

**THE PROCEEDINGS OF THE FIRST
INTERNATIONAL CONFERENCE ON
ENTREPRENEURSHIP DEVELOPMENT (ICED)**

Theme:

Developing Context-Relevant Entrepreneurship:
Experiences and Lessons from Advanced and Emerging
Economies

Unit for Enterprise Studies,
Faculty of Management Sciences,
Central University of Technology, Free State
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Initially, the conference abstracts were double blind peer reviewed by anonymous reviewers. Subsequently, the conference panel then requested authors whose abstracts were accepted to develop full papers for submission to the conference. Upon submission, the full papers were double blind peer reviewed and only accepted papers were considered for final submission and presentation at the conference. Many thanks to the reviewers who worked hard to ensure the high quality of the full papers.

The Editor is very grateful to his editorial assistants, Ms Lindiwe Sibeko and Ms Bridgette Mokgosi for their excellent work and great assistance with the preliminary formatting of referencing, tables and figures, headings and typesetting. I would never have done it all alone without their invaluable inputs and I am eternally grateful! Many thanks to Dr Luna Bergh who assisted with the language editing of the proceedings.

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Preface

This volume is a compilation of empirical and theoretical papers received for the 1st International Conference on Entrepreneurship Development (ICED). This one of a kind conference was convened in the Free State Province, covering multiple issues that bridge entrepreneurship, higher education and technology in advanced and emerging economies contexts. It was a great stride for the Unit of Enterprise Studies at the Central University of Technology, Free State (CUT) to host this international conference.

The overriding aim of the conference was to bring together academics, the public sector, corporate world and the surrounding community to network, collaborate and engage in research that informs entrepreneurship theory and practice in South Africa. The conference also served as a platform for disseminating scientific findings to the academic community and South African society at large to inform national and regional policies on entrepreneurship development. This was considered to be pertinent if South Africa's quadruple challenges of unemployment, poverty, inequality and social deprivation that continue to plague the country, were to be eradicated.

Readers of this volume will encounter research papers that cover the breadth of entrepreneurship theory and practice, contribution of technology to entrepreneurship development, role of higher education in entrepreneurship as well as other contemporary issues relevant to entrepreneurship.

We are proud to announce that we received 84 abstracts from scholars and researchers. These research abstracts went through a rigorous blind-copy review process, which enlisted one reviewer per abstract. The final reviews of accepted abstract were cross-examined by the organising committee of the conference for precision, accuracy and relevance. In total, 82 abstracts were accepted and authors were encouraged to develop full papers for consideration for the second round of double blind peer review.

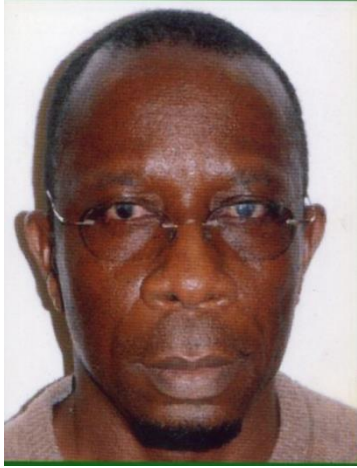
A total of 31 full papers were received. The full papers were then double blind peer reviewed before submission to the conference. The authors made some corrections to the papers before they could be finally accepted for presentation at the conference and for publication in the full conference proceeding. 23 full papers were accepted for inclusion in the full conference proceeding.

We were pleased with the quality of research demonstrated in these papers and we sincerely hope that delegates and readers will find this compendium a resourceful addition to their scholarly collection.

The Conference Editor
Professor Patient Rambe

Biographies of Conference Chair, Program Chair, Keynote Speakers and Track Chairs

Conference Chair



Professor Dennis Yao Dzansi (PhD – Entrepreneurship; MA – higher Education Studies; MBA), is a Professor in Entrepreneurship and Head of Department of Business Support Studies as well as the Head of Unit for Enterprise Studies in the Faculty of Management Sciences. He has spent his whole working life that started in 1979 in the field of education. He has published numerous articles in accredited academic journals. He is the author of three academic books and a chapter in a small business management book used by undergraduate students in South Africa. His academic interest is diverse but he has special interest in the broad field of entrepreneurship, business social responsibility, business ethics, and organisational behaviour with specific focus on organisational justice.

Programme Chair



Professor Crispin Chipunza is currently the Assistant Dean, Research, Innovation and Engagement in the Faculty of Management Sciences at the Central University of Technology, Free State. He is also a member of the Business Management Department where he teaches Research Methodology. Crispin supervises Doctoral and Master's students in the area of human resources management in small businesses. He obtained his doctorate from Nelson Mandela Metropolitan University in South Africa.

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Government Interventions in Youth Entrepreneurship: Examining Strategies and Policies

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ABSTRACT

Youth Entrepreneurship has been identified as one of the desirable solutions for curbing high unemployment rates in Africa, which is linked to stagnant economic growth in this continent. Though this has been identified as a solution, it seems as if the implementation and strategies to promote youth entrepreneurship have not yielded the required outcomes. Business initiatives by the youth are still marred by high failure rates, a trend that will have to change if the goal is to be met. Through the critique of theories of successful entrepreneurial activities and current strategies and policies, this paper unveils what government is doing and where they need to improve in their interventions. It reviews the use of policy, training, incubation and mentorship in fostering entrepreneurship by government. Regrettably, this study finds, through a thematic analysis methodology that the government ministries in South Africa are not fulfilling, comprehensively, the agenda of youth entrepreneurship development. The paper thus proposes fundamental, essential mechanisms in youth entrepreneurship to be put in place to fast track the youth, enabling them to fill the gaps they face.

Keywords: Unemployment, Economic Growth, Government

1. INTRODUCTION

Youth entrepreneurship is at the helm of South Africa's narrative on economic growth and development (ILO, 2005). It has been regarded as the solution for the current youth unemployment rate in the country and in Africa at large (Beeka & Rimmington, 2011). The problem in Africa is that it seems as if the youth section of the population is growing at exponential rates, and as a result, making up the largest portion of the population in Africa (Beeka & Rimmington, 2011). This has become an urgent problem because, historically, the plight of youth was not regarded as a critical issue for governments and communities at large (Mulenga, 2000 cited in ILO, 2005). They were just not big enough to be of concern for governments. Unfortunately, this has meant that African countries, including South Africa, have had to embark on reactionary strategies in dealing with this pandemic. Most of the countries in this continent have thus turned to youth entrepreneurship as a solution to the unemployment and economic problem caused by the increased youth population.

Though this is the chosen strategy to deal with this problem, it is essential that these countries and their leaders are honest with themselves and accept that, 'not all young people can become entrepreneurs in a business sense' (ILO, 2005:14). However, governments should in fact strive towards the development of youth that think entrepreneurially, as such youth can actively contribute towards economic and social development that promotes sustainability and growth in the country (Entre-Ed, 2017). That said, exacerbating the problem for the youth, is the fact that at the core of their problem, distorting this required development is *eternal liminality*. This is a period in the Pinnockian Rite of Passage, which is a model that describes youth development, where the youth are forever young, without the support structures required in adulthood (Awogbenle & Iwuamadi, 2010). For instance, in South Africa, today's black youth, who make up the majority of the youth, is said to be regressing; they are less skilled than their parents (Merten, 2016). They do not have the correct skills to deal with adulthood and being self-sufficient when they reach adulthood. This is an unfavourable situation for improved employment and the creation of an entrepreneurial society (Kunene, 2016). It means the development of youth to adulthood is troubled. The solution therefore, it would seem, is one that goes beyond the responsibilities of the economic development arm of the government, and instead should include all the government divisions for cultural change to take effect and youth to transition to adulthood.

Barringer and Ireland (2012), who write on the key success factors in entrepreneurship, highlight experience, networks and knowledge as critical factors in achieving entrepreneurial success. However,

youth in their nature are less likely to have adequate resources, social networks, business contacts and work experience that is required, due to the limitation of being young (Awogbenle & Iwuamadi, 2010). Where there is *eternal liminality* unfortunately, these support mechanisms to transition beyond being young are not realised. Thus the need for the government to create environments that will promote enterprise development, particularly for the youth is critical. It is for this reason that the aim of this paper asks what government interventions have been implemented by government to foster youth entrepreneurship. The study therefore examines all government ministries with the intention to explore if they have strategies in place specifically designed to promote youth entrepreneurship. It does this by investigating policies, mentorship programmes, training programmes and incubation programmes.

2. BACKGROUND

Currently it is estimated that there are 1.1 Billion young people in Africa, the size of China (Biola, 2016). This suggests the youth are going to drive the industrial entrepreneurial narrative in this continent in the future. To do this, there is a need for a more responsive education programme and a change in the socialisation structures youth grow up under (Njihia, 2016). Young people, especially students, need to be taught to be more responsive to their African environment. That said though, it is critical to note that young people have their 'age' as a hindrance to their success.

According to the ESDA (2016) workshop held on youth entrepreneurship, age is a threat to this form of entrepreneurship, as exposure to necessary critical knowledge and experience to do business may not have been acquired as yet. They often have not learnt from being mentored, which includes acquiring important soft skills, i.e. time management, corporate professionalism and management skills training (ESDA, 2016). The young are usually not in interaction with other entrepreneurs that could increase their ability to collaborate and network - thus improving their ability to find more opportunities, had they been exposed (ESDA, 2016).

Youth do not have wisdom of 'age' on their side. Young Entrepreneurs in Southern Africa perceive their age to be a contributing factor for their failure in entrepreneurship (ESDA, 2016). Added to this, they recognise their lack of capital, skills, support and market opportunities (Brixiova, Ncube & Bicada, 2015) is critical. Their age is a significant barrier, thus mechanisms need to be put in place to fast track their skills and abilities, whilst improving their environment to become entrepreneurs. It is said there are possibly over 60% of South Africa's youth who are not employed (DBSA, 2011). These individuals lack the skills-set that is required to be absorbed into the employment opportunities the economy seeks. By them not interacting with productive activities in society, they have been in danger of being more susceptible to risky behaviour, substance abuse, crime and HIV/AIDS infection (ILO, 2005), including the psychological effects of distorted growth and inability to behave in a society as responsible members of that particular society once they turn into adulthood (ILO, 2005).

It is critical at this point to mention that this unemployment pandemic is even more crucial for young girls as they are disadvantaged in the labour market because of the perception of a mismatch between being employed and raising a family (Okojie, 2003). Most youths are dependent on their families as they still live in their parents' home, there is therefore a phenomenon of prolonged youth that is being experienced in Africa (Awogbenle & Iwuamadi, 2010). Traditional family and community structures, which were previously fundamental in the transition from childhood to adulthood, have been destroyed. Colonialism and in the case of South Africa, apartheid as well, which destroyed family and community - are responsible for this development crisis (Emmet, 2001). The United Nations describes youth as individuals who are between the ages of 15-24 years of age (Awogbenle & Iwuamadi, 2010). However, due to the plights described above, this changes in Africa. In South Africa, the age of youth is therefore 14-35 years of age (DBSA, 2011). In this paper, the South African youth definition is used, as the context of the paper is South Africa.

With all these problems that South African youth face, it is therefore the responsibility of the government and all stakeholders in both the private and public sector to work together to change the environment for youth entrepreneurship. As the youth struggle for economic freedom, they have to work hard and be willing to accept assistance when it is provided. Assistance will manifest through

adequate policy formulation and, more importantly, implementation thereof (Kunene, 2016). The government therefore has to protect citizens, they have to ensure physiological needs, safety needs and social needs are met whilst they promote and develop the economy (Centanni, 2017). Thus, it begins with government creating an adequate environment for youth development.

3. LITERATURE

Though there are many definitions of entrepreneurship, it is safe to say that a more universal approach to understanding and defining this phenomenon is one that leans more towards Shane and Venkataramans (2000) view that says, it is the ability to find opportunities. This view suggests that entrepreneurship is the ability to create solutions for problems that exist in an environment. In creating these solutions, the entrepreneur uses certain skills to gather the required resources to solve the problem, yielding profits as a result (Shane & Venkataraman, 2000). This occurs through extraction of value from the environment itself (Jack & Anderson, 2002). This suggests that this is a specialised skill, which is not necessarily innate. Given the correct environment, individuals can thus develop it over time.

The General Entrepreneurial Monitor (GEM), regarded as the world's entrepreneurship activity monitor, created a framework to best understand when countries can reach entrepreneurship activity that is relevant to the economy (GEM, 2017). Their report found that it all begins with a social, cultural and political context, which then splits into general national framework conditions to promote economic growth and entrepreneurial framework conditions, as depicted in the Figure 1 below, which promotes entrepreneurship growth. The former may lead to increased Growth Domestic Product (GDP) and the latter may lead to increased entrepreneurship activity resulting in increased GDP. The concern of this paper is, the latter, in figure 1; the entrepreneurial framework conditions.

These conditions are those that concern entrepreneurship at large, they are more of a concern for youth entrepreneurship as unemployed and disadvantaged youth were not seen as a major target for governments and funding agencies (ILO, 2005). However, it has been this lack of appropriate interventions that has led to African governments like that of South Africa to be forced to implement reactionary strategies in dealing with this problem.

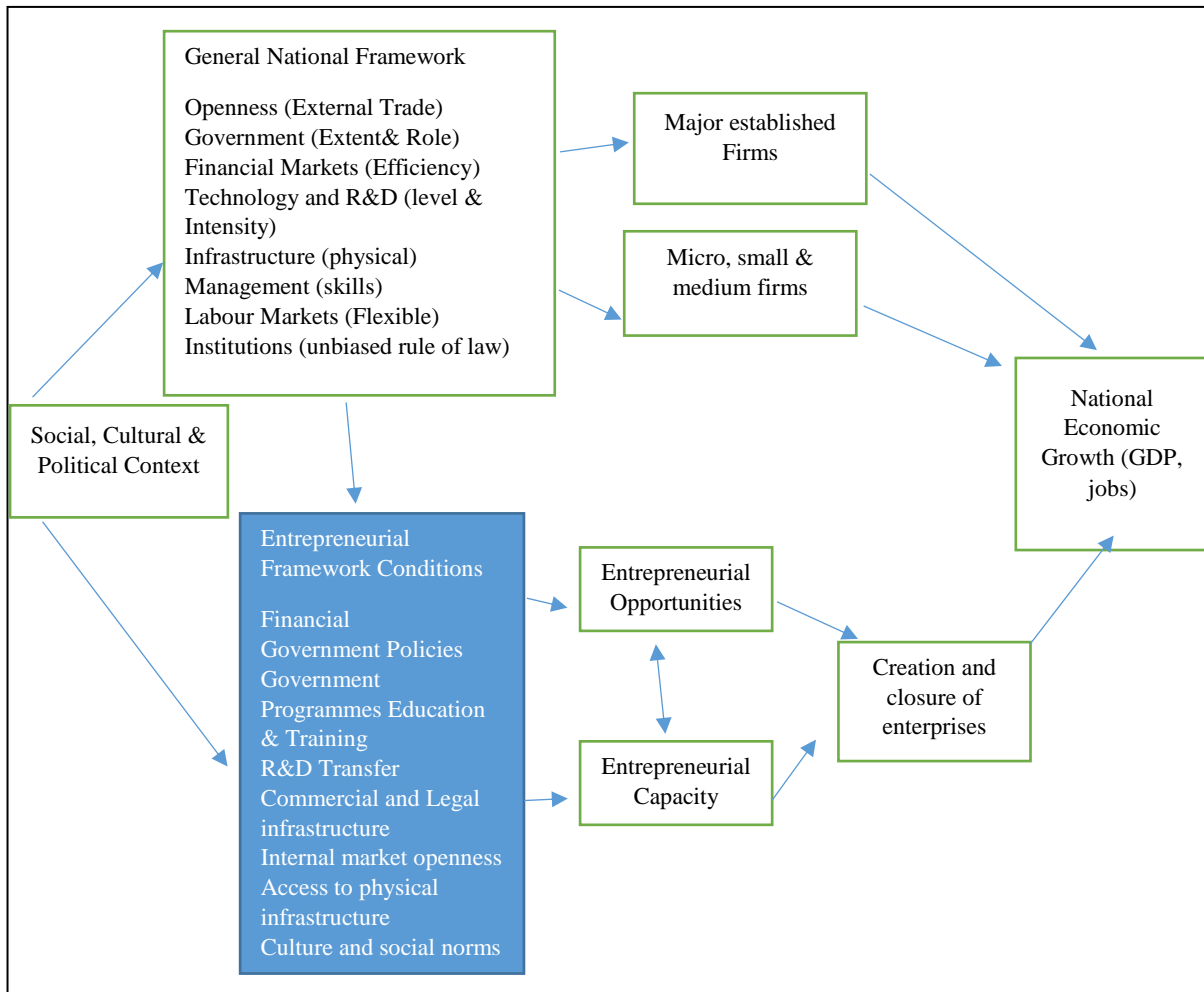


Figure 1: The GEM Conceptual Framework (Source: GEM 2004 adapted from Reynolds et al. 2002)

Awogbenle and Iwuamadi (2010), DBSA (2011) and Oseifuah (2010) have been concerned and continue to be concerned with the fact that financial factors, government policies, government programmes, education and training, R&D transfer, commercial ad legal infrastructure, internal market openness, access to physical infrastructure, culture and social norms are impediments to successful entrepreneurship growth. These impediments need to be converted into positive elements in the environment.

As depicted in Figure 2, once these Entrepreneurial Framework Conditions are fulfilled, the country can begin to achieve entrepreneurship capacity and opportunities, which are pertinent in making decisions to close off enterprises that are not viable and open up only those that are designed to fit desired economic growth.

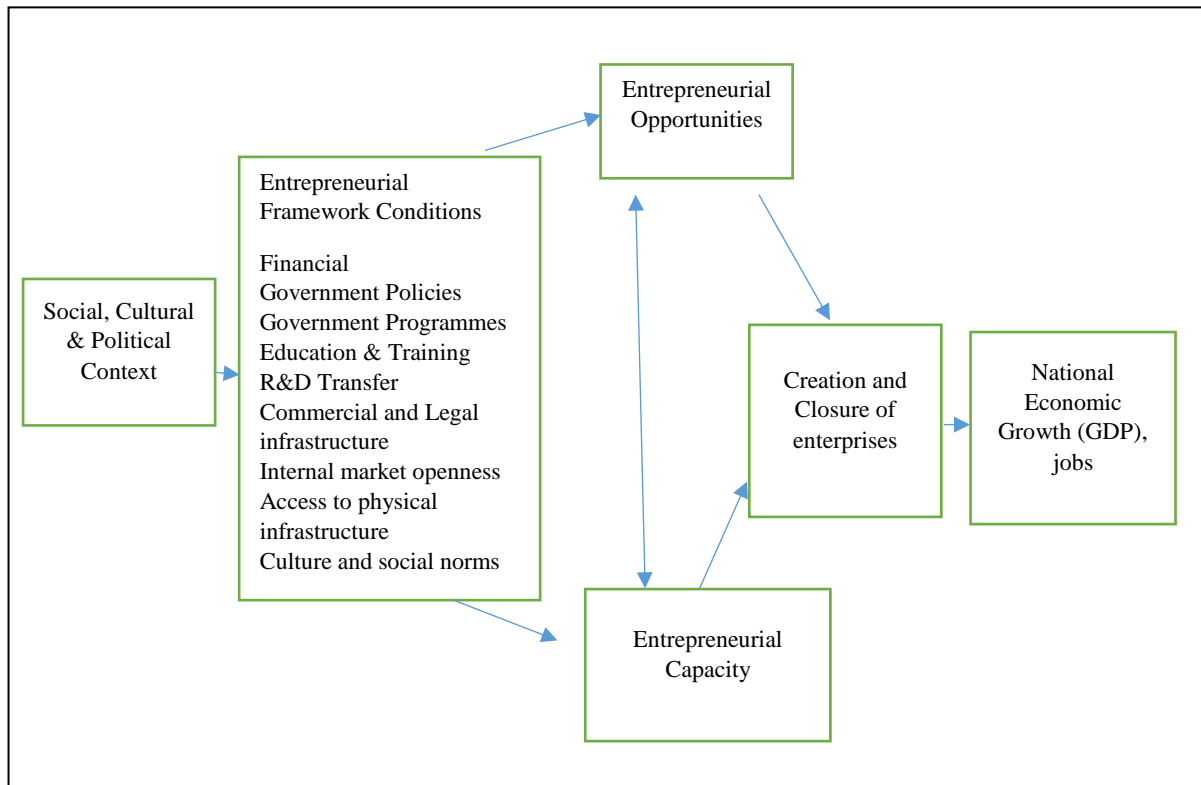


Figure 2: The Entrepreneurial Conceptual Framework

(Source: Author's own adapted from GEM, 2002)

Given this concept about entrepreneurship, government needs to design an environment that allows for entrepreneurship ecosystems as mentioned by Isenberg (2011) to thrive, where the ecosystem comprises systems designed to support the growth of entrepreneurship businesses. Mason and Brown (2013) emphasise the need for a more systems-based approach to entrepreneurship and promote the use of entrepreneurship ecosystems. Both Mason and Brown (2013) and Isenberg (2011) agree that having inter-connection between these various 'actors' in the environment will lead to entrepreneurship that is steered towards economic development. These critical 'actors' of the ecosystem as adapted from Isenberg (2011) are:

3.1. Support Mechanism

This refers to the availability of mentors and/or advisors for the entrepreneurs. Young people need coaching as they meet obstacles and find solutions (Awogbenle & Iwuamadi, 2010). Support mechanism also includes the ability to network. To be an entrepreneur who is successful one needs to have what is sometimes called social capital. Social capital can be accessed through networking and sometimes family. It gives entrepreneurs information, capital, skills and labour (Sharma, 2014). The family is a strong motivator and provides background the young entrepreneur needs (Kim-Soon, Ahmad, Saberi & Tat, 2013).

3.2. Regulatory Framework and Infrastructure

It is important to have government policy that supports entrepreneurship activity. Herrington (2011) advises that adding to the high failure rate of entrepreneurship in South Africa is a regulatory environment. There needs to be infrastructure in place to foster the development of markets and businesses. Awogbenle and Iwuamadi (2010) suggest that there have to be specific programmes in place designed to benefit entrepreneurial businesses. The state needs to actively be a socialization agent, to allow for the development of youth to the potential they can be (ILO, 2005).

3.3. Human Capital

This is the ability to manage and have the skills to do so, education as discussed below elaborates on how human capital skill like this one and entrepreneurial company experience are closely linked to this. Being exposed to incubators, mentors and networks (Awogbenle & Iwuamadi, 2010) can help resolve the problem of Human Capital.

3.4. Funding and Finance

Funding is critical for entrepreneurship businesses. Family is seen as the source of funding that supports start-ups by young people (Sharma, 2014). However, in the African context, as explained earlier, this cannot be a source to rely on as there is a lack of funds in the family as they are usually too poor (Awogbenle & Iwuamadi, 2010) Private equity and access to debt, which is another source of finance, is also difficult for most of these young individuals, as they are mostly involved in low-value income activities, found to not be enough even for survival at times (Awogbenle & Iwuamadi, 2010). They also do not possess required collateral to secure required funding. Most importantly, there are skills required and needed to manage this vital resource, which they lack.

3.5. Education and Training

This includes pre-university training, higher education and any other relevant training and educational programmes. Education and training systems should be designed in such a way that they are able to provide learners with adequate quality education for them to be entrepreneurs (Gwija, Erasia-Eke, & Iwu, 2014). In South Africa, Total Early Stage Entrepreneurial Activity (TEA) has often, over the years been found to be lower than other developing countries (Herrington, 2011). To avoid this, there has to be development of skills that are appropriate and suitable for opportunities that are available (DBSA, 2011). Financial literacy is important in the training and education structures. With financial literacy, entrepreneurs are better able to run their businesses and this changes financial behaviour for them. The more poor financial literacy one has, the higher the probability of failure for businesses they run (Oseifuah, 2010).

3.6. Culture

There has to be specific cultural norms that exist in a society to promote entrepreneurship. There needs to be a culture of self-employment and being independent. Family in most countries and cultures will transmit through socialization, concepts of being independent and ambitious (Sharma, 2014). Where there is a break down in family structure, there will be a problem. Youth in South Africa consider being an entrepreneur as a 'stop-gap', and thus seek formal employment (ILO, 2005). According to Awogbenle and Iwuamadi (2010), South African youth prefer to be employed. This suggests there is a mind shift that has to take place. What makes support even more difficult in a country like South Africa is unsupportive cultural and social norms (Herrington, 2011).

Existence of these 'actors' within an ecosystem of an entrepreneurial business impacts their ability to exist, grow and be sustainable in the first 3-5 years. This is aligned to TEA. According to Mahadea et al. (2013), an increase in TEA will positively influence the GDP; this is because TEA is a measure of individuals who start up their businesses and are able to run them for up to 3.5 years. These individuals are between the ages of 18-64 (Mahadea, et al., 2013). Youth make up the majority of these individuals in South Africa.

Incubation; Education and Training; Mentorship and Apprenticeship; and Policy can fill the gap caused by 'age' in youth. Though funding is often raised as a deterrent for entrepreneurship, young entrepreneurs themselves acknowledge that a lack of skills and support is a major problem (Brixiova, Ncube & Bicada, 2015). Due to such reality, experiential learning is now promoted in developing sustainable entrepreneurial ventures and comprises "...Networking, peer-based support and customer interaction assume greater significance over time" (Mason & Brown, 2013:5). That being the case, then the government institutionalization of these four dynamics in promoting youth entrepreneurship needs to be assessed so that corrective measures are taken, if need be.

4. METHODOLOGY

To complete this research, a document analysis exercise in all government ministries in the Republic of South Africa was conducted. If the government continuously puts forward the need for youth entrepreneurship as one of the major solutions for economic development, as per the past three, 'State of Nation Addresses' by the President of the Republic of South Africa (South African Government, 2017), then it is imperative that as a means to solve the issue of implementation, institutionalization of this proposition by government is explored.

There are thirty-seven government ministries in the Republic of South Africa (South African Government, 2017). The Deputy Presidency is not included as it is understood to be part of the 'The Presidency' ministry. All of these ministries are governed by the laws of the land, which are translated into the various policies. Based on the critical loopholes that youth entrepreneurship and development faces, as discussed above, four themes were chosen to guide the document analysis process.

The first theme was 'policy'. Policy in its nature is a guide and framework that is followed because of its authoritative power; it should guide that which should be accomplished by whom and when (University of Sydney, 2017). In essence, this is the primary theme that guides the other three that follow. Within this theme, the research hopes to find what specific policies to guide youth entrepreneurship have been put in place.

The next, theme, which is part of the three secondary themes that was used for this research was the 'Training Programmes', for the study sought to find if there had been any educational programmes developed by government departments for the purpose of fostering youth entrepreneurship. Training can foster development if designed to suit those that need to be trained (Cho & Honorati, 2014).

The third secondary theme was, 'Mentorship' sometimes referred to as 'Apprenticeship', as simply studying material does not mean one can easily apply it (Karas & Lerman, 2016). According to McGowan, Cooper, Durkin and O'Kane (2015:247), "Mentors, because of their experience and profile as successful entrepreneurial leaders, can provide role models of best leadership practice, engaging their mentees essentially as entrepreneurial apprentices". This helps in closing the knowledge gap, which a lack of prior knowledge for young entrepreneurs poses.

The last secondary theme, was 'Incubation'. This theme is critical for young entrepreneurs when starting out as it provides the space for partnership and access to organisations to network (Chiguntu, 2017). Young entrepreneurs can learn and be guided in this space.

Guided by these themes, documents that govern all the ministries as shared in their official websites in the past year were analysed by the researchers, results of which are provided in the section that follows. It is important to caution that though the concept of youth entrepreneurship has been used many times, it has however been found to be lagging in institutionalization by the state. Due to this, the study is one that is designed to be exploratory, in search of the institutionalisation of the concept of youth entrepreneurship. Institutionalisation in its nature allows for implementation to take place, because its main concern are the rules, norms of behaviour and how they are enforced (Zahirul, 2006). The exploration of these official documents provides insight into whether or not the country is indeed placing youth entrepreneurship at the forefront of its development agenda.

5. FINDINGS AND DISCUSSION

As shown in Table 1, the analysis of the strategies in the various ministries of cabinet revealed that, only 11.42% of the ministries had direct policies that call for the support of youth entrepreneurship and development. There were only five incubation programmes that were identified, that could foster youth entrepreneurship and 8.57% of the cabinet ministries used mentorship programmes as an intervention practice. The most used method, though it too is still low, is training programmes; there were thirteen training programmes that were found across all cabinet ministries, which is the highest intervention. It

is important to note that the use of mentorship programmes is not as common though it is advised extensively as found in the literature above.

There is misalignment between the primary theme and secondary themes. There are instances where secondary interventions have been put in place without the guidance of policy. Given the importance of youth in the economic development of the country Gwija et al. (2014) there would have been an assumption that these four themes, which promote youth entrepreneurship and development, would feature prominently in all the thirty-six cabinet ministries.

Table 1: Youth Entrepreneurship and Development Institutionalization

CABINET MINISTRY	POLICY	MENTORSHIP	TRAINING	INCUBATION
NO Entrepreneurship Interventions	Youth 33 (88.58%)	34 (91.43%)	24 (62.86%)	32 (85.71%)
Ministries with Entrepreneurship Policies	Youth 4 (11.42%)	3 (8.57%)	13 (37.14%)	5 (14.28%)

Table 2 below provides the breakdown of these interventions from all the Cabinet ministries. Only two out of the thirty-seven cabinet ministries had participated in all four intervention programmes. These are the ministry of the Presidency and that of Trade and Industry. Given that this country has a ministry of Small Business Development it would have been assumed that this division of government would also participate in all four intervention measures specifically for the benefit of youth. However, its mandate did not, from the start stress the youth aspect, and simply had a blanket call to assist small business in general (Fredricks, 2017). Interestingly, this is in line with a school of thought that stresses that youth entrepreneurship should not be treated differently from that of adult entrepreneurship (White & Kenyon, 2000). That said, in South Africa, youth entrepreneurship and development has been given special attention and identified as the salvation to economic problems. This suggests it should be strategized for by this ministry.

Interestingly, the Ministry of Trade and Industry has been participating in all four themes identified in this paper. This ministry has dedicated resources towards youth entrepreneurship and development. In addition to that, they have a youth economic empowerment policy designed to serve the development of youth - known as the National Youth Economic Empowerment Strategy and Implementation Framework 2009-2019 (Gwija et al., 2014).

Table 2: Cabinet Ministry Youth Entrepreneurship and Development Interventions

	Cabinet Ministry	Policy	Mentorship	Training	Incubation
1	Agriculture, Forestry and Fisheries	0	1	1	1
2	Arts & Culture	0	0	0	0
3	Basic Education	0	0	0	0
4	Police	0	0	0	0
5	Communications	0	0	0	0
6	Cooperative Governance and Traditional Affairs	0	0	1	0
7	Justice and Correctional services	0	0	1	0

8	Defence and Military Veterans	0	0	0	0
9	Economic Development	0	0	1	0
10	Energy	0	0	1	0
11	Environmental Affairs	0	0	0	0
12	Health	0	0	0	0
13	Higher Education And Training	0	0	1	0
14	Home Affairs	0	0	0	0
15	Human Settlements	0	0	0	0
16	International Relations and Cooperation	0	0	0	0
17	Labour	0	0	0	0
18	Mineral Resources	0	0	0	0
19	Public Services Administration	0	0	0	0
20	Finance	1	0	1	1
21	Planning Monitoring And Evaluation	0	0	0	0
22	Public Enterprises	0	0	1	0
23	Public works	0	0	0	0
24	Rural development And Land Reform	0	0	1	0
25	Science and Technology	0	0	0	0
26	Small Business Development	1	0	0	1
27	Social Development	0	0	0	0
28	State Security	0	0	0	0
29	Sports & Recreation	0	0	0	0
30	Telecommunications and Postal Services	0	0	1	0
31	Tourism	0	0	0	0

32	Trade and Industry	1	1	1	1
33	Transport	0	0	0	0
34	Water and Sanitation	0	0	1	0
35	Ministry in the Presidency responsible for Women	0	0	0	0
36	The Presidency	1	1	1	1

The Ministry of Finance and that of Agriculture, Forestry and Fisheries have put a recognizable effort towards these interventions. In reference to the latter ministry, agriculture has been at the forefront of development in line with strategies of land reform (South African Government, 2017). The agrarian sector is at the forefront of economic development in Africa, therefore there is a need to develop youth to solve problems and provide innovation which can be commercialized. It thus is only plausible that strategies would be designed to ensure that youth participate in the industries under this ministry. The former, the ministry of Finance, also shows a commitment in youth entrepreneurship and development. However, it is important to note that in their interventions, mentorship, which provides one of the pertinent skills (Awogbenle & Iwuamadi, 2010) through a dual relationship of learning in an apprenticeship form, is not included.

As mentioned earlier, training which encompasses education and skills development, is the most popular of the intervention. Seven ministries that are not seen to have any other intervention in place have this form. This could be regarded as a welcomed attempt towards youth entrepreneurship and development. However, only three ministries have these programmes aligned to policy. These are the ministry of The Presidency, Trade and Industry and Finance. That said, they could still engage with the other forms more prominently. However, there are still twenty-three ministries that have not taken part in these interventions, which Awogbenle and Iwuamadi (2010) consider to be essential in youth entrepreneurship and development in the African context.

Young people need to take it upon themselves to change and seize every opportunity available, be it training, skills improvement and/or empowerment. The National Youth Development Agency (NYDA) was tasked with monitoring interventions which ranged from financial to development services. However, it was found that youth were not accessing services provided (DBSA, 2011). This is not surprising in a country where "...people especially the youth still put much greater value on earning wages rather than creating wealth" (Awogbenle & Iwuamadi, 2010:70).

6. LIMITATIONS OF THE STUDY

Firstly, there is a need to develop a study that will look into the details of the programmes that are offered to get to the depth of the interventions provided. Secondly, further investigation needs to take place that goes into all documents available as this study relied on data provided online by these organisations. Possibly, their online information is not as regularly updated. However, that said, this provides an outlook of the interventions that are out there.

7. CONCLUSION AND RECOMMENDATIONS

There is a social barrier that is critical in youth entrepreneurship. Due to colonialism and apartheid in South Africa, the youth are displaced, they are not armed with the structures and resources they need from their communities, family and culture because these have broken down. There is also an age gap that this research proves. Due to their age, they do not have experience, adequate knowledge and necessary networks. The combination of these two barriers, specific to youth entrepreneurship is one that can be referred to as a socio-age barrier. This means the combination of social barriers youth experience and the age barrier leads to a socio-age barrier.

When family and the community have failed to be part of the growth of the child and young adults' development, needed to make them independent thinkers, departments like Social development, Basic Education and Cooperative Governance and Traditional Affairs need to have relevant strategies in place to fill this gap.

Within this agenda, the female young person needs to be strategised for adequately as well. There needs to be a promotion of changed thinking and doing intra-household time, where time is allocated in the family and within communities in support of young girls becoming entrepreneurs. There is, therefore, a need for gender-sensitive programmes to also be part of the overall strategy of youth entrepreneurship development. With the family structures destroyed in South Africa, government should begin to provide policies to deal with such issues.

For entrepreneurship to develop, and for the government to begin creating environments that are positive for it to prosper, access to incubators are also important accelerators in an environment. From these results it is clear that when government thinks of intervention towards the development of youth into enterprising individuals, fit to be entrepreneurs or innovative employees, most think of creating training programmes. Though there is nothing wrong with this, it is clear that experiential learning needs to be adopted - thus a need for all departments to explore how they can create interventions through a combination of Policy, Incubation, Education & Training and Mentorship programmes.

With the youth stuck in being forever young and not becoming adults at the time when they should be, there is a need for specific policy in Early Childhood Development and adolescent stages that develop their innovative and enterprising skills. Apartheid and colonization still impact society, leading to *eternal liminality*. Government needs to intervene through their ministries, from The Presidency, Small Business Development, Rural Development and Land Reform, Social Development, Basic Education, Arts and Culture and Cooperative Governance and Traditional Affairs.

Small Business Development ministries should seek to be the leaders in youth entrepreneurship. They need to have policy interventions in place with all three secondary themes covered in this paper. They have to look at partnering with other ministries to achieve this, like the ministry of Trade and Industry, Economic Development, Basic Education, Science and Technology and Cooperative governance and Traditional Affairs. The latter is essential in the development of youth as local leadership and traditional leadership is at the forefront of a child's development.

There is a need to change South Africa's dialogue on development. Africa needs to define their own agenda for their own development and growth. With South Africa being at the dawn of Industrialisation in its growth path, it is essential that a clear plan is drafted and understood by entrepreneurs, as well as researchers on entrepreneurship. These decisions will help South Africa in dealing with poverty alleviation, decreasing unemployment and achieving economic growth, and accelerating youth entrepreneurship.

Further research into these policies and strategies by the various government divisions, promoting youth entrepreneurship need to be completed, themes used and their appropriateness have to be investigated further, to ascertain if they fulfill their mandate or if new programmes need to be designed. Entrepreneurship ecosystems by Isenberg are therefore fundamental in whatever strategies are designed for the youth in South Africa.

There exists a misalignment in the practices by government ministries in their interventions practices. There are departments that have either training programmes, incubation and/or mentorship programmes without policy that guides them. Although these initiatives are commendable, lack of specific policy may lead to these interventions failing to achieve youth entrepreneurship development as they should.

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Achieving Hair Salon Competitiveness through a Relationship Marketing Model

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ABSTRACT

This paper examines evidence of growing competition within hair salons and identify relationship marketing as a tool to support competitive strategy. Hair salons are seen to be emerging (SMMEs) – a status achieved due to participation in competitive social economic activities. This paper presents a Relationship Marketing model compatible with the requirements of emerging SMMEs. It is hoped that this model promotes hair salons' competitive strategy: contributory to South African socio-economic mantra. There is perceived lack of relationship marketing (RM) by SMMEs. For emerging SMMEs like the hair salons, this perception amplifies the importance of strategic tool to support competitive strategy for successful competition. A survey data collection method was used to collect quantitative data from 145 respondents, randomly selected owner/managers of hair salons and customers. These responses were supported with personal interviews to improve generalizability. Evidence of lack of awareness and the importance of relationship marketing activities were found. This finding supports the need for RM model presentation and hair salon competitiveness – as it reverberates the requirements for hair salons as emerging SMMEs.

Keywords: Relationship Marketing, Marketing Management, Business Management, Strategic Management of SMMEs

1. INTRODUCTION

The growing competition within hair salons has necessitated the identification of relationship marketing as a tool to support competitive strategy. Hair salons are seen to be emerging (SMMEs) – a status achieved due to participation in competitive social economic activities. Relationship marketing has been chosen as a tool that should be used to build, develop, and maintain a successful relational exchange for competitiveness (Po-Tsang Chen & Hsin-Hui Hu, 2010:406). It can be assumed that with an increased consumer appetite for service quality and pressure of increased profit and market share, hair salons would benefit from the application of relationship marketing. This assumption permeates the domain of both relationship marketing strategies and the services hair salons to the quality of interaction with customers. With determination that the interactions should enable hair salons to engage, network, and collaborate with customers for improved services.

A study conducted by Che, Binti and Jamil (2009) on relationship marketing suggests that the primary focus of interaction is to understand customer preference, taste and lifestyle and use this understanding to build closer relationships for competitiveness. The authors argue further that to achieve a sustained competitiveness, the quality of interaction with the understanding of customer's taste, preference and lifestyle is vital for customize service, customer attraction and retention. The above argument had been supported and expanded by Cosic and Djuric (2010) to include business development strategy through network-interaction concepts. The network-interaction concepts in the context of hair salon industry relate to the achievement of relationship marketing that is sustainably competitive.

2. THE PROBLEM

Competitiveness can be achieved through the application of relationship marketing concepts. With increased competition in hair salon, business competitiveness is usually short lived. Long-term competitive advantage can and should be achieved through relationship marketing that deepen and strengthen interaction with a customer in the form of patronage. This patronage determines the level of and speed/quality of service provision.

3. RESEARCH QUESTIONS

Based on the problem statement, the research identified the following research questions:

- What kind of interaction needed to promote the service quality of hair salon?
- What are the elements of service quality in hair salons?

4. THEORETICAL AND CONCEPTUAL FRAMEWORKS

Theoretically, this study is underpinned by Relational Exchange Theory, which is a long-term relationship between service providers and customers. According to Chattananon and Trimetsoonton (2009), it is a source of business partnerships; based on buyer-seller relationships (Kanagal, 2010:4). According to Jham and Khan (2008:35), building relationships requires customer satisfaction as a prerequisite for meeting customers' expectations. Khan (2012:107) also offers that the continuity of the business relations between the customer and company is customer retention. Therefore, the study considers customer satisfaction and retention as critical to relationship building between the customer and service provider. Conceptually, it is assumed in this study that the application of relationship marketing components such as confidence/trust, communication, responsiveness, tangibility, complaints handling and empathy (Deng, Wei & Zhang, 2010; Kassim & Abdulla, 2010; Pournaserani, & Mousavian, 2011; Rezvani et al., 2011; Anabila, Narteh & Tweneboah-Kodua, 2012) serving as independent variables could lead to service quality, customer satisfaction and retention as mediation variables for a business to achieve competitiveness and growth. This should make relationship marketing theoretically appealing for hair salons.

5. LITERATURE REVIEW

This literature review discusses the main concepts that foreground this study namely, relationship marketing and service quality.

5.1. Relationship marketing (RM)

According to Gilaninia, Danish and Shahmohammadi (2012:10721), RM is a strategy to attract, retain, and promote customer relations, while Cosic and Djuric (2010:53) define RM as paradigm change, which shifts the focus of business from transaction to relationship. The definition of Alrubaiee and Al-Nazer (2010:157) states that RM involves the directing of all marketing activities toward building loyalty (keeping and winning customers) by providing value to all the parties involved in relational exchanges. The authors further maintain that the main theme in customer relationship marketing is to acquire and retain customers.

Kanagal (2009:17) describes RM as the identification, establishment, maintenance, enhancement, modification and termination of relationships with customers to create value for customers and profit for the organisation through a series of relational exchanges that have both a history and a future. According to Alqahtani (2011:585), RM is seen as a core business activity directed towards setting up, improving, and maintaining successful relational exchanges with customers, suppliers and even other businesses.

Implicit in the above definitions is that relationship marketing involves activities aimed at developing long-term cost effective links between an organization and its customers for their mutual benefits. Organization can maintain and enhance relationships by treating customers fairly and offering service augmentations. For the service provider, a valued relationship is one that is financially profitable in the long term.

5.2. Service quality

It has strong impact on business performance, customer satisfaction, customer loyalty and profitability (Santouridis & Trivellas, 2010:331). Quality has been typically regarded as being a key strategic component of competitive advantage, and therefore improving service or product quality has been a matter of prime concern to firms, leading to satisfaction and greater retention (Yuen & Chan, 2010:222). Generally, service quality is pivotal for satisfying customers, retaining them, and creating loyalty among customers. Hence, one can suggest that there is effective relationship marketing.

5.3. Gaps in the Literature Review

Overall, there are varieties of gaps in the literature and in the empirical analysis. These gaps relate to elements of relationship marketing

Table 1 Gaps in the literature review and the empirical evidence

ELEMENTS OF RELATIONSHIP MARKETING (100%)	GAPS IN THE LITERATURE	EMPIRICAL EVIDENCE OF PRACTICE (AVERAGE %)
TRUST/COMMITMENT	14.3%	85.7%
HANDLING OF COMPLAINTS	17.6%	82.04%
COMMUNICATION	32.6%	67.4%
RESPONSIVENESS	9.7%	90.3%
EMPATHY	34%	66%

5.4. Trust/commitment

Trust/commitment is an element of and pillar of development and management of relationship between business and its customers. In practice, the trust needed by customers on services are often not fulfilled and/or absent because some business owners show a negative perception to this variable in relationships. Usually, some owners of the salons do not demonstrate a high level of integrity such as consistency, honesty, fairness, helpfulness and responsibility within the business. Thus, absence of these may reduce the level of commitment in a relationship between the salon and the customers. From Table 1, about 14.3% of the salons do not consider and do not show this tendency to their customers. This is not consistent with Sohail (2012:237) who observe that trust/commitment is higher among buyers who believe they receive more value from a relationship, and that it is another important determinant of customer loyalty. Therefore, the absence of trust/commitment within some of the salons is a crucial concern to be addressed if they want to win more customers.

5.5. Handling of complaints

Complaints are queries or customer problems and if satisfactorily resolved enhances loyalty towards the organisation by the customer. From a practical point of view, most potential queries situations in salons could arise from the wrong application of a hair chemical on a customer's hair, disrespect of the employees towards the customer, and insensitivity to a customer's complaints. The outcome of an amicable solution to these disagreements and aspects of dissatisfaction with the services of the salons would foster customer satisfaction, loyalty and retention. However, poorly managed queries in the salon business would interfere with relationships. There must be right complaints management approach to minimize negative outcomes and maximize positive consequences. Thus, the ability of the business to handle queries well could be an important determinant of customer satisfaction, loyalty and retention. Similarly, a 17.6% gap for this marketing practice means a huge loss of customers to those salons. Therefore, complaints handling is a huge investment of time, productivity gains and relationship building for a business.

5.6. Communication

Another gap emanates from an ineffective communication system among the salons. It seems, for any particular organisation to be known and heard by its customers, it should consistently communicate with its customers rather than only produce and price its products. According to the table, 32.6% of the salons do not practise this element of RM within some of the hair salons because, they may find it difficult to inform, remind, persuade and differentiate offerings from competitors. Anabila, Narteh, and Tweneboah-Kodua (2012:53) argue that communication has a positive effect on customer acquisition and retention, and that the frequency of communication between the parties indicates the strength of the relationship. Additionally, Sohail (2012:237) avers that relationship conflict can be reduced by using a proper communication system and that it is important element of relationship marketing. Therefore, the importance of communication within the hair salons cannot be under-estimated, because communication in relationships keeps them in touch with customers, providing timely and trustworthy information if a delivery problem occurs. Therefore, attention must be drawn to the fact that the deeper

or more value that communication has, the more influence it has on customer's perception of the organisation, and the stronger relationship they build.

5.7. Responsiveness

Also included among the gaps is responsiveness as an element of relationship marketing, which is not well adhered to by some of the hair salons. It denotes speed and timeliness of service delivery. The table shows that 9.7% of the salons do not practise this as a driver for customer satisfaction and retention and for that matter relationship marketing. This shows that these salons have negative perception towards this relationship element. This suggests that they do not give prompt service, show care and interest in helping customers, and respond appropriately to requests. These include understanding customer requirements and developing the service based on responsive feedback, which enhances service satisfaction. Kassim and Abdulla (2010:352) allude to this suggestion and describe responsiveness as a company's ability and willingness to provide prompt service when customers have questions or problems. Thus, understanding customer requirements and developing the service based on responsive feedback, enhances service satisfaction, loyalty and relationship building.

5.8. Empathy

Empathy as an element of RM is another driver for building customer-provider relationship. It depicts personal attention, preferences, understanding and caring of the customer. Empathy pre-supposes that owners of businesses are expected to implement customer-oriented strategies whereby businesses must show sincere interest in solving clients' problems and requirements. The table shows that 34% of the salons do not practise empathy within their businesses. This means that these salons do not personalise services and generally do not demonstrate caring behaviour in all of their interpersonal dealings with customers – these represent a gap in the literature to be addressed. Therefore, the stand-up issue from all these gaps is that there is a critical need to address them if relationship marketing can succeed within the hair salons.

6. METHODOLOGY

6.1. Research Design

This study was exploratory to answer two (2) specific research questions. It was exploratory because it investigated how relationship marketing can be used and has its impact on hair salon competitiveness which is a virgin area. The importance of hair salon competitiveness provides rationale for the development of relationship marketing framework. The exploratory design is selected for its quantitative relevance to contextual interplay of data collection and analysis. It employs both descriptive and quantitative research approaches.

6.2. Population and Sampling

The target population for this study were the owners and customers of the hair salons in the Free State Province. The Free State Development Cooperation (FDC) provided an estimate list of 550 registered hair salons. With the population size of 550, a sample of 200 was considered adequate for this study through a pilot study which was conducted to identify the salons suitable for this specific study aimed at quality improvement effort and data reliability. Probability sampling method was adopted in this study for the following reasons: 1) Large sample comprising 550 hair salons in the region, which allows for representativeness; 2) The need to generalize the results of the study, and 3) The population is well defined.

6.3. Data Collection

Lack of suitable previous study on the subject necessitated the construction of a custom made questionnaire. A pilot study using 20 respondents was performed in the Mangaung area of Bloemfontein to improve readability and clarity of the questions. The questionnaires were administered personally. Altogether 54 itemized Likert-type questions were used to collect the primary data for analysis. According to Cooper and Schindler (2011:299), Likert-type scales consist of statements that express either a favourable or unfavourable (agree or disagree) attitude toward the object of interest. Eleven itemized questions for sections A and B were used because the respondents were made not to guess a choice but to indicate specifically what type of information was required by the researcher. The

structured questionnaire was made up of two sections, dealing with the drivers for service quality, customer satisfaction, and retention. The questionnaire was divided into four sections: Section A: general information questions, mostly related to demographic factors; Section B: business information questions; Section C: This section was highly structured - requiring the respondents to indicate their awareness of relationship marketing. The respondents were made to indicate their preferences on a Likert-type scale; Section D: The respondents were made to answer questions on the elements of relationship marketing practices such as service quality, customer satisfaction, customer retention, confidence/trust, communication, responsiveness, tangibility, empathy, and complaints handling.

6.4. Data analysis

Data collected was analysed using the SPSS statistical computer software package proven to produce reliable inferential and descriptive statistics. The data was statistically analysed using frequency counts, and percentages. Cronbach's Alpha coefficient statistic for reliability analysis, correlation and regression models were also used for relationships.

6.4.1. Credibility and reliability of constructs

The Cronbach's Alpha statistic is the main tool used to measure reliability of the various constructs in the study. Cronbach's alpha co-efficient of around 0.70 is deemed acceptable for internal consistency of a measuring instrument (Lai et al., 2010; Field 2012; Khan et al., 2012). Table 2 is the summary of the reliability tested using Cronbach's alpha.

Table 2: Summary of reliability of constructs.

CONSTRUCTS	NO OF RESPONDENTS	NO. OF ITEMS	CROMBACH'S ALPHA	COMMENTS: Internal consistency
Awareness of relationship marketing	145	5	0.920	Very high
Service quality	145	7	0.907	Very high
Customer Satisfaction	145	6	0.770	Adequate
Customer Retention	145	4	0.570	Moderate
Confidence/trust	145	4	0.082	High
Complaints Handling	145	5	0.508	Moderate
Communication	145	4	0.508	Moderate
Responsiveness	145	3	0.721	Adequate
Tangibility	145	3	0.382	Very low
Empathy	145	2	0.701	Adequate
All 10 constructs	145	43		

7. RESULTS AND DISCUSSION

7.1. Response rate

The questionnaires were administered to a sample of 200 hair salons out of which 145 completed were returned. This represents a response rate of 73% (72.5% to be precise). All the returned questionnaires were correctly filled

Table 3. Biographical summary

Biographical Variables	Category	Frequency	Percentage
Q1: Gender	Male	90	62.1%
	Female	55	37.9%
Q2: Age	Below 25	3	2.1%
	26 – 35	83	57.2%
	36 – 40	52	35.9%
	40 and above	7	4.8%
Q3: Level of education	Primary	1	0.7%
	Middle	24	16.6%
	Matric	113	77.9%
	Diploma	3	2.1%
	Degree	4	2.8%
Q4: Nationality	South African	77	53.1%
	Permanent Resident	6	4.1%
	Non South African	62	42.8%
Q5: Type of Respondent	Owner	54	37.2%
	Owner/Manager	14	9.7%
	Manager	7	4.8%
	Employee	7	4.8%
	Customer	63	43.4%

7.1.1. Biographical summary

The study sample consisted mainly of males (62.1%) with 38% female respondents. This demographic suggests more men are involved in hair salon business compared to women. The social and economic rationale for the increase in men compared to women could be any of these reasons: due to the scourge of unemployment hitting the males quite hard, or the low-set up cost of establishing a salon or they have a more entrepreneurial mindset than the female counterparts do. The results show that a majority (57.2%) of the respondents fell within 26 and 35 years' group who form the core of the unemployed. Hair salon business seems to be the only economic activity that the unemployed could easily engage in - especially owing to the fact that it is relatively inexpensive to start a salon business.

The greatest proportion (77.9%) of the respondents were those reaching matric level of education, only 0.7% reached primary level whilst 4.9% had tertiary education. This indicates that the question of unemployment in the province still comes to the fore. These school leavers seemed not to have been able to continue their education to the tertiary level and thus, not being able to be absorbed by the job market except resorting to joining the hair salon industry. The statistics also shows that 46.9% being owners goes to confirm earlier findings that most small businesses are owned by single individuals and future goals of the business are determined as much by personal life style and family factors, as by commercial considerations (Islam et al., 2011). On the other hand, the 9.7% owner/managers could also mean that apart from the fact that they are owners, these may have managerial skills to manage their own businesses and have the potentials to understand the principles of relationship marketing and practise it in their salons.

Table 4. Business details

Business Details	Category	Frequency	Percentage
Q6: Form of business	Sole proprietor	94	64.8%
	Close corporation	21	14.5%
	Partnership	11	7.6%
	Family business	19	13.1%
Q7: Number of employees besides owner	1-5	38	26.2%
	6-10	79	54.5%
	10 and above	28	19.3%
Q8: Age of business	Less than 1 year	6	4.1%
	2-5 years	76	52.4%
	6-10 years	54	37.2%
	11 years and above	9	6.2%
Q9: Daily sales estimates	Less than R200	12	8.3%
	R201-R300	32	22.1%
	R301-R400	33	22.8%
	R401-R500	22	15.2%
	R501-R600	28	19.3%
	R600 and above	18	12.4%
Q10: Monthly gross profit estimates	Less than R10 000	85	58.6%
	R11 000 - 20 000	50	34.5%
	R21 000 - 30 000	5	3.4%
	R31 000 - 40 000	3	2.1%
	R40 000 and above	2	1.4%
Q11: Estimate your business's percentage profit for the previous year	Loss	11	7.6%
	Breakeven	30	20.7%
	up to 2%	55	37.9%
	3-5%	35	24.1%
	6-10%	6	4.1%
	11-15%	3	2.1%
	16-20%	1	0.7%
	21% and above	4	2.8%

7.1.2. Business Profile Summary

The results indicate that most businesses in the study sample were sole proprietorships (64.8%); 14.5% were corporations, with very few partnerships (7.6%), and 13.1% being family businesses. This (64.8%) figure confirms earlier findings of Hinson and Mahmoud (2011), which suggests that one person usually dominates a small firm, and hair salons are no exceptions. The proportions (14.5% and 7.6%), which are close corporation and partnership respectively, could mean that they are rather the registered and well-established hair salons whose owners may be well educated, having marketing information for proper management and who could know much about relationship marketing practices. Regarding the number of employees, the staff complement of most salons is between 6-10 employees (52.4%) with only 19.3% of the sampled businesses having 11 or more employees. These figures confirm earlier findings of Zahedirad and Shivaraj (2011) that tiny establishments employ between 5 and 9 workers. Thus, in terms of this study, most of the hair salons are either tiny or small in nature.

In terms of daily sales growth, 44.9% the businesses were making between R201 and R400; 34.5% of them made between R401 and R600 and only 12.4% made above R600, while only 8.3% of the respondents made less than R200. In general, the businesses sampled were low-income businesses with only 12.4% taking in more than R600 daily and this indicates that they are not profitable in terms of over-head costs. Regarding monthly gross profit, a greater proportion (58.6%) grossed less than R10 000 per month; 34.5% grossed between R11 00 and R20 000. This is an indication that the majority of the salons are relatively not able to make within the profitable range. It could also mean that those salons earning between R21 000 and R40 000 and above (6.9%) are the few close corporations and the partnerships that are well established. Generally, these figures paint a bleak picture of the hair salon business in the province as far as profitability is concerned. In terms of estimated business percentage

profit/loss for the previous year, almost a third (28.3% (41)) of the salons operated between loss and breakeven, which is a significant figure in terms of profitability. Almost two thirds (62.0% (90)) of the salons made between 2% and 5% profit the previous year, while 6.2% (9) of the respondents made 6-15 % profit and 2.8% (4) made 21% and above profit. This means that the current estimates for monthly gross profit does not seem to predict a healthy percentage profit for the coming years. Thus, there is the need for improved marketing practices such as relationship marketing.

7.1.3. Perceived Relationship Marketing Awareness and Practices

An overall measure of perceived Awareness and elements of relationship marketing practices are calculated, using frequency distribution and percentages.

NOTE: The information in Table 5 shows the average percentages of the items of the questions under each construct as summaries.

Table 5: Summary

CONSTRUCTS	NO. OF RESPONDENTS	NO. OF ITEMS	AGREE / STRONGLY AGREE AVERAGE %	COMMENTS: PERCEIVED RELATIONSHIP MARKETING PRACTICE
Awareness of relationship marketing QUES: 12-16	145	5	63.7	Not very high
Service quality QUES: 17-23	145	7	97.0	Practice
Customer Satisfaction QUE: 24-29	145	6	94.4	Practice
Customer Retention QUES: 30-33	145	4	88.4	Practice
Confidence/trust QUES: 34-37	145	4	85.7	Practice
Complaints Handling QUES:38-42	145	5	82.04	Practice
Communication QUES: 43-46	145	4	67.4	Not very much
Responsiveness QUES: 47-49	145	3	90.3	Practice
Tangibility QUES: 50-52	145	3	90.6	Practice
Empathy QUES: 53-54	145	2	66.2	Not very much
All 10 Constructs	145	43		

7.2. Findings Related to the Specific Research Questions

With respect to **Research question 1 - What factors of interaction are needed to promote the service quality of hair salons?** The literature study indicated that some of the elements or factors of service quality are assurance, reliability, value added service and tangibility. However, from the statistical analysis, awareness of relationship marketing (parameter = 0.229, t =4.390, p-value = 0.000) emerged from the questionnaire as a significant factor influencing service quality.

Research question 2: What are the elements or factors of service quality? The literature study indicated that some of the elements or factors of service quality are assurance, reliability, value added service and tangibility. However, it emerged from the questionnaire and the service quality as a RM practice that 98.6% reflect that the businesses agreed/strongly agreed that services offered by employees

show willingness to offer help to customers, and that the business pays individual attention to customers.

8. CONCLUSION

The following conclusions are based on the literature review and the empirical findings. In the literature review, there were gaps to be addressed regarding the neglect of practising some of the relationship variables by some of the salons. In terms of ownership of business, the empirical analysis showed that 77.9% were high school leavers, while 53.1% were South Africans with 64.8% as sole proprietors. In terms of business performance in earnings, greatest proportion (93.1%) grossed less than R21 000 monthly gross turnover, while customer satisfaction as a relationship marketing variable significantly contributed to business performance, even though other variables played some roles. From statistical analysis, relationship marketing awareness among the salons is not very high (55.9%), even though the majority (above 80%) of the respondents strongly agreed that it is good to practise the elements of the relationship marketing in the salons. Therefore, these findings support the need for a relationship marketing model for hair salon competitiveness and growth.

8.1. Final framework for relationship marketing

The framework for relationship marketing presented here is based on the conclusion derived from the gaps in the literature review and empirical data analysis (See Table 1). It is hoped that this framework would support and promote relationship marketing success in small businesses, particularly, the hair salons through the application of relationship marketing elements identified to be effective in influencing service quality, customer retention, and satisfaction. Figure 1 is the proposed framework for relationship marketing for hair salons.

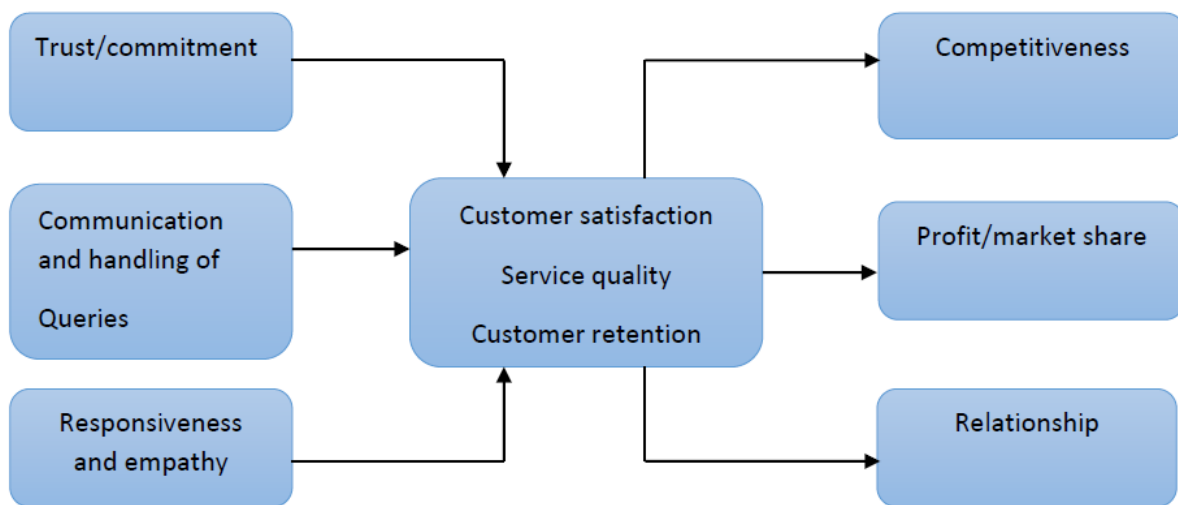


Figure 1: Proposed framework for relationship marketing for hair salons

8.2. Discussion of the framework

The key variables of the framework are extracted from some gaps found in the literature review and the empirical findings; namely, trust/commitment, communication, handling of queries, responsiveness, and empathy as independent variables. The mediating variables are customer satisfaction, service quality and customer retention. It is assumed that if these gaps or perceptions are addressed and the business practices them, it would be able to provide quality service, customer satisfaction, and retention, which would ultimately lead to competitiveness, profit/market share, and relationship building.

8.3. Application of the relationship marketing framework

The framework can be used to influence customer perceptions that have to do with the way in which customers view and react to the products and services that are available to them - especially when the product or service is novel. The management strategies in the framework could be applied to the operations of marketers. For example, for marketers in their campaigns to get attention of customers by making it possible to convince them to purchase a specific product or service use marketing

communication strategy. The purpose of this framework is to ensure that management functions are aligned with service quality strategies, cutting across the marketing activities, determining customer satisfaction and retention of the adoption process. It supports the challenges that management of the hair salons face that has become imperative with the increase of, for example, new demands of customers for service quality, current fashionable hairstyles and even current hair chemicals within the industry context.

With increased competition, changes in customers' taste for current hairstyle and life style in the context of hair salons, this framework can be used to communicate differentiated features of services and products offerings. By so doing, hair salons' competitive abilities would benefit from the application of the framework.

8.4. Application of the framework to relationship management

Since "the customer" is the central block of relationship marketing building, one of the benefits of the framework is found to be the fostering of long-term customer relationships. It is worthy to note that long-term customer relationships build mutual rewards that benefit both the firm and the customer, while the organization can also gain quality sources of marketing intelligence for better planning of the marketing strategies (Jesri, Ahmadi & Fatehipoor, 2013). In addition to this, this relationship marketing framework allows flexible access and interaction of a business with customers as against traditional marketing practices where customers were passive partners.

The framework can be used to encourage hair salon businesses to develop a competitive plan by fostering intense, difficult-to-duplicate marketing relationships with customers, employees and even competitors as partners. For example, this could be done by the management developing special treatment such as extra services, special prices, coupons, free hair products and higher priority over other customers, or providing fast and flexible salon services or product information to customers.

The framework assumes that management steps up the marketing management process to manage all the marketing activities with such elements as commitment, trust, empathy and responsiveness. This commitment of management is essential in promoting the concept of customer relationship management within and outside the business. What ought to be done is to, among others, institute frequent changes in marketing activities and introduction of support techniques such as trained staff that are required to make the framework a success because relationship marketing is a partnership in nature

9. RECOMMENDATIONS

9.1. Formalisation of hair salon industry

The study revealed that greater proportion of the hair salons in the industry are not formalized and unregistered. Efforts must be made by Free State government, in partnership with small-business-oriented NGOs to formalize these informal hair salons into economically viable ventures by registering them to be sustainable commercial industry. The financial implication for the formalization would make them get provincial guarantees to enable them access financial credit facilities from the banks and other financial institutions. With this financial back up, hair salons would be able to finance any marketing practices such as relationship marketing management, which may be cost-inhibitive to undertake.

9.2. Development of hair salon academies

The literature review shows that already hair salon academies are spreading across in some major cities of the country illustrating the importance, lucrative, job creation, and self-employment potential of the business, which seems to be scantily found in the Free State Province. It is suggested that such training centers be established in the various cities of the province. There must be a curriculum blend of both hair care and marketing practices such as relationship marketing and other business skills to stimulate growth in this market. In order to boost its potential for novelty and growth, and in collaboration with the Skills Education and Training Authority (SETA), such academies could be accredited. This step would draw more unemployed into the industry to make it value creating.

9.3. Development of skills training

It is recommended that basic training in business management and entrepreneurship must be incorporated in the academies mentioned earlier to assist the salons owners to overcome skills shortages. The aim is to prepare the students to run their own businesses with the knowledge gained. The local municipalities and private collaborate practise capacity training by setting up development and training programmes for salon operators. In these programmes, areas such as marketing management, marketing practices, simple financial management, marketing research, and more importantly the knowledge of relationship marketing are included, so that the operators of these salons' would gain mastery of relationship marketing management to enhance customer relationships.

9.4. Recommendations for further research

The results of this empirical research necessitate further research on the following pertinent issues: Whether the findings of this study are applicable to other parts of South Africa by replicating this research on a larger scale preferably nation-wide; Why relationship marketing is not practiced by some hair salons to any appreciable extent in the Free State province; To validate the findings of this study to suggest that relationship marketing framework influences hair salon competitiveness, performance, and growth.

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Locus of Control of Engineering Workforce in a Power Distribution Utility: Implications for Job Performance

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ABSTRACT

In view of the high risk, high voltage environments which the Eskom Bloemfontein engineering workforce (i.e. engineers, technologists, and technicians) is exposed to in the design, installation and maintenance of coal-fired power plants, sub-stations, transmission lines and electrical equipment, their psychological dispositions - especially locus of control is non-trivial. The exploration of the influence of locus of control of the engineering workforce on improved job performance is critical to eliminating electricity related risk, accidents and deaths emanating from work-related fatigue, job stress and exhaustion. This empirical study draws on a quantitative approach, a survey research design and revised Rotter's Locus of Control Scale questionnaire to explore combined influence of internal and external locus of control on organisational performance. The results demonstrate a positive relationship between internal locus of control and job performance of the Eskom engineering workforce. The results also demonstrate that a sizable number of the Eskom engineering workforce are easily influenced by external forces, with implications for the job performance of the engineering workforce. Implications for the initiation and fostering of locus of control to improve the job performance of Eskom Bloemfontein engineering workforce are discussed.

Keywords: Eskom, Job Performance, locus of Control

1. INTRODUCTION

The current study examines the components of internal and external locus of control and their influence on job performance of the Eskom Bloemfontein engineering workforce in their work environment. Locus of control (LC), which describes “the extent to which individuals believe that they have control over their own destiny” (Asiedu-Appiah & Addai, 2014:44), is a critical requirement to Eskom Bloemfontein’s engineering workforce comprising engineers, technologists, and technicians. This workforce’s electricity infrastructure installation and maintenance work unfolds in high risk, high voltage environment comprising coal-powered power plants, sub-stations, high voltage transmission and distribution lines, generators and highly charged electrical equipment. Since locus of control is “a psychological concept” that captures “how strongly people believe they have control over the situations and experiences that affect their lives” (Adams et al., 2008: 109), the effective planning and execution of electricity infrastructure design, installation, maintenance, repair and overhaul demands recourse to locus of control - especially internal locus of control. Effective performance of such work and elimination of work-related accidents, injuries and deaths demand the engineering workforce to persistently display appropriate psychological dispositions such as locus of control, among other considerations. As O’Connell et al. (2015) suggests, high locus of control is associated with effective performance, reduced stress and reduced accidents in the work environment.

Although work-related injuries, accidents and fatalities at Eskom have multiple causes (e.g. human error, failure to adhere to safety procedures, fatigue, exhaustion and boredom), there is no doubt that low locus of control at work has potential to contribute to mishaps and lower performance among employees. A study conducted by Rana, Muammer & Zeynep (2011) on the effects of locus of control on learning performance of academic students indicate that low locus of control at work contributes to lower job performance of employees. The study elaborates that individuals with external locus of control are less careful, affected by the group members, easily influenced by external forces, are less self-confident, and they display unsteady job performance (JP). Eskom Safety performance statistics highlights that 202 lost-time injuries (LTIs) including occupational diseases were reported in 2015/16 (Eskom Integrated Report, 2016). Despite Eskom’s commitment to safety, the company experienced an increase in both employee and contractor fatalities-four employee and thirteen contractor employee fatalities in the 2015/16 financial year (Eskom Integrated Report, 2016). In view of these work-related

deaths, there is scope to explore the relationship between internal and external locus of control and effective job performance at Eskom. Since the characterisation of job performance at Eskom incorporates a “zero harm” policy, understanding LC-JP relationship would be critical to eliminating various harm and fatalities in the work environment. The study, therefore, seek to address the following questions:

1. What are the main components of internal and external locus of control of the Eskom engineering workforce in Bloemfontein?
2. What is the influence of locus of control on the job performance of the Eskom engineering workforce in their work environment?

The rest of the paper is structured as follows: A brief research background is provided, followed by formulation of the research problem, literature view, methodology, presentation of findings, discussion, recommendations, implications for future research and conclusion.

2. RESEARCH BACKGROUND

Eskom is mandated to generate, transmit, and distribute 70% of its electricity to industrial, mining, commercial, agricultural, redistributors, and residential customers in South Africa. Eskom as the officially sanctioned single buyer has to procure all the electricity generated by renewable energy independent power producers (IPPs) at prices negotiated by the Department of Energy, which is guided by the renewable energy feed-in tariff process (REFIT) (Eskom Holdings Soc Ltd, 2015b). Despite the huge national strategic role of Eskom, the company has multiple power generation and distribution challenges which have recently manifested in blackouts leading to the under-production of mining companies, economic stagnation (at 2% in 2015 rather than the projected 5%), decline in productivity in different economic sectors, malfunctioning of traffic lights, traffic congestions and increased accidents.

The need for high locus of control at Eskom should be conceived in light of the incidences of work-related injuries, accidents and casualties in the work environment despite the institution’s implementation of the Zero Harm Programme in the Year 2009 (Eskom Annual Report, 2009). While the cause of these accidents may vary from failure to observe safety procedures, human error, negligence and fatigue, engineering workforce’ self-efficacy and self-belief in their capacity to effectively execute their roles and responsibilities in a safe environment (i.e. locus of control) cannot be discounted in these work-related contingencies.

It is uncontested that the engineering profession is a very stressful and challenging profession which demands more than just a demonstration of intellectual, technological and technical capacity to include an individual’s self-belief in their capacity to influence outcomes (i.e. locus of control). Locus of control has been found to influence many job performance related factors. Ng et al. (2006), a United States based study explored the influence of locus of control on job-related factors and found that locus of control is positively related to job attitudes, employee well-being, coping behaviour, withdrawal intentions, withdrawal behavior, perceptions of the work environment and job performance. Similarly, Modise’s (2016) Master’s study, which examined engineers’ self-leadership and their locus of control on job performance demonstrated that engineers deal with stressful scenarios on a constant basis, which often contribute to their fatigue, burnout, loss of concentration and focus in their work environment. Collectively, these studies point to the need for engineers to exercise high locus of control if there are to optimise their performance in the work environment.

3. PROBLEM STATEMENT

While the highly stressful nature of engineering work and its impact on job performance is acknowledged in literature (Rasi et al., 2014), the influence of internal and external locus of control on job performance of the Eskom engineering workforce remains speculative. For instance, Munir and Sajid (2010) claim that despite the increasing interest in locus of control-job performance relationship over the years, findings remains inconclusive and sometimes contradictory. While Asiedu-Appiah and

Addai (2014) insist that locus of control exerts a significant and positive impact on performance, April, Dharani & Peters (2012) contest this position arguing that locus of control exerts a weak and sometimes negative effect on job performance. The problem, therefore, is the inconclusive evidence on the relationship between locus of control and job performance, which complicate researchers' solid knowledge of the exact nature of the relationship between these variables.

4. CONCEPTIONS AND DIMENSIONS OF LOCUS OF CONTROL

Locus of control refers to one's belief in his or her abilities to control life events (Strauser, 2002; Hillol & Poonam, 2014). It is an aspect of personality that deals with individuals' generalised expectancies that they can or cannot control reinforcements in their lives (O'Connell & Spector, 1994). In the context of the engineering workforce whose work involves the conception of engineering drawings, the design of such drawing, and their erection of engineering structures and installation of power generation and transmission structures, the capacity to influence work-related outcomes is integral to effective execution of such work. Since locus of control emphasises one's belief in his/her own power or forces to influence positive or negative situation occurring during their life (Sardogan, 2006:184), such sense of capacity to influence work outcomes cannot be insulated from scrutiny. This is particularly the case for public organisations such as Eskom, which have been financed by national bailouts, is largely under public scrutiny and for which employee performance is a non-negotiable matter.

Two forms of locus of control; namely, internal and external locus of control, are largely presented in mainstream management literature. Individuals who have internal locus of control think that they have a big role to play in affecting the events which influence their lives. Furthermore, they assess themselves as possessing the power to direct their lives in whatever way they desire (Gülveren, 2008). On the contrary, individuals with external locus of control relate the events affecting their lives to perceptions that are out of their control, such as chance, fate, and fortune. As such, given the strategic importance of Eskom in national development discourse, this organisation cannot be steered by engineers and technicians who surrender their work-related outcomes to the vagaries of chance and fate. Since employees with external locus of control believe that the events affecting their lives cannot be predicted and controlled (Küçükkaragöz, 1998; Rastegar & Heidari, 2013), they would be misfits if they were to be in the employ of Eskom, where predictability and consistency in electricity generation, distribution and supply is expected from this organisation's stakeholders.

4.1. Locus of control and job performance

Many researchers have shown that locus of control has an important role on individuals' lives. Thus, locus of control affects both one's physiological and psychological health to a considerable extent. Thus, although locus of control' is subjective, it can cause psychological problems. In addition, locus of control is another factor found to be related to performance (Sonnetage *et al.*, 2010:352, Syahputra, 2014:107), where else several studies support the notion that internals (people with internal locus of control) exert greater effort on the job and are subsequently better performers (Thomas, Kelly & Lillian, 2006; Asgari & Vakiri, 2012; Hans, Nusbeen & Ghabshi, 2013) than externals (people with external locus of control) in confirmation of this Wang, Bowling & Eschleman (2010:761) found that individuals with an internal locus of control orientation appear more motivated, perform better on the job, and express higher levels satisfaction than individuals with an external locus of control.

5. METHODOLOGY RESEARCH DESIGN

The paper adopted a cross-sectional survey design. A cross-sectional survey research design seeks to gather data from a single point in time (Punch, 2013) to provide comprehensive evidence about the state of affairs about the phenomenon at that particular time. To explore the constitution of locus of control, including this concept's relationship with job performance of engineers at a specific time, a cross sectional research design was considered most appropriate for such an investigation.

5.1. Target Population

The Eskom Bloemfontein Human Resources department had a target population of 134 full-time engineering personnel comprising 30 full-time graduate engineers, 34 technologists and 70 technicians. Given the small size of the target population, census was considered. A census is considered appropriate

when the entire population is very small and it becomes unreasonable to select some members from the entire population. The census seeks to include every unit of the population available (Grim *et al.*, 2010) due to its small size. All the 134 engineering workforce were therefore targeted in this study. Of the 107 employees who successfully completed the questionnaire, there were 29 graduate engineers, 28 technologists and 50 technicians, thus representing 80% of the target population.

5.2. Instrument credibility

The structured questionnaire instrument was an adapted version of Rotter's Locus of Control Scale questionnaire. The questionnaire was validated for reliability using Cronbach's alpha coefficient. The Cronbach's alpha coefficient for internal locus of control was 0.706 and that for external locus of control was lower (0.434) due the number items involved. The Cronbach's alpha coefficient for locus of control (overall) was 0.688. Based on Kumar (2011:196), these statistics demonstrate that questionnaire items were reliable.

The averages and percentages of the internal locus of control and overall locus of control variables were calculated. The means and mean percentages of each of the items are presented in Tables 2.

Table 2: Descriptive statistics.

Variables	Mean	Mean %
Internal Locus of control	58.41	77.88
Locus of control (overall)	76.02	69.11

The mean percentages of internal locus of control and overall locus of control are 77.88% and 69.11%, respectively. These measures are all high and above 50%. This means that a majority of these engineers identify highly with the locus of control.

5.3. Data analysis

The data analysis involved descriptive analysis and inferential statistics. Descriptive statistics comprising frequencies, measure of central tendency (the mean) and measures of variation (range and standard deviation) were used to summarise the responses to the survey questions. According to Neuman (2011:386) descriptive statistics provide a summary of the main features of a set of data collected from a sample of participants. Inferential statistics such as Spearman's rho correlation coefficient and Regression equations were also used to test the influence of locus of control and job performance.

5.4. Sample demographics

As shown in Table 3, the analyses of demographic factors focused on respondents' age, gender, marital status, level of education, ethnic background, and rank in occupational hierarchy and years of experience.

Table 3: Demographic information.

Demographic information	Category	Frequency	Percentage
Gender	Female	48	44.86%
	Male	59	55.14%
Age Group	21 - 30 Years	41	38.32%
	31 - 40 Years	32	29.91%
	41 Years & above	34	31.78%
Ethnicity	Black Africans	70	65.42%
	White	29	27.36%
	Indian & Others	8	7.55%
Marital Status*	Single	44	41.12%

	Married	63	58.88%
Educational Level	Matric & Certificate	9	8.41%
	Diploma	33	30.84%
	Honours	21	19.63%
	Master's	14	13.08%
	Others	30	28.04%
Engineers Hierarchy	Technicians	50	46.73%
	Technologist	28	26.17%
	Graduate Engineer	29	27.10%
Years of experience on the job	0 - 5 Years	27	25.23%
	6 - 10 Years	28	26.17%
	11 - 15 Years	24	22.43%
	Over 15 Years	28	26.17%

* - combined Never married, Divorced/separated and widowed and named it Single. This is for more plausible comparability for marital status groups

The results in Table 3 highlight that the majority of respondents were male (55.14%) while the remainder were female (44.86%-48). Also, most (38.32%) of the respondents were in the 21 to 30 years age category, followed by those who were 41 and above (31.78%) and lastly the 31 to 40 years (29.91%) group. About 65.42% of the respondents were black Africans; 27.36% were white and 7.55% were Indians and other minority groups.

5.5. Internal locus of control

This section establishes whether respondents had internal locus of control or external locus of control to address the research question on the main components of internal and external locus of control of Eskom engineers.

Table 4: Internal Locus of Control

Internal locus of control		Frequency distribution					Descriptive		Latent factor	
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Agree/Strongly agree	Mean	Standard deviation	Factor loading
Can certainly determine what will happen in my work environment.	n	2	9	41	32	23	51.40 %	3.61	0.98	0.328
	%	1.87 %	8.41 %	38.32 %	29.91 %	21.50 %				
Have a big role in shaping events which influence my work life.	n	0	1	8	56	42	91.59 %	4.30	0.65	0.317
	%	0.00 %	0.93 %	7.48 %	52.34 %	39.25 %				
Have the power to determine the attitude I want to display at work.	n	1	0	1	45	59	98.11 %	4.52	0.62	0.675
	%	0.94 %	0.00 %	0.94 %	42.45 %	55.66 %				
	n	1	1	5	47	53		4.40	0.71	0.668

Work life is determined by own action.	%	0.93 %	0.93%	4.67%	43.93 %	49.53 %	93.46 %			
Strong connection between work-based actions and consequences.	n	1	3	15	50	38	82.24 %	4.13	0.83	0.513
	%	0.93 %	2.80%	14.02 %	46.73 %	35.51 %				
People who perform their job well deserve to be rewarded.	n	13	17	21	30	26	52.34 %	3.36	1.33	0.411
	%	12.15 %	15.89 %	19.63 %	28.04 %	24.30 %				
Conceive supervisors in high regards.	n	9	25	29	30	14	41.12 %	3.14	1.17	0.372
	%	8.41 %	23.36 %	27.10 %	28.04 %	13.08 %				
Value participative management style.	n	1	0	12	49	45	87.85 %	4.28	0.74	0.618
	%	0.93 %	0.00%	11.21 %	45.79 %	42.06 %				
Have autonomy and control of work activities.	n	2	4	16	53	31	79.25 %	4.01	0.88	0.535
	%	1.89 %	3.77%	15.09 %	50.00 %	29.25 %				
More likely to experience work stress.	n	14	28	31	23	11	31.78 %	2.90	1.19	0.199
	%	13.08 %	26.17 %	28.97 %	21.50 %	10.28 %				
Generally satisfied with my job.	n	3	4	21	43	36	73.83 %	3.98	0.97	0.351
	%	2.80 %	3.74%	19.63 %	40.19 %	33.64 %				
Works hard to develop knowledge, skills and abilities.	n	2	2	6	45	52	90.65 %	4.34	0.82	0.675
	%	1.87 %	1.87%	5.61%	42.06 %	48.60 %				
Believes positive affirmation from previous experiences results from attitude.	n	4	6	35	40	22	57.94 %	3.65	0.99	0.270
	%	3.74 %	5.61%	32.71 %	37.38 %	20.56 %				
Have lower levels of job stress if performance is better.	n	4	14	21	39	28	63.21 %	3.69	1.12	0.188
	%	3.77 %	13.21 %	19.81 %	36.79 %	26.42 %				
Emphasises striving for achievement.	n	1	3	10	51	42	86.92 %	4.21	0.80	0.408
	%	0.93 %	2.80%	9.35%	47.66 %	39.25 %				

The results in Table 4 reveal that 98.11% of the respondents have the power to determine the attitude they want to display at work and 93.46% of respondents agree that their work life is determined by their own actions at work. A total of 91.59% have a big role in shaping the events which influence their work life and 90.65% work hard to develop their knowledge, skills and abilities.

Overall, the positive work orientation insinuates a strong internal work ethics among technicians, technologists and engineers in the engineering divisions at Eskom, Bloemfontein, which if properly harnessed can positively impact on job performance. This inherent power to determine the task and job environment outcomes seems to eclipse responses to statements such as “people who perform their job well deserve to be rewarded” and “I can certainly determine what will happen in my work environment” which generated marginal affirmations (i.e. 52.34% and 51.40% respectively). The marginal affirmation of the first statement seems to attest to the absence of limited adherence to an equitable compensation structure at Eskom, Bloemfontein. A McKinsey Quarterly study found that seventy percent of organisations say that they use or plan on using a motivation program (Dewhurst et al., 2009). Many managers still believe that money is everything. Research shows that non-financial rewards or

recognition serve as a better motivator than money for most people (Burton, 2012). The later statement is quite relevant since it is inconceivable to have full control over one's work-related destiny unless perhaps if one were self-employed. Thomas et al. (2006) note that people who possess a high internal locus of control have full control over their work-related destiny.

5.6. External locus of control

Table 5 illustrates that a majority (68.22%) of the engineering work force agreed that the general work climate (e.g. work rules, procedures) tends to control their actions at work. Given that the different work environments at Eskom, Bloemfontein, which include the high voltage, operational resources management; network system configuration administration and plant maintenance; basic system maintenance and risk reduction; and fault finding and repair work, are all governed by clear operational guidelines, rules and stipulations such as the codes of practice relating to the operation, use and maintenance of transmission and distribution power systems, it is natural that engineers would be obliged to these regulations in their work environments. For instance, the high voltage all pylons that are erected in residential areas have a height restriction of 25 meters or 80 feet tall, and yet if there are tall trees that are present, then the towers' heights of 30 to 40 meters or 100 or 120 feet are recommended by Clark (2014) in his study of planning and building successful installation.

A total of 40.19% of the engineering work force agreed that they see the external environment influencing and controlling their actions at work. This moderately high external locus of control suggests that some of Eskom employees lacked the capacity and capability to determine their work-related and work environment-related outcomes. These findings mirror Rana et al.'s (2011) findings, in their study of the effects of locus of control on learning performance, that individuals who have high external locus of control display unsteady performance. However, the fact that these employees were in the minority is consistent with findings on the high internal locus of control reported in the previous section (see Table 4.1: Internal Locus of Control).

Table 5: External locus of control

External locus of control		Frequency distribution						Descriptive		Latent factor
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Agree/Strongly agree	Mean	Standard deviation	Factor loading
External environment influences my actions at work.	n	7	24	33	27	16	40.19%	3.20	1.14	0.512
	%	6.54%	22.43%	30.84%	25.23%	14.95%				
Depends on peers to get job done more.	n	52	25	15	6	8	13.21%	1.99	1.25	0.475
	%	49.06%	23.58%	14.15%	5.66%	7.55%				
Work climate tends to control my actions at work.	n	3	9	22	43	30	68.22%	3.82	1.03	0.131
	%	2.80%	8.41%	20.56%	40.19%	28.04%				
Depends on supervisor for direction and guidance.	n	43	36	14	7	7	13.08%	2.06	1.18	0.646
	%	40.19%	33.64%	13.08%	6.54%	6.54%				
Attitude towards work is shaped by financial incentives.	n	17	28	33	20	9	27.10%	2.78	1.18	0.445
	%	15.89%	26.17%	30.84%	18.69%	8.41%				
	n	57	36	11	1	1	1.89%	1.74	1.44	

Struggles to work independently without peers.	%	53.27%	33.96%	10.38%	0.94%	0.94%				0.441
Attributes success at work to external forces.	n	35	41	22	7	2	8.41%	2.07	0.98	0.614
	%	32.71%	38.32%	20.56%	6.54%	1.87%				

5.7. Influence of locus of control on job performance

This section assesses the influence of locus of control of Eskom engineering workforce on job performance of the engineering work force in their working environment. The relationship was determined through a consideration of question items' mean and standard deviations followed by the conduct of correlations analysis.

Table 6: Influence of locus of control on job performance

Influence of locus of control on job performance	Frequency distribution						Descriptive		Latent factor	
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Agree/Strongly agree	Mean	Standard deviation		Factor loading
Takes note of information that can be used to create positive outcome.	n	0	1	5	58	43	94.39%	4.34	0.61	0.656
	%	0.00%	0.93%	4.67%	54.21%	40.19%				
Self-confidence assists me to accomplish tasks on my own.	n	0	1	3	52	50	96.23%	4.42	0.60	0.727
	%	0.00%	0.94%	2.83%	49.06%	47.17%				
Self-confidence assists me to accomplish tasks with less supervision.	n	0	0	5	53	49	95.33%	4.41	0.58	0.755
	%	0.00%	0.00%	4.67%	49.53%	45.79%				
Making effort improves capabilities of employees.	n	0	1	4	57	44	95.28%	4.36	0.60	0.602
	%	0.00%	0.94%	3.77%	53.77%	41.51%				
Being inquisitive helps to accomplish tasks successfully.	n	1	1	7	51	47	91.59%	4.33	0.72	0.674
	%	0.93%	0.93%	6.54%	47.66%	43.93%				
Engaging in activities that help my work situation has made job completion rewarding.	n	2	0	8	59	38	90.65%	4.22	0.74	0.648
	%	1.87%	0.00%	7.48%	55.14%	35.51%				
Performing well at work leads to positive outcomes.	n	13	16	27	20	31	47.66%	3.37	1.36	0.226
	%	12.15%	14.95%	25.23%	18.69%	28.97%				
Have a great deal of influence on the	n	0	1	19	50	37	81.31%	4.15	0.74	0.429

achievements of my department.	%	0.00%	0.93%	17.76%	46.73%	34.58%				
I volunteer to carry out task activities that are not part of my job.	n	2	3	14	53	35	82.24%	4.08	0.86	0.330
	%	1.87%	2.80%	13.08%	49.53%	32.71%				
Cooperating with others in the organisation helps to get tasks done successfully.	n	0	0	4	37	66	96.26%	4.58	0.57	0.596
	%	0.00%	0.00%	3.74%	34.58%	61.68%				

Table 6 presents the influence of locus of control on job performance of the engineering workforce. A total of 96.23% agreed that having self-confidence when performing tasks has assisted them accomplish tasks on their own, while 96.26% agreed that cooperating with others in the organisation is critical to getting tasks accomplished successfully. About 95.33% of the respondents agreed that having self-confidence has helped them accomplish tasks with less supervision. Furthermore, 95.28% agreed that making the effort improves their capabilities on the job while 94.39% agreed that they take note of information that can be used to create positive outcomes in the future.

The second level of analysis involved performing a correlation test to determine the influence of locus of control on job performance. Since the locus of control variables were not normally distributed, the Spearman's rho correlation coefficient was used. This correlation test determines whether there is a relationship between locus of control and each of the performance statements. To determine whether the two variables are significantly correlated, the p-value is used. A discussion of each of the relationships between locus of control and job performance (visualising job performance) statements is given below (see Table 7).

Table 7: Correlation coefficients between performance and locus of control

Variables	I use my imagination to picture myself performing well on important tasks.	I visualise myself successfully performing a task before I do it.	Sometimes I picture in my mind a successful performance before I actually do a task.	I purposefully visualise myself overcoming the challenges I face.	I often mentally rehearse the way I plan to deal with a challenge before I actually face the challenge.	
Locus of control						
Internal locus of control	Coefficient	0.423	0.474	0.473	0.363	0.369
	P-value	0.000	0.000	0.000	0.000	0.000
Locus of control	Coefficient	0.298	0.397	0.363	0.278	0.288
	P-value	0.002	0.000	0.000	0.004	0.003

The above results show that internal locus of control is positively related with the visualising job performance statements and the correlation coefficients range from 0.363 to 0.474. All 5 correlations coefficients are statistically significant, thus indicating that there are significant relationships between locus of control and each of the visualising job performance statements.

Table 8: Regression results

Dependent variable:	Unstandardized		t-statistic	p-value
	Coefficients	Std. Error		
Intercept	8.683	2.675	3.246	0.002
Locus of control	0.157	0.035	4.499	0.000
R Square	0.162			

The results above show that locus of control has a positive impact on job performance. The coefficient, 0.157, means that an improvement on locus of control by 1% leads to a 15.7% increase in job performance. R squared is 0.162, which means that about 16.2% of the variation in job performance is explained by locus of control.

6. DISCUSSION

The data presented in Table 4 and 5 illustrate that the components of locus of control that affected engineering workforce at Eskom were internal locus of control and external locus of control. The mean percentage for internal locus of control was 77.88%, demonstrating that the engineering personnel at Eskom in Bloemfontein generally exhibited a high level of internal locus of control, judging from their positive work-oriented experiences and their capacity to control situations relating to the job itself and the general work environment. Such a strong positive orientation towards work and the general work environment resonates with Asiedu-Appiah and Addai's (2014:53) findings on Kumasi Centre for Collaborative Research (KCCR) employees in which 85.72% of respondents were reported to possess internal locus of control. All the averages for the internal locus of control tested were above 50%, which indicates a positive orientation towards locus of control. The positive identification with locus of control seem to cohere with Mali's (2013:149) findings on the high locus of control reported in their study and its positive effects on the job performance. The positive orientation towards work life of engineering workforce at Eskom concurs with Thomas et al.'s (2006) study on locus of control which reports that individuals who have internal locus of control perceive themselves as performing a big role in affecting events which influence their work lives.

Table 5 shows the 40.19% of engineering workforce considered the external environment as influencing and controlling their actions at work. This sizable amount of external locus of control suggests that some engineering workforce at Eskom Bloemfontein lacked the capacity and capability to determine their work-related and work environment-related outcomes. These findings mirror Rana et al.'s (2011) results on the effects of locus of control on learning performance which highlighted that individuals who have high external locus of control display unsteady performance. However, the reality that these employees were in the minority is consistent with findings on the high internal locus of control reported in the previous section.

The results in Table 6 demonstrate that internal locus of control of Eskom engineers positively influences their job performance. Several studies affirm that individuals with internal locus of control exert greater effort on the job and are subsequently better performers than individuals with external locus of control (Muhonen & Torkelson, 2004; Thomas et al., 2006; Asgari & Vakiri, 2012). For instance, it has been found out that internal locus of control is related to various important work outcomes including job satisfaction and job performance (Thomas et al., 2006:107). The expression of sizable external of locus of control could be a consequence of the leadership dynamics and the limited amount of free reign Eskom engineers may be rendered during performance of their work. An authoritarian leadership style impedes middle and operational level managers' capacity to take charge of their work environment, complicating the connection of the effort spent on tasks to job performance. This would lead them to attribute performance to external circumstances.

Overall the perceived positive relationship between internal locus of control and job performance suggests that when engineers enjoy a great deal of autonomy on their job, they will be more inclined to conceive the direct consonance of their individual effort and job performance (Rambe & Modise, 2016). Researchers have also found that individuals with an internal work locus of control generally have

greater control of the work environment, perform better due to their control of outcomes and have lower levels of job stress (Chen & Silverthorne, 2008:572). Furthermore, other authors have reported a strong relationship between perceived work control and certain job-related factors such as job satisfaction and emotional distress (Wang et al., 2010:761). Our intuition, therefore, is that the more internal locus of control Eskom engineers have on their work, the higher the chances of their satisfaction on the job and the more they would attribute their success to their individual and collective effort.

7. RESEARCH RECOMMENDATIONS AND IMPLICATIONS

The results of the study suggest that respondents understood the concept of locus of control. The fact that slightly over 40% of respondents of engineers were reported to have external locus of control, implies that future studies may need to examine the effectiveness of interventions that Eskom institute to instil internal locus of control and reduce the external locus of control among these employees.

More so, the fact that a sizable number of the engineering workforce (40.19%) see the external environment as influencing and controlling their actions at work implies that this workforce lacks the capacity and capability to determine their work-related and work environment-related outcomes. The moderate dominance of external locus of control can be detrimental to job performance as employees attribute success to chance and external circumstances and not their personal effort and task efficacy. Such variations in locus of control among the engineers seems to suggest that developing a work culture that attracts employees with a high internal locus of control can result in the organisational wide assimilation of locus of control. Human resource recruitment policies at Eskom should, therefore, focus on identifying and recruiting people with internal locus of control or making such a quality a component of the human resource development at Eskom. High performers with internal locus of control can also be used as role models across departments to ensure a wider rollout of a high locus of control culture. Future research can examine the effect of such role models' task behaviours on the assimilation of internal locus of control among these employees without such qualities.

Successful performance of engineering programmes and projects do not only require change in the way in which engineering education prepares students for professional practice, but rather transformation in the work philosophy and culture of Eskom leadership at all levels to ensure all employees' socialisation into productivity-oriented leadership repertoires. The internalisation of a strong internal locus of control and a strong work ethic and their practical manifestations at all organisational levels is critical increased productivity of Eskom engineers. Future research could examine the effectiveness of mechanisms Eskom has put in place promote a deep work ethic and a sense of personal ownership of tasks and activities among its engineering employees.

8. CONCLUSION

The study established that a positive correlation relationship exists between internal locus of control and performance of engineers, but the opportunity for expression of such internal locus of control becomes a challenge for some engineering workforce due to multiple constraints within the Eskom work environment. The existence of external locus of control among a sizable percentage of Eskom engineering workforce can be detrimental to job performance for those employees who attribute their success to external circumstances and not their personal effort and task efficacy. Therefore, a change in work philosophy may need to entrench a culture of leadership at all engineering levels to ensure the internalisation of a strong internal locus of control and strong work ethic, which will manifest at all organisational levels. Work-related personal mentoring of employees serves as a critical tool to generating a vibrant attitude towards work, habits and orientation to others.

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Critical Stakeholders That Hospitality SMMEs Engage with in Fulfilment of Their BSR Activities

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ABSTRACT

While stakeholders are considered as an integral component of any successful business strategy, it remains unclear which stakeholders impact the business' social responsibility activities the most as primary and secondary stakeholders differentially engage with the business. More so, the scale of business operations, age of the business and the industrial and sectoral location of the business have a profound influence on the readiness and proficiency of the business to adopt business social responsibility. More so, the dominance of large businesses in corporate social responsibility activities invokes an erroneous assumption that business social responsibility (BSR) is the preserve of large businesses, which SMMEs are insulated from. In view of the ambivalence about the constitutive composition of stakeholders which small businesses engage with in pursuit of their BSR activities, this study investigates the critical stakeholders that hospitality SMMEs engage with in their social responsibility activities. Drawing on quantitative approach, a survey was conducted among 120 owner/managers of hospitality SMMEs in the Free State province, South Africa. Evidence suggests that although community and managers tend to be the most valued stakeholders in the SMME BSR activities, SMMEs differentially engaged with all stakeholders in their socially responsible activities. More so, donations and employment of local communities were the prime preoccupations of business-communities' engagements. The study recommends a transition from this minimalist perspective of stakeholder management to embrace other secondary players if BSR initiatives are to succeed.

Key words: Business Social Responsibility, community, hospitality, SMMEs, stakeholders

1. INTRODUCTION AND PROBLEM STATEMENT

While the national impact and visibility of large corporations manifests in large-scale innovations, research and development frontiers, the “invisible hand” of small firms tends to be felt in grass root development initiatives that steer equitable growth opportunities. Such parallels do not necessarily insinuate the obscurity of small firms at national level or the inconsequential impact of large companies at local levels but rather signify the consonance of firm size with the firm's sphere of influence. In fact, a majority of small, micro and medium enterprises (SMMEs) in South Africa, which operate in agricultural trade, tourism and construction industries contribute to 70-80% of employment; 30% of the Gross Domestic Product (GDP); and 4% of export earnings (Statistics South Africa, 2015). Such a significant contribution to the national macroeconomic fundamentals should be conceived in light of the competing hurdles of the surging economic inequalities, stunted growth rate, raging unemployment, high inflation rates and high taxes. A reversal of these economic woes puts into sharp focus the various stakeholders that SMMEs in their triple bottom line activities (socio-economic, ethical and environmental concerns) to roll back joblessness, steer economic growth and close the income gaps between haves and have-nots.

One of the fastest growing types of small businesses in South Africa is in the tourism and hospitality industry. The tourism and hospitality industry is ranked number four among industries that contribute towards the gross domestic product following mining, manufacturing and quarrying (Taal, 2012). The tourism and hospitality industry is among the unique service sectors in South Africa, whose growth potential is different from manufacturing, construction and other primary industry such as agriculture and mining (George, 2001; Moeti, 2016). Taal (2012) further states that hospitality makes up to 67% of the tourism industry, which is by far the largest sector in the tourism industry. It includes hotels, caravan parks, bed-and-breakfasts, game lodges, guest houses, and camping sites - to mention a few (Mette, 2010; Mosweunyane, 2016). The multi-sectorial nature of the hospitality industry seem to

compound the complexity that it brings to bear upon both the various stakeholders and various contexts the industry operates in (Mette, 2010).

Despite the immense potential of tourism and hospitality in South Africa, business social responsibility is among the under-explored areas in small businesses in the country. Business Social Responsibility (BSR) is the company's commitment to operating in an economically sustainable manner while recognising the interest of its stakeholders over and above those provided by law (Dzansi, 2011). Dzansi and Pretorius (2009) contend that BSR can be seen as compensating society for the hardships suffered from the organisation's extractive exploits. Besides this clear recognition of small businesses' contribution to the economic development and improving the quality of life of communities, it remains unclear which stakeholders impact the business' social responsibility activities the most as primary and secondary stakeholders differentially engage with the business.

As such, the current study to address the following research questions:

1. Which stakeholders are critical in the fulfilment of the BSR goals and activities of hospitality SMMEs in the Free State?
2. Which stakeholders have the greatest impact on the sustainability of hospitality SMMEs?

The rest of the paper is structured as follows: a problem background and problem statement are first rendered, next a literature review and a guiding theoretical framework are given, a methodology is presented, findings are presented and discussed, implications are presented and a conclusion is granted.

2. PROBLEM BACKGROUND

The motivation for SMME involvement in BSR needs to be debated so that its historical evolution can have more meaning. BSR emerges from the realisation by corporations that they cannot operate in isolation from their community and that good governance goes beyond the works performed in their offices (Araoz, 2011). In South Africa, the concept was made popular by the democratic regimes that governed the country since 1994 as they were trying to combat the social imbalances that were caused during apartheid, through different social programmes and public initiatives. These national aspirations found expression in the King II and King III Reports that explicitly address the relevance of corporations in acknowledging all stakeholders through 'the triple - E bottom line' approach (Araoz, 2011:2). Triple - E bottom line (economical, ethical and environmental) is a form of corporate social responsibility (CSR) highlighting that the corporate leader tabulates bottom line results, not only in economic terms but also in terms of organisations' efforts in the social realm (Slaper & Hall, 2011). It is this light that critical questions should be raised about the depth of involvement of the various stakeholders in the SMMEs' BSR initiatives. But more importantly, it has to be acknowledged that the CSR debate has largely focused on large corporations and eclipsed the involvement of small businesses that employ BSR to engage with their stakeholders.

Jenkins (2009:23) emphasizes that SMMEs issues that are close to home are far more likely to motivate them to engage into BSR activities, issues (such as employee motivation and community involvement). SMMEs normally operate within local communities; hence, they are more aware of community and environmental issues and they are compelled to get involved and become problem solvers to improve social lives of many while simultaneously improving the visibility and social status of their businesses. This argument creates room for investigating the extent to which various stakeholders are implicated in hospitality SMMEs' pursuit of BSR. Dzansi and Pretorius state that while the social purpose has dominated the BSR agenda and has been well explored, a changing mind-set that BSR improves business performance is increasingly motivating SMMEs to integrate BSR into their economic activities. Yet despite this realisation, it remains speculative whether the various stakeholders (e.g. employees, managers, customers, suppliers, regulators, investors, financiers) of tourism SMMEs equally engaged with these entities in their BSR activities.

While the unsubstantiated argument is that SMMEs by virtue of their size and proximity to the community are chiefly accountable to their customers in their BSR activities (Flowers, Parker, Arenz, Gaffley, Greighton, Fredricks, Matthews, Pietersen & Smith, 2013; Luiz, 2014), this argument ignores

the internal and external dynamics of the business which gives credence to employees and financiers and investors in explaining the sustainability of SMME BSR activities (Tseane-Gumbi, 2011; Rambe, Moeti & Dzansi, 2016). In view of the complexity of the levels of contribution to BSR of various SMMEs stakeholders, the stakeholder(s) which are most critical to the implementation of SMMEs' BSR activities remains speculative. Unpacking this puzzle is critical because SMMEs seem to struggle with BSR due their limited information on managing BSR practices (Garay & Font, 2012).

3. PROBLEM STATEMENT

While studies have been conducted on the concept of BSR, most of them tend to focus more on large organisations (Duke II & Kankpang, 2013; Adewal & Rahmon, 2014). Little attention has been given to small medium and micro enterprises (SMMEs), thus creating the erroneous impression that it is desirable for BSR to be carried out by large organisations exclusively (Ladzani & Seeletse, 2012). More so, while arguments about SMMEs' consideration of the quadruple bottom line (economic, social, ethical and environmental) variables often consider all stakeholders as integral to the implementation of BSR (Fontiane, 2013; Dixon, 2014), it is often not apparent which stakeholders would maximise the economic value of the business if the SMMEs were to maximise their engagement with them in their BSR activities. In other words, the adoption of the blanket approach to SMME-stakeholder relations management has contributed to SMMEs' illusion of the important stakeholders that maximise the economic value for such businesses. This confusion poses a risk of SMMEs investing in least important stakeholders and losing envisaged economic value (profitability, improved competitiveness) (Sen, 2011; Papaioannou & Pettersson, 2013).

4. LITERATURE REVIEW

This section discusses literature on the engagement of stakeholders in Business Social Responsibility activities. The stakeholder theory of BSR is also discussed in this section.

4.1. The Stakeholder mind-set

Stakeholders are "those groups who can affect or are affected by the achievement of an organisation's purpose" (Jamali, 2008:217; Russo & Perrini, 2010:209). A business' stakeholders include customers, suppliers, employees, financiers, communities and managers, who interact and communicate to create value for the business.

The basic idea of creating value for stakeholders is derived from the conception of the business as a set of relationships among groups which have a stake in the activities of the business. Business is about how its stakeholders create value (Freeman, Harrison, Hicks, Parmar & Colle, 2010) for the business entity. Traditionally, the main objective of the business was to generate profits and prioritise their cash flows. However, there has been a paradigm shift from just making profits to realising that the success of the business is based on its relationship with stakeholders (Russo & Perrini, 2010). As a result, businesses can no longer ignore the fact that they have a responsibility towards their stakeholders, and must link their objective of making profits with making sure that their stakeholders are cared for and valued. In this paper, the stakeholders that will be considered for hospitality SMMEs are managers, employees, customers, suppliers, the environment and the broader society. Figure 1.1 shows the stakeholder diagram of this study.

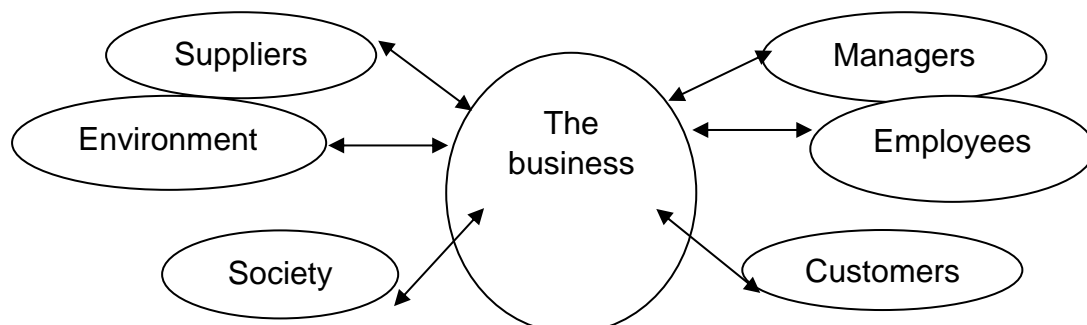


Figure 1.1: A Stakeholder diagram (Source: Sen 2011:30)

4.2. The stakeholder theory

The Stakeholder Theory was developed in the last 30 years to deal with the mindset that businesses are the property of their owners and their sole responsibility is to make profit (Freeman et al., 2010). The stakeholder theory thus strongly suggested that businesses must include the key elements that were affected by the business' operations. As a result, the hospitality businesses such as bed-and-breakfasts (B&Bs), lodges and safaris cannot ignore the responsibilities they have to their stakeholders by just focusing on making profit.

The Stakeholder Theory suggests that if businesses can adopt, as a unit of analysis, the relationships between a business and the groups and individuals who can affect or are affected by it, they have a better chance of dealing with problems that may arise (Freeman et al., 2010). This theory suggests that the main goal of BSR is to create value for key stakeholders by using their interaction with the business. For example, the hospitality industry relies much on the support of different stakeholders such as customers for increased sales, employees for improved business performance, funders for financing and technical support, and the environment for resources extraction. The Stakeholder Theory, therefore, suggests that these key stakeholders must be integrated in the planning of the business activities and the business objectives should be aligned with those of these stakeholders.

5. RESEARCH DESIGN

A quantitative case study design was used in this study. A case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between the phenomenon and context are not clearly defined (Thomas, 2011). In the case of this study, the constitution of the stakeholders who support tourism SMMEs' BSR activities including the individual contribution of each stakeholder to the SMME BSR architecture (goals, activities and practices) is not clearly defined. As such, a case study best suits such an investigation. The critical stakeholders that hospitality SMMEs engage with in the fulfilment of their BSR goals and activities were also investigated as well as the stakeholders that had the greatest impact on the sustainability of hospitality SMMEs.

5.1. Target population

The estimates from the Tourism Grading Council of South Africa (TGCSA) were drawn upon to establish the target population (Tourism Grading Council of South Africa, 2016). The TGCSA (2016) estimates were relevant in establishing the hospitality SMME population size in view of the difficulty of establishing the actual population size as many hospitality SMMEs are not registered and operate in obscure places. These estimates put the number of hospitality businesses in the Free State at 150 organisations. This comprises 30 hotels, 56 guest houses, 8 lodges, 12 bed-and-breakfasts and 44 self-catering outlets. However, since hotels were considered to be larger than other hospitality establishments, they were excluded from this study. Therefore, altogether 120 hospitality establishments constituted this study's target population.

5.2. Sample size

Due to the size of the population, a census was considered for this study and all the 120 hospitality SMME establishments (56 guest houses, 8 lodges, 12 bed-and-breakfasts and 44 self-catering outlets) were considered and hotels were excluded from the study because of their size, which disqualifies them from being viewed as SMMEs. The survey was then administered on all the 120 SMME establishments to ensure that all SMMEs were considered, irrespective of their cluster or classification.

5.3. Research instrument

The questionnaire was designed using structured questions. It consisted of 67 items in the Likert-scale format. Bryman and Bell (2007) posit that Likert scale based questions make the processing of data for computer analysis easy as questions from the Likert scale can be pre-coded.

5.4. Reliability issues

All the questionnaire items that were measured on a five-point Likert scale were used in the calculation of construct reliability using Cronbach Alpha reliability measure. It is critical to highlight that the reliability statistics presented in Table 1 are of the entire instrument employed in a larger study.

Table 1: Reliability statistics of the questionnaire constructs

Construct	N	Number of questionnaire items	Cronbach's Alpha	Comment
[B1] General understanding of business social responsibility (Goals)	90	2	0.369	Low internal consistency
[B1] General understanding of business social responsibility (activities)	89	4	0.696	Moderate internal consistency
[B2] Economic Component of Business Social Responsibility (Profitability Goals)	90	2	0.306	Low internal consistency
[B2] Economic Component of Business Social Responsibility (Activities)	89	2	0.679	Moderate internal consistency
[B2] Economic Component of Business Social Responsibility (Growth)	89	6	0.814	High internal consistency
[B3] Legal component of business social responsibility	91	4	0.827	High internal consistency
[B4] Ethical component of business social responsibility goals	90	4	0.689	Moderate internal consistency
[B4] Ethical component of business social responsibility (activities)	91	7	0.878	High internal consistency
[B5] Philanthropic Component of Business Social Responsibility	91	3	0.525	High internal consistency
[D] Business Social Responsibility Activities	90	4	0.697	Moderate internal consistency
[E] Sustainability of Business Social Responsibility	92	2	0.423	Low internal consistency
[E] Sustainability of Economic BSR	91	2	0.462	Low internal consistency
[E] Sustainability of Environmental BSR	91	4	0.870	High internal consistency
All Likert scale questions	75	61	0.764	High internal consistency

The adequate reliability of a construct (subsection) is indicated by a Cronbach's alpha value of at least 0.700. Any Cronbach's alpha value that is less than 0.700 is indicative of low internal consistency/reliability (Georgia, 2009). However, the overall score of the questionnaire is 0.764. This means that the instrument is reliable because the score is above 0.700.

5.5. Data Analysis

Data analysis was conducted using Statistical Package for the Social Sciences (SPSS) version 23. Both descriptive techniques and correlational statistics were applied. To meet the research objectives, the following tests were conducted: frequency, percentage analysis, and Pearson's correlation test.

6. PRESENTATIONS AND DISCUSSION

The following section provides the presentation and discussion of findings. The subsequent section provides sample demographics to provide a picture of the constitution of the sample.

6.1. Demographics

This section provides an overview of the demographic characteristics of the sample using a frequency table. The demographic information pertains to gender, race, age and highest level of education, religious denomination and nationality of hospitality SMME owner/managers.

Table 2: The demographics of the hospitality SMME owner/managers

Demographic Variables	Category	Frequency	Percentage
Gender	Male	38	41.3%
	Female	54	58.7%
Race	Black	38	41.3%
	White	48	52.2%
	Coloured	6	6.5%
Age	18-35 years	49	53.3%
	36-45 years	32	34.8%
	46-55 years	9	9.8%
	56-65 years	2	2.2%
Highest Level of Education	Grade 10-12	22	24.7%
	Post Grade 12	57	64.0%
	Post Graduate	10	11.2%
Respondent Type	Owner	1	1.1%
	Manager	15	16.3%
	Owner/Manager	24	26.1%
	Employee	52	56.5%
Religious Denomination	Christian	91	100.0%
Nationality	South African Citizen	85	93.4%
	South African Permanent Resident	5	5.5%
	Non South African	1	1.1%

About 53.3% of the respondents fell within the 18-35 age groups, followed by 34.8% which fell within the 36-45 age groups. These demographics illustrate that most participants constituted the economically active population. It can be interpreted that the employ of the hospitality SMMEs in the Free State is dominated by a young adult and economically active population. The dominance of the economically active population in the hospitality industry is reflective of an expansive population structure of South Africa, which is dominated by moderately youthful groups (Statistics South Africa, 2015). The mid-year population estimates show that the dominating age groups in the Free State are 20–24, 25-29, 30-34, and 35-40 (Statistics South Africa, 2015). In fact, in his study on records management systems of the hair salon industry, Mosweunyane (2013) also affirmed that the economically active groups dominate the South Africa labour market.

There is a moderate balance between male and female participants. Female participants were the majority (58.7%), while male participants made up 41.3% of the participants. The moderate dominance of females can be attributed to the service of hospitality, which demands acts of courteousness, kindness and meekness, qualities associated more with womanhood than manhood (Lee–Ross & Lashley, 2009). However, a study conducted by Pirnar, McCuddy, Birkan and Kozak (2009) shows that the hospitality industry in Turkey is dominated by males who tend to earn more than women.

6.2. Business Profile

Table 3: The business profile of hospitality SMMEs

Business profile	Category	Frequency	Percentage
Q8. Type of Business	Hotels	8	8.7%
	Guest Houses	26	28.3%
	B&Bs	25	27.2%
	Lodges	28	30.4%
	Self-Catering	5	5.4%
Q9. Number of Employees	1-5	28	30.4%
	6-10	60	65.2%
	11-20	4	4.3%
Q10. Age of Business	1-3 Years	10	10.9%
	4-6 Years	38	41.3%
	7-10 Years	41	44.6%
	11-15 Years	3	3.3%
Q11. Form of Business	Sole Proprietorship	12	13.0%
	Close Corporation	2	2.2%
	Pty Ltd	62	67.4%
	Partnership	16	17.4%
Q12. Gross turnover per annum	Up to R500 000	5	5.5%
	More than R 500 000 but less than R 2 million	47	51.6%
	More than R2 million but less than R4 million	37	40.7%
	More than R4 million	1	1.1%
	Other	1	1.1%

There is a moderate balance between businesses that are aged between four and six years (41.3%) and those aged seven to ten years (44.6%). This means that a majority of the hospitality businesses in the Free State have survived for their first three years of existence. This casts doubt on the claims about the low survival of SMMEs in this sector (Wiese, 2014).

The most represented (67.4%) form of business in the study was private companies, followed by the sole proprietor (13%), while and partnerships (17%) were the minority businesses. The majority (65.2%) of the businesses had between 6-10 employees, which shows that the hospitality SMMEs in the Free State have a small workforce.

6.3. Stakeholder Engagement in fulfilling BSR practices

Table 4: Stakeholders the hospitality SMMEs engage with in their BSR activities

Q50: In its BSR Engagement, the business is involved with:	No	Yes	% Yes
Managers	1	89	98.9%
Employers	2	88	97.8%
Customers	1	91	98.9%
Society	2	88	97.8%
Environment officials	4	86	95.6%
Suppliers	1	89	98.9%

Table 4 shows the critical stakeholders that the hospitality SMMEs engage with in the fulfilment of their BSR goals and activities. The respondents indicated that stakeholders are engaged at all levels in equal measures. All the stakeholders had an engagement rating of at least 95%. This shows that the

hospitality industry considers all its stakeholders in its engagement with BSR strategies and activities. Although literature suggests that businesses tend to engage differently with primary and secondary stakeholders in their industry (Nameer, 2009), hospitality SMMEs in the Free State's intensity of engagement with stakeholders seems comparable and equitable across various stakeholders. The results do not seem to suggest a distinction between primary and secondary stakeholders as far as engagement with the hospitality SMMEs is concerned. The results indicated in Table 4 illustrate that although all the stakeholders are very important for the hospitality SMMEs' fulfilment of the BSR activities, customers (98.9%), society (98.9%), suppliers (98.9%) ranked the highest with regard to engagement with such businesses. Therefore, although hospitality SMMEs in the Free State engage all their stakeholders in the fulfilment of BSR activities and goals, customers, society and suppliers were engaged with the most.

6.3.1. Stakeholders with the greatest impact on the sustainability of hospitality SMMEs

To determine the stakeholders with the highest impact on the sustainability of hospitality SMMEs, a correlation table was used to analyse those relationships.

Table 5: Correlations between stakeholders and the Sustainability of BSR

Pearson Correlation		Q51. Level of importance in Administration or Execution of BSR						BSR Sustainability		
		Managers	Employees	Customers	Society	Environment	Suppliers	BSR Social Sustainability	BSR Economic Sustainability	BSR Environmental
Q51. Level of importance in Administration or Execution of BSR	Managers	Corr p-value N	-							
	Employees	Corr p-value N	0.696** 0.000 89	-						
	Customers	Corr p-value N	0.515** 0.000 89	0.515** 0.000 91	-					
	Society	Corr p-value N	0.325** 0.002 88	0.449** 0.000 89	0.669** 0.000 89	-				
	Environment	Corr p-value N	0.403** 0.000 89	0.645** 0.000 91	0.476** 0.000 91	0.642* 0.000 89	-			
	Suppliers	Corr p-value N	0.727** .000 89	0.640** .000 91	0.600** .000 91	0.437* .000 89	0.436** .000 91	-		
BSR Sustainability	BSR Social Sustainability	Corr p-value N	-0.052 0.630 88	-0.102 0.344 89	-0.041 0.706 89	0.121 0.261 88	0.094 0.382 89	-0.011 0.916 89	-	
		Corr	0.103	0.108	0.239*	0.208	0.149	0.168	-0.142	

BSR Economic Sustainability	P-value	0.347	0.320	0.026	0.055	0.169	0.120	0.193	-	
	N	86	87	87	86	87	87	86		
BSR Environmental Sustainability	Corr	-0.104	-0.023	0.080	0.209*	0.229*	-0.108	0.339**	0.042	
	P-value	0.330	0.832	0.451	0.049	0.029	0.309	0.001	0.702	-
	N	89	91	91	89	91	91	89	87	
**. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).										

Table 5 illustrates that different stakeholders have an impact on the various components of sustainability. It indicates that customers have a positive impact on economic sustainability with a correlation effect of (correlation=0.239, p-value=0.026), society had a positive impact on environmental sustainability (correlation=0.209, p-value=0.049) and the environment had a positive impact on environmental sustainability (correlation=0.229, p-value=0.029). It can be inferred from these statistics that customers, society and the environment have the greatest impact on the sustainability of hospitality SMMEs in the Free State province.

7. IMPLICATIONS FOR FUTURE RESEARCH AND PRACTICE

The social sustainability dimensions of BSR is negatively related to the majority of stakeholders (employees, managers, customers and suppliers), except for the society and the environment, even though the relationships were not significant. This could mean that only the general society and the environment actively interacted with the business to ensure its social sustainability. Future studies examine the reasons why all the major stakeholders were negatively associated with social sustainability.

It is surprising to note that internal stakeholders (i.e. managers and employees) had the lowest correlations with the economic dimension of BSR of their SMMEs, even though this relationship was positive and non-significant. Since the business' core mandate is profit making and economic growth (i.e. economic dimensions of sustainability), this finding is unusual. The hospitality business may need to examine this relationship further to ensure that internal stakeholders contribute significantly to the economic sustainability of the businesses.

Except for the environment and the society, all other stakeholders (managers, employees, customers and suppliers) were either weakly or negatively associated with the environmental sustainability dimension of BSR. This could point to the latter stakeholders' indifferent or negative attitude towards environmental sustainability issues, activities and practices that the hospitality SMMEs introduced. Future studies may need to examine the motivations for such negative perceptions towards the environment. The businesses may also need to introduce and build environmental awareness and sensitivity scorecards into the performance of their employees.

8. RECOMMENDATIONS

The results of the study demonstrated that although all stakeholders have been proven to be an important part of BSR customers, society and suppliers are ranked as most important by the businesses. In addition, customers were considered as influencing financial sustainability while society was considered as influencing most the environmental sustainability of the business. Given that different stakeholders affect different forms of BSR, an approach that allows the SMME business owners to leverage the collaborative roles of individual stakeholders on particular forms of BSR, while also allowing for the collective recognition of all stakeholders, is critical to promoting the improved formalisation of BSR practices in small businesses (Branco & Rodrigues, 2007). A stronger stakeholder approach that recognises the individual contribution of each stakeholder to BSR, the individual BSR where such contribution is most realised, and the collective contributions of different stakeholders, would be critical to the success of an organisation-wide rollout of BSR in small businesses.

Furthermore, given the multiple stakeholders that interact with hospitality SMMEs, there is a need to reconcile the individual needs of these individual SMMEs and those of their stakeholders to improve their inter-organisational cooperation. This cooperative approach will allow the tourism SMMEs to meet their BSR goals without necessarily compromising the growth, development and sustainability of SMMEs' stakeholders. Since different stakeholders impact different components of the sustainability of the hospitality SMMEs, with customers having a positive impact on economic sustainability while the environment has a positive impact on environmental sustainability, SMMEs may need to develop a hierarchy of stakeholders and align them to the attainment of particular types of BSR (e.g. economic, social, ethical and environmental) so that particular stakeholders target BSR forms where they can maximise their impact and the long-term sustainability of the business.

9. CONCLUDING REMARKS

The paper examined the critical stakeholders that hospitality SMMEs in the Free State regard as critical when they carry out their business social responsibility activities, including the stakeholders with the greatest impact on the sustainability of hospitality SMMEs. Though the results indicated that all stakeholders are very critical and actively engaged with in social responsibility activities, customers, environment and society were highly engaged with by hospitality SMMEs to advance BSR. It was further recommended that the hospitality SMMEs should consider the individuality of different stakeholders while at the same time building collaboration and integration of various stakeholders into the BSR strategy of firms so as to prioritize them well.

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Realities and Challenges of Running SMMEs in Mpumalanga, South Africa and Chuzhou, China

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ABSTRACT

The aim of this paper is to explore and gain a deeper understanding of the realities and challenges faced by owners of small and medium enterprises (SMMEs) in running their businesses. In collecting data, the researcher followed a qualitative approach. Purposive sampling was used to select SME owners to take part in the semi-structured interviews. A total of 10 (Mpumalanga (n=5) and Chuzhou (n=5) owners took part in the study. Data collected was analysed using Tesch's data reduction technique of open coding. Results indicate that most of the owners interviewed still faced challenges when running their businesses. Among these challenges were lack of capital to start their business, lack of managerial skills, difficulty in getting funding from the banks in both countries, access to market and lack of access to technology. Besides the challenges highlighted, positive revelations emerged from the study. These include the characteristics of hardworking people to carry out business activities. From the findings it is recommended that government, through its agencies responsible for the support of small business, provide some financial guarantees since banks are risk averse towards these businesses.

1. INTRODUCTION

Over the years, attention has been given to the role played by small, medium and micro enterprises (SMMEs) worldwide (Abdullahi & Sulaiman, 2015). From literature, it has emerged that many SMMEs were established out of economic necessity because the owners were perhaps out of work or even needed to supplement their income (Baporikar, Nambira & Gomxos, 2016). The value of SMMEs is known globally for their contribution towards economic growth, job creation and social progression of society. Successful SMMEs result in the growth of the economy, which in turn contributes to the employment of the members of society. For SMME owners to flourish in their business endeavours, it is imperative for them to have the necessary capabilities that would enable them to think out of the box. This, however, suggests that they need to have insight into running a business successfully. Capabilities such as managerial skills, experience in the business sector in which the business is operating and financial skills are deemed crucial for SMMEs to prosper.

Despite the crucial role played by SMMEs globally, it is notable that they ordinarily face a series of challenges. Bouazza, Ardjouman and Abada (2015:2) have identified some of the challenges that SMMEs normally face, *inter alia* cumbersome legal and regulatory constraints, lack of access to external financing, low human resources capabilities, lack of managerial skills and training and low technological capabilities. All these factors need to be managed properly if SMMEs are to prosper. The findings of Bouazza et al. (2015) are in line with those of Mnisi and Rankhumise (2015) who believe that some of the factors that can cause frustration for SMMEs are (i) not being able to access start-up capital, (ii) facing high costs of borrowing finance, (iii) fear of failure and (iv) lack of appropriate training and business education. These are areas in which the government has to provide the necessary support to these SMMEs to ensure that they take cognisance of the factors that are likely to impede the prospects of success. Some of the above challenges were investigated in this study in relation to their effects on entrepreneurial initiatives, particularly in South Africa and China.

The purpose of the study was to explore realities and challenges experienced by selected SMMEs in South Africa and China. This would provide a deeper understanding of the real phenomena on the ground, in particular what SME owners see as contributing factors and the challenges they face in their business practices. Although the challenges and opportunities of SMMEs are conceived to be more generic, there could be circumstances across the two countries, therefore it is imperative for a comparative analysis to be done.

The remainder of this paper is organised as follows: the literature review on the realities and challenges facing SMMEs is followed by the methodology used in the study. The results and the limitations of the study are then highlighted. Lastly, the conclusions and recommendations are presented.

2. LITERATURE REVIEW

The trend globally is that SMMEs form the largest employer in either developed or developing economies (Hyder & Lussier, 2016). In contrast, small businesses in South Africa show signs of stagnation in both turnover and employment in a nation with a 26.5% unemployment rate (Statistics SA, 2017). These two factors are important because turnover has a strong bearing on the wealth being created in the economy and employment is important for the community's social stability.

2.1. The importance of small businesses

From a global perspective, it is recognised that SMMEs play an important role in economic development because they serve as a primary source of employment creation and contribute towards economic growth. According to Ensari and Karabay (2014), SMMEs are a primary component of economic liberalisation and social stability. Not only do they contribute to output, but they also fulfil social objectives in the community. The fact that they contribute to employment shows that they are the backbone of the private sector throughout the world. They also contribute to the gross domestic product of the country. In China, the output value of SMMEs contributes 55.6% of the gross domestic product and generating more than 75% of employment opportunities (Yan, 2015). The Chinese SMMEs have growth shown an increase and become an important driver for promoting the development of the economy. These businesses are making strides in addressing the social instabilities among the communities.

2.2. Factors contributing to the success of SMMEs

Agbim (2013) maintains that entrepreneurial success is dependent on a number of factors, including entrepreneurial capabilities. This relates to the ability to adequately use resources in the performance of tasks in the enterprise. It is therefore important to acquire the capabilities that will enhance the success of the venture in the context of the environment in which the business is operating. The other important factor that could lead to the success of a business is access to finance and this could contribute to the expansion of the business and sustainability. In the context of China, it is noted that the success of SMMEs is mostly attributed to top management's ability to develop effective strategies that would assist the business in achieving its objectives (Yan, 2015). It is notable that the other crucial factors for the success of SMMEs are entrepreneurial resources and supporting resources. According to Premaratne (2001) as cited by Yan (2015) entrepreneurial resources entail assets that are mobilised by the entrepreneurs during the establishment stage of the business. These resources could include, among others, financing such as credit and investment capital and these could further include abstract resources such as knowledge of a particular field, technology or even network that could provide a support of some kind to the business.

2.3. The challenges facing SMMEs

There are many issues that have been discussed in relation to the challenges facing SMMEs. However, few studies organise SMME challenges according to their severity in the business operations (Rahman, Yaacob & Radzi, 2016). According to Ramukumba (2014), SMMEs in South Africa face quite a number of challenges, ranging from a lack of managerial skills, obtaining finance and credit, access to markets, appropriate technology and support for the role they play in economic development. Other challenges faced by SMMEs include enabling environments, lack of knowledge about procedures and requirements involved in acquiring funding. Regarding the problem of acquiring funding, Ensari and Karabay (2014) in their study summarised the factors contributing to the failure of SMMEs as follows: lack of managerial expertise, quality failures, shortage of resources, inadequate capital and lack of technical competencies. Maye (2014) explains in his study that the participants believed that business environment is not favourable to their operations. He further identified the chief impediments to growth as follows: (i) lack of skilled staff, burdensome regulations, (ii) local economic conditions, (iii) lack of finance and (iv) cost associated with labour. In South Africa, labour force is highly unionised and the government has also put sectoral determination in place to ensure that the employers pay the workers

in accordance with the determined wage tariffs. This revelation is contrary to the Chinese regulations whereby labour is not unionised and it is cheaper compared to South Africa. It is notable that in China, small and medium-sized enterprises have a significant potential in the creation of employment opportunities because of labour-intensive industries. The majority of the firms enjoy significant labour-cost advantage and having access to low labour costs which have been a driving force for many sectors in China (Luo, Lin, Guiying, Li, Gao, Xia & Jie, 2009).

Furthermore, Yan (2015) explains that the Chinese SMMEs under new normal economy, face challenges in respect of innovation capabilities whereby the businesses need to embark on renewals of their product development in order to reduce cost of production and improve their market growth. Financing has also emerged as one of the impediments despite the Chinese government's efforts to implement favourable loan and taxation policies to support the SMMEs. It is noted that the SMMEs do not succeed in their attempt to secure start-up funding and growth capital, in this regard the owners provide start-up capital from their own personal savings and with friends also assisting.

Other contributing factors leading to the failure of SMMEs in South Africa as identified by Mnisi and Rankhumise (2015) are internal factors such as:

(i) Lack of managerial skills - at times entrepreneurs start businesses out of desperation and in most cases they have no experience of running a business.

(ii) Lack of functional skills - these skills include planning, organising, leading and control, which are all important in running a business. Proper planning is required in order to prosper and to achieve the objectives of the business, and owners must have insight into organisational resources needed for the functioning of the business. Small business owners further need to take the lead in controlling the business to ensure its success.

(iii) Poor staff training – SMMEs do not normally employ highly skilled employees and in this regard it becomes important to train employees so that they perform well in their respective duties. All these factors play an important role in the success of a business and if not taken care of, might lead to the failure of the business.

Another challenge pertinent to the failure of SMMEs is lack of proper infrastructure. Kinyua (2014) is of the view that a lack of proper infrastructure could inhibit the SMMEs from performing beyond expectation. In this regard, a spatial planning approach ensures that there is efficient use of land by balancing competing demands within the context of sustainable development, which will ensure continued operation of the business. Infrastructure and other related services assist in making things happen within the enterprise.

3. METHODOLOGY

3.1. Research design and approach

The design adopted for the study was exploratory. This exploratory approach provided the opportunity to unravel the nature of the SMME owners' experiences and views, in order to understand the realities and challenges of running a business in the two countries. The exploratory approach was chosen to gain a richer understanding of the experiences faced by business owners in running their businesses. The approach relies on the use of qualitative data collection techniques with a view to gaining a deeper understanding of factors that contribute to the factors affecting the success of SMMEs.

3.2. Sampling and choice of participants

The research was conducted in South Africa and China. The population of this study was SMME owners selected from the Mpumalanga and Chuzhou provinces respectively. Purposive sampling was used to select the participants for the study based on the researcher's judgement that they would contribute positively since they had experience in running their businesses. This is consistent with what De Vos, Strydom, Fouché and Delport (2011) maintain, namely that it is based entirely on the judgement of the researcher whether that sample contains characteristics and typical attributes that best serve the purpose

of the study. The latter technique was deemed appropriate in the sense that it is ordinarily used in cases where participants are selected on the basis on their specific knowledge, namely the experiences and challenges that they face in running their businesses (Creswell, 2012:206). A total of 10 SME owners were interviewed (Mpumalanga (n=5) and Chuzhou (N=5) and took part in the study.

3.3. Data collection procedures

Prior to data collection in South Africa, the researcher, made appointments with the selected business owners. In China, the research collaborator made appointments with the business owners. The collaborator also arranged for an interpreter to ensure that there was smooth communication with the participants. Unstructured in-depth interviews were used as the data collection technique as they gave interviewees the opportunity to talk openly about their experiences and opinions in relation to business hindrances. During this important stage of data collection, the collaborator and the researcher used audiotapes and took field notes during the interviews. The data collection was not guided by data saturation because this study was more of a baseline study.

3.4. Data management and analysis

In analysing data, unstructured in-depth interviews were transcribed and the field notes were also used in the transcription. Secondly, Tesch's data reduction of open coding was followed (Creswell, 2009). In the process of analysing the data, the co-coder and the researcher analysed the data independently. Transcribing entailed listening to audiotapes to capture the meaning. The researchers read the field notes to understand the data properly and to get a sense of the whole. Topics were abbreviated as codes and these were written next to the appropriate clusters of the text. The related topics were grouped to reduce sub-themes to a manageable number. A final decision regarding the wording for *topics* was made to turn these into categories (Creswell, 2009). After the data analysis, the co-coder and the researchers met to discuss the final analysis and the themes that emerged. In order to ensure anonymity and prevent personal identifiers, pseudonyms were used.

4. RESULTS AND DISCUSSION

The results and the discussion of this research are organised into the main themes that emerged during the analysis, namely access to finance, lack of financial management training, managerial skills, access to the market, access to technology, hard work and start-up capital. The participants in this study provided very important information pertaining to the factors contributing to the success or failure of the business. In the next section, the themes that emerged are discussed, and verbatim quotes are given.

4.1. Access to finance

The participants indicated that access to finance was critical for the business to succeed in various business transactions. The challenge that the SME owners encountered was that banks require collateral for a loans. Banks are regarded as risk averse towards SMMEs because of the latter's lack of collateral security. This is what some of the participants had to say:

"Banks always require high collateral which I do not have and without security, no capital will be given. According to me the governments should help us, for instance you will have a start-up capital, but one will not be able to get money for operating expenses..." [Lera, Mpumi, Mpumalanga, South Africa].

"... When I started my business, I used my own money. The money was not enough and I had to apply for bridging funds from the bank..." [AMI, Chuzhou, Wei, Chuzhou, China]

"... The business is self-funded and additional funding of RMB 5 000 000 was received from the bank as loan..." [CJI, Chuzhou, China]

A number of indicators are used by banks when assessing SMME owners for funding. These range from the fact that the owners are not educated and as such they are unable to manage financial affairs; hence the businesses are classified as high risk. The findings are in line with Rogerson (2006), Rankhumise and Rugimbana (2010) and Mahadea and Pillay (2008), who found in their respective studies that

financial institutions are not willing to fund small businesses. Baporikar *et al.* (2016) concur with these authors that banks do not want to give funds to SMMEs as most of them do not have collateral. Large established businesses have collateral and are known for their sound financial standing, and therefore it is easier for them to get bank loans and this is common in South Africa and China. Pletnev and Barkhatov (2016:186) also agree that access to finance plays an important part in the success of the business. Similarly, Sham (2014) also found in his study that Chinese SMMEs experience the same challenges because the banks are not willing to fund them due to lack of qualified collateral and the lack of credit repayment track record. Finally, Muriithi (2017) also concur with other scholars that inability to access finances remain a major impediment to SMMEs survival and growth.

4.2. Lack of financial management training

It is noted from the interviews that one of the concerning factors in carrying out business activities is that most of the SMME owners lack financial management insights. The participants from South Africa felt that they required financial management training and this could assist them in managing the financials of the business correctly. This is different from what the Chinese SMMEs owner who indicated that they received training on financial management. The most common statements were in the following veins:

“You know financial management is important to me, say the bank give you funding, though I have a bit of knowledge on how to use the money, but it will be helpful if some training is provided so that the money is not directed to other purposes that are not meant for the business...” [Atlegang, Abe, Iera and Rams, Mpumalanga, South Africa]

“... I received financial and enterprise management training from Chuzhou Economic and Technological development. That helped me to be able to management my finances properly and effectively...” [Zanzi, Wei, Chuzhou, China]

The analysis provides differentiated views on the financial management training which depicts that there is lack of training provided to the South African participants, while the Chinese had a better opportunity of being exposed to similar training. In the South African context, this gives banks the impression that these businesses are unable to manage their resources and therefore they are not always willing to grant loans to them. The reality is that if funding is misappropriated, it will result in the business yielding less income and probably not being able to meet its obligations as they become due. It can be deduced that lack of financial management can cause problems such as cash flow difficulties. The findings concur with what Eniola and Entebang (2017) found in their study that financial knowledge has a direct effect on firm performance in this regard; it could either affect the business positively or negatively.

4.3. Managerial skills

The sampled entrepreneurs indicated that for them to succeed in their business endeavours, it would be prudent for them to have managerial skills. This supports Dzansi, Rambe and Coleman's (2015) claim that ineffective management capacities more especially during start-up can lead to a low creation rate. Efficient management with capacities such as knowledge, skills and competencies could make small businesses more efficient. Having sound managerial skills would lead to successful operations. Once SMME owners possess good managerial skills such as planning, interpersonal skills, communication skills, computer skills and so forth, they can ensure that the right decisions are made in managing the overall performance of the business. This means being able to communicate and deliver results by providing employees with a strong business plan to meet the set goals for the business. Managerial skills are required to manage the business properly and these include overseeing workplace issues, employees, teamwork, team development and communication. These findings concur with those of Bouazza *et al.* (2015) that lack of management skills is regarded as one factor that could impede the success of the business. The following is what the participants had to say:

“... We need to have some skills for instance planning, technical skills, communication skills. Without these, the business might not succeed in the operations of the business. You know you need to speak

from time to time your employees or even suppliers ...” [Abe, Lera, Mpumi, Mpumalanga, South Africa].

“... Some of the larger companies absorb the clients because of their reputation. Clients sometimes do not prefer working with small businesses fearing the quality of our products...” [Ankira, Chuzhou, China]

It could be deduced that SMME owners should possess management skills which would assist them in the operation of their business successfully. Furthermore, if SMME owners possess sound managerial skills, they are able to plan the business activities well and organise the resources to achieve the planned activities

4.4. Access to the market

The participants from both countries regarded lack of access to market as one of the factors that leads to the failure of SMMEs. SMMEs have a challenge in accessing markets, more especially the Chinese and this is due to the high level of competition and therefore if one is not innovative, there is likelihood of losing the market. These findings confirm what Fernandez, Xu, Zhou and Puyuelo (2016) found in their survey that firms consider the competition in China to be intense or very intense. Based on what the participants indicated, two reasons that could be attributed to lack of access to the market are lack of market research prior to the start of business and lack of marketing skills. These findings are in line with what Rahman *et al.* (2016) found, namely that marketing issues of SMMEs are among the reasons for SMME failure. Further to this, Rankhumise and Masilo (2016) in their study also found that access to marketing creates challenges because if there is no possible market to serve, the business is unlikely to succeed. This is what some of the participants had to say:

“... As business we are faced with vicious competition and this is as a result of many SMMEs in our city. At times it is not simple to run a business successfully and one should always think of better way to run the business. There is vicious competition and you need to compete in this hostile market environment ...” [Ramsey, Wei, Chuzhou, China].

‘... Competition is a serious factor that can harm the business. There are many businesses selling the same products and one needs to be vigilant in combating competition in the market. Innovation is the way one should think of...’ (Rams, Mpumalanga, South Africa]

It could be deduced that if SMMEs are unable to access the market, they are prone to fail in their business endeavour. This is due to the fact that they may have the products or services to offer, but if there are no clients to buy, there would be no revenue to generate.

4.5. Access to technology

The participants indicated that technology played a crucial role in their businesses. Access to and use of technology is important because technology brings about opportunities for the business and enhances the business network. This is what the participants said:

“...The use of technology is important for me to do some transactions, for instance, one can do payments for stock online and can also do marketing using technology through my phone. Lack of access can hinder the business operations...” [Abe, Mpumi and Rams, Mpumalanga, South Africa]

“...As a business you need to focus on business solutions, for instance make use of electronic business platform, mobile internet. What I can say is that we need to use technology to assist us in running the business. We can always use financial software to assist in our financial system...” [AMI, Wei, Chuzhou, China].

The use and adoption of technology is likely to enable the business to be more innovative and results in good relationships with distant suppliers. This ensures the expansion and growth of the business.

4.6. Hard work

According to the participants, particularly Chinese business owners, hard work contributes to the success of the business. They said that they had to be hands-on regarding the activities of the business in order to be successful. Importantly, they had to commit to work for the business, irrespective of what lay ahead, and to take pride in getting involved in every business activity. This is what they had to say:

“... I believe that hard work is important for the success of the business. What I can say is that without committing time and efforts, the business will not survive, therefore one has to work hard to achieve the objectives of the business...” [Wei, Chuzhou, China]

“... Without hard work, my business will not make a profit. I am working hard with my people and I am a manager and a worker as well...” [Ankara, Chuzhou, China]

It is important to note that from the participants' articulation, it can be deduced that working hard can influence the success of the business. Furthermore, a business owner who serves exemplary to staff will ensure that her employees work towards a common goal.

4.7. The need for start-up capital

The participants revealed that a lack of start-up capital is usually the most critical determinant of business failure. From the interviews, the dilemma facing the SMMEs and how they struggled to make ends meet was made clear.

“When starting the business, I had money from my personal savings which was enough to get the set-up of the business. I did not have enough money to pay other obligations and I was forced to work on the small scale...” [Mpumi, Mpumalanga].

“My family helped me with some funds when starting off with my business...” [Atlegang projects, Mpumalanga].

‘... We funded the business from our own money and some of the money was from the banks which help us to finance our debt...’ [AMI, CJL, Chuzhou, China].

It is notable that some of the small businesses did not obtain any funding when they started their businesses. The reason for not accessing financing was a lack of collateral and/or guarantees. These findings are in line with what Hyder and Lussier (2016) found in their study: most of the failed businesses were due to lack of capital, which is seen as the most critical factor for business success. Wonglimpiyarat (2015) concurs with Hyder and Lussier who argue that financing stands as a constraint of SMMEs and the Chinese government attempts to improve SMMEs access to finance by introducing intervention such as 12th Five Year National Economic and Social Development Plan.

5. LIMITATIONS AND FUTURE RESEARCH DIRECTION

This study, like others, has its own limitations. First, the study was phase 1 of a bigger project; the findings per se are applicable only to the two provinces mentioned with the aim of establishing a base for the quantitative research. Second, the study adopted a qualitative approach, which some scholars regard as more subjective. In this study, only ten SMME owners took part in the study, comprising theoretical saturation.

6. CONCLUSIONS AND RECOMMENDATIONS

The purpose of the study was to explore realities and challenges experienced by SMMEs in South Africa and China, and important conclusions can be drawn from the findings. It can be concluded that most emerging SMMEs still face the challenge of not obtaining funding from banks due to a lack of collateral. This is contrary to established businesses that find it quite easy to obtain funding since they have collateral and their financial positions are known. It is evident that financial management plays a vital role in the success of a business and therefore a lack of specific training has a negative impact on the performance of the business. According to the participants, management skills and access to market are

crucial for the performance of the business. In addition, most small businesses do not adopt technology, and this could have a negative impact on the functioning of the business. Hard work is important for a business to succeed and this finding was prevalent among Chinese and the South African business owners. Lack of start-up capital is still a challenge for small businesses.

Based on the conclusions, a few suggestions can be made. It is suggested that government has to play a role in assisting SMMEs with finances through its agencies. Some training interventions such as financials, management skills and marketing skills should be provided to SMMEs. This will help the owners acquire the necessary knowledge and insight that would assist their performance.

In conclusion, this study has provided very important information on the experiences from SMME owners on the running of a business. The reality is that it is not easy to run a business, irrespective of the country in which the business operates, and this as a result of the challenges faced. Finance is seen as a stumbling block which hinders business operations and, more specifically, growth and expansion prospects.

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A University-Sponsored Student Business Venture Model for Bridging the Entrepreneurial and Innovation Chasm

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ABSTRACT

Different models are needed to bridge the entrepreneurial and innovation chasm that exists between university outputs and the societal/community needs. One solution towards bridging the chasm is an idea of entrepreneurial and Innovation University that promote academic entrepreneurship and innovation. In the university context, new venture creation models do not view students as potential entrepreneurs/innovators to drive entrepreneurship and innovation activities. Against this backdrop, this paper adopts a pragmatic approach exploring literature on academic entrepreneurship and innovation, and new venture creation models. Its aim is to contribute to an ongoing discussion of entrepreneurial and innovation chasm by proposing a new venture creation model, University-Sponsored Student Business Venture (USSBV). This model takes a position that students are capable of sourcing and exploiting good ideas, with an ultimate intention of establishing student-led new ventures.

Keywords: New venture creation model, University-Sponsored Student Business Venture, Entrepreneurial and Innovation Chasm, Academic Entrepreneurship and Innovation.

1. INTRODUCTION

There exist an entrepreneurship and innovation chasm between the university outputs and the needs of society/community. In the past, universities used their three core functions (teaching, research and community engagement) to develop solutions for bridging entrepreneurship and innovation chasm, thereby addressing the socio-economic challenges.

Universities are in the knowledge business and they cannot afford to ignore entrepreneurship and innovation as their fourth core function (Malele, Mpofu & Muchie, 2016a). Entrepreneurship and innovation as the university core function, forces universities not to only train students as industry-ready workers but to pursue academic entrepreneurship and innovation aimed at strategically positioning them as important engines of sustainable technological, social and economic development and growth (Yusof, Abdul-Samad, Hassan, Darus, Mohammad & Zaharim, 2010; Malele, Mpofu & Muchie, 2015).

Academic entrepreneurship and innovation is an interesting and important research topic as it induces the thinking that drives and expands the core functions of universities (Malele et al., 2016a) from the transfer of knowledge (teaching and learning), development of knowledge (research and development), and the application and consumption of knowledge (community engagement) to include the application and exploitation of knowledge (entrepreneurship and innovation).

Most literature on academic entrepreneurship and innovation focus attention on university spin-offs with the aim of commercializing technological breakthroughs, which may otherwise remain unexploited (Van Burg, Romme, Gilsing & Reymen, 2008). This thinking is one sided as it creates an idea that academic entrepreneurship and innovation is only achieved through the exploitation of research and development (R&D) results. This is mainly true for technology-orientated entrepreneurship and innovation. However, academic entrepreneurship and innovation also involve universities' entrepreneurship and innovation activities that could result in a profit, regardless of them being technological or not. For example, universities could offer some tailor-made and business-orientated services to an organization within their vicinity.

This paper's proposition is that an academic entrepreneurship and innovation model is known as the university-sponsored student business venture (USSBV), which according to Malele et al. (2016a), have the potential of exploiting students' new or existing knowledge outputs and intuitive ideas to bridge the

entrepreneurial and innovation chasm. The proposed model will be presented and discussed after a brief discussion on the definition of entrepreneurship and innovation, followed by what academic entrepreneurship and innovation involve, how it is significant in addressing students' employment and livelihood issues, and how it relates to venture creation models. This paper contributes to the ongoing discussion on bridging the entrepreneurial and innovation chasm.

2. ENTREPRENEURSHIP AND INNOVATION DEFINED

Richard Cantillon (1680–1734), pre-classical entrepreneur, was the first person to use the term entrepreneur (Van der Lingen & Van Niekerk, 2015). An entrepreneur (*in French entrepreneur meaning to undertake*), is an individual who undertakes an initiative of establishing a new company which is not necessarily based on innovation or a new idea, or rather any idea that could bring a profit (Lewandowski, 2013). While an innovator (*in French innovateur meaning to pioneer*) is an individual who pioneers and adopts some new ideas, product, procedure, method, or service that could change people's lives - including their political, social and/or economical systems. In this regard, the entrepreneur is seen as a person who gets things done and is an economic innovator (Van der Lingen & Van Niekerk, 2015). This individual practices entrepreneurship and innovation.

Entrepreneurship is concerned with the discovery and exploitation of profitable opportunities (Shane & Venkataraman, 2000). Low and MacMillan (1998) define entrepreneurship as the creation of a new enterprise. Entrepreneurship is the process that leads to the development of new ventures based on the exploitation of new or existing knowledge (Elpida, Galanakis, Bakouros & Platias, 2010).

On the other hand, Lewandowski (2013) argues that due to its several fields of research (i.e. business and management; economics; organization studies; innovation and entrepreneurship; science, engineering and technology, knowledge management and marketing), there is no agreeable definition for innovation, although it is deeply explored. However, some classic definitions, like that of the Austrian economist, Joseph Schumpeter, considered innovation as: (i) an introduction of a product which is new to consumers, or one of higher quality than was available in the past; (ii) methods of production, which are new to a particular branch of industry. These are not necessarily based on new scientific discoveries and may have, for example, already been used in other industrial sectors; (iii) the opening of new markets or a new source for raw materials or semi-manufactures; (iv) the use of new sources of supply; and (v) new forms of competition that lead to the restructuring of an industry or organization (Schumpeter, 1934; 1949).

Drucker (1985) introduced an opportunity-based theory which linked entrepreneurship and innovation. It sees entrepreneurship not just causing change (as claimed by the Schumpeterian theory) but exploiting the opportunities that are created by change.

The Schumpeterian innovation theory perceives entrepreneurship as a process comprising three major physiognomies (Baileti, 2011): (i) innovation, (ii) foresight, and (iii) creativity. However, it ignores the entrepreneur's risk-taking ability and organizational skills and places undue importance on innovation. While Opportunity-based theory views entrepreneurship as a process of always searching for change, responding to it, and exploiting it as an opportunity.

The Schumpeterian innovation theory applies and befits large-scale ventures that could keep their risk profile low and not change their structure, but force one group within the organization to be creative and have market's foresight. While the Opportunity-based theory applies and befits small-and-medium ventures as it forces them not to imitate, rather search for change and respond to it creatively.

The practice of: (i) identifying the challenges (problems), (ii) searching for change (foresight), (iii) having the ability to create new ideas aimed at addressing those challenges (creativity) and the mechanisms for implementing those ideas successfully (risk) results in entrepreneurship and innovation (i.e. Entrepreneurship and Innovation = Problems + Ideas + Creativity + Risk). In this regard, entrepreneurs are innovators who try new things (ideas, product, procedure, method, or service) and

take risks of exploiting them into establishing a new profit-making organization that could solve an existing or new problem(s). Then, they plan and grow their organizations into big ventures.

3. ACADEMIC ENTREPRENEURSHIP AND INNOVATION

Academic entrepreneurship and innovation is an umbrella term which refers to the efforts and activities that universities (and their industry partners) undertake in hopes of commercializing the university's ideas and the research outcomes (Wood, 2011). Scholars agree that it can be traced back to a passage of the Bayh-Dole Act of 1980 which provided a mechanism for which the intellectual property generated under government research grants could become the property of the university, rather than the funding agency sponsoring the research (Wood, 2011; Siegel & Wright, 2015).

Yusof et al. (2010) define academic entrepreneurship as the leadership process of creating value through acts of organizational creation, renewal or innovation that occurs within or outside the university that results in research and technology commercialisation.

Traditionally, the term academic entrepreneurship and innovation meant a university spin-off or an institutional transfer of research, development, or technology to start innovations or ventures (Barth & Schlegelmilch, 2013).

Academic entrepreneurship and innovation is not a single event, but rather a continuous process comprised of a series of events and research streams (Wood, 2011). Through these events, academic entrepreneurship and innovation attempt to increase an individual and/or organization's profit and prestige (Mirani & Yusof, 2016). Some of the events and research streams could be development of business ventures by students and inclusion of entrepreneurship and innovation curriculum in students' studies (Malele et al, 2016b). Table 1 summarizes the dimensions and mechanisms of academic entrepreneurship and innovation, which is the genesis of its research stream. Unfortunately, students' roles in these dimensions and mechanisms are not highlighted but subdued.

Table 1: Academic Entrepreneurship and Innovation Dimensions and Mechanisms (Source: Adapted from Yusof Et Al., 2012; 2010)

Dimensions	Description	Mechanisms
Organisational creation	Venture creation by expanding operations in existing or new markets through university start-ups, companies, spin-offs or spin-outs and strategic alliances, joint ventures or collaboration with the industry.	Start-up companies University spin-offs Joint venture
Organisational renewal	The university's commitment to pursue research and development in creating and introducing scientific breakthrough, new inventions and products; introducing new ways of doing things in terms of production processes and organizational systems within the university; and, transferring and commercializing new knowledge and technology for economic and social development.	Research groups Research centers Technology transfer schemes
Organisational innovation	The transformation of the existing academic organisations through the renewal or reshaping of the ideas in which they are built; by building or acquiring new capabilities and then creatively leveraging them to add value for stakeholders; and, through revitalizing the organization's operations by changing the scope of its business, its competitive approach or both.	Patenting Licensing Design rights

Mirani and Yusof (2016) assert that academic entrepreneurship and innovation comprise activities like industry-university collaborations, university-based incubator organisations, start-ups by academics, double appointments of academics in organisations and universities, consulting and patent-seeking. In almost all the segments highlighted in Mirani and Yusof (2016), students are not mentioned as key

stakeholders or possible developers or founders of either start-ups or university-based incubator organisations.

Academic entrepreneurship and innovation go beyond research and development or intellectual outcomes as it involves the use of intuitive ideas and opportunities that could be exploited into developing new ventures that could bring income and profit. Academic entrepreneurship and innovation are created from innovative ideas, developments, and patents that are generated by the university in an effort of addressing the needs of the society or business. These ideas, developments, and patents undergo a robust selection stage before being exploited.

Academic entrepreneurship and innovation are synonymous to intellectual entrepreneurship. According to Beckman and Cherwitz (2009), intellectual entrepreneurship includes readiness to seek out opportunities, undertake the responsibilities associated with each, and tolerate the uncertainty that comes with initiating genuine innovation. In this regard, students play a vital role in academic entrepreneurship and innovation.

3.1. Students' employment and livelihood

Today, youth unemployment is the greatest challenge facing the world. In 2013, the global youth unemployment rate reached 13.1%, nearly three times higher compared to that of adults (ILO, 2014). In the last quarter of 2014, the South African unemployment rate of 15 to 24 and 25 to 34 years of age groups was 48.8% and 29.6%, respectively (Stats SA, 2015). To address the aforementioned unemployment dilemma, most governments in the world echo an idea that young people should be educated. The challenge is: what happens to them after graduating? Some will be employed, others enroll for further or postgraduate studies, very few will enroll for new qualifications, and perhaps, the majority might be unemployed.

Universities play a role in educating young people, but are they in a position to eradicate unemployment; and if so, how so? To answer such a question, universities should promote and implement entrepreneurial—and innovation—drive that could help students establish and develop new business ventures. This could foster self-employment for the graduates and the possibilities of employment for other young people.

Considering the above argument in the context of youth development, academic entrepreneurship and innovation could be an engine for students' self-employment. Beckman and Cherwitz (2009) argue that academic entrepreneurship and innovation widens the mission of institutions of higher learning from advancing the frontiers of knowledge and preparing tomorrow's leaders to also serve as engines of economic and social development.

Through academic entrepreneurship and innovation, students are positioned between academic production of knowledge and the know-how from societies or private enterprises (Barth & Schlegelmilch, 2013). In this regard, in academic entrepreneurship and innovation students are also viewed as intellectual entrepreneurs or innovators (Malele et al., 2015).

As intellectual entrepreneurs, students understand that genuine collaboration between universities and the public is tantamount to more than increased access to intellectual assets, more than knowledge transfer - the exportation of neatly wrapped solutions rolling off the campus conveyer belt. This is because students are part of the same entrepreneurship and innovation ecosystem which contribute possible ideas to be exploited. The latter makes academic entrepreneurship and innovation pivotal because students could graduate while they are already business individuals, as such leading them to a better livelihood.

4. NEW VENTURE CREATION MODELS

Literature was explored to determine whether or not there exists a new venture creation model that involves students or is students driven. The discussion below provides two major venture models that could relate to the involvement of students, although students' roles were not clearly highlighted. This

paper proposes a new venture creation process model that will involve students as venture creation individuals.

Lewandowski (2013) mentioned that new venture creation is perceived as an effort by a group of people, who are pursuing common goals, to harmonise their cooperation and assets, in a standardised, formalized and/or institutionalized form. New ventures have specific characteristics which distinguish them from more mature ones, these includes novelty, small size, and an inherent uncertainty in business (Yankov, 2012).

To predict the success of a new venture creation, Carland and Carland (2000) advise that new venture creation should be modeled as a process. The literature identifies several types of venture creation models of which Lewandowski (2013) perceives as segmented within three basic classifications: (i) independent entities, (ii) new profit centers within an organization which has other established businesses, or (iii) a joint venture.

Traditionally, a new venture creation model comprised three stages within the process: (i) ideas, (ii) commitment and early planning, and (iii) implementation (Lewandowski, 2013). However, with the growth and development in literature, different scholars added new stages and created new models as discussed. More than 30 models could be identified in literature (Santos, Curral & Caetano, 2010; Yankov, 2012; Yusof, Siddiq & Nor, 2012; Lewandowski, 2013).

The Carland and Carland (2000) venture creation model views the entrepreneurs/innovators as developing a vision of the business venture based on their cognition, entrepreneurial drive, knowledge, creativity, experience and intuition (see Figure 1). The Baron and Shane (2005) venture creation model has a different focus than that of Carland and Carland (2000), as in their first step sees the idea or opportunity as equivalent of the entrepreneurial vision. The analytical stages are skipped and the focus is on the gathering of resources before the launch of the new venture; with two post-launch stages: building the business and harvesting the rewards.

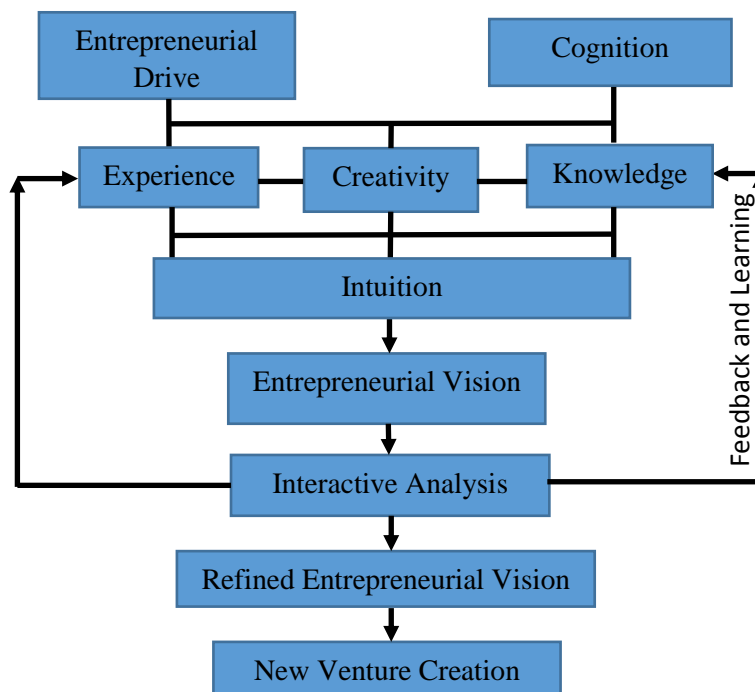


Figure 1
Carland's Venture Creation Model (Source: Carland and Carland, 2000)

Yankov (2012) revised the Carland and Carland (2000) new venture creation process model by adding a context corresponding to the strategy and structure model and substituting the refined entrepreneurial vision with the more formal business plan. The initial part of the process - the formation of the

entrepreneurial vision takes place in the mind of the technical entrepreneur. After analysis, changes, and reconsideration, the vision may develop into formal or informal business plan. The new venture then forms in the framework of the industry structure (see Figure 2).

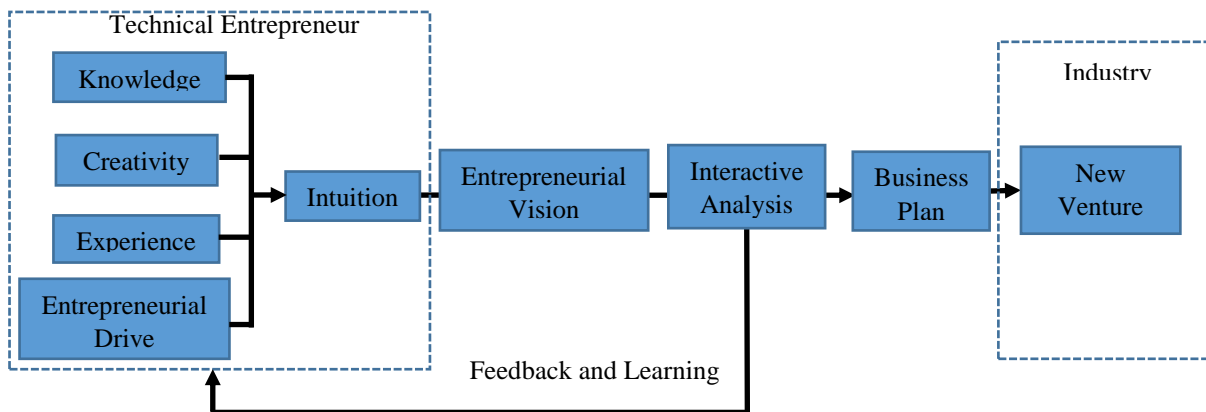


Figure 2 Yankov's Venture Creation Model
(Source: Yankov, 2012)

Considering all the characteristics of academic entrepreneurship and innovation, the aforementioned discussion on venture creation process model, there is a need for a comprehensive model that could be student-centered and student-driven. This need is supported by the fact that a university's entrepreneurial and innovation system is enhanced by recognizing the university's role in (i) supporting start-up company efforts by academicians and students; (ii) regional economic development; and (iii) alignment of curriculum to meet the needs of local community and its development efforts (Yusof et al., 2010).

Furthermore, the need is supported by the argument that the continuing revitalisation of the field of entrepreneurship and innovation could be fostered through examining opportunities for research in other areas like (i) university-sponsored entrepreneurship, and (ii) venture finance (Hoskisson, Covin, Volberda & Johnson, 2011). The section below discusses a proposed new venture creation model, the University-Sponsored Student Business Venture (USSBV).

5. UNIVERSITY-SPONSORED STUDENT BUSINESS VENTURE

Most of what is heard about entrepreneurship and innovation are wrong. Entrepreneurship and innovation are not magic, not mysterious and it has nothing to do with genes but it is a discipline that could be learned (Drucker, 1985). The USSBV involves activities that are driven by entrepreneurship and innovation. The USSBV is generally a hybrid and agile new venture creation model that comprises four stages: (i) idea generation, (ii) agreement stage, (iii) business research and development, and (iv) venture creation stage.

5.1. Idea Generation Stage (Ideation)

In USSBVs students do not obtain entrepreneurship and innovation ideas only through research and development, but also allow students to obtain ideas from patent search. Most of the ideas could develop from students' intuitiveness (i.e. brainstorming sessions, normal creativity, etc) which seeks to address challenges emanating from students' environment or communities. Furthermore, the need for employment develops more intellectual opportunities that could be exploited. In this regard, the first stage in a USSBV is idea generation, well known in entrepreneurship and innovation as ideation (see Figure 3). In the ideation stage, an interactive process is conducted which involves finding the (i) needs (mostly through the methods that are discussed above), and (ii) formulating and determining feasibility. An ideation stage is the recognition of opportunities stage for feasible ideas, which when found, then goes through an agreement stage.

5.2. Agreement Stage

The ideation stage is followed by an agreements or intellectual property rights stage which involves patent registration, signing of agreements of understanding and agreements of exploiting the ideas. These agreements are signed between the students and the university. To protect all parties, in a case whereby students obtain ideas from community members such as indigenous knowledge holders or practitioners, an agreement between the student, the community member, and university should be signed.

Research and development (R&D) are at the heart of innovation but unless research could be effectively transferred to the marketplace, the benefit to the locality or economy is limited (Yusof, 2010). Almost all R&D ideas need to go through IP protection and registration process. However, some ideas will not go through the intellectual property (IP) registration but could be protected through other agreements (i.e. terms of reference, memorandum of understanding, etc). In this stage, the university has to use its policies, assets, and resources to assist students with the development of business agreements. Thereafter, the ideas will be taken to business R&D stage.

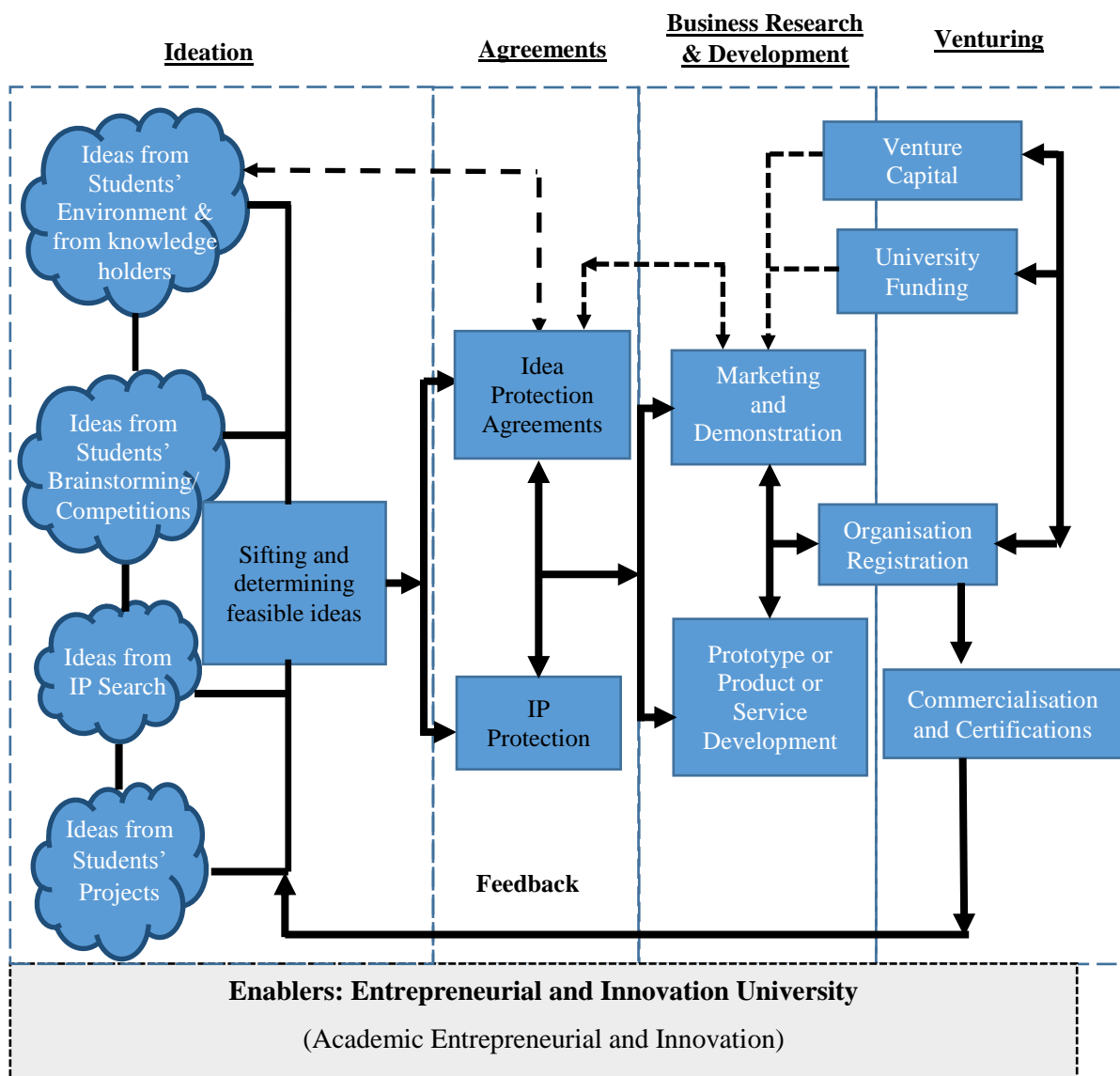


Figure 3 University-Sponsored Student Business Venture

5.3. Business Research and Development Stage

Depending on the purpose of an idea and the agreements that were signed, in this stage, an idea is either developed as prototypes/products/services. These prototypes/products/services are then marketed and demonstrated (or vice-versa) to the: (i) selected target market (i.e. those who suggested ideas and solution was conceptualize for, or selected group which marketing research identified as potential buyers), and (ii) entire potential market (i.e. expansion of buyers).

It is at this stage when part of venture capital funding and university funding will be important and necessary because some of the prototypes/products/services will need to be protected through agreements and/or IP protection processes. The latter should happen before these prototypes/products/services are marketed and demonstrated to the targeted market. The results of this stage foster the beginning of the venture creation stage.

5.4. Venture creation stage (venturing)

In this stage, the USSBV's stakeholders strategically form and register an organization that will be used to commercialize and seeks necessary certification for the developed, marketed and demonstrated prototypes/products/services. In this stage, most of the agreed venture capital funds and university funds will be needed because other entrepreneurial and innovation activities should be conducted like further marketing, salaries of new employees, etc. This stage produces more ideas that are feedback, mostly to the ideation stage; however, depending on how they are conceptualized, they could be routed to any stage for further development and exploitation.

5.5. Enabler

It should be noted that throughout the USSBV stages, the enabler is the university and its academic entrepreneurship and innovation policies and funding used to support students with training and other business amenities.

As a good practice, the importance of other factors, such as students' entrepreneurial and innovation character, attitudes, intentions, interest, etc, which may be statistically significant should be conducted through a validation excessive (Yankov, 2012). The university as an enabler will have to conduct the aforementioned statistical test to determine and separate entrepreneurial and innovation students from others.

6. CONCLUSION

In this paper, a new venture creation is seen as a process to assemble ongoing and new ideas into a hybrid and agile relationship that have interdependent practical actions that could generate profitable outcomes. A new venture creation model named university-sponsored student business venture (USSBV) comprising four major stages (i.e. ideation, agreements, business research and development, and venturing) in which students are major stakeholders, was introduced.

The USSBV differs from Carland's and Yankov's models as it views students' intuitive ideas as not emanating from their knowledge or creativity or experience, but mostly from other sources which are mainly ignored in literature. Secondly, in a USSBV, students do not need an entrepreneurial drive to engage themselves in an entrepreneurship and innovation activity, as is the case in Carland's and Yankov's models. However, students' entrepreneurship and innovation ideas foster a drive for students' engagement. Through the ideation stage, these ideas are collected from ideation enablers (i.e. competitions, olympiads, training activities, community engagements, etc), collated and sifted to be processed in other stages.

7. FUTURE STUDIES

The USSBV is a form of a joint venture creation model in which students are the major shareholders and founders of the venture. The USSBV is a joint venture between the founder, an intellectual entrepreneur (a student) and a university. Depending on the roles, this relationship could be extended to involve a community member and/or a venture capital or sponsor. In this regard, future studies could investigate the potential types of agreements for USSBV.

A study on enablers and relating factors that influence USSBV could be conducted. A statistical significant analysis of entrepreneurial and innovation attitudes, motivation, interest, intention, etc, could be investigated as part of USSBV validation. Another significant work could investigate the ideation stage and suggest different ideation idea platforms because students might use the platforms to sift a solution for societal problems.

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Black Tax and its Influence on Youth Entrepreneurship Intentions in South Africa

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ABSTRACT

The purpose of this conceptual paper is to describe and conceptualize a pervasive and yet under-reported phenomenon – ‘black tax’ – and how it influences entrepreneurship intentions among South African youths. The paper argues that since individuals in highly collectivist countries, such as South Africa, consider themselves to be more of social actors than individuals; they seek to satisfy shared communal values over personal goals. Naturally, societal piety expectations including ‘black tax’ govern individuals’ attitudes and behaviour. The paper posits that individuals’ perceptions of ‘black tax’ are an antecedent to behaviours such as entrepreneurship. Consequently, an extensive review of literature that encapsulates the key issues of black tax, social norm and entrepreneurship intentions, was conducted. This paper significantly contributes to the theoretical aspects with regards to black tax as a major phenomenon influencing a social order of an individual or group. This explanation of such behaviour can very well be extended towards explaining individuals’ desire towards entrepreneurship. Thereby, black tax might very well be the societal piety that influences youth to seek employment in lieu of engaging in entrepreneurship after schooling system, sometime without a chance to finish school but dropping out in order to advance the aspiration of the family.

1. INTRODUCTION

South African youths are “buckling under the financial [and social] pressure of being family breadwinners to the extent that it is crippling their aspirations” (Ratlebjane, 2015; Chabalala, 2016; University of Cape Town Unilever Institute of Strategic Marketing, 2016). Many dreams, plans, and hopes are deferred, and others abandoned, so as to allow for the little available resources to support the extended family (Chabalala, 2016). The effects of black tax are now so severe that they not only shape, but dictate the lives of young South Africans, voluntarily or otherwise. To this end, several entrepreneurship policies and development structures have as a result been put in place to support youth entrepreneurship. Despite this though, entrepreneurship levels among South African youth remain depressed. In fact, South Africa has the lowest Total Entrepreneurial Activity (TEA) levels in the sub-Saharan African region (Herrington et al., 2010:44). The literature posits that students lack the motivation to embark on entrepreneurial activities (Rae, 2010; Makgosa & Ongori, 2012).

More interesting is the fact that despite youth unemployment is most severe in South Africa (Kelser & Hout, 2010), entrepreneurship levels remain low among the youth. It is justifiable to assume that the uptake of entrepreneurship, as an alternative to employment, would be greatest in South Africa because of the high unemployment levels and the country’s support for entrepreneurial activities (Shambare, 2013). Thus, the low TEA, within a background of rising unemployment and high entrepreneurial support, can be considered to be a theoretical puzzle that defies all conceptual explanations. Consequently, the existence of this theoretical puzzle is a gap that this study seeks to address. More specifically, this study seeks to propose a conceptual model that explains this phenomenon.

To try and address the above-mentioned theoretical enigma of youth unemployment, Ebewo (2016) sought to understand how entrepreneurial environment influenced entrepreneurial intentions (EI). The latter study provided new insights into EI among youths. Of note, it was able to decompose EI into two constituent elements; namely, Immediate Entrepreneurship Intention (IEI) and Future Entrepreneurship Intention (FEI) (Ebewo, 2016). The significance of this finding was that the decomposed EI model is able to account for the presence of social norms in the EI model, which many other studies could not.

In Ebewo’s (2016:161) decomposed model, the effect of subjective norm is significant if, and only if EI is decomposed into IEI and FEI. The latter model, as proposed by Ebewo (2016), partially explains the low present-day TEA levels in South Africa. This is so because youths sometimes choose to defer

their decisions to engage in entrepreneurial activities to the future, due to FEI. Nevertheless, while Ebewo (2016) provides major breakthroughs, his study is inconclusive. In fact, it triggers a new set of questions: (1) Why do social norms result in a decomposed EI model? (2) What kind of social norm actions are responsible for this phenomenon? In an attempt to answer the above questions on social norms, the literature pointed towards black tax as a possible answer to the dilemma (University of Cape Town Unilever Institute of Strategic Marketing, 2016).

Consequently, the existence of the above-mentioned theoretical puzzle is a gap that this paper seeks to address. More specifically, the purpose of this conceptual paper is to describe and conceptualize a pervasive and yet under-reported phenomenon – ‘black tax’ – and how it influences entrepreneurship intentions among South African youths.

2. CONCEPTUALISING BLACK TAX IN SOUTH AFRICA

The term “black tax” currently have no scientific definition. This phenomenon is fairly new and has yet to receive much attention from researchers and scholars. The only attention that is captured about black tax in South Africa is through newspaper articles which are largely opinions and views rather than scientific. Although all of this has stimulated debates and triggered a new line of thinking, there still exist multiplicity of definitions of what constitute black tax. According to Seid (2016) the term “black tax” is used to describe the obligation of employed black South Africans to provide for their extended family. Similarly, however in a different context, Matubutuba (2016) views black tax as black working class individuals who are faced with the responsibility of supporting family members while Mhlungu (2015) posits that “real financial and social implications for being a member of one or more a group or society – people who are deliberately and systemically denied opportunities, equal rights and freedoms; who are paid less; who travel further to work; who have little or no social security nets; who come from backgrounds where there are fewer family members employed or educated”.

Notwithstanding the above, this paper defines black tax as a societal expectation which translates to social norm. Our definition goes on in indicating that this societal expectation comes in different forms and not only in monetary value. The paper further posit that one’s responsibility to provide for family and relatives has been observed to be an important antecedent in defining people’s behaviour in collectivist countries such as South Africa. In other words, individual persons will act in a manner that ensures that they live out society’s and family’s expectations. Accordingly, Gerald Mwandambira, the acting chief executive of the South African Savings Institute, refers to this as “sandwich generation” rather than “black tax” as the former is more inclusive of other races. This problem is most common in previously disadvantaged groups, but is equally applicable to other racial groups (Ratlebjane, 2015). Consequently, this paper views this concept as “social tax” and not black tax; the proposed term eliminates the notion that this only affects black people and that it is only based on monetary value (i.e the extra money that black professionals are coughing up every month to support their extended families) as defined by Ratlebjane (2015). In the South African context, this might well be seen as the concept of Ubuntu that espouses “good or ideal morals” and behaviour (Gelfand, 1970).

The philosophy of Ubuntu derives from an Nguni word, ubuntu meaning “the quality of being human”. Ubuntu manifests itself through various human acts, clearly visible in social, political, and economic situations, as well as among family (Flippin, Jr, 2017). According to Shambare (2016:216), Ubuntu refers to an African philosophy that seeks to promote harmonious relations and interaction among people. This philosophy suggests that a person can only truly and fully exist if he or she co-exists with others in his or her community. In other words, this means that one should always have a strong sense of consideration for others. According to the philosophy of Ubuntu, a person fully becomes mature and ‘complete’ by making his or her needs subservient to those of others (Gelfand, 1970).

3. BLACK TAX AS AN IMPORTANT CONSIDERATION OF SOCIAL NORM

The phenomenon of “black tax”, although necessary and commendable, is also responsible for creating an endless cycle of poverty for many families (Mpete & Daya, 2017). According to the Financial Services Board, in Mpete and Daya (2017) there is an emerging trend that shows that only 6% of South African retirees are financially independent at retirement, while the remaining 94% are dependent on

their families, friends, or the government. Black tax is essentially an opportunity cost on savings one could be making to ensure for a better and debt-free future. The fact that one is spending money on taking care of family responsibilities means that they are not saving, especially for things such as retirement. Black tax can trap families in a cycle of poverty, because if one does not save for a comfortable retirement at an earlier stage or as a young professional, you will have to depend financially on your children. They, in turn, will be burdened with paying a heavy black tax, which will affect their ability to save for their future (Mpete & Daya, 2017).

The concept of “black tax” is basically the notion of family or community members (Societal expectation) who feel entitled to being paid back by either monetary and/ non-monetary means for all the years invested to an individual. These can include but not limited to education, clothing, or even the R5 coin one carried as pocket money to school, the reality is that some families who were instrumental in one’s upbringing may feel the need to be “paid back” - especially if the subject of their “investments” is working and earning what is perceived to be a decent salary. A more common and practical example is a young professional who recently graduated from university and has now secured employment. To some extent it is not even employment but an internship. However, the expectation remains intact to the fact that one wakes up in the morning and goes to work.

According to Financial Reach South Africa (2016), coming from a disadvantaged background, particularly lower and to some middle income families to an individual which is the first or possibly the second generation in the family to go to university, the pressure and burden is felt to put this young person through tertiary and reap the financial rewards as soon as possible from their immediate family and often extended family. These young professionals may be expected to send money back home for parents’ living expenses, school fees for younger siblings, financial contributions to family ceremonies, family emergencies and home extensions for a better house for the entire family. The recent graduate is burdened with a sense of financial indebtedness to their family and is perceived as an agent of change to the family. The saviour of the family who will ensure a better life is given to all.

According to Matubatuba (2016:1), the following are some of the examples and types of black tax;

- (a) Support in the form of contribution to family living expenditure such as groceries, water and light,
- (b) Support in the form of tuition fees of a sibling or other close individual,
- (c) Support in the form of emergency expenses such as medical bills and funerals.
- (d) Support in the form of extending a small family house into a bigger house.
- (e) Acting on fulfilling other non-financial family responsibilities in lieu of one’s aspirations (e.g. being forced to get a job in order to support the family in lieu of starting a business, being forced to enrol for a business management programme in lieu of the programme of your choice in order to take responsibility of the family business in future).

According to the UCT Unilever Institute Aspirations Report 2016, black tax hinders youth from achieving their aspirations. Furthermore, the report provides some of the factors that constitute black tax, which include lack of jobs, lack of assets that prevents access to credit and lack of access to quality education. The report revealed that South Africans' aspirations include financial stability; belonging; freedom; comfort; health; experiences; the need to "give back"; and respect. Amongst other things, the reports indicate that individuals would be respected by society if they are able to support their families. Furthermore, the report reveals that over 30% of the respondents indicated that family responsibilities are holding them back from progressing.

Consequently, in the context of this paper, black tax is viewed as a societal piety that influences youth from following their own personal goals and aspirations in order to advance the expectations of the society, particularly family members (i.e. engaging in entrepreneurship activities). These can be in the form of financial or non-financial means.

4. SOCIAL NORM AS A DETERMINANT OF ENTREPRENEURSHIP INTENTIONS

According to Linan (2004), social norms play an important role in constructing social order. Furthermore, the author also argues that such norms are the behavioural expectations and cues within a society or group. This study concerns itself with the influence of social norm as a determinant of entrepreneurship. Another antecedent of intention is a social factor called social norm, which refers to “perceived social pressure to perform or not to perform the behavior” (Ajzen, 1991:188). Past literature has shown controversial results on the relationship between social norm and entrepreneurial intention. For instance, Moriano, Gorgievski, Laguna, Stephan and Zarafshani (2012) confirm that social norm is a significant predictor of entrepreneurial intention. In addition, Van Gelderen et al. (2008) also found that social norm was important in explaining intention towards entrepreneurship.

Unlike attitude and perceived behavioural control, there is mixed evidence for the impact of subjective norms on intentions, with several studies finding significant impact (Kolvereid, 1996; Tkachev & Kolvereid, 1999; Kolvereid & Isaksen, 2006; Engle et al., 2010), while others do not support this finding (Autio *et al.*, 2001; Krueger et al., 2000; Liñán & Chen, 2009). Kolvereid (1996) and Tkachev and Kolvereid (1999) found this particular antecedent as significantly related to entrepreneurial intent in both their Norway and Russia samples. Similarly, Engle *et al.* (2010) found subjective norms to be significantly related to intentions in 12 countries.

The literature on social capital suggests that values and norms transmitted by “important others” may affect motivations (Casson & Della Giusta, 2007). Thus, these values - received from others - may partly determine PA and PBC (Heuer and Liñán, 2013). As suggested by Boyd and Vozikis (1994) subjective norms might act as an antecedent to attitudes or PBC due to some of the original failures of subjective norms to directly predict intentions. These relationships of subjective norms and intentions being mediated by attitudes and PBC were subsequently supported with empirical evidence (Autio et al., 2001; Linan & Chen 2009; Linan et al. 2011). In support, Krueger et al., (2000) found that subjective norm have a significant relationship between attitude toward the behavior and perceived behavioral control. This showed that subjective norm is not a standalone variable and may be used to moderate or even mediate the relationship of other variables on intentions as suggested by Reitan (1997).

5. ENTREPRENEURSHIP INTENTIONS

Entrepreneurship is a way of thinking, a way of thinking that emphasizes opportunities over threats. The opportunity identification process is clearly an intentional process, and, therefore, entrepreneurial intentions clearly merit our attention (Krueger, Reilly & Carsrud, 2000:411). According to Bird (1988), Krueger and Brazeal (1994), intention proved to be the best predictor of planned behaviour in the psychology literature, the authors further posit that this behaviour occurs, particularly when it is rare, hard to observe, or involves unpredictable time lags. As such, the authors argue that entrepreneurship is a distinctive example of such planned, intentional behaviour (Bird, 1988; Katz & Gartner, 1988).

According to Lee and Wong (2004:7), intent is the first step in the creation of an individual’s business. In a more recent study, Ajzen (2011:56) defined intention as an individual’s readiness to do a specific behaviour. In the entrepreneurial context, Thompson (2009:676) defines intention as “a self-acknowledged persuasion by an individual who intends starting a new business venture and intentionally plans to achieve this in the future”. The table below summarises some definitions of entrepreneurship intention.

Table 1: Definitions of entrepreneurship intention

Source: Developed for this study

Author(s) and year	Definition
Bird (1988)	A state of mind that focuses a person's attention, experiences and behaviour towards a goal or path.
Krueger (1993)	The commitment to starting a new business.
Liñán (2004)	The effort that the person will make to carry out the entrepreneurial behaviour.
Souitaris <i>et al.</i> (2007)	A state of mind directing a person's attention and action towards self-employment as opposed to organisational employment.
Fayolle (2006)	The cognitive representation of a person's will to perform a particular behaviour that is considered a good predictor of planned and controllable human behaviour.
Hisrich <i>et al.</i> (2008)	The motivational factors that influence individuals to pursue entrepreneurial outcomes.
Thompson (2009)	Self-acknowledged convictions by individuals that they intend to set up new business ventures and consciously plan to do so at some point in the future.

Rivis and Sheeran (2003:218) note that intentions summarise a person's motivation to act in a particular manner and indicate how hard the person is willing to try and how much time and effort he or she is willing to devote in order to perform behaviour. Consequently, entrepreneurship intention refers to the intention of an individual to create a new business venture (Engle *et al.*, 2010:38). Malebana (2014:130) indicates that it is a strong indicator of possible entrepreneurship.

6. LIMITATIONS OF THE STUDY

The limitations of this paper are noted. As indicated below, this is a conceptual paper. Consequently, this paper was limited to desktop research. There was no empirical evidence in a form of survey, case study and interview(s) conducted. Furthermore, the lack of scientific literature in the area of black tax was a major limitation of this paper.

7. CONCLUSION AND RECOMMENDATIONS

The purpose of this conceptual paper is to describe and conceptualise a pervasive and yet under-reported phenomenon – 'black tax' – and how it influences entrepreneurship intentions among South African youths. The paper argues that since individuals in highly collectivist countries, such as South Africa, consider themselves to be more of social actors than individuals; they seek to satisfy shared communal values over personal goals. Naturally, societal piety expectations including 'black tax' govern individuals' attitudes and behaviour. The paper posits that individuals' perceptions of 'black tax' are an antecedent to behaviours such as entrepreneurship. Consequently, an extensive review of literature that encapsulates the key issues of black tax, social norm and entrepreneurship intentions, was conducted.

This paper significantly contributes to the theoretical aspects with regards to black tax as a major phenomenon influencing a social order of an individual or group. This explanation of such behaviour can very well be extended towards explaining individuals' desire towards entrepreneurship. Thereby, black tax might very well be the societal piety that influences youth to seek employment in lieu of engaging in entrepreneurship after schooling system, sometime without a chance to finish school but dropping out in order to advance the aspiration of the family.

Furthermore, this paper also attempts to determine the influence or rather the association of black tax to entrepreneurial intentions. Consequently, the study argues that black tax has an influence in entrepreneurship intentions, particularly on social norm as suggested by Ebewo (2016). The latter study provided new insights into EI among youths. Of note, it was able to decompose EI into two constituent elements namely, Immediate Entrepreneurship Intention (IEI) and Future Entrepreneurship Intention (FEI) (Ebewo, 2016). The significance of this finding was that the decomposed EI model is able to account for the presence of social norms in the EI model, which other studies could not. In Ebewo's (2016) decomposed model, the effect of subjective norm is significant if, and only if EI is decomposed into IEI and FEI. The latter model, as proposed by Ebewo (2016), partially explains the low present-day TEA levels in South Africa. This is so because youths sometimes choose to defer their decisions to

engage in entrepreneurial activities to the future, due to FEL. This explanation of such behaviour can very well be extended towards explaining individuals' desire towards entrepreneurship.

Following the limitations of this study, the paper proposes qualitative, quantitative and mixed method studies in this area. Also, it was noted from literature that most studies used regression analysis to measure the relationship between subjective norm and entrepreneurship intentions which to some extent does not account for social norm adequately, particularly in collective nations such as South Africa. The paper proposed future studies to use structural equation modelling to testing the relationship between subjective norm and entrepreneurship intentions, as this have shown different results compare to regression analysis in the more recent studies.

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Developing a Research Culture at the Central University of Technology, Free State: Implications for Knowledge Management

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ABSTRACT

The thirteenth year transition of the Central University of Technology, Free State (CUT) from a vocational and professional training orientation institution (i.e. a technikon) into a full-fledged university with a strong research focus has not been a smooth, uncomplicated one. At the heart of this transition has been the need to transform the psychological faculties of academic and research staff complement which was accustomed to training graduates for industrial placement and lacking a culture of research to fully embrace a strong ethos of conducting world-class research. The induction and socialisation of academic staff into the development and execution of cutting-edge research also required providing research support to aspirant emerging academics and creating an ambient academic environment for research. Drawing on 10 cases comprising four heads of departments, three prolific established researchers and three emerging researchers, this research study explored the challenges of establishing a strong research culture at the university, the extent to which the current research interventions have effectively addressed the perceivably “missing research culture” and their implications for knowledge management. Evidence suggests that the endowment of an ideal institutional research environment (comprising strong internet networks, persistent connectivity on and off campus), research peer mentorship, and growing publication outputs should be matched by a coherent research incentive culture and strong research leadership. This is critical to building new knowledge and entrenching knowledge management founded on communities of practice and scholarly networking through the documentation and communication of research findings. The research concludes that the multiple policy documents covering different domains of research may be creating policy pressure, which needs to be released through policy and research actions if the current performative stance on increasing research quality at the expense of research quality is to be challenged.

Keywords: Research culture, publication, performance, university

1. INTRODUCTION

Universities of Technology (UoTs) were a consequence of the major reconfiguration of the higher education landscape in South Africa, which took place from 2004 onwards. Through a process of mergers and re-designations, South Africa’s 36 higher education institutions (21 traditional universities and 15 technikons) were trimmed down to 23 universities - comprising 11 traditional (some of which were merged with others), 6 comprehensive universities (arising from mergers between traditional universities and technikons), and 6 UoTs (created from unmerged technikons) (Du Pre, 2010). While the merging of differentiated educational systems with different research production capacities, practices, research ethos and varying resource constraints created opportunities for former technikons with limited research productivity to assimilate the prolific research culture of research-oriented institutions, the possible backlash manifested in some experienced staff members’ resistance to the “performative” research orientation of these reconstituted institutions.

Over the past 15-20 years, the South African Universities of Technology (UoTs) have grappled with being financially disadvantaged by the apartheid legacy and the death of a research culture (Badat, 2010). While the Central University of Technology, Free State (CUT) has introduced multiple initiatives to advance research such as the Research and Development Plan 2014-2020, Scholarship of Teaching and Learning, CUT and UFS Joint Research Programme, Research Entities (Centres, Units and Groups Project), National Research Foundation/CUT Flagship Programme and the Graduate Attributes Programme, CUT is yet to overcome the death of a tradition of scholarly research. There is growing consensus about the lack of research productivity among some long-serving academic staff members who have never been part of a “research culture” (Ngowi, 2012).

According to Evans (2007), a research culture includes the inculcation of disciplinary and interdisciplinary ideas and values and fostering an environment where researchers can flourish as individuals within their own research capacities. It also includes the excitement of the academics to engage themselves in research projects (Evans, 2007). The CUT experience is an exceptional one, in which the multiple research policies, research programmes and institutions have not sufficiently accelerated cutting-edge research at the institution - judging from: (1) the number of full-time and permanently employed research active staff, (2) publications in top journals in disciplinary fields, (3) successful applications for NRF rating researchers. If research culture relates to the development of a framework in which students and their supervisors, in collaboration with stakeholders and/or funding bodies, collectively build capacity and intellectual capital (Bako, 2005) then it can be argued that the CUT research culture has been an oxymoron. The number of Master's and Doctoral completions has almost doubled - fifty-three Master's degrees were awarded in 2016 compared to twenty-seven awarded in 2010 and nineteen doctoral degrees were awarded in 2016 compared to the six awarded in 2010 between the years 2010 and 2016. This impressive growth is, however, marred by stunted growth in other research areas. For instance, the institution has only secured few successful NRF grant funding and one South African Research Chairs Initiative (SARChI) Chair between the years 2010 and 2016 (Lategan, 2016). More so, the sluggish growth in the number of NRF rated researchers due to retirements, resignations and exits is a cause for concern. For instance, for the years 2013, 2014 and 2015, their numbers decreased from 7 to 6 and then merely grew to 9 (De Jager, 2014).

One of the most fundamental pillars of a research culture at a university is the presence of research-active academics. Over the past seven years, the Faculty of Engineering and Information Technology (FEIT) at the Central University of Technology, Free State (CUT) has put concerted effort into building a critical mass of research-active academics through recruitment of reputable and well-established researchers as well as encouraging and supporting staff to acquire higher degrees (Ngowi, 2014). In spite of these initiatives, CUT just like other UoTs, is still confronted with the challenge of building the research capacity of young generation of researchers. In fact, there is limited evidence of intense research collaboration between emerging academics and experienced academics. For instance, the postdoctorate appointments are only to take root at the institution in 2017 in the Faculty of Management Sciences and Humanities, where a few research-active senior academics dominate the research publication arena.

The current study sought to answer the following questions:

1. What are the current research interventions put in place to advance a research culture in the Faculty of Engineering and Information Technology at the Central University of Technology Free State?
2. What challenges are hindering the establishment of a strong research culture in this faculty and what are their implications for knowledge management?

2. RESEARCH BACKGROUND

The building of a research culture at CUT should be conceived in view of the research highlights and current research interventions, including the research blockages at the institution. In terms of research strides, CUT generated 55.02 journal credit units, as well as 13.02 published conference proceeding units and 0.44 scientific book units in 2014. The institution also received the NRF Excelleration Award for attaining the most improved research performance over recent years (Research and Innovation Report, 2014). Moreover, the Centre for Rapid Prototyping and Manufacturing (CRPM) in the Faculty of Engineering and Information Technology was launched officially by the Minister of Science and Technology, Naledi Pandor in 2015. The National Research Foundation (NRF) also awarded the South African Research Chairs Initiative (SARChI) research chair, to Prof Ihar Yadroitsau in recognition of the phenomenal research his team has been conducting in Medical Product Development through Additive Manufacturing (AM) at CUT. This groundbreaking research is considered essential to the country's strategic growth and development. In 2015, three academics (Two from Engineering and one from Management Sciences) were successful in their NRF rating applications, demonstrating the high calibre of their research. In 2016, five academics (Four from Engineering and one from

Education) were promoted from Senior Lecturer to Associate Professorship, and one academic staff member was promoted from Associate Professor to Professor in Management Sciences.

In spite of these laudable research achievements, some systemic fissures that point to constrained knowledge generation and transfer capacity persist at CUT. For instance, while the research growth rate of Faculty of Engineering and Information Technology (FEIT) (in all aspects) is encouraging, there is limited evidence on the increased participation of staff in research and deepening of a research culture characterised by quality research outputs. This means the professoriate should engage with all activities associated with research participation and productivity to bring emerging researchers on board. More so, although institutional interventions designed to advance the research capacity such as the establishment of new research centres, units and groups are beginning to gain wider recognition and legitimacy at the institution, there is insufficient evidence that these initiatives have put emerging academics at the core of developing a publication culture. Since these research initiatives were implemented in 2014, pundits claim that it is too early to expect huge research outcomes from these initiatives. However, as it may, it is uncontested that the three-year life of such initiatives has been far from being amazing intellectual headstarts.

More so, the aforementioned 2014 research outputs represented as a weighted output of 0.24 units per academic staff member (Research and Innovation Report, 2014), clearly demonstrate the skewed distribution of research productivity and knowledge production among staff members at this university. This disproportionate publication record seems to support the view about the paradoxical nature of building a research culture at the institution - one in which knowledge production is inadvertently concentrated in the small nucleus of senior, experienced academics in ways that euphemistically exclude junior academic staff in the “publication race.”

In view of the need to grow the number of publication outputs to about 75% of the expected Department of Higher Education and Technology (DHET) norm by 2020 (the current norm is 1.1 credit output unit per full-time academic staff at CUT) (Lategan, 2015), the prevalence of permanently employed academic staff that have not published an article suggests the prevalence of “juniorisation” of research at the institution. The low ratio of research output to academic staff members suggests some systemic institutional blockages and personal constraints in the existing knowledge transfer models at this institution.

Furthermore, the potential research experience gap between the current, retiring leaders (senior researchers and professors) and emerging researchers to fill the vacated positions at higher education institutions is not only disturbing (Joshi, Dencker, Franz & Martocchio, 2010; Linder & Wald, 2011) but also demonstrates the lack of a solid research tradition at Universities of Technologies (UoTs) that enables intergenerational transfer of knowledge. Since UoTs were primarily designed to offer sectoral knowledge derived from specific occupational, industrial sectors on the one hand, and specialist disciplines on the other, their primary foci and specialisations have traditionally been teaching and the conduct of applied research required by industry and employers (Ntshoe & Selesho, 2014) rather than the production of scholarly research-based knowledge, the domain of traditional research-intensive universities. As such, the skewed knowledge production and management of UoTs cannot be taken for granted in view of their academic institution history.

3. PROBLEM STATEMENT

The work of the faculty in higher education institutions has traditionally been trifocal, consisting of teaching, research and community service/engagement. University faculty members are required to become teachers, researchers, and service-oriented professionals. At CUT, where there is a small cohort of the professoriate comprising 16 associate professors and 11 full professors (De Jager, 2014), the progression of junior staff to professorship has been derailed by the lack of a strong research culture at the institution. For instance, out of a total employ of 276 permanent members of academic staff, there were only 9 National Research Foundation (NRF) rated researchers in 2014 (De Jager, 2014). Similarly, one of the discomfiting features of CUT’s research culture is the institution’s dependence on the research output of a few, prolific, experienced senior academics (mostly the ageing professoriate in

their 60s). In other words, there is no compelling evidence of inter-generational and trans-generational transfer of research knowledge to sustain the necessary research culture in the long term.

4. LITERATURE REVIEW

4.1. Research Culture in Higher Education

According to Schein (1992), research culture is the pattern of basic assumptions that a given group has invented, discovered, or developed in learning to cope with its problems of external adaptation and internal integration, and that have worked well enough to be considered valid, and, therefore to be taught to new members as the correct way to perceive, think, and feel in relation to those problems. In the context of UoTs, this could mean the drive from a strong professional and vocational orientation and teaching of specialised programmes towards embracing the ethos of conceptualising, researching and documenting, dissemination of world-class research through: publications in top research journals, building research capacity through successful postgraduate completions, fostering postgraduate research experience and strong research mentorship of junior academics and novice researchers. Cheetham (2007:4) further notes, “The research culture is the structure that gives [research behavior] significance and that allows us to understand and evaluate the research activity”. This structure should comprise systems, processes and practices that give rise to cutting-edge research and allow researchers to contribute significantly to their different fields of expertise.

The change from Technikon to a University of Technology has meant that teaching is interwoven with research and research principles (Cheetham, 2007). This transition calls into question the infusion of research into the teaching practices to ensure that research sufficiently informs teaching methodologies and practices. Cheetham (2007) advocates for the intertwining of research, teaching and knowledge transfer – one in which research is embracing the systematic generation of knowledge, development of new ideas and experimentation with new techniques. These activities provide an intellectual platform for engaging knowledge transfer the same way teaching and learning explicates a body of ideas, is informed by available research and instils habits of inquiry that reflect the provisional nature of knowledge.

The cultivation of a research culture in a university is a long-term process that requires an appropriate institutional climate, which takes full cognisance of strategic planning, committed leadership and a favourable climate. While the institutional climate provides the environment in which individual research expertise can be recognised and honed, research is also considered as an individual-driven activity (Connell, 2004) because in universities it is initiated, planned and conducted by individuals or small group of researchers (Hazelcorn, 2005). As such, universities cannot take the research orientation of academic staff for granted as these should be integral to the recruitment and selection of academics and researchers (Hazelcorn, 2005) if a rich research culture is to be cultivated at the university. For this reason, academic qualifications of academics and researchers should juxtapose with their publication record and the frequencies of publications as these provide reasonable proxies of applicants’ inclination towards research productivity research (Jenks, 2009).

To the extent that higher education institutions are deeply embroiled in knowledge management processes such as knowledge creation, documentation, dissemination and transfer, these institutions can be conceived as knowledge-creating organisations. Since the scope and objectives of higher education are consistent with knowledge management principles (knowledge creation through research, knowledge transmission through teaching, knowledge documentation and curation through their libraries) (Alavi & Leidner, 2001), the fostering of a research culture cannot be insulated from the domains of teaching, research and knowledge management. The generation of scholarly research, engagement in critical inquiry and the dissemination of research knowledge through teaching, postgraduate supervision and library-based informational repositories are all integral to the building of research capacity and the promotion of a research culture at UoTs.

One of the effective ways through which a solid research culture can be established is through effective research mentorship. Hemmings, Rushbrook and Smith (2007) argue that well-reputable researchers may instil strong research interest and productivity in mentees when they adopt the role of mentors who

sympathetically critique novices' work. Moreover, the fostering of working relationships between research mentors and mentees founded on collegiality, mutual interdependence and trust is integral to building a sustained research culture in a university (Mullen, 2009). The mentors should instil a sense of self-efficacy in the mentees during their execution of research work and while mentees should also consider the research advice of mentees to sufficiently ground them in research processes, practices and ethos critical for establishing them as seasoned researchers. Bland and Ruffin (1992) further argue that the formal and informal interaction with colleagues who have established themselves as researchers may also motivate the young academics to emerge as a researcher and enrich their own research profiles. Therefore, the systematic arrangement of such activities that provide opportunities to interact with renowned researchers might be useful for fostering the conduct of cutting edge research among academics (Jenks, 2009).

4.2. Critical success factors for building a university research culture

4.2.1. Research mentorship programmes

Research mentorship programmes encourage experienced faculty members with research skills to share their expertise with those who need assistance in developing their competence for research. Mbeo and Rambe (2016) argue that at the core of improving research capacity is by providing a connected interactive environment that allows for individual reflection and collaborative networking of research processes between experienced researchers and novice researchers. This understanding mirrors Cheatham's (2007) claim, "It is the intersection and interaction of research mentoring networks that builds and strengthens the research culture". He elaborates that a mentorship programme has the potential to support a unit's culture of research by building departmental research capacity; fostering strong personal and professional relationships among colleagues in the context of research development; and providing recognition of a faculty with excellent research skills. It can be inferred from this that while the building of a research culture can unfold top-down through seasoned researchers' knowledge investment into emerging researchers, in reality, the implementation of mentorship requires shared intentionality and distributed leadership among a core research group comprising the heads of departments, seasoned research leaders, their research peers and students.

4.2.2. Research Funding

In addition to providing academic and technical support for research grant applications, institutions wishing to develop and maintain a culture of research may provide more direct support to faculty researchers by allocating funds directly to research; adopting a generous sabbatical leave policy that enables frequent and/or extended research time; and facilitate access to high-class research libraries, computers, updated laboratories and other facilities (Hanover research, 2014). Freedenthal, Potter and Grinstein-Weiss (2008) note that special support may be put in place especially for new junior faculty, including the allocation of research start-up funding. Senior researchers can also guide junior staff in grant proposal writing as well as prepare grant applications jointly with junior staff.

4.2.3. Nurturing a research climate for leading research

Mintrom (2008) identifies two mechanisms that executives could utilise effectively in concert to enhance institutional reputation (with funders and other partners) and improve research performance, namely:

1. The revision of policies to emphasise the significance of research productivity; and
2. The complementation of this tacit pressure by incentives to "promote and reward strong research effort on the part of individuals and whole academic units".

Flagging the significance of research performance could take the form of emphasising the quantity (i.e. numbers per year) of research publications for emerging researchers and foregrounding both quantity and quality (impact factors of journals, citation indices such as H indices) of publications for senior academics and researchers. The performance and promotion systems can also be tied to the quality of publications rather than just considering DHET accreditation of journals exclusively. That said, since

individual academics do not respond well to relentless scrutiny and pressure, performance management processes and academic practice monitoring should foreground research and publication incentives and opportunities at the expense of sanctions and retribution. Madden (2009) observes that suitable management of researchers within an ideal environment would ensure the right combination of recognition and reward.

5. THE PROPOSED FRAMEWORK

“A culture of research provides a supportive context in which research is uniformly expected, discussed, produced, and valued” (Hanover research, 2014).

Keeves (1999) argues that developing a research culture is concerned with the dynamics of the interrelationships among three domains (See Figure 1). For Keeves (1999), **Domain 1**, the trifocal function, comprises the university faculty’s task of research, teaching and community engagement. These tasks interact in different ways for each faculty member. **Domain 2**, the individual attributes and output, refers to the knowledge, skills, values and attitudes that the faculty members have relative to the conduct of research. This also includes their readiness, capacity and experience in research. **Domain 3**, the institutional attributes and policies, refers to the policies set by the institution for the purpose of developing a research orientation. This includes all other policies and measures concerning faculty members of the entire institution.

Developing a research culture can be conceived to revolve around the interaction between Domain 1 and Domain 2. Although a balance among the three tasks in Domain 1 would be ideal, the nature and extent to which faculty members focus on each task depend on their discretion, which is influenced by their own perception of these tasks. Their output in Domain 2 is based on their knowledge about producing research. This also interacts with the way they view the trifocal function—Domain 1—and the issues that they address in their research activities. Thus there is an interaction between Domain 1 and Domain 2.

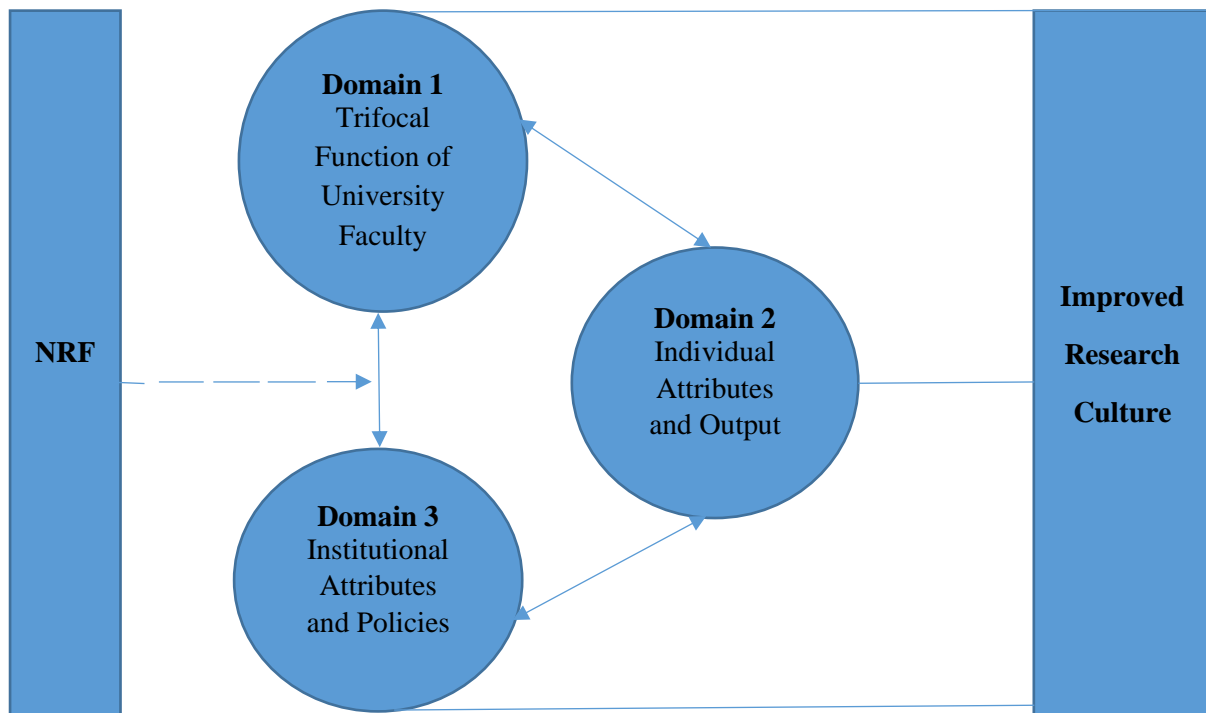


Figure 1: Framework for Understanding Research Culture in Heis

(Adapted from the nature and processes of educational and social inquiry by Keeves, 1999)

Research culture is also concerned with the interaction between Domain 2 and Domain 3, which involves reciprocal processes. Domain 3 influences the nature and extent of research productivity in Domain 2 even though the reality in Domain 2 must pave the way for the improvement or changes in

Domain 3. The research activities resulting from Domain 2 should generate knowledge that would provide context for Domain 3 (Salazar-clemeña & Almonte-Acosta, 2007).

The interaction between Domain 1 and Domain 2 implies the frame of meaning derived by the faculty members from their trifocal function. The interaction between Domain 2 and Domain 3, on the other hand, implies a second frame of meaning constructed by the faculty members as they view the institutional policies and assimilate their research functions. These frames of meanings occur in the interaction between Domain 1 and Domain 3 as well. As represented by the double-headed arrows, the faculty members' research knowledge and skills, as well as their performance of their trifocal task, should also influence institutional policies, in the same way, that institutional policies affect the other two domains.

It should be noted that the NRF exerts a level of influence on policy formulation at the institutional level. The interpretation of NRF directives is based, however, on the context of the institution, frame of references and frame of meaning for institutional leaders. As represented by the dotted line, policies, mandates, and principles are open to interpretation, which is done both for the interest of the institution and of its major players—the faculty members.

According to Salazar-clemeña and Almonte-Acosta, (2007) the development of a research culture cannot take place overnight. It entails careful planning and constant process of development. From the point of view of university faculty, the necessary components of a research culture that would enhance research productivity are: time, strong belief in the research endeavours, faculty involvement, positive group climate, working conditions and organisational communication, faculty development programme, research infrastructure, decentralised research policy, research funding, and clear institutional policy for research benefits and incentives. These can be classified into the elements of the framework proposed in this paper.

Domain 1 (Trifocal Function): Globally the university has three defined mission statements: **Research** (generation of new knowledge) **Teaching** (transfer of existing knowledge) and **Community Engagement** (application of new and existing knowledge). A range of strategies is needed to encourage not only the full professors and full-time faculty, but also the part-time faculty to spend more time on research. Strategies should also address the nature of research being done by the faculty in order to distribute the workload. For instance, provisions for research assistants or junior researchers can be made. The faculty should likewise emphasise proper time management to enable them to allocate their time appropriately among their three functions. Moreover, institutions could look into the percentage of workloads assigned in teaching, research, and community engagement.

Domain 2 (Individual Attributes and Output): For the individual member of the faculty, the effects of carrying out research may be related to reward structures within the institution. To increase the participation of staff in research, there should be measures in place to consider those who are not participating at all in research. Organizations typically provide two types of rewards: extrinsic, e.g. salary and promotions; and intrinsic, that are associated with the actual process of work (Coleman, 2001). In the case of intrinsic rewards, benefits may be associated with the satisfaction arising from: completion, for example, of a research project; achievement of a personal goal such as publishing a research paper.

Domain 3 (Institutional Attributes and Policies): Four important elements of an improved research culture, from the perspective of the faculty, may be classified under Domain 3. These are positive group climate, working conditions and organisational communication. To create a positive group climate, research must be presented as a requirement to the faculty in non-intimidating ways. Expectations for research should be made clear to faculty aspirants, initially at the department level. Research should be broadly defined on the basis of the identified departmental research thrusts and priorities and standards for research must be expressed explicitly. Successful research activities and individual research projects should be tracked and publicised in order to serve as motivation to every academic constituency. Such initiatives could provide a sense of motivation both for the researchers

themselves and others who are not involved in research. An environment of “intellectual synergy” (Shanklin, 2001) can then be created.

Domain 3 and NRF. The component of **Research funding** involves both the institution and the National Research Foundation and the Department of Higher Education and Training. Enhancing and supporting research productivity necessitates allotment of funds. For example, apart from funding research projects, supporting paper presentations at international conferences would demonstrate to the faculty that what they have produced is valuable. Appropriate linkages with external funding agencies can be pursued more actively as a few institutions in the country currently have access to sufficient funding for research. NRF should plan strategic ways of offering financial assistance or grants for individual and institutional research projects.

Clear policies for research benefits and incentives also concern both the institution and NRF. Given the low salaries for faculty in majority of the HEIs in the country, providing adequate incentives becomes crucial in sustaining and enhancing research productivity. Institutions should strengthen research benefits and incentives that could serve as motivational factors for doing research. A well-defined body of policies that demonstrates the relevance of research to professional advancement and growth is needed. Universities should align their graduate programmes with the thrust of developing research institutions in order to produce capable research graduates. Early exposure to research (e.g., publishing academic works, presenting in conferences) must be provided.

6. RESEARCH DESIGN

The study adopted a qualitative case study design in which ten cases were drawn upon to explore the challenges of establishing a strong research culture at the Central University of Technology, Free State (CUT) and the extent to which the current research interventions have effectively addressed the perceivably “missing research culture.” The cases comprised four heads of departments, three prolific established researchers and three emerging researchers in the Faculty of Engineering and Information Technology at this university. To address the aforementioned issues, the data collection process involved exploring the existing research culture at the institution and how established and emerging researchers contribute to the development of such a culture in the Faculty of Engineering and Information Technology at CUT.

The established researchers were selected on the basis of the institutional and demographic data which revealed that many awards and research recognitions had been bestowed on these participants. However, unless specific questions about this aspect were asked, few of these respondents offered the information. The emerging researchers were mostly staff members who had recently finished their postgraduate studies; who had just started their academic research career; or had not published much in their field of expertise. As such, purposive sampling was employed for the data collection processes as the researcher targeted academics with the aforementioned qualities.

6.1. Data collection process

6.1.1. Interviews

In-depth, semi-structured interviews were conducted face-to-face with each of the 10 participants. The scheduled interviews, which lasted an hour on average, were conducted in the respective offices of the individual researchers and the heads of departments. One of the most challenging aspects of the data collection process was the delay in securing appointments for the interviews due to the busy schedules of the participants. The fact that the interviews were held at the research participants’ institutions was helpful in creating a context for observing the hectic research schedules of these participants.

The main author audio-recorded all interviews using a digital audio recorder while she made extensive handwritten notes simultaneously. An interview schedule containing broad list questions was used to guide the researcher in her exploration of the role of knowledge management promoting the research culture in the Faculty of Engineering and Information Technology. The interview participants were

interrogated on their perceptions of the existing research culture at CUT and their contribution to the development of such a culture in their Faculty.

6.2. Data Analysis

All data were transcribed verbatim by the main author in Microsoft Word, sorted and scripted to identify main themes and patterns using thematic content analysis. Thematic content analysis enables the construction of meaning from data. For Taylor-Powell and Renner (2003), the meaning-making process involves the identification of themes/patterns, organising them into coherent categories, and identifying other themes that serve as sub-categories. Four categories emerge from the Trifocal Function theme, four categories from the Individual Attributes and Output and two categories from the Institutional Attributes and Policies theme (Tables 1). Broad categories included background details related to research policy interventions; views about research support and opportunities for both established and emerging researchers; opinions and experiences of research challenges; and mentoring, building capacity and research productivity.

Each interview was assigned codes and the line-by-line coding enabled the main author to have a close study of the data and to lay the foundation for its synthesis. Once coding was completed, codes were clustered together into meaningful groups to generate themes. In some cases, the groups were collapsed where they overlapped to allow for more synthesis and rigor.

6.3. Ethical Considerations

Sikes (2004:16) establishes that it is necessary for researchers to put into consideration the ethical implications of their research to mitigate negative risks, prejudices and undesirable consequences on subjects that may arise from the conduct of their research. Therefore, researchers must do everything possible to avoid harming or wronging subjects involved in the research.

Thus, in this study, the following ethical standards were adhered to:

- Participants were informed of the purpose of the study and that no financial benefit would accrue from their active participation.
- Participants were also informed of their voluntary participation in interviews and of their right to withdraw from the study without any prejudice or harm. They were also assured of their anonymity and the reporting of their views in aggregate form to protect their identities.
- Pseudonyms were used in situations where it was necessary to identify participants in relation to their utterances.
- Participants were also informed that privacy would be guaranteed at all times and all information that is gathered would be treated as confidential.

Table 1:
Research Culture in the Faculty of Engineering and Information Technology (FEIT)

Themes	Categories	Transcript Data	Researchers Comments
Domain 1 Trifocal Function of University Faculty <i>Research Support and Opportunities</i>	Promotions	Evidence of recent academic promotions of staff members from Senior Lecturer to Associate Professor in the Department of Civil and also Electrical Engineering is a sign to show that hard work is recognised. Also the Vice-Chancellor's Academic Excellence Awards at CUT for the recognition of excellence in research, innovation, teaching and learning activities, and in curriculum development (Vincent, 10/02/2017).	Staff advancement through recognition of hard work and promotion prepares academics for the complexities of educating a new generation with advanced skills and knowledge they will need for the unknown future.
	Study support	There is a study support system at CUT for all permanent and fixed term staff to cover for tuition fee for the	Furthering education and qualifications is critical to consolidating the research culture at CUT.

		improvement of a qualification (Walter, 10/02/2017).	
	Establishment of new research centres, units and groups	This exercise [creating research centres, units and groups] is the most important process which has been undertaken by the institution in the grouping and identification of research niche areas (Edward, 14/02/2017).	The establishment of new research centres, units and groups is directed at building a critical mass in research and optimising opportunities to grow research outputs in the Faculty of Engineering and Information Technology.
	Cross-cutting research activities	The Dean introduced cross-cutting research that is aimed at the initiation of a research flagship for the faculty which is aimed at identifying one target with several objectives considering the current and proposed future research capacity (Alex, 9/02/2017).	Recognition of cross-cutting research activities is crucial and should be to the advantage of the researchers.
Domain 2 Individual Attributes and Output <i>Research Challenges</i>	Teaching workload	Too much teaching workload, so the proposal is to reduce teaching workload of an academic provided the person is active in research. (Steve, 8/02/2017).	Reducing teaching load avails additional time for academic staff to do research which will directly lead to them having a passion for research.
	Incentive Funding	This [incentive funding] is meant to be used by researchers in support of their research activities however the revised policy on pay-out for personal incentive has demoralised staff as they were used to R30 000 instead of the current R15 000 which must still be channelled to Dean's research budget (Daniel, 14/02/2017).	A small part of research incentives is now channelled to Dean's fund. That will be used to broaden the participation base in research – especially in the Research Units. However staff members seem to be dissatisfied with the revised policy to payout incentives.
	Limited funding	Postgraduates are expected to pay tuition fee and most of them are not working. CUT should introduce a plan of waiving the tuition fee for all full-time postgraduate students (Mandisa, 14/02/2017, general consensus from majority of interviewees).	Limited funding for staff and students (because of limited internal resources and low participation in external research grant applications) is somehow a barrier due to funding.
	Recruitment	<ol style="list-style-type: none"> 1. Work out the old buddies system by appointing research oriented/interested individuals with research profile who would be able to mentor the emerging researchers (Grow your own timber). Excellent recruitment, remuneration and retention strategies (Steve, 8/02/2017). 2. Recruitment of more full-time post-graduate students and post-docs, accelerate the completion of staff qualifications and appoint more senior staff (Vincent, 10/02/2017). 3. Communications and Marketing need to drive hard for 	<ol style="list-style-type: none"> 1. Excellent recruitment of faculty staff with a passion for research is necessary, remunerate them accordingly and put retention strategies in place to retain knowledge. 2. Recruit more full-time postgraduate students and post-doctoral fellows who are research active. 3. Marketing of CUT postgraduate qualifications is very low. If it was properly done, this would be a good platform to recruit BTEch /

		postgraduate marketing (Moses, 16/02/2017).	Hons students to enrol for Masters Degrees.
Domain 3 Institutional Attributes and Policies	Research Policies	Research and Development Plan (2014-2020) - promoting a culture of research within the University where there is a need for CUT to be defined as a niche university – “ <i>what the university is known for</i> ” (Nigel, 16/02/2017).	This approach requires a vibrant research culture supported by clear research agenda, a balanced ratio or proportion of teaching versus research involvement.
	<i>Research Policy Interventions</i>	Financial support to do research	There are some inconsistencies regarding provision of funding for conference attendance, DHET Grant, UFS/CUT Joint Grant Programme, NRF Block Grant etc. (Kennedy, 14/02/2017).
			Departments could be encouraged to hold internal seminar on quarterly basis on research proposal writing for funding purposes.

7. FINDINGS AND DISCUSSION

Globally the university has three defined mission statements: **Research** (generation of new knowledge) **Teaching and Learning** (dissemination of knowledge and transfer of existing knowledge) and also **Community Engagement** (application of new and existing knowledge). These functions are all directly related to Knowledge Management. For the purpose of this study, the researchers will focus on findings related to research as a generation of new knowledge.

7.1. Domain 1: Trifocal function

Since research is one the trifocal function of the university, this section discusses the research domain which emphasised the provision of research support. Although research was not a key priority for the then Technikons, Universities of Technology are improving their profile in the South African research and innovation landscape. Research Culture is the basis of how a university education works, it is the intellectual lifeblood of staff, and should be the fundamental support of teaching, and a basis of support for the community (De Jager, 2016).

7.1.1. Research Support and Opportunities

The research support and opportunities covered the recognition of excellence in research and teaching through promotion, provision of study support, establishment of research structures and the institution of cross-cutting research structures. These issues are elaborated in sections below.

7.1.1.1. Recognition of excellence in research and opportunities for promotion

Excellence in teaching and research is recognised annually through the Vice-Chancellor’s Academic Excellence Awards at CUT. As one established researcher highlighted: “The prizes are awarded to academics displaying best practices in research, innovation, teaching and learning activities, and in curriculum development. A system for awarding excellent learning also exists at CUT”. In the same way, CUT has created faculty excellence awards in recognition of achievements in teaching and learning and research at faculty level. High-performing students referred to as A-students for extraordinary performance (achieving distinctions in all their courses are recognised and awarded bursaries by the Vice-Chancellor annually. They are exempted from paying university fees the following year. This strategy motivates other learners to strive for excellence in their studies (interview with Vincent, 10/02/2017). More so, this established researcher further highlighted that staff is normally recognised for only excellence in research during the annual faculty prize giving ceremony and not for teaching and the resistance towards the criteria for the recognition of Vice-Chancellors’ excellence award for Established researchers that a nominee should be an NRF rated researcher seems to be a ‘check list’ of unnecessary conditions. This inconsistency demotivates staff to strive for excellence in their teaching activities. On the other hand, the selection and evaluation criteria for established researcher award should be used to determine whether a finalist for the Vice-Chancellor’s Excellence Awards has demonstrated excellence in research and innovation on the basis of evidence and rating by NRF is one of the requirement.

7.1.1.2. Study support

There was consensus among study participants that CUT provided a string system to support staff members' academic study. As one Head of Department noted: "There is a study support system at CUT for all permanent and fixed term staff to cover for tuition fee for the improvement of a qualification" (interview with Walter, 10/02/2017). More so, staff development was conceived to assist staff for the complexities of educating a new generation with the advanced skills and knowledge they will need for the unknown future.

7.1.1.3. Establishment of new research centres, units and groups

CUT was conceived to be at the frontier of creating research support structures. As one emerging researcher professed: "This exercise [i.e. the establishment of new research centres, units and groups] is the most important process which has been undertaken by the institution in the grouping and identification of research niche areas" (Interview with Edward, 14/02/2017). The establishment of new research centres, units and groups is an institutional intervention directed at building a critical mass in research and optimising opportunities to grow research outputs and developing a publication research culture in the Faculty of Engineering and Information Technology. In spite of the establishment such an initiative, its extent of success is yet to be fully evaluated. In fact, what remains a grey area is where to profile and record such research outputs-whether to categorise it as an achievement of a specific faculty or to direct it to an individual research structure. There is some increasing realisation that some structures lead by more research proactive scholars and personalities are more research proactive while some are dormant.

7.1.1.4. Cross-cutting research activities

There was a clear awareness among academic staff of some research activities built into faculties. As one emerging researcher revealed: "Dean introduced cross-cutting research that is aimed at the initiation of a research flagship for the Faculty of Engineering and Information Technology which is able at identifying one target with several objectives considering the current and proposed future research capacity" (interview with Alex, 9/02/2017). These cross-cutting research activities include the scholarship of teaching and learning and the Stars of Academe and Research (SoAR) which are critical to research mentorship of novice researchers by senior academics and seasoned researchers.

7.1.2. Research Challenges

A couple of research related challenges that hindered the flourishing of research among academics and researchers were acknowledged by research participants. These included staff workload, limited research funds, financial publication incentives and recruitment policies coupled with a rigorous marketing, all of which are elaborated in sections below.

7.1.2.1. Teaching workload of staff

The research participants emphasised the need for CUT to develop time management framework and provide teaching support to academic staff inclusive of strong internet connections to be able to teach online subjects - especially for IT students. As one established researcher highlighted: "These included the consistent allocation of lecturing assistants who can assist with marking of class tests, practicals and assignments" (interview with Steve, 8/02/2017). In this way, academic staff will be provided with adequate time to do research, will be motivated to conduct more cutting edge research and ultimately improve the research culture in the faculty.

7.1.2.2. Limited research funds

There was a general concern among interviewees that the tuition fees that CUT require of its full-time Master's and Doctoral students were high and not afforded by many students. As one Head of Department highlighted: "One of the proposals given was the waiving of all tuition fees for postgraduate students" (interview with Mandisa, 14/02/2017 and supported by majority of research participants). In future, CUT would have to improve the process so that more research projects would be completed and more students would graduate from the system without worrying about funding for studies and accommodation for international postgraduate students. More students would have to be encouraged to

continue their studies at postgraduate level, and a conducive environment for research needs to be cultivated.

7.1.2.3. Financial incentives for research publications

The research participants highlighted that although the CUT has an established research incentive system, this left a much to be desired. For instance, the incentive system of teaching, research and innovation of the Vice-Chancellor's Academic Excellence Awards problematically favoured the institution and reduced the financial benefit extended to the award recipient. A financial incentive of R30 000 is payable to each of the Vice-Chancellor's Academic Excellence Award recipient per category (Category A, teaching and curriculum innovation awards; Category B, research and innovation awards and Category C, community engagement award). The recipient may take one-third of the incentive as a cash benefit which is fully taxable, while the other two third is used to enhance the teaching, research or community engagement activities of the recipient. According to CUT policy on publication incentives (2016), the incentive for the 2014 accredited publications (payout in 2016) at CUT will be R 30 000 per credit unit. The R 30 000 will be allocated as follows:

- R 15 000 – the researcher can take this as a personal incentive subject to the payout conditions of personal incentives.
- R 12 000 – the researcher can use this in support of his/her research.
- R 3000 – to the Dean's Research and Development Fund. This fund must be used for the development and promotion of research in a Faculty.

As one Head of Department noted: "This departure from the incentive system where the researcher would get the entire R30 000 to getting R15 000 was reported to be demotivating and demoralising" (interview with Daniel, 14/02/2017). Mbeo and Rambe (2016) argue that to the extent that the incentive system erroneously prices research productivity at the expense of publication quality, it discourages academics' aspirations to publish in high impact journals with more rigorous peer review system and research quality considerations. This problematic incentive system further undermines the culture of scholarly research and may compromise the intergenerational transfer of seasoned research expertise to emerging scholars.

7.1.2.4. Recruitment and Marketing

With regard to recruitment, a couple of issues were observed. As one established researcher highlighted: "The shortage of suitably qualified and experienced researchers, insufficient funding and the other factors such as not getting enough full-time postgraduate students constrained the implementation of plans and strategies aimed at establishing a research culture" (interview with Moses, 16/02/2017). Excellent recruitment of faculty staff with a passion for research, remunerating them accordingly and putting retention strategies in place to retain knowledge would contribute to the generation of full-time postgraduate students and post-doctoral fellows who are research active. Also, in order for CUT to attract more students (and more qualified) to the Master's and Doctorate programmes, the research office would need to liaise with Communications and Marketing Office to carry out a rigorous marketing campaign of the postgraduate programmes per faculty.

7.1.3. Research Policy Interventions

7.1.3.1. Research Policies

There was a general agreement that the university is currently paying an incentive to all researchers who published research outputs as per DHET categories. The payout is based on the submission of outputs (n) to the DHET (n+1) and the subsidy received (n+2). The objective was to pay an incentive (not salary) to researchers to promote research outputs and for the researchers to use these funds in support of their research (Research and Development Annual Report, 2013).

The Policy on Research Centres, Units and Groups at CUT is directed at building a critical mass in research and optimising opportunities to grow research outputs. The approved Research Clusters and Programmes are identified as a meaningful vehicle to meet the research outputs of the Research and Development Plan by 2020. Marchant (2009) suggests that, in addition to a centralised research unit, each discipline or unit should ideally have its own research centre, which directs resources for faculty

research. Cheetham (2007) agrees but indicates that a specialised or unit-specific research centre may be best implemented where a culture of research has already begun to take hold, as centre funding may be difficult to gain for units with unproven research success.

Research policies have also been developed to support scholarly research at CUT. As one senior researcher noted “According to the CUT Research and Development Plan (2014-2020) developed at the end of 2013 for the purpose of promoting a culture of research within the University where there is a need for CUT to be defined as a niche university - “*what the university is known for*” (interviews with Nigel, 16/02/2017). This approach requires a vibrant research culture supported by clear research agenda, a balanced ratio or proportion of teaching versus research involvement.

7.1.3.2. Financial support to do research

The research participants expressed gratitude over the financial support by the NRF. This financial support came in the forms of free-standing research grants, the Master's and doctoral awards; the grant-holder linked bursaries and other awards made available by the NRF. As one emerging researcher highlighted: “These were acknowledged as resources that CUT could use to implement its strategies and plans aimed at establishing and improving a research culture” (interview with Kennedy, 14/02/2017). More so, departments could be encouraged to hold internal seminar on quarterly basis on research proposal writing for funding purposes.

The semi-structured interview data revealed that the faculty members did not consider any of the aspects of research culture in their institutions as being strong. They deemed the following indicators as present only to a moderate extent: the impact of research, inter-institutional collaboration, institutional research strategy, financial reward system, research infrastructure, the presence of ethical policies, and the availability of research funding. It must be noted, however, that about (90%) of the respondents concurred that institutional strategies and plans were in place for the management and development of research-related activities as well as for improving prospects for inter-institutional collaboration. They were also cognisant of the existence of an institutional office that handles research ethics concerns, which need to be improved.

The specific facets of a research culture that the faculty members found present but least evident among the indicators were: faculty publications in national conference papers and international journals, faculty awareness of available funding for research, research workshops for faculty, and focus on the different types of research. At the Research Culture workshop that was held at CUT in 2014, Prof Habib delivered a very illustrative presentation on how an institution can be successful in research. He mentioned that to be a great university, the institution needs to take account of the national context by acting locally while thinking globally. Moreover, the university must have a diverse and cosmopolitan environment with emphasis on applying own context and not copying others.

Prof. Habib emphasised that South African universities need to compete as a system with other systems rather than competing with one another at the expense of developing a synergy in the national system of higher education institutions. However, to build a research culture a university needs to develop three building blocks: recruit good academics; provide these academics with adequate funds to carry out research, and create an enabling environment. The first can be achieved through working out an effective budgeting system with the aim of creating a sustainable academic pipeline that ensures entry of new generation academics to continue the work of retiring academics.

8. CONCLUSION AND RECOMMENDATIONS

There are implications for Knowledge Management. Building and enhancing research culture will remain a continuous process. However, findings revealed various individual and institutional factors which may affect academics' research practices, and the establishment of a research culture takes time, careful planning, resources and the right environment (Rosas, 2007). In order for CUT to attract more students (and more qualified) to the Masters and Doctorate programmes, the research office would need to liaise with Communications and Marketing Office to carry out a rigorous marketing of the postgraduate programmes per faculty. A module on research theory and practical to be offered by

experienced researchers and be made compulsory at BTech level for all programmes is recommended to enhance research culture in the Faculty of Engineering and Information Technology. There should also be continuous training sessions for research students and their supervisors to enhance their research skills - especially academic writing, using technology, reviewing the relevant literature and data analysis to avoid confusion during the research process.

It is evident from the interviews conducted that CUT should provide proper incentives to faculty members who engage in research activities - which may include but not limited to financial monetary reward, reduction of teaching workload through the use of lecturing assistants, equipment, supplies and materials, and other research support with the aim of motivating researchers (both staff and postgraduate students). CUT aspires to foster an institutional culture that focuses on the needs of South Africa and supports graduates with skills and competencies in appropriate technologies; however, with the current situation with the extremely slow internet connectivity, this is impossible to be achieved. Other strategies should involve exposing them to various publishing and research opportunities available in the field of Engineering and Information Technology. The faculty could, for instance, consider the establishment of postgraduate support groups and also encourage staff to train postgraduate students on how to write a proposal for funding. For this purpose, CUT needs to establish a postgraduate alumni system that contributes to substantial financial commitments towards the enhancement of postgraduate studies and decrease CUT's dependence on government funding.

As Lategan (2015) observes, CUT is striving to decrease the "juniorisation" of its institutional research system in favour of "seniorisation" through increased academic staff participation in research outputs (primarily through award of research grants, publications, completed postgraduate studies and rated researchers) and studies towards higher qualifications in their disciplines. The University should continue to give recognition to outstanding research projects/activities and researchers (both established and novice) to motivate emerging researchers to engage in a research culture and increase guidance to junior staff who want to participate in research centres, units and groups. Again, it is evident from the interviews conducted that a culture of research is supported by faculty interaction, peer mentoring programmes and research collaboration established through institutional relationships with other universities, professional bodies, and government entities.

Bland, Center, Finstad, Risbey and Staples (2005) note that successful researchers have a network of like-minded scholars with whom to discuss their projects. The departments must not compromise on quality and rules for conducting good research. Bland *et al.* (2005) conclude that "when an individual faculty's research productivity is the goal, nothing substitutes for recruiting faculty staff with a passion for research and providing time for them to do research." At least one 'competent academic staff in research' should be freed from assessment, invigilation duties and all departmental administration responsibilities to guide research students and conduct research activities at national and international level.

In building a research culture, the Central University of Technology (De Jager, 2016), recommends the following: a) continuous development of institutional research policies and agenda, b) Faculty/Departmental culture and working conditions, c) budget for research, d) collaboration with and access to research professionals in other institutions, e) policies and guidelines on research benefits and incentives, f) research committees, and g) publications (quality & impact & relevance).

Evidence suggest that the endowment of an ideal institutional research environment (comprising strong internet networks, persistent connectivity on and off campus), research peer mentorship, and growing publications should be matched by a coherent research incentive culture and strong research leadership.

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Tourism Enterprise Development Initiatives: Would Creating A Mentoring Environment Develop Student Skills?

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ABSTRACT

Twenty years into democracy, the South African government is still investigating various interventions to move communities from a position of need to one of self-sustainability regarding the development and management of small businesses (Ladzani, Watson & Van Vuuren, 2002; Mahlatsi, 2007:1-2). Added to this challenge, there is a dire need for a shift in the educational agenda of South Africa (Erasmus, 2005:4), to close the gap between the graduation and employability of new graduates. Community engagement in Universities of Technology (UoTs) is evolving to become a game-changer in addressing the economic challenges of the country (Erasmus, 2005:4). Service learning (SL), as a form of community engagement, is promoted at higher educational (HE) institutions as a learning paradigm. The SL project of the Tourism Management Department at CPUT, as a form of community engagement, was designed with the focus on exposing students to real-life organisational environments, while improving business operations for small and medium tourism enterprises (SMTEs). Project outcomes are predominantly based on the development and initial implementation of business plans for SMTEs, whilst developing student industry exposure and skills. This paper aims to assess students' perceptions of the benefits of service learning through investigating skills learnt through their participation in the SL Project. Action research was undertaken for this explorative study. Census sampling was adopted to collect quantitative and qualitative data from participants. The findings reveal that the majority of student participants (80%) responded positively to the benefits of the project and "real-world" exposure, with ninety-four per cent of responses recommending SL inclusion for future tourism studies. Implications suggest that SL project coordinators need to consider structured data collection for future projects in order to collect quality student reflections to enhance the mentoring environment.

1. INTRODUCTION

According to the 2016 draft Tourism Human Resources Development (THRD) report and strategy document (HRSC, 2016:73), graduate entrants into the tourism industry are still ill prepared for industry requirements due to limited industry exposure. Additionally, technical skills, soft skills such as critical analytical skills, cognitive skills and communication skills are lacking from graduates (Kruss, 2004).

Higher Education (HE) institutions employ training models like Service Learning (SL) within some Faculty programmes, which could potentially improve the skills of recently graduated candidates, which could result in the success of prospective start-up enterprises. SL is a curriculum-based learning model in South African HE, a learning experiential programme that is credit bearing and takes place as an organised service activity (Matthews & Zimmerman, 1999; Fourie, 2003). Within engagement activities, reflection on service activities is regarded as an essential tool that improves learning and an understanding of service actions by all parties involved in the projects (Council on Higher Education, 2006; Smith-Tolken, 2013). Additionally, the experiences of SL fosters students' learning and improves civic responsibility (Sandmann, Kiely & Grenier, 2009). This paper focusses on the students' shared experiences and their perceptions of the skills that students developed from participating in the SL project.

The SL project of the Tourism Management Department of the Cape Peninsula University of Technology (CPUT), is unique in design in that the tangibility of the outcomes of the project were based on paper results in the form of business plan-proposals for businesses to implement. Comparatively, many SL projects focus on assisting impoverished communities with door-to-door education campaigns about social skills, or by approaching non-profit organisations to help improve building structures (Keating, 2014). The CPUT's Tourism Management SL project was based on collaborating with tourism business representatives (Easterling & Rudell, 1997) on creating proposals that tourism enterprises can independently consult with after the project is completed. Business owners got the opportunity to view their business from an outsider's perspective, allowing them to assess strengths and

challenges faced by the respective businesses. Students were able to identify their skill limitations in understanding the operations of tourism enterprises (Groenewald & Schurink, 2003; Zwane, Du Plessis & Slabbert, 2014). This paper outlines the SL project and data collection plan, and shares methodological tools and skills gained by students to illustrate clearly the process of the CPUT Tourism Management SL project (Sale, Lohfeld & Brazil, 2002) as a mentorship tool.

2. RESEARCH OBJECTIVES

The tourism industry requires efficiently prepared students with sufficient industry knowledge and human interaction skills. SL project environments incubate students and improve graduate attributes, as indicated in literature on SL student reflection processes by Osman and Petersen (2013). This paper suggests methodologies to create mentoring environments for social sciences' SL projects, as well as outlines the research methodology on student feedback to add to the SL body of knowledge.

3. LITERATURE REVIEW OF SL IN SOUTH AFRICA

The Southern Regional Education Board (Stanton, Giles and Cruz, 1999) defined SL as "...the accomplishment of certain tasks or activities that meet genuine human needs, while consciously improving educational growth of student" (Stanton, Giles & Cruz, 1999). SL, as a form of community engagement, was defined as a learning experiential programme (Matthews & Zimmerman, 1999) that was credit bearing and took place as an organised service activity (Fourie, 2003). In these engagement activities, reflection on service activities, improved learning and understanding of service actions by all parties involved is essential (Council on Higher Education, 2006b; Smith-Tolken, 2013a). Additionally, the experiences of SL foster students improve civic responsibility (Sandmann, Kiely & Grenier, 2009). The CPUT community engagement draft policy defines SL as "...student learning that takes place within or through a community development project; it is fully curriculated, including monitoring and assessment of student progress" (CPUT, 2008). As noted by Nduna (2007), SL could be considered as the one form of community engagement that offers an opportunity for structured collaborative work between communities and students, with reciprocal learning (Osman & Petersen, 2013). The process of SL occurs in cycles where students learn theoretical knowledge in the classroom that is reflected on and applied within a particular problem in the community in which they are working (Mouton & Wildschut, 2005). These values are reflected in the CPUT policy on community engagement, as it is a structured, goal-orientated community engagement programme that is credit-bearing and closely monitored for progress to ensure quality of project outputs (CPUT, 2008).

Lazarus, Erasmus, Hendricks, Nduna and Slamati (2008) clearly outline the SL conceptualisation process, which started with the release of the Education White Paper Number 3 in 1997. The concept of SL in South Africa developed in 1999, when South Africa's Joint Education Trust (JET) launched the Community Higher Education Service Partnerships (CHESP) to assist South African Higher Education Institutions (SAHEI) to conceptualise and implement Community Engagement (CE) as a core function of university academic programmes (Lazarus et al., 2008). Community engagement is a cluster of activities that include SL, volunteering and problem-based teaching (Hall, 2010) that assists in promoting and developing social responsibility and social awareness among students. Design, performance and assessment of the various activities also differ. Debates continued on the realignment of policies and terminology by higher educational institutions like JET and CHESP to differentiate SL from community engagement (Mouton & Wildschut, 2005), which allowed for the development of a multi-faceted approach to community engagement and improved participation by universities in the country (Lazarus et al., 2010), while developing work interaction, technical and problem-solving skills in students.

The centre for Work Integrated Learning (WIL) at CPUT identified three main forms of community engagement as illustrated in Figure 1: Community Outreach (CO), which is more focused on short-term volunteer programmes, focusing on benefits for the communities only; Cooperative Education (CE), based on students spending a period of time in industry, with a focus on learning professional skills for students; and Service Learning (SL), the curriculum-based community interaction programme, which is a practical two-way learning and production process aimed at benefiting both community members and students (Scheepers, 2015).

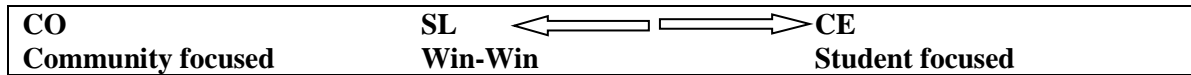


Figure 1: Forms and Benefits of Community Engagement Source: (Ohlhoff, 2014)

The three forms of community engagement play an integral part in the education process of Universities of Technology (UoTs) in South Africa and were implemented at strategic levels within the academic structures of UoTs. As depicted in Figure 1 SL, which is the focus of this paper, was seen as the programme that offered a win-win in two ways. Firstly, students gain in professional and soft skills, while experiencing the “real-life” daily operations of a business. Secondly, participating SMTEs gain assistance in developing their business with student mentorship. The aim of SL projects is for communities and students to equally benefit from participation.

3.1. Benefits linked to SL projects

The primary role of SL in learning institutions is to link students’ learning to real-life lessons, and secondly to solve dynamic community problems and effect social change in communities (Kowalewski, 2004). The mentorship-type relationship in which students are able to learn entrepreneurial skills from the partnered business owners, encourage the development of networks and a sense of social responsibility (Giles & Eyler, 1998). Basardien, Friedrich and Parker (2013) are of the view that as students work closely with communities on projects, they develop more courage to start their own enterprises after graduating from a university. In addition to the knowledge they disseminated to the broader community, the tacit or informal learning students were exposed to during site visits at business meetings and while interacting with the SMTEs, all became part of their life-long learning (Hall, 2010). SL participation fostered by group work allowed students to create strong peer interaction (Gallini & Moely, 2003).

Students integrate information learnt from the classroom, to help develop practical, tangible products for the communities they are concerned with. With the SL project at CPUT, students collaborated with participating SMTEs to translate new ideas into business plans that were handed over to the business owners (communities) after the completion of the project. During this period, the students gained considerable practical industry insight, learning how these businesses function from an operational point of view, while applying what they learn in theory to real-life situations. The students’ performance was monitored through continuous reporting in the classroom and through presentations of their final products, post project completion, reflecting on their partnerships with respective SMTEs. A SL project report by Machtmes et al. (2009) indicated an improvement of analytical skills and strong relationships within the classroom. Students’ heightened awareness of self-development is beneficial as it improves learning experiences (Kowalewski, 2004).

The functioning of the tourism industry is built on a strong foundation of networks and partnerships. The SL project in this research was designed so that the SMTEs mentor students on daily operations of their start-ups and, in turn, students mentored the SMTEs in the development or improvement of their start-up business plans (Ejiwale, 2012). Networks that were developed early on during community engagement initiatives might benefit students when it comes to job-hunting on completion of their studies. For the educational institution, SL projects allow communities direct access to knowledge and teaching processes present in institutions of higher learning, which improves the communities’ view of universities (Cruz & Giles, 2000). Whilst working with existing companies, students developed relationships with industry professionals which could assist them when entering the workplace after graduation (Pang & Wong, 2013). As the country endeavours to develop training mechanisms for the success of small and medium enterprises and mainly for the development of undergraduate employability skills, it becomes crucial to share community engagement models that work, as depicted in Figure 1, to build on the training and education body of knowledge in the entrepreneurship and higher education spheres. The aim of this paper is to assess students’ perceptions of the benefits of SL by investigating learnt skills from their participation in the SL project. The design of the SL project and

research process is clearly outlined in the paper, which could be referenced for SL programmes in social science programmes.

4. METHODOLOGY

Action research adopts varied approaches that make a project unique as a result of (1) study variables, (2) SL project design and (3) forms of feedback required from SL participants. A mixed approach was adopted for the project: qualitative methods were used to gather insights from the participants regarding their participation in the SL project, while quantitative tools were used to establish statistical reliability of interviews conducted with students (Ahmad, 2015). Three varied research tools were used to collect data as depicted in Table 1.

Table: Process of Data Triangulation

A	1. Reflection presentations
A	2. Self-administered questionnaires
A	3. Focus group interview
Steps in data collection and analysis	
Step 1: Data analysis	A1 – transcription and theme identification A2 – quantitative data tested A3 – transcription and theme identification
Step 1: Data triangulation	A1+A2+A3 – cross-tested themes from different sources
Step 3: Comparative analysis	Assess areas of convergence and divergence to draw conclusions

Source: Researcher's construction

All tools were designed to collect specific data from participating students. For the purpose of this paper, data was collected from students on their perceptions of the benefits of SL participation regarding skills learnt from their participation in the project. Data collection methods, as mentioned in Table 1, were structured as (A1) the comments from student group reflections (A2) student questionnaires, and (A3) the focus-group interview. Qualitative responses were coded as SLG1 to SLG5 for the service learning group responses and FP1 to FP4 for the focus group participants.

Kothari (2006) notes that in enquiries that comprise small population sizes, the census enquiries are essential as with this study, which was limited to the participants of the service learning project. The study population was 178 senior year students who participated in the 2012 and 2013 SL project. The sample constituted of 25 self-administered questionnaires, four students participated in a focus group interview and five group presentations, each with six to a maximum of seven members, were selected for SL reflections. Student group reflections were collected immediately after the SL project completion, reporting on the perceptions of student performance during the SL project. Twelve months after the completion of each project, questionnaires were sent out and received back from students who were alumni or postgraduate students at the stage of data collection. A focus group panel was conducted post the 2013 project to assess perceptions of alumni after a complete academic year of SL participation.

4.1. Reflection comments (A1)

The final day of the SL project was designed as a presentation day where the student groups presented the marketing and/or business plans to a panel of assessors. Self-reflective learning enhances student engagement with knowledge (Oates & Leavitt, 2003). Structured feedback on SL experiences was collected from participating groups. Participating groups were coded as service learning group one to service learning group five (SLG1 to SLG5).

4.2. Self-administered questionnaires (A2)

The students' self-administered questionnaires followed a quantitative approach, with the aim of probing the skills requirements of SL projects for participating students. The questionnaire section included the geographical data section, followed by close-ended question sections, asking about the students' perceptions of the SL experiences. The question design in the later sections of the questionnaire included a 5-point Likert scale. The scales ranged from strongly disagree to strongly agree. The questionnaire also included a cover page explaining participant's voluntary participation in the study.

4.3. Focus group interview with students (A3)

Immediately after the collection of questionnaires, a schedule was set to conduct group interviews with alumni who participated in the SL project the year before. The semi-structured interview followed a list of topics which were covered in the questionnaire, to probe the students' reasoning on the answers that were provided in the questionnaire (Bryman, 2012). The flexible approach of the focus-group interview allowed for questions arising from new themes that developed from the conversation to be added during the process.

The reflection tools are discussed. Transcribed interview recordings were constructively analysed and coded using the ATLAS.ti 07 programme. Themes were developed from qualitative data based on the study objectives, and the data was discussed with verbatim quotes in the discussions. The quantitative data was analysed with the SPSS.20 programme to produce frequency distributions depicted in graphs and tables. A comparative analysis was conducted between all data sets, to assess similarities and contradictions between data from students to denote SL experience of learning.

5. RESULTS AND DISCUSSION

In the SL presentations, students reflected on their own experiences of the SL project and shared their experiences of the impact of SL participation. This realisation of their learning was essential for their own development. Student group sentiments were captured, to be compared with data from other sources. Group feedback from the structured presentations indicated the following:

The overall project was a tough and challenging exercise, but we are glad we did it and proved to ourselves that we can work together, under pressure and complete the task. We gained new knowledge and found it interesting to implement our academic knowledge practically (SLG1).

As a group, we worked hard and we mastered team spirit. We now know we are able to work in an environment where we don't know each other and still work together (SLG2).

By doing the service learning experience we realised that in order for your business to be successful you must involve the community (SLG3).

The group got to see and learn how a SMTE is run (SLG4).

The group learned how to actually compile a business plan (SLG5).

The reflective statements from the student presentations concluded that students learned valuable lessons during the SL project, learnt about SL processes and successfully linked classroom learning to industry operations (Groenewald & Schunrink, 2003). Linking to statements by Zwane, Du Plessis and Slabbert (2014), students realised their skills limitations, and gained knowledge.

Twelve months after student reflections were collected and analysed, another enquiry that included questionnaires and a focus group interview was conducted. Data was analysed, as indicated in Table 1, to assess student perceptions of the benefits or limitations of the SL project. The following section will focus on a comparative analysis of the feedback from all sources, covering benefits of the SL project for students. This was not a repetition of the data collection, nor a repetition of the research objectives, thus the study design cannot be considered longitudinal.

5.1. Skills acquired from SL participation

An assessment of various SL projects in South Africa by Mouton and Wildschut (2005) warns against high community expectations, as pre-project students reflected limited preparedness to assist communities due to limited skills. SL projects link students' learning to life lessons while solving dynamic community problems or effecting social change (Kowalewski, 2004). From the students' perspective, SL offers a mentorship-type relationship in which students are able to learn entrepreneurial skills from the partnered business owners. As students work closely with communities on the project, they may gain the courage to start their own enterprises after graduating from a university, due to the first-hand experience provided by such projects (Basardien et al., 2013). Figure 2 indicates a correlation to skills (56%) perceived as acquired from SL participation with a questionable forty per cent indicating neutral responses.

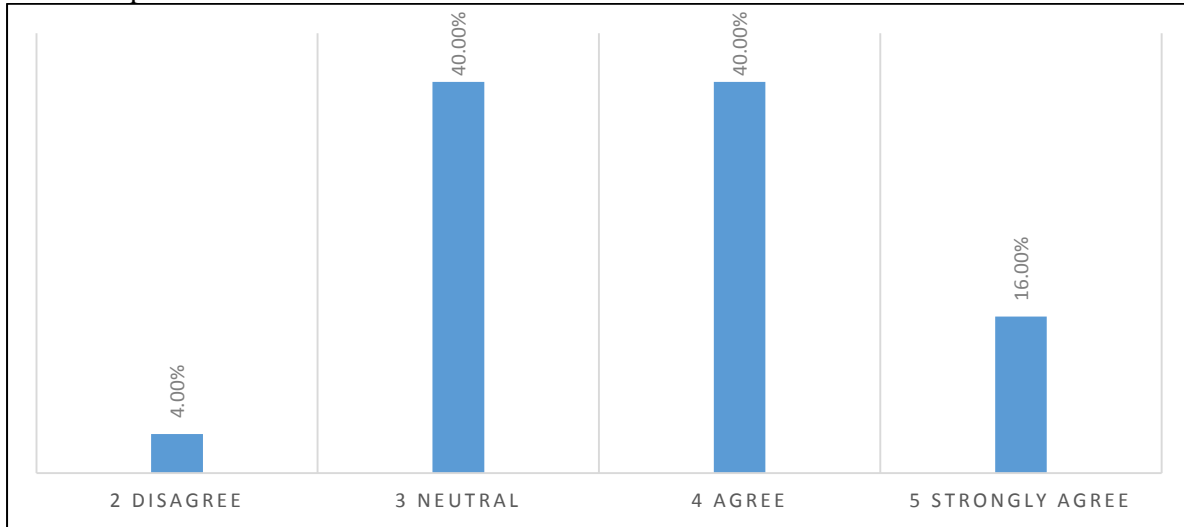


Figure 2: Students' Acquired Life Skills

This may be because students would have perceived not to have gained all other skills out of the scope of the project, to start their own enterprises. Enquiries into small business start-ups in South Africa indicate limitations of management and financial skills, which pose a threat to the success of the businesses (Solomon, Frese, Friedrich & Glaub, 2013). With the SL interactions, students would have enquired and received limited mentoring on these elements, as a result of limited skills by the partnering SMTEs or limited interaction between parties, which indicates some limitations of the mentor on the SL project. Students were asked if they gained some experience in the operations of the business they worked with. Figure 3 indicates a positive response, as eighty percent of the students appreciated the exposure to the establishments, as this exercise allowed them the opportunity to gain insight on how the establishments are run on a daily basis.

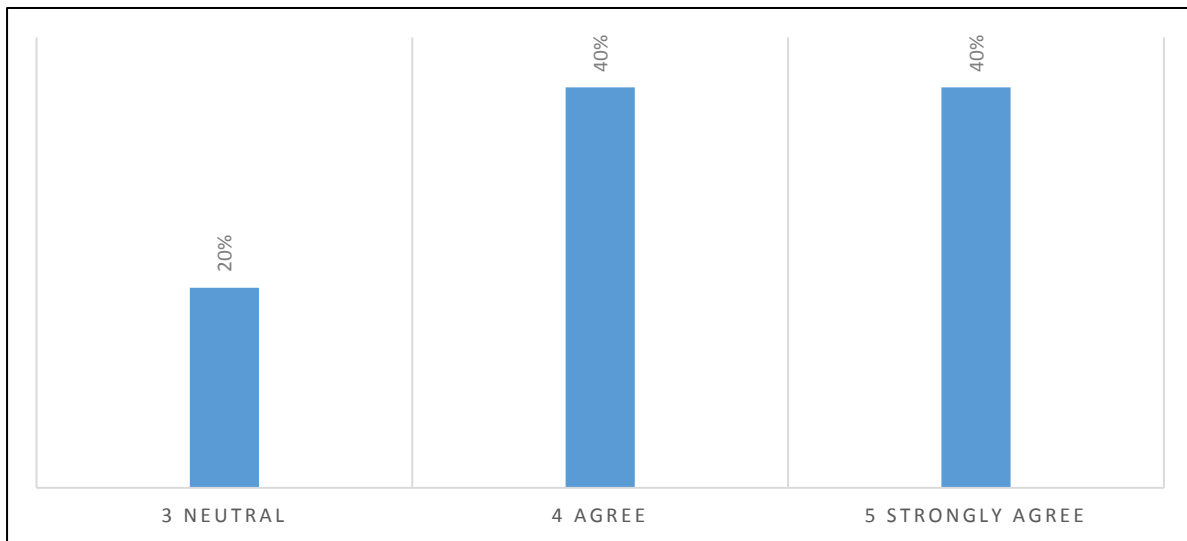


Figure 3: Students Acquired Some Experience in Operations of a Tourism

Students got the opportunity to adopt managerial roles in the learning process as they developed business plans for participating SMTEs.

On a personal level, SL may help boost students' confidence in building relationships within the working environment and may also increase their sense of social responsibility (Giles & Eyler, 1998). The questionnaire focused mainly on topics pertaining to the students' experiences of the SL project regarding skills learned. The project required students to work in groups with set deadlines for submissions. Assessments were conducted by a member of the participating SMTE, one member from the participating government partner, and the SL coordinator. This process allowed for a rounded feedback session for the students and participating SMTE to improve where shortfalls were identified in the project. Feedback from students was recorded as credits for their modules, and feedback to participating SMTEs was used to further develop the business plans submitted at the end of the project. In this case, mentoring took place for students and participating tourism businesses for implementation.

The results in Table 2, which aggregated the *agree* and *strongly agree* scales, highlight perceived technical skills gained through SL participation. The quantitative data highlighted perceptions of skills gained from SL participation. The data collected from alumni or post-graduate students indicated that on average, eighty per cent ($n = 20$) of the respondents indicated to have improved in leadership and 80 per cent improved their time management skills. Eyler (2002:520) points out that group dynamics in group work may cause conflict. Responses to the question whether students learned some conflict management skills during the SL project yielded an improvement (68%; $n = 17$). Student perceptions into venture start-up skills were explored, entrepreneurship skills and new business start-up skills yielded an average eighty-one per cent ($n = 21$) perceived awareness, indicating that the project does expose students to crucial business start-up skills.

Table 2
Skills Learned Durning SI Participation (N = 25)

STATEMENT	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	No Response
Students' opinion on service learning						
I learned some leadership skills during the service learning project	0	1	4	16	4	-

I managed my time well during the service learning project	0	3	7	10	5	-
I learned to rely on my group members during the service learning project	2	3	10	5	5	-
I learned some conflict management skills during the service learning project	0	2	6	10	7	-
Community work enhanced ability to communicate my ideas	0	1	8	11	5	-
I learned some entrepreneurial skills during the service learning project	0	1	8	11	5	-
I learned some skills on starting a new business	0	2	5	11	6	1
I learned some business financial skills during the service learning project	1	3	6	10	4	1

Poor financial management is highlighted as one of the key factors resulting in small business failure in South Africa (Solomon, Frese, Friedrich & Glaud, 2013). Financial skills were one of the core learning outcomes of the SL project, to which 56 per cent of the students indicated an improvement. This result indicates a clear correlation to literature indicating poor financial management by small enterprises in South Africa (Jagwa-Egon & Mbohwa, 2015), which limits the training students receive in this area of expertise. The question then arises on the correlation between the levels of learning by students and the technical expertise of the business mentors, and if responses in Figure 2 could indicate that business owners themselves have limited skills, which could impact on the level of training or mentoring students receive from SL projects.

Feedback in Table 2 relating to skills gained in technical and soft skills during the project was validated by the qualitative data from the focus group interviews in Table 3, indicating themes which emanated from the inductive analysis of the transcripts of the focus group interview. Reports from previous studies highlight SL project connections between classroom learning and “real-world” experiences (Easterling & Rudell, 1997; Shelly, 2000). Students in the focus group interview indicated that they could reflect on what they learned in the Tourism Management course and turn their knowledge into implementable ideas for the businesses involved in the SL project. Group dynamics proved the biggest learning curve in this section of feedback, with interpersonal, communication and conflict management being noticeable. Data in the discussion indicates that SL participation improves students’ learning process, improves their self-awareness, and awareness of their capabilities for prospective venture management. Data collected was in three forms; self-administered questionnaires, focus group interview and student reflections post project completion.

Table 2
Skills Learned Durning SI Participation

Identified skill	Comments by students
Interpersonal skills	<p>“...I think I gained interpersonal skills when you learn to work well with other people. Before then I was the type of person who, I like to do things by myself.” (FP3) (P2, 2:17).</p> <p>“...especially when there is like friendship involved, when you have to meet like to for a formal meeting, for group work, you should not involve friendship.” (FP3) (P2, 2:36).</p>
Conflict management	<p>“...and another thing I was working with groups, when others don’t get to do their part and you got to say things...” (FP2) (P2, 2:39).</p>

Leadership skills	“...my first-year project is used to avoid being the leader because I know as a leader you have to take charge and that you are doing most of the work....it was a bit difficult.” (FP1) (P2, 2:23).
Communication skills	“...it was a bit difficult, but I had to deal with everyone.” (FP1) (P2, 2:24). “Basically, you need to have good communication to be able to communicate with the person you will be working with any way, so I think communication skills are quite important for this particular project.” (FP4) (P2, 2:42).
Organisational skills	“I think that, with regards with ours, like I explained that with ours I did realise that I needed to be more organised. It was not that I was not organised but with the time frames, it made you realise that you needed to manage your time... more.” (FP2) (P2, 2:20). “...at some point, you would find that someone is much stronger in that particular field... so we would assign, people with those different qualities.” (FP4) (P2, 2:38).

There is a correlation between the focus group interview and the students’ interview and reflection data, indicating that participating in the SL project was beneficial for the students’ level of employability regarding technical and soft skills. Active citizenship encourages the development of critical soft and technical skills. A report on the benefit of a SL project for their students by Easterling and Rudell (1997) clearly demonstrated a direct relationship in the development of students’ communication, interpersonal, skills and leadership skills. Themes on the skills gained from SL participation were developed in Table 3, which clearly outlines students’ development of soft skills. Industry and literature points to the increasing need for graduates to possess these skills to foster their learning process once they enter the working place. Participation in SL projects, as is the case in this research, show the benefits SL projects could deliver in the development of stronger graduate attributes.

6. CONCLUSION

This aim of this paper was to assess the benefits of a SL project as a mentoring environment, through assessing skills gained by students in the Tourism Department of a UoT. Students were allowed time to reflect on their experiences of the SL project and how SL impacted on their learning experiences. Reflection comments were collected directly after the completion of the project. This feedback was an analysis of students’ performance during the SL project. Questionnaires and interviews were conducted twelve months after project completion. Data collected clearly illustrated the benefits of the SL project for participating students in developing essential organisational skills.

Key findings indicate that after a full year of the SL project completion, students still reflected positively on the impact of the project on their personal growth. Because students indicated that being exposed to small business start-up organisations through the SL exposed them to essential industry skills, it thus becomes imperative for future studies to explore graduate motivation to engage business start-up after graduation, rather than focusing on obtaining employment, and if SL participation affected their career choices after graduation. In this way, SL projects will can be directed to entrepreneurial development, rather than just a focus on development of graduate attributes for employment.

7. LIMITATIONS OF THE STUDY

The design of the SL projects is reliant on sustainable relationships with external role-players. Fostering these relationships come with limitations that warrant to be mentioned. Relationship management with external participants must be closely monitored. As some data, for example the questionnaires and focus group interviews, were collected after a twelve-month period from project completion, response numbers to questionnaires were negatively affected by the timeframe from project completion to data collection.

8. RECOMMENDATIONS

The design of the SL project in this paper is clearly outlined for consideration UoTs that offer business studies to consider when implementing SL projects in their respective courses. Skills to be gained by students from SL participation, are limited to the knowledge and commitment of the participating communities, as learning is limited to the level of mentoring received from participating SMTEs. Research implications suggest that SL project coordinators need to consider structured data collection for future projects in order to collect quality student reflections to enhance the mentoring environment. In addition, possible future research could also assess the skill levels of participating communities, pre-SL project, to investigate possible correlations to the impact on student learning. Implications for SL projects imply that continuous feedback by students must be included in the design of the programme to gauge progress throughout the project in order to identify limitations where they exist.

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Entrepreneurship Content of the Curriculum and Students' Attitude to Venture into Business

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ABSTRACT

Entrepreneurship programmes offered are growing despite a lack of clear answers regarding the impact of entrepreneurship education on its participating students. As entrepreneurship education depends on the concrete form and content of such courses, the challenge to educators is to craft courses, programmes and major fields of study that harness academia while keeping a reality-based focus on entrepreneurial action in the learning experience environment. This study is positioned within a quantitative descriptive research paradigm, which permits the testing of relationships among the various constructs through a structured questionnaire. The sample was drawn from final-year students of the Faculty of Management Sciences at one university of Technology. Students studied various business-related programmes in which modules on entrepreneurship were compulsory. Data provided by 263 respondents was analysed using correlation and regression analyses. The results revealed a significant relationship between all the 3 hypothesised. The entrepreneurial content of the curriculum should be enhanced by improved teaching delivery modes that enable students to gain hands-on experience by seeing, touching and 'feeling' the business world. Contents of the curriculum should be designed to include learning outcomes which are for entrepreneurship rather than about entrepreneurship. An entrepreneurial content of the curriculum which is developed for entrepreneurship deals with real entrepreneurial activity and produces students who have a positive attitude towards entrepreneurship. To enhance the status of entrepreneurship, curriculum developers should include various aspects of entrepreneurship in all years of the students' study programme.

Key words: Entrepreneurship, entrepreneurship education, Entrepreneurship content curriculum, attitude towards entrepreneurship, intentions and self-efficacy towards entrepreneurship.

1. INTRODUCTION AND PROBLEM STATEMENT

Entrepreneurial teaching programs and initiatives to educate students to become future entrepreneurs are growing everywhere in the world. The number of entrepreneurship courses at universities has grown rapidly in recent years, but how such courses can successfully motivate and qualify students to venture into new businesses creation still needs to be evidenced.

Most universities offer entrepreneurship as part of the curriculum, but still entrepreneurship is not improving in the country. Furthermore, discrepancies continue to exist in the quality of entrepreneurship education programmes on offer within Higher Education Institutions (HEIs) in South Africa, particularly in curriculum design. Brijlal (2008) posits that little emphasis is placed on motivation of the entrepreneur as a person and on entrepreneurial skills.

South Africa is faced with the immense rate of unemployment among youth, especially university graduates. The formal labour market in South Africa is currently lessening, incapable to absorb the ever-increasing demand of labour force. Traditionally, HEIs have not prepared students for self-employment as a career option, which is resulting in the loss of many potential entrepreneurs, because of this educational bias to large businesses and lack of information on self-employment as a career option, many HEIs are now offering courses related to entrepreneurship and small business, but still South Africa's entrepreneurial environment is generally mediocre (Herrington, Kew and Kew (2009: 84). Lazenby and Machaba (2011:78) affirm that the education system does not stimulate a culture of entrepreneurship, but that of a relaxed zone in employment, as there is a small percentage of university graduates who intent to venture into entrepreneurial endeavours. Education planners should introduce entrepreneurship courses from primary school right up to university level to discover the entrepreneurial class early. Furthermore, Driver, Wood, Segal and Herrington (2001) in their annual publication Global Entrepreneurship Monitor (GEM), have evaluated an overall lack of entrepreneurial elements from the

education system in South Africa. Factors such as attitude towards entrepreneurship, entrepreneurial role models, negative mindsets towards confidence, initiative and creativity, negative perception towards entrepreneurship as a career choice, and negative attitude towards failure are all cited to contribute towards the South African entrepreneurial culture.

University students hold a high potential in starting their own businesses ventures due to their levels of education. The questions are: were they exposed to the quality entrepreneurial content of the curriculum that enables them to become entrepreneurs and/or do they have a positive attitude and intentions towards entrepreneurship? Mahadea, Ramroop, and Zewotir (2011:77) explain that “entrepreneurial education is one of the keys to solving the economic problem in South Africa”. Solomon (2007:169) states that “if entrepreneurship education is to produce entrepreneurial founders capable of generating real enterprise growth and wealth, the challenge to educators is to craft courses, programmes and major fields of study that meet the rigors of academia while keeping a reality-based focus and entrepreneurial climate in the learning experience environment”. The study contribution will assist the higher education institutions (HEIs) to cultivate appropriate educational programmes to promote entrepreneurship.

2. THE PURPOSE OF THE STUDY

The purpose of the study is to assess the role played by entrepreneurship content of the curriculum in students’ intentions and attitude to venture into new businesses.

3. THE OBJECTIVE OF THE STUDY

3.1. Theoretical objectives

- To achieve the primary objective, the following theoretical objectives are formulated for the study:
- To conduct a review of literature on entrepreneurship and entrepreneurship education.
- To conduct a review of literature on entrepreneurship education at universities.
- To review literature on students’ attitudes and self-efficacy towards entrepreneurship.
- To review literature on entrepreneurial intentions models.

3.2. Empirical objectives

- To evaluate students’ perceptions of their entrepreneurial content of the curriculum.
- To evaluate students’ perceptions of becoming an entrepreneur after graduation.
- To examine the predictive relationship of students’ perception of the entrepreneurial content of the curriculum and their attitude towards becoming entrepreneurs.
- To examine the predictive relationship of students’ perception of the entrepreneurial content of the curriculum and their intentions towards becoming entrepreneurs.
- To examine the predictive relationship of students’ perception of the entrepreneurial content of the curriculum and their self-efficacy towards becoming entrepreneurs.

4. LITERATURE REVIEW

4.1. Theory of Planned Behaviour

In this study, the Theory of Planned Behaviour (TPB) was used. It is a theory that links beliefs and behaviour. The concept was projected by Icek Ajzen to expand on the predictive power of the theory of reasoned action by including perceived behavioural control. It explains human behaviour. It has been applied to studies of the relations among beliefs, attitudes and behavioural intentions (Ajzen, 1991:183). The general picture that emerges from the theory is that the intention to create a firm is influenced by different beliefs that could be grouped in the three categories that follows (Ajzen, 1991; Herrington & Kelley, 2012).

Personal attitudes toward the enterprise-creation behaviour. It refers to whether people have a positive or negative perception about this behaviour (most importantly attractiveness of entrepreneurship). Thus, a high positive attitude towards creating an enterprise will lead to a higher intention to do it.

Subjective norms. It consists of the perceived social pressure to carry out or not entrepreneurial behaviours. This concept includes parental role-modelling, parental support and opinions of important others. A more positive subjective norm about becoming an entrepreneur will lead to a higher intention to do it. Perceived control (self-efficacy) is the perception about the capability to successfully execute specific firm-creation behaviours. A high sense of self-efficacy will determine a higher probability to take the decision to start an entrepreneurial process.

These perceived personal beliefs would be the most important predictors of entrepreneurial intentions. Veciana, Aponte and Urbano (2005:168) explain that as per the TBP the attitude toward the act refers to the degree to which a person has a favourable or unfavourable appraisal of the behaviour in question. Social norms, on the other hand, refer to the perceived social burden to perform or not to perform the behaviour.

These are tied to perceptions of what important people in our lives would think about initiating a venture. Perceived behavioural control plays an important part in the TPB (Ajzen, 1991).

4.2. Entrepreneurship

According to Lorz (2011:9) the term “entrepreneur” in English originates from the French verb “entreprendre” which means to undertake. It clearly refers to establish and manage a business activity. Primo and Green (2011:1) Kabongo and Okpara (2010:296), Nga and Shamuganathan (2010:259) and Baron (2002:226) describe entrepreneurship as an opportunistic pursuit of economic wealth via creative initiatives of the individual operating within an uncertain environment constrained by limited tangible resources.

Ferrier (2012:5) and Read and Sarasvathy (2005:9) define entrepreneurship as “the creation of new ventures, new products and new markets”. The literature therefore indicated different ways of defining both entrepreneurship and entrepreneurs. Pihie and Sani (2009:341) posit that entrepreneurship can be measured in two ways: actual entrepreneurship (people that have started business) or entrepreneurial intention or covert entrepreneurship (people that intend to start a business). This study focused on covert entrepreneurship.

4.3. Entrepreneurship education

Buys and Havenga (2006:36) affirm that the core mechanism of an entrepreneurial culture is education. Kim (2007: 399) also confirms that better educated individuals are more prone to be self-employed. According to Cheng, Chan and Mahmood (2009:558) entrepreneurship education is more than business management or starting a new business, it is about “learning”; that is, learning to incorporate experience, knowledge and skills to start a new venture. In this study, entrepreneurship education refers to a formalised programme that equips students with the needed knowledge, skills, intentions and attitudes to identify business opportunities, search customers’ insights, and network and understand the needs of the market, create ideas and turn them into business opportunities. Develop a business plan, establish and run a business. De Faoite, Henry, Johnston, and Van Der Sijde (2003:432) describe it as a programme that develops entrepreneurial drive among students (raising awareness and motivation), developing the entrepreneurial abilities needed to identify and exploit business opportunities. It also refers to training students in what is needed to set up a business and to manage its growth.

Kabongo and Okpara (2010:297) assert that “the essence of entrepreneurship is the ability to envision and chart a course for a new business venture by combining information from the functional disciplines and from the external environment in the context of the extraordinary uncertainty and ambiguity”. It manifests itself in creative strategies, innovative tactics, uncanny perception of trends and market mood changes, and courageous leadership when the way forward is not obvious. What is taught in entrepreneurship classes should serve to instil and enhance these abilities.

Prodromou (2009:8) is of the view that providing numerous entrepreneurship courses and programmes is essential, but they will not be of benefit if students are not satisfied with them. Current evidence suggests that there is a gap between the perceived desirability of entrepreneurship amongst students and

authentic self-employment and start-up rates amongst graduates. Such data have focused primarily on the influence of education and pedagogy on entrepreneurship education (Lourenço & Jones 2006:112). Pittaway and Cope (2007:7) explain that an entrepreneurship programme should espouse an action-learning approach whereby the real world is viewed as a proper scene for learning as it is acknowledged that students often learn best by comparing the theory and their experiences in a learning environment.

Robertson and Collins (2003:331) suggest that the learning process to develop students to be entrepreneurial should give students ownership of their own learning objectives; involve students in real-world problem-solving; provide students with role models of successful entrepreneurs; and enable students to reflect on what they have learned. Robertson and Collins (2003:332) maintain that the entrepreneurial orientation can also be enhanced by viewing movies of entrepreneurs, discuss issues of entrepreneurs through video conferences and go out to the business community and search for idea possibilities.

4.4. Entrepreneurship content of the curriculum

Walter and Dohse (2009:21) suggest that the effect of entrepreneurship education depends on the concrete form and content of such courses. Brijlal (2008:31) points out that “the subjects and skills taught at some of the institutions do not appear to encourage learners to become active agents of their own destiny through developing qualities such as independence, risk taking, self-motivation and innovation”.

According to Kirby (2004:514), entrepreneurship education should not be ‘about’, but rather ‘for’ entrepreneurship. Co and Mitchell (2006:350) state that education about entrepreneurship is primarily based on the concept of transference of knowledge about the field, while education for entrepreneurship focuses on the learning experience and the development of competencies, skills, aptitudes and values. Thus, the teaching methods used in each of these areas differ.

Entrepreneurial pedagogy should aim to prepare students for learning in and for the outside world, teaching models that encourage students to persist to learn throughout their experience and to discover and build life opportunities are indispensable. In this context, the possibility of “learning by doing” becomes important. Fiet (2000:8) also emphasises that “teachers should teach students how to apply theory deductively to their special circumstances”.

Further evidence of these changes can be concluded from a statement by North (2002:27) that the implementation of a new curriculum focused, *inter alia*, on entrepreneurship will be a problem for some years to come, and that care should be exercised to prevent entrepreneurship education from becoming yet another activity where predominantly theoretical knowledge is acquired. Jones and English (2004) state that the growing literature on entrepreneurship education tends to argue that a different approach is required, a departure from the traditional lecture-centred passive learning used in traditional business disciplines such as management and marketing. The new style ought to be action-oriented to encourage experiential learning, problem solving, and creativity, and best provide the mix of enterprising skills and behaviours needed to create and manage a small business.

The studies of Mwasalwiba (2010) and Pretorius, Nieman, and Van Vuuren (2005) revealed that every training institution has its own approach in constructing an entrepreneurship curriculum. This is evident from the comparative study conducted by Brijlal (2008) on the state of entrepreneurship education at HEIs in the Western Cape. The Western Cape universities such as the University of the Western Cape (UWC), University of Cape Town (UCT), University of Stellenbosch (US) and the Cape Peninsula University of Technology (CPUT) have different entrepreneurship content in their curriculum. A study by Co and Mitchell (2006:354) shows that South African universities use 80 percent theory (class time) and only 20 per cent outside classroom methods in teaching entrepreneurship. The theory (class time) is broken down into business plans discussion (32%), lecture, (26%), and case studies (22%). The expectation is based on the premise that more and better entrepreneurship education in the classroom would result in more and better entrepreneurs. Zegeye (2013:318) explained that course content in any

education setting should be in line with the economic realities of that country to be useful. It should stress the skills and knowledge that an entrepreneur would need to be successful.

The Umsobomvu Youth Fund Research Report (2001) outlines that the quality of the training programme depends on adequate input factors such as infrastructure, appropriate selection of target group members, content and design of programme, capacity and delivery method, and assessment and tracking methods, as illustrated in Figure 1. The training programme should be developed to attain the output factors.

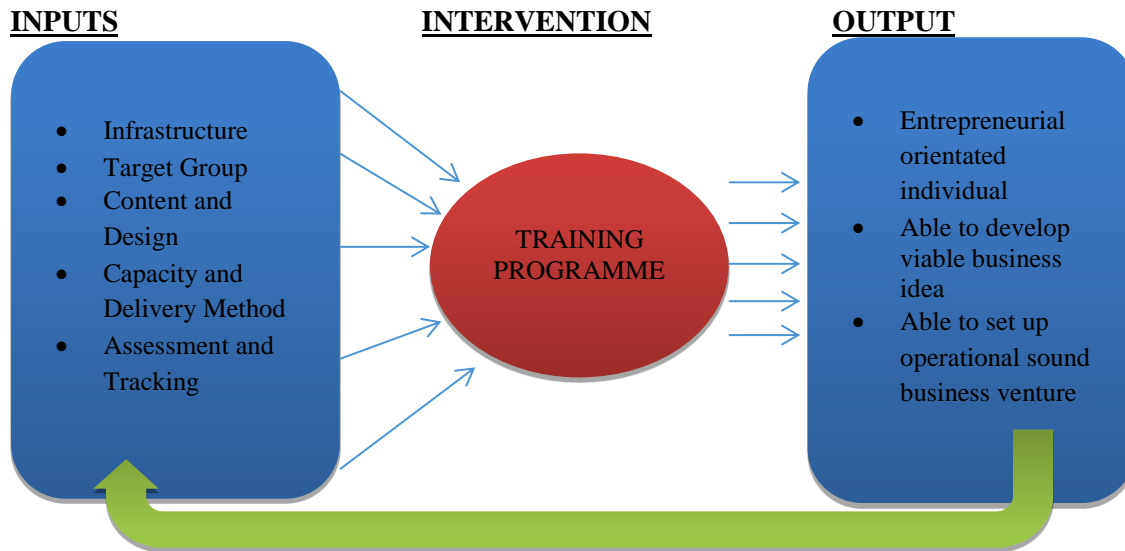


Figure 1: Operational Model of Scope Of Work (Source: Umsobomvu Youth Fund Research Report, 2001: 6)

As per this model, the quality of the training programme is dependent on suitable input factors such as infrastructure, appropriate selection of target group members, content and design of programme, capacity and delivery method, and assessment and tracking methods. Udoukpong, Emah and Umoren (2012) posit that business studies as a vocational subject with entrepreneurship positioning promotes learning through practice, and it is recommended that schools offering the subject should have well-resourced centres with the essential amenities for hands-on learning.

Nicolaides (2011) highlighted that the government should provide the necessary resources such as finance and infrastructure. Entrepreneurship education is targeted at different categories of people who usually have different learning needs, and the benefits of entrepreneurship education will certainly be different to different individuals (Botha, 2006; Herrington & Wood, 2003). An Umsobomvu Youth Fund Annual Report (2005:15) revealed that their entrepreneurship programme targeted out-of-school youth and young people in general education and training. The entrepreneurship 2010 Campaign emphasised three pillars: the strengthening of entrepreneurship education and skills training, which improve access to finance and business support; and the creation of an enabling environment through appropriate legislative and regulatory changes.

Shambare (2013) posits that teaching methods go beyond rehearsing formulae in textbooks; it should empower students to develop free and creative thinking in the application of knowledge and theory in the real world. According to Henderson and Robertson (2000) experiential learning can transform experience into entrepreneurial knowledge, which is possible to produce entrepreneurs in the same way nurses are produced through appropriately designed work integrated learning. Some research studies reveal that educational institutions are moving towards a more knowledge sharing environment where class discussions and guest speakers are becoming more popular (Solomon, 2007; Brijlal, 2008; Prodromou, 2009).

Keat, Selvarajah and Meyer (2011:209) revealed that “to produce students who are capable of dealing with actual entrepreneurial activity or transforming students’ entrepreneurial competencies to a practical way is closely centred on courses for entrepreneurship”. Many students and graduates perceive several obstacles that oppose business start-ups, such as lack of experience, or lack of finance, which block the path toward their preferred choice (Keats & Ahmad, 2012:182). The problem of this inconsistency may lie in the present curriculums, which have focused almost entirely on the needs of aspiring middle and functional managers rather than the needs of aspiring entrepreneurs.

Maharasoa and Hay (2001:140-141) suggest that emphasis should be placed on the ability of the curriculum to prepare students with comprehensive knowledge and skills that are relevant to the needs and aspirations of the country and to students’ individual growth. Baron (2003) argues that previous researchers have failed to recognise that entrepreneurship is a process and that the motivation to start a new business may vary with the stage of the process. It depends at what stage the potential entrepreneur is. The entrepreneur may be starting from being innovative and creative or may be at the idea-generating or screening and development stage. Galloway and Brown (2002) explain that the immediate start up may not be the best for entrepreneurial growth in higher education but entrepreneurship education has the potential value of the long-term benefit.

According to Orford, Herrington and Wood (2004) groundwork research suggests that entrepreneurship education can have a crucial positive influence on four areas crucial to entrepreneurship:

Learners’ self-confidence about their ability to start a business;
Learners’ understanding of financial and business issues;
Learners’ desire to start their own businesses; and
Learners’ desire to undertake higher education.

On the other hand, Kim and Fish (2010:241-243) introduced freshman programmes for undergraduate students named “From Nothing to something”, the mission being to teach students a creative innovative process from recognition of unique business opportunities by generating viable entrepreneurial products and services.

Rae, Martin, Antcliff and Hannon (2010) explain that extra curriculum such as idea generation, business planning, venture creation, enterprise skills development and networking events are necessary means of raising students’ awareness of enterprise development and providing opportunities to develop skills and confidence in practical ways. Figure 2 illustrates the key stages of the path in developing entrepreneurial effectiveness as outlined by the Quality Assurance Agency for Higher Education (Bellingham, 2012).

The key stages consist of the following:

- Enterprise awareness: understanding 'what enterprise means to me’.
- Developing an entrepreneurial mind set: participating in enterprising learning and activities.
- Developing entrepreneurial capability: developing capability and confidence through guided experience and practice.
- Illustrating the key stages of the path in developing entrepreneurial effectiveness.

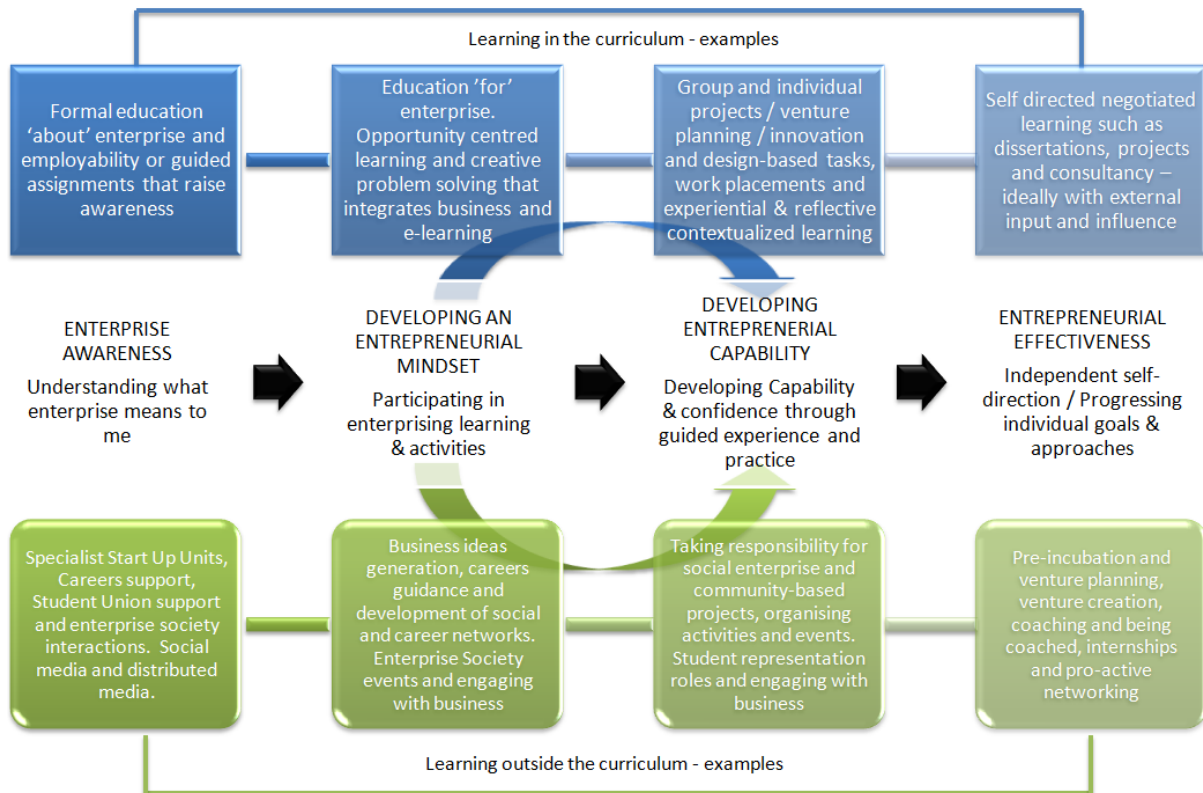


Figure 2: Developing Entrepreneurial Effectiveness
 (Source: Bellingham, 2012:12)

The activities in the boxes in Figure 2 of each stage of the typical student journey are examples only; curricular and extra-curricular activities will vary widely between providers. The figure illustrates how both curricular and extra-curricular learning contribute to the development of enterprise awareness, an entrepreneurial mind set, capability, and overall effectiveness. Bellingham (2012:9) alluded that “students may not approach their learning in a linear fashion; rather their journey may pass through different stages in an iterative fashion and may engage with different stages simultaneously. Individual students' journeys are likely to have diverse starting points and transition points into the future”.

Whiteley (1995:6) affirms that “changes in the curriculum have been accompanied by changes in teaching styles and learning methods. Many of these changes aim to promote a deep rather than surface approach to learning by enabling students to apply knowledge in novel contexts and to solve related problems. Assessment processes are being adapted to reflect this approach and the value placed on core skills”. Solomon (2007:179) concluded that “the traditional teaching method of requiring students to create business plans still exists as a foundation for teaching the nuts and bolts of entrepreneurship. However, what we teach in our entrepreneurship classes should assist to inspire and enhance entrepreneurial abilities” (Solomon, 2007:169).

4.5. Attitude towards entrepreneurship

Taatila (2010:48) affirms that “without an entrepreneurial attitude society can stagnate, which can hinder the long-term growth and prosperity of a region”. This noticeably specifies the importance of entrepreneurship to society, but also the nation’s global competitiveness and economic development. Steenkamp, Van der Merwe and Athayde (2011:50) are of the view that early formal entrepreneurship education moves the attitudes of students, which in turn directs them towards certain future careers.

Sowmya, Majumdar and Gallant (2010) revealed that without an entrepreneurial attitude society can decay, which can delay the long-term growth and success of a region. The society and the business world necessitate and demand entrepreneurial competencies, which place more pressure on the individual’s attitudes and skills than before (Taatila, 2010). It is therefore of interest to study how

entrepreneurial education affects the attitudes and motivation of those undertaking these types of programmes at universities. Pretorius et al. (2005) revealed that the facilitator of an entrepreneurship programme would impact on the students positively if their attitudes and behaviours can be modified, and there is the likelihood that the programme may lead to further venture start-ups. Although a learning programme contains the best knowledge and skills (content) about venture start-ups, there is no assurance that students will act entrepreneurially unless their mind-set, readiness to take risks, confidence, attitude, and behaviours have been influenced.

4.6. Students' intentions towards entrepreneurship

The objectives of entrepreneurship education are to transform the students' state of behaviours and even intentions that makes them understand entrepreneurship, to become entrepreneurial and to be an entrepreneur (Dhliwayo, 2008). Other researchers, such as Sowmya et al. (2010), Turker, Selcuk, and Turkey (2008), Solomon (2007) and Isaacs Visser, Friedrich and Brijlal (2007) found a positive influence of entrepreneurship education on students' entrepreneurial intentions, and have found that students completing entrepreneurship education programmes are more likely to become entrepreneurs; on the other hand, many scholars have found negative effects in evaluating the effectiveness of entrepreneurial programmes (Subotzky 1999; Cheng et al., 2009).

Entrepreneurship programmes and initiatives are aimed at developing students' skills and knowledge at identifying business opportunities. Entrepreneurship can be viewed as the type of planned behaviour, for which intention models are appropriate. In previous research, personal and environment-based determinants of entrepreneurial intention have been extensively discussed (Ajzen & Fishbein, 2000; Krueger, Reilly & Carsrud, 2000; Mobaraki & Zare, 2012; Rasli, Khan, Malekifar & Jabeen, 2013). However, there have been a limited number of studies addressing the influence of entrepreneurship content of the curriculum on students' entrepreneurial intention to venture into new business creation.

According to Peterman and Kennedy (2003) entrepreneurship education programmes can significantly change the entrepreneurial intentions of students. Hence, in addition contribute direct effects of entrepreneurship education programmes through new start-ups, students may repeat the entrepreneurial process many times during their entire working career, by starting new companies or starting new business areas in existing companies, by running their businesses more competently, or by assisting other entrepreneurs. Fiet (2000) indicates that a good course necessitates the practical application of theory to "immediate events" and that responsibility for its application must be taken. The most effective method is to create a student-approved system for class meetings that require students to practice skills until they accomplish their capabilities. Entrepreneurship education is therefore a purposeful programme that is aimed at imparting not only entrepreneurial knowledge but also inspiration, competencies and readiness to become entrepreneurs in the future (Dhliwayo, 2008:338). Hence, for the study, entrepreneurship education refers to a formalised programme to equip students with the needed skills and knowledge to recognise business opportunities.

Ali, Topping and Tariq (2011:13) concur that there is an expectation that entrepreneurship education would result in a proportionate increase in both the number and the quality of entrepreneurs entering an economy. It should be noted, however, that the growing body of empirically rigorous research in this area has so far provided only limited evidence to support the assumption that entrepreneurship education can produce better outcomes at several stages of entrepreneurial activity, from start-up through to exit strategies (Turker et al., 2008).

5. CONCEPTUAL FRAMEWORK AND HYPOTHESIS STATEMENTS

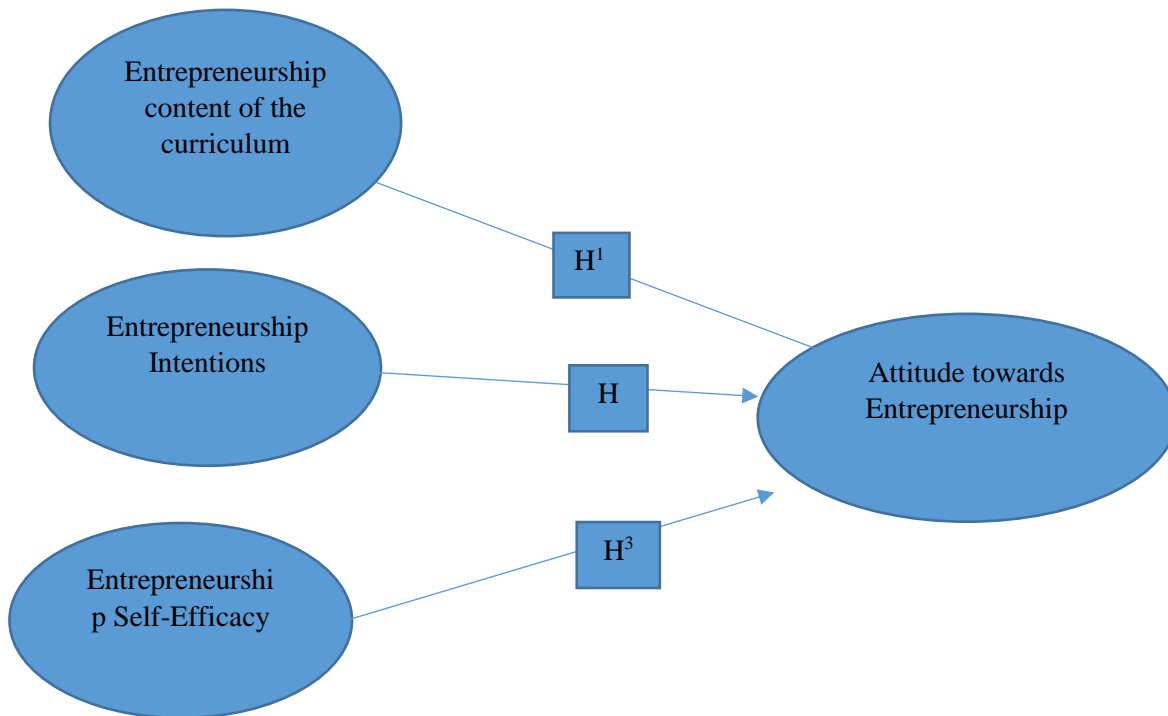


Figure 3: Own source

H¹: There is a positive relationship between entrepreneurship content of the curriculum and attitude towards entrepreneurship.

H²: There is a positive relationship between entrepreneurship education and attitude towards entrepreneurship.

H³: There is a positive relationship between entrepreneurship effectiveness and attitude towards entrepreneurship.

6. METHODOLOGY

The research design for the study is quantitative approach because it is aimed at describing students' intention to venture into new business creation. The survey method was used. The study gathered data using a structured questionnaire. The instrument was adapted from instruments developed by previous researchers.

6.1. Sample description

In establishing an appropriate sample size, an analysis was undertaken of the sample size used by previous researchers in similar studies (Galloway & Brown, 2002; Souitaris, Zerbinat, & Al-laham, 2007). These studies used sample sizes that ranged between 200 and 230 students. Hence, a final sample size in the region of 250 was deemed appropriate. A total of 263 respondents was finally included in the study. Furthermore, consideration of sample sizes was also based on the type of multivariate analysis, namely factor analysis that was used in the study, which requires a sample size more than 200 cases. The target population for the study was drawn from final-year students from the Faculty of Management Science (FMS) at the one University of Technology, situated in the Southern Gauteng region of South Africa. The study population comprised of students in these programmes. Only full-time students were included in the study. The motivation for the exclusion of part-time students is based on the assumption that they are already employed (either self-employed or working for an organisation). Part-time students in terms of university policy are enrolled based on their unavailability to study full-time because of full-time work commitments.

Table 1 provides an overview of the total population under study and is based on enrolment figures in the (FMS) 2014.

Table 1: Headcount of Faculty of Management Science students – 2014

Department	Programmes	Head count	Proportional selection
Accountancy	Financial information system	48	13
	Cost and Management accounting	245	50
	Internal auditing	127	50
Human Resource management	Human Resources	167	50
Logistics	Logistics	252	38
Marketing and sport	Marketing	240	42
	Retail Business Management	79	20
TOTAL		1158	263
TOTAL SAMPLE SIZE = 263(23% of total)			263

(Source: Integrated Tertiary Software System [ITS])

6.2. Statistical analysis /Psychometric Properties of the Measurement Scale

Polit and Hungler (1999:699) describe data analysis as “the systematic organization and synthesis of research data, and the testing of research hypothesis using those data”. The Statistical Package for Social Sciences (SPSS) version 24.0 was used to analyse the data. Descriptive analysis was used to analyse the composition of the sample. Numbers utilised to tell one something about the extent to which two or more respondents differ, are called inferential statistics (Bunker, Pearlson & Schulz, 1975). Frequencies, means, correlations and regression analyses were used in the study.

Table 2: Sample demographic characteristics

Gender	Frequency	Percentage
Male	99	38 %
Female	164	62 %
Total	263	100%
Marital status	Frequency	Percentage
Married	3	1 %
Single	260	99 %
Total	263	100%
Age	Frequency	Percentage
Below 21	37	14 %
21-25	210	80 %
26-29	12	4 %
Over 29	4	2%
Total	263	100%
Citizenship	Frequency	Percentage
South Africa	245	93 %
Non-South African	18	7 %
Total	263	100%
Personal Experience	Frequency	Percentage
Formal Experience	144	55 %
No Experience	119	45%
Total	263	100%
Course of study	Frequency	Percentage
Human Resources	50	19 %
Marketing	42	16 %
Retail Business Management	20	7 %

Gender	Frequency	Percentage
Logistics	38	14 %
Internal Auditing	50	19 %
Financial Information System	13	5 %
Cost and Management Accounting	50	19%
Total	263	100%

Table 2 contains information on the general demographic information of students and their background, information in relation to gender, age, marital status, citizenship, personal experience in business and course of study, is based on a frequency analysis. From Table 2, it is evident that the proportion of males is lower than females (n = 164; 62%; n = 99; 38%). The age categories of respondents are reported in Table 1 shows respondent age below 21 years (n = 37; 14%), followed by those who were between 21 to 25 years (n = 210; 79.8%), those between 26 and 29 years (n = 12; 4%) and respondents older than 29 years constituted (n = 4; 2%) of the sample. On marital status, there are more unmarried respondents in the survey, (n = 260; 99%) compared to married respondents (n = 3; 1%). This result is not surprising as the respondents are full-time students and the majority are younger than 25. On citizenship of the respondents, South Africans comprised the overall majority of the sample (n = 245; 93%), compared to those who were non- South Africans (n = 18; 7%). On personal experience in business, most the respondents (n = 144; 55%) had some formal experience in business, while many of them (n = 119; 45%) had no experience in business. On the course of the study, Human Resource Management (n = 50; 19%), Marketing (n = 42; 16%), Retail Business Management (n = 20; 7%.6), Logistics (n = 38; 14.4%), Internal Auditing (n = 50; 19%), Financial Information System (n = 13; 4.9%), and Cost and Management Accounting (n = 50; 19%).

7. DATA ANALYSIS AND RESULTS

In accordance with the two-step procedure suggested by Anderson and Gerbing (1988), prior to testing the hypotheses, confirmatory factor analysis (CFA) was performed to examine reliability, convergent and discriminant validity of the multi-item construct measures using AMOS 7. Overall, acceptable model fit is indicated by goodness-of-fit index (GFI) $\geq .80$; root mean square error of approximation (RMSEA) values $\leq .08$; incremental index of fit (IFI); Tucker Lewis Index (TLI) and comparative fit index (CFI) values $\geq .90$. Recommended statistics for the final overall model assessment show acceptable fit of the measurement model to the data: $\chi^2/(df) = 2.543$, GFI = 0.870; IFI = 0.900; TLI = 0.905; CFI = 0.898; RMSEA = 0.075. Loadings of individual items on their respective constructs are shown in Table 2, while the scale construct correlations are presented in Table 3. The results are shown in Table 2, and descriptive statistics and correlations among the study constructs are presented in Table 3.

Table 3: Measurement accuracy assessment and descriptive statistics

Research constructs	Descriptive statistics*		Cronbach's test		C.R.	AVE	Item Loadings
	Mean	SD	Item-total	α Value			
Entrepreneurship content of the curriculum (EC)							
EC 1			0.605				0.760
EC 2			0.711				0.756
EC 3			0.700				0.734
EC 4			0.621				0.669
EC 5	2.01	1.072	0.525	0.660	0.660	0.569	0.604
EC 6			0.578				0.603
EC 7			0.583				0.591
Entrepreneurship Intentions (EI)							
EI 1			0.763				0.864
EI 2			0.743				0.845
EI 3			0.719				0.828
EI 4			0.701				0.813
EI 5			0.679				0.796
EI 6			0.693				0.786
EI 7	3.08	1.367	0.645	0.799	0.799	0.643	0.762
EI 8			0.634				0.746
EI 9			0.539				0.680
General Self Efficacy (GE)							
GE 1			0.533				0.599
GE 3			0.631				0.732
GE 4			0.722				0.822
GE 5	3.15	1.007	0.758	0.702	0.701	0.665	0.877
GE 6			0.689				0.884
GE 7			0.706				0.833
GE 8			0.745				0.860
Attitudes Towards Entrepreneurship (AE)							
AE 1			0.589				0.661
AE 2			0.785				0.811
AE 3	3.03	1.300	0.641	0.780	0.779	0.722	0.694
AE 4			0.556				0.579
AE 5			0.602				0.606
AE 6			0.929				0.950
AE 7			0.855				0.863
AE 8			0.691				0.694
AE 9			0.556				0.579

EC= Entrepreneurship content of the curriculum; EI= Entrepreneurship Intentions; GE= General Self Efficacy ; AE= Attitudes Towards Entrepreneurship

As recommended by Anderson and Gerbing (1988) and Hair, Babin, Anderson and Tatham (2010), individual item loadings should be above 0.5. From the results in Table 3, GE 2 has been deleted because the factor loadings are not meeting the recommended threshold of 0.5. From the results presented in Table 3, all the remaining item loadings for the research constructs are above 0.51; therefore, proving acceptable individual item reliabilities as more than 50 per cent of each item's variance is shared with

its respective construct. Using a formula proposed by Fornell and Lacker (1981), the composite reliabilities (CR) and average variance extracted (AVE) for each variable were computed. The composite reliabilities (CR) are all above the recommended value of 0.7 suggested by Hulland (1999); thus, indicating satisfactory internal uniformity and dependability of the respective measures. All average variance explained (AVE) values are above 0.5; thus, tolerable according to the literature (Fraering & Minor 2006). These results provided evidence for acceptable levels of research scale reliability. Discriminant validity was proven by checking if the AVE for each multi-item construct was greater than the shared variance between constructs (Fornell & Larcker 1981; Anderson & Gerbing 1988; Nunnally & Bernstein 1994; Hair et al., 2010) and if the inter-construct correlations were less than a unit. Furthermore, the inter-construct correlation values are less than the recommended value of 0.6, revealing an adequate level of discriminant validity (see Table 3).

Table 4: Sample data statistics and correlations between constructs

Variables	EC	EI	GE	AE
EC	1.000			
EI	.598***	1.000		
GE	.550***	.588***	1.000	
AE	.156***	.181***	.433***	1.00

Note: EC= Entrepreneurship content of the curriculum; EI= Entrepreneurship Intentions; GE= General Self Efficacy; AE= Attitudes towards Entrepreneurship

7.1. Structural equation modelling

This study used structural equation modelling (SEM) to approximate the causal relationship among the constructs based on the conceptual model in Figure 3. The maximum likelihood estimation (MLE) method was used because it has desirable asymptotic properties (e.g., minimum variance and unbiasedness) and is scale-free. The results are reported in Table 4. The model is acceptable in terms of overall goodness of fit. Acceptable model fit are indicated by χ^2 (df) values < 3; GFI and AGFI values ≥ 0.80 ; RMSEA values $\leq .080$; IFI and CFI values ≥ 0.90 . Results of this study indicate that, χ^2 (df) = 2.679; GFI (0.865); IFI (0.861), TLI (0.851), CFI (0.850), and RMSEA (0.078) and therefore, achieved the suggested thresholds (Hair et al., 2010). This suggests that the model converged well and could be a plausible representation of underlying empirical data structures collected in South Africa.

Table 5: Results of structural equation model analysis

Hypothesis Statement	Hypothesis	Path Co-efficient
EC → AE	H1	.705***
EI → AE	H2	.600***
GE → AE	H3	.593***

Note: EC= Entrepreneurship content of the curriculum; EI= Entrepreneurship Intentions; GE= General Self Efficacy; AE= Attitudes towards Entrepreneurship

8. DISCUSSION OF FINDINGS

The results in Table 5 offer support for three proposed hypotheses. According to the objectives of the study, it can be deduced that the study postulated that there is a positive relationship between all the three hypotheses. The first research objective was to examine the relationship between entrepreneurship content of the curriculum and attitudes towards entrepreneurship. Consistent with hypothesis one (H¹), results indicate higher levels of entrepreneurship content of the curriculum and attitudes towards entrepreneurship. The path co-efficient is 0.705 which shows a significant strong relationship. There is therefore a significant positive relationship between entrepreneurship content of the curriculum and attitudes towards entrepreneurship. The second research objective was to investigate the relationship between entrepreneurship education and attitudes towards entrepreneurship. Also, in support of hypothesis two (H²), the results indicate higher levels of entrepreneurship education with higher levels of attitudes towards entrepreneurship. The results ultimately prove that there is a strong significant positive relationship between entrepreneurship education and attitudes towards entrepreneurship. The results indicate higher levels of entrepreneurship education associated with higher levels of attitudes towards entrepreneurship. The path co-efficient of 0.600 shows a strong positive relationship. The third

research objective was to investigate the relationship between entrepreneurship effectiveness and attitudes towards entrepreneurship and the third proposed hypothesis (H³) was the relationship between entrepreneurship effectiveness and attitudes towards entrepreneurship. The path co-efficient for hypothesis 3 is 0.593 which shows a significant relationship between the two variables. Of all the three hypotheses, the strongest relationship was that of entrepreneurship content of the curriculum and attitudes towards entrepreneurship, which has a standardised coefficient of 0.705, followed by entrepreneurship education and attitudes towards entrepreneurship with a standardised coefficient of 0.600 and finally the relationship between entrepreneurship effectiveness and attitudes towards entrepreneurship has the lowest coefficient of 0.593. Although the results show that there is a positive relationship between entrepreneurship effectiveness and attitudes towards entrepreneurship, the relationship between entrepreneurship effectiveness and attitudes towards entrepreneurship has the lowest coefficient compared to other hypotheses.

9. CONCLUSIONS AND MANAGERIAL IMPLICATIONS

Entrepreneurship education at the universities is of utmost importance in South Africa and Africa at large as the unemployment rate is generally high. Education which is specifically intended to stimulate interest in starting businesses is becoming increasingly important.

Although several studies in entrepreneurship education have been conducted previously, they have focussed on identifying the psychological characteristics and traits of those who started businesses. As psychological characteristics and traits do not have good predictive power, this study assessed the impact of the entrepreneurship content of the curriculum in students' intentions to venture into new business creation. The empirical findings of the study revealed that there was a positive relation between entrepreneurial education and the intention to start businesses by students at university level.

The study revealed that entrepreneurship students have a more positive attitude towards becoming entrepreneurs and have higher intentions of becoming an entrepreneur. Hopefully with better understanding in entrepreneurship among future graduates, the HEIs would be able to turn students to become entrepreneurs. This will endorse the intention to become a nation of entrepreneurs of a developed country in accordance with the South Africa Vision 2020 dream of success. Tan and Frank (2006: 417) emphasise that entrepreneurship education should be supported by three pillars: industry, academia, and public policy which includes government and government agencies, and that funds should be obtained to support these linkages. They further indicated that private and public partnerships are essential to facilitate entrepreneur-practitioner skills and in doing so they also impart social skills.

10. LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

The study used a quantitative research design, although future research may consider adopting a mixed method approach to get more meaningful results. A larger sample can be considered in order to generalise findings. Katono (2013:203) indicates, "there is need or a larger sample to make the findings more generalizable". However, the present research can be seen as a preliminary investigation of the opportunity to increase value in designing the entrepreneurial-related programmes that stimulate students' intentions, attitude and self-efficacy to venture into new business creation.

The sample population inevitably limits the conclusion that can be drawn from the present findings, as only students from FMS were included in the sample. Future studies should include students from the other faculties. However, the purpose was not to generalise the findings outside the sample, but to understand the phenomenon in its context, and further research is required to incorporate a wider range of graduates from the different faculties and other higher learning institutions.

11. RECOMMENDATIONS

11.1. The following recommendations were made:

- Revision of the content of the curriculum is required;
- Holistic approach from all role-players with adequate resource availability;
- The learning process of entrepreneurship should not only be restricted to just discussions but also the interaction within the current dynamic business socio-economic learning environments;

- The mode of delivery for entrepreneurship should be revisited;
- The management of HEIs should ensure that entrepreneurship is part of students' curricula from their first year of study to the third year: and
- An environment conducive to venture into business creation should be created by providing incubation support and start-up funds.

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An Educational Game to Foster Entrepreneurship

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ABSTRACT

There is a growing demand for entrepreneurial skills in many countries and also in South Africa. Educational games can foster entrepreneurship. The idea to develop a specific set of educational games to foster entrepreneurship education originated from Aalen University of Applied Sciences in Germany. The concept development of the educational game system VAL-U (VALues & yoU) is a joint effort of Aalen University and Central University of Technology, Free State (CUT) in Bloemfontein. The VAL-U educational games exist on six different levels directly related to entrepreneurship, namely: Level One: Elementary economics; Level Two: Basic accounting; Level Three: Marketing; Level Four: Project management; Level Five: Sustainable development and business strategy and Level Six: Business plan development. The development and deployment of the VAL-U educational games involve various stakeholders from university, industry, community and education. The games are used to train CUT students in the Faculty of Management Sciences as Train-the-Trainers in the basics of entrepreneurship. They train members of the community accordingly under the supervision of academic experts – in line with CUT's strategic drive to become a true entrepreneurial university. After a first trial of development and roll-out, CUT has seen that the game can be developed and deployed successfully provided that there is funding available for materials and to offer seed funding to the participants in the training. The purpose of this article is to provide a theoretical overview of the mechanics of the VAL-U game system, the planned roll-out in local, regional and national context and also to provide feedback on results achieved during the first phases of implementation.

Keywords: Entrepreneurship, planning games, economics, accounting, marketing, sustainability, project management.

1. INTRODUCTION

Socio-economic development and responsible use of natural resources are two of the pillars of sustainable development. In order to achieve socio-economic development and to create workplaces and wealth, entrepreneurial thinking is required and for this, fundamental training for future entrepreneurs is necessary. This training must match the requirements of the target groups.

In many discussions within the last years, the need showed up for a basic training in economics skills. Entrepreneurs and intrapreneurs need basic competences. Entrepreneurs, such as small-scale farmers, guest house managers and tour operators, engineers and innovators, shop managers and shopkeepers, wholesalers as well as craftsmen and traders need basic knowledge in economics. The same holds for young academics: no one should graduate without elementary knowledge about the function of an enterprise. Also within larger organisations – in industry, administration and academia – economic knowledge and managerial skills are needed to run smaller units efficiently; this is called entrepreneurial thinking.

In the wake of huge unemployment (Free State Growth and Development Strategy, 2014:5) coupled with a lack of entrepreneurial skills, entrepreneurial education and training in the Free State and South African context becomes imperative. The question arises, whether this need gap can be filled by means of an educational game to foster entrepreneurship? Such an educational game concept may inculcate entrepreneurial skills among the target group (youth, unemployed, owners of small businesses, etc.) and beyond for gainful employment, poverty alleviation and general improvement in the quality of life for participants. According to Herrington and Kew (2013), such game has to integrate two aspects: entrepreneurship education, motivation and self-assessment for future entrepreneurs as the core function to support entrepreneurship and training for the necessary skills and knowledge for future entrepreneurs to give the business a change to survive and the entrepreneur a change for success.

The concept development of the educational game system VAL-U (VALues&yoU) is a joint effort of Aalen University of Applied Sciences in Germany and Central University of Technology, Free State.

2. EDUCATIONAL GAMES FOR SOCIO-ECONOMIC DEVELOPMENT

2.1. Background

The transition to sustainable development is a challenging task for states, organisations and individuals. The “great transformation to sustainability” (WBGU, 2011) will require the contribution of all groups in society. Therefore, the science is in the middle of these transformation process and consequently the universities (WBGU, 2011). It includes integrative prospects and trans-disciplinary research. Schneidewind has emphasised the importance of “real world laboratories” for trans-disciplinary research projects. “Especially cities are an important space for experiments (Schneidewind, 2013). In that sense, CUT will implement a real-world laboratory for socio-economic development, entrepreneurship education and sustainable development.

Games are a well-known method of training that can claim its roots back to the chess game. They have been used in military and management education for a long time (Elgood, 1989).

Planning games can be defined from different points of view (Holzbaur, 2003):

- A model of the real world used for didactical purposes,
- A simulation with didactic background,
- A controlled experiment,
- A method of teaching close to reality,
- A method of learning by making decisions and experiencing the effects.

From the various definitions, the following one is applicable for the context of this paper: a planning game is a training procedure that consists of a dynamic system, in which the trainee has to make decisions that influence the system (Holzbaur, 2000). The didactic aspect (training) is mentioned here; but it is necessary to say that in many cases a substantial learning effect is given not by some trainer’s evaluation, but by the dynamic evolution of the system’s state.

There is a set of notions for these games referring to the historical background (war games), the decision orientation (planning games) the use in management education (management games) or for implementation as computer games (serious games, simulation games). For the VAL-U concept, the notion of educational games will be used to emphasise the focus on the pedagogic use of the games: educational games are simulation games which involve situation analysis and decisions in one or several roles and which are aimed for education and training.

The impact of education in general on socio-economic development is given by enabling economic development (e.g. creating employment) or allowing people to participate in everyday life, in the political life and in the workforce. Of course, enabling people to get employment and to work in a job is a necessary prerequisite for development, but in this document, the emphasis will be mainly on the entrepreneurship aspect of creating new jobs. Entrepreneurship is the attitude to start an enterprise and to take well-calculated economic risks (Smit & Vivian, 2001).

Management is an important aspect for entrepreneurship. It is not the business administration approach to organise and control a company; it is the will and ability of “getting things done through other people”. Although starting an enterprise may be a one-man-show, a successful entrepreneur needs to involve other people – customers, employees, and partners. Innovators must involve their working groups as well as their peers (Smit & Vivian, 2001).

2.2. Importance

The following aspects of educational games are important for the training of future entrepreneurs (Holzbaur, 2003):

- Educational games lead to an efficient way of training. Training can be transferred to real world problem solving since educational games are based on real world models. The game itself has the same semantics as the real world problems. Hence, less transfer is needed and training can be applied directly.
- Educational games are decision-oriented, which makes training effective with respect to the subsequent activities.
- Educational games are reproducible, reliable and fair. This implies that trainee's performance is not based of the random outcome of reality. This gives the trainee the self-evaluation and self-esteem to start an enterprise.
- In educational games, risks can be taken and new ways of problem solving can be developed and tested. This gives the trainees the chance to evaluate their ideas and plans.

2.3. Advantages

Educational games provide an optimal match for the competences needed by entrepreneurs. They give the potential entrepreneur the facts, knowledge, problem-solving competence, social and inter-cultural competence, personal competence and self-esteem and the ethical competence that are needed to plan and start a company and make the right decisions, to communicate in order to get the funding, personnel and customers, to manage and run the company and to control the operations and establish the management systems and to decide optimally in routine and critical situations (Holzbaur, 2003).

2.4. Use

One can use educational games for entrepreneurship in different ways: In formal education (university, school) educational games can be the topic of a special course within the curriculum or they can be embedded within courses on special subjects (e.g. management, quality/ project/ risk/ environmental management, accounting, marketing, controlling or special courses on entrepreneurship and start-ups). Moreover, they can be used for start-up training for newcomers giving them the facts, skills and motivation for entrepreneurship and evaluating their skills.

Within lifelong learning, educational games may be used for test and evaluation of skills, knowledge and problem-solving behaviour (individual or in a team). They can also be used to improve those skills and problem-solving behaviour. Educational games may also be used to evaluate existing business plans by simulating the business in order to assess plausibility, feasibility and risks of the plan.

2.5. Haptic games

The fundamental idea of educational games is "Learning by doing". Educational games simulate the environment in an elementary way in order to make the business processes transparent. The transactions in business are distinguishable. The expression "haptic" comes from the Greek word for touching and means the tactile sense. Haptic games use physical objects which are handled by the players. Very often, these objects are positioned on a game board. People can learn haptic games easily because they have an intuitive presentation.

2.6. Aim of the project

The main aim of this game project is thus the following:

- To give the target group the necessary knowledge, skills and competences to comprehend the basics of entrepreneurship;
- To clarify the concepts and terminologies applicable to entrepreneurial activity;
- To develop the game boards and materials virtually without costs;
- To develop the training units in a variety of contexts, specifically aimed at the South African context. This may include special target groups like children, students or unemployed people.

2.7. Targets groups, participants and stakeholders

As the project aims to the development, deployment and training, there are several levels of target groups:

- CUT's Faculty of Management Sciences as the responsible body and the teams for the development of the planning game. These teams will be responsible for acquiring the necessary resources for the development of the basic planning game and basic training materials.
- Potential project partners as funding bodies for the game development and customers for the game. These can be government, companies or other organizations.
- Responsible bodies for the deployment of the planning game. These groups will organize the use of the planning game within their area of responsibility and/or directly do training to their target group.
- Participating organizations for the training. These are the direct partners for the trainees and organize the training.
- Trainers who provide the training for the target group. Trainers can be lecturers, students, members of the organizing body or freelancers. Initially, trainers will be trained by CUT staff.
- Participants in the training.

The final target groups will be addressed by the participating partners and may consist of role-players like the following:

- Unemployed people to give them skills to start a business
- Potential entrepreneurs who already have a business idea
- Students that should be motivated towards entrepreneurship
- Craftsmen and traders, small-scale farmers, small business owners in tourism, hospitality and trade.
- Learners in secondary education and students in general training

3. GAME STRUCTURE AND COMPONENTS

The educational game system VAL-U consists of several games that are integrated to reach the educational goal. In the following paragraph, an overview and short description of each level will be given.

3.1. VAL-U overall structure

The game system VAL-U will be used for training on various levels. On each level, various subjects will be taught and trained. The levels are linked to corresponding concept of values.

The various levels and their relation to the subjects of economics education are compiled in table 1 below:

Table 1: Levels, values and subjects in the VAL-U game

Level	Value aspect	Entrepreneurship contents
Six	adding value to society	Business plan development, forecast and research, bringing the plan to action
Five	entrepreneurial values	Sustainable development, corporate social responsibility, strategic planning, competition, entrepreneurship
Four	valuing people and culture	Project management, teamwork and leadership, networking, soft skills and culture
Three	creating value for the market	Marketing and sales, risk management, supply and demand, quality and research, stakeholders

Level	Value aspect	Entrepreneurship contents
Two	adding monetary value	Accounting, cost analysis, interest and taxes, investment and financing, funding
One	the concept of value creation	Elementary economics: product price and financial gain, procurement, production and sales

Level One: Micro-Eco-Nomy: The planning game Micro-Eco-Nomy was designed for education in schools and in emerging countries. The goal of the planning game is to introduce the players into the fundamentals of economics. The basic board contains places for a materials storage (procurement), production, product storage (sales) and money (cash, accounting). The external functions are the market for raw materials and the product market. In level one, the trainees do some elementary bookkeeping. The complexity of the cost structure increases from material costs, to variable production costs and fixed costs.

Level Two: Bilancia: A game for accounting which is based on Micro-Eco-Nomy and will use the concepts of haptic games to introduce the basic concepts of accounting, bookkeeping and controlling but also address the various ways of getting funding for the start of the business (bank loans, shareholders, fundraising).

Level Three: Marketing: Based on the Micro-Eco-Nomy board, the market will be introduced. Pricing and the various influences on the price will be addressed using the mechanisms from level one. Other marketing issues like product properties and added value, market research, promotion and communication, distribution and cooperation will be addressed throughout the game. On that level, trainees will also be challenged to think about their own business idea and the potential value it can create for the customers.

Level Four: Management: Games on this level will address the planning and managerial skills. Here the entrepreneurial skills and attitudes are also addressed. The planning game LEGO TOWER on project management (Holzbaur, 2001) is also a planning game for entrepreneurship. While the basic game is focused on the optimal trade-off between the components of the project triangle (quality, cost and time), the winning criterion is the proposal price which must be an optimum balance between two requirements typical for an entrepreneurial situation: it must cover the expenses and be high enough to achieve financial gain and is must be low enough to be competitive against the other players. The planning game LEONARDO is based on a bridge construction concept primarily described by Leonardo da Vinci. It urges the players to cooperate and to plan without verbal communication.

Level Five: Strategy and Sustainability: Albuchmühle is a set of role based planning games on environmental management and general management (Holzbaur, 2000). It covers all important aspects from technical and financial calculations to marketing and human resources. Role players have goals and (hidden) agendas and they have to interact to come to a solution. The games involve concepts of sustainable development and strategic planning. It supports presentation and negotiation skills and can be used on a qualitative but also on a quantitative (based on numbers from typical areas of activity) level.

Level Six: Business plan: In the final role-based game, the participants will run their own existing business or their own business idea with their already acquired business knowledge economically in the game. The planned steps of their own existing business or their own business idea can be tested. This level integrates the former levels and uses their results (e.g. on marketing, finance, skills and planning) to create a business plan. A business plan structure is provided and the players will develop their own business plan. After passing the six levels of the game, participants are able to create their own business plan and to start their own business.

4. AIMS AND SCOPE OF THE PROJECT

The main aim of the project is to provide target groups with the necessary basic knowledge and competencies to foster entrepreneurship in the form of the development and management businesses on a small scale.

The project will develop, distribute and deploy a planning game that gives the target group basic knowledge on various levels of economic competences. The game description will be open to everybody and the game boards and materials will be developed in a way to allow deployment virtually without costs.

The training units will be developed to be used in a huge variety of contexts, mostly concentrating on the deployment for South African communities and with future entrepreneurs. The training units can be tailored for the use of increasing the basic economic interest of special target groups like children, entrepreneurs, students or unemployed people. The long-term result shall be an improved economic situation in a region, province or country – in this case, the Free State as a starting point.

Deliverables comprise:

- Game description and templates for game boards and materials;
- Materials for the trainers and for train the trainers seminars;
- Reports and publications.

Within the project, there are several tasks which apply for the whole concept, but also for each of the six educational games and training modules linked to the corresponding levels. These principal tasks comprise:

- Concept development and requirements analysis with the various partners;
- Development of the educational games and the instruction materials;
- Training the trainers;
- Deployment and training including evaluation;
- Adaption of the material and publication of the educational game system; and
- Evaluation of the training and game concept and scientific publication.

5. PRACTICAL APPLICATION: TRAINING TARGET GROUPS, PARTICIPANTS, STAKEHOLDERS

5.1. Train-the-trainers

The first step in the practical application of the VAL-U Game is to train people who can act as trainers in the future. In CUT's case, it was decided to train members of ENACTUS (a student entrepreneurship-group) as trainers, since they are directly involved in promoting entrepreneurship in communities in the Free State. In addition, some senior students who are already appointed as mentors for new students were also trained as trainers.

5.2. The participants of the planning game

This planning game can be played simultaneously by up to twenty-six participants.

5.2.1. The entrepreneurial-teams

The entrepreneurial-teams form the management of a company. Each team should consist of five persons. Each person has to act in a specific function within the company. Three persons come into operational business. The first person should act as the chief buyer. The second person should act as the director of production and the third person has to act as the sales manager. The other two persons are employed in the administration of the business transactions. The administrator of the firm accounts has to manage the cash register of the company as well as its credit account. The last person has to act as the chief accountant. He has to provide the company with managerial key data by creating the income statement and a simplified balance sheet. The goal of each team is to generate as much profit as possible.

To assure a reasonable supervision it should not play more than four entrepreneurial teams at the same time. Figure 1 below shows the different functions of an entrepreneurial team within the company:

Player	One	Two	Three	Four	Five
Function	Chief buyer	Director of production	Sales manager	Administrator of the firm accounts	Chief accountant
Tasks	Direction of the purchase	Direction of the production	Direction of the sold product	Administration of the company cash register and the credit account	Creating the income statement Creating a simplified balance sheet

Figure 1: Functions of an entrepreneurial team

5.2.2. The director of the bank

The bank has to be directed at least by one person. There can be one assistant of the bank director depending on the number of participants. The task of the bank director is to cash the credit interests and the fixed costs of the companies.

5.2.3. The director of the acquisition market

The acquisition market has to be directed by at least one person. There can be one assistant of the acquisition market director depending on the number of the participants. The task of the acquisition market director is to sell the companies raw materials for the accordant prices. The prices for the raw materials are shown on the price boards.

5.2.4. The director of the distribution market

The distribution market has to be directed by at least one person. The task of the acquisition market director is to buy the finished products of the companies for accordant prices. The prices for the finished products are shown the price boards.

5.2.5. The supervisor of the planning game

The supervisor has to fulfil the most important task within the planning game. He/she has to explain the participants how to play the game. Furthermore he has to clarify open questions and to attend the participants in words and deed. Besides that, it is his responsibility to make sure that the learning content of the planning game is conducted to the participants. For this reason, a considerable part of his task is in the moderation of the planning game. By asking specific questions and doing specific analyses the participants shall be animated for entrepreneurial thoughts. Basic requirements to come up with these tasks are far-ranging entrepreneurial knowledge as well as experiences in the field of pedagogy.

5.2.6. Level One: Economics (Micro-Eco-Nomy)

The goal of this planning game is to introduce the players to the fundamentals of economics. The basic board contains places for a materials storage (procurement), production, product storage (sales) and money (cash, accounting). The external functions are the market for raw materials and the product market. In level one the trainees do some elementary bookkeeping. The complexity of the cost structure increases from material costs, to variable production costs and fixed costs. The process can be depicted as follows in figure 2:

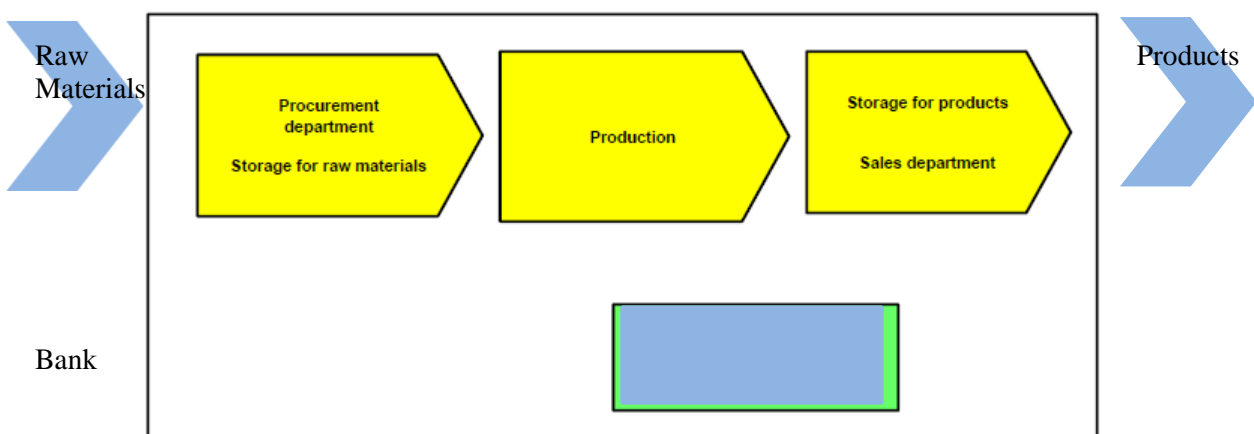


Figure 2: Level one economic process

5.2.7. Level Two: Accounting (Bilancia)

A game for accounting will be based on Micro-Eco-Nomy and will use the concepts of haptic games to introduce the basic concepts of accounting, bookkeeping and controlling but also address the various ways of getting funding for the start of the business (bank loans, shareholders, fundraising).

For example:

At the beginning of each month the *first page* gives at least the basic information (like in Level one) to the trainees:

- Start (Capital);
- Raw materials price;
- Production costs;
- Sales Price.

Raw materials price:	Two units each (flour, water, oil, sugar, yeast)
Production costs:	One unit each (electricity/gas)
Sales (prize):	Six units each
Start (capital):	Sixteen units

Then, in each month there are a couple of events that happen:

January activity list for Jane's Fat Cakes:

Transaction	Quantity	Price per each	Total
1a. Buy raw material	Two	Two units	Four
1b. Manufacture	Two	One unit	Two
1c. Sell	Two	Six units	Twelve
2a. Buy raw material	Two	Two units	Four
2b. Manufacture	Two	One unit	Two

The task will be to transfer the events to the balance sheet:

January

Day	Activity	IN takings	OUT expenses					Cash
			Purchases	Production	Fixed costs	Interest paid	Salaries	
1/1	Opening balance							Sixteen units
1a								
1b								
1c								
2a								
2b								

Here is an example of how this could take place:
 January activity list for Jane's Fat Cakes

Transaction	Quantity	Price per each	Total
1a. Buy raw material	Two	Two units	Four
1b. Manufacture	Two	One unit	Two
1c. Sell	Two	Six units	Twelve
2a. Buy raw material	Two	Two units	Four
2b. Manufacture	Two	One unit	Two

January

Day	Activity	IN takings	OUT expenses					Cash
			Purchases	Production	Fixed costs	Interest paid	Salaries	
1/1	Opening balance							Sixteen units
1a	Buy raw material		Four					Twelve units
1b	Manufacture			Two				Ten units
1c	Sell	Plus twelve						Twenty-two units
2a	Buy raw material		Four					Eighteen units
2b	Manufacture			Two				Sixteen units

At the end of each month, the amount of profit/loss needs to be determined. Therefore, the total unit amount of each single section must be determined:

- Selling (profit);
- Buying material (loss);
- Manufacturing (loss).

And later:

- Fixed costs (loss);
- Salary (loss);
- Interests (loss).

After adding up all of those values, the total result (Operating profit/loss) of the month will be clear:
 Example (January):

Sales Revenue	+	Seventy-eight units
Purchases	-	Twenty-six units
Manufacturing costs of sold products	-	Thirteen units
Fixed costs	-	Zero
Salary	-	Zero
Interest paid	-	Zero
Operating profit/loss	=	+ thirty-nine units

All 'Sales events' summed up:

(+twelve, + twelve, +eighteen, + eighteen, + eighteen = + seventy-eight)

After the ‘basic months’ *January* and *February*, there will appear some new events. Those events will be:

a) Fixed costs

3b. Manufacture	Three	One unit	Three
3c. Pay fixed costs		Four units	Four
3d. Sell	Three	Six units	Eighteen

They will be transferred into the branch: *fixed costs*.

b) Pay rent

3. Pay rent (fixed cost)			200
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It will be transferred into the branch: *fixed costs*.

c) Bank loan

Question: how much money do you think you will need?			
Answer: Let us take two-hundred units from bank – interest payable monthly, four units.			
4.	Enter: money received		

It will be transferred into the branch: *loan*.

d) Bank interest

5e. Pay bank interest			Four
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It will be transferred into the branch: *Interest paid*.

e) Pay salary

6. Pay salary			Fifty
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It will be transferred into the branch: *Salaries*.

In the last months *May (A) & (B)*, two different situations will be simulated. In both, the selling price increases, but only in the second scenario there will be profit. The reason is the simultaneous increase of the production volume.

So, both of the months start with the *Carry-over from April: 257 U*.

5.2.8. Level Three: Marketing

Based on the Micro-Eco-Nomy board, the market will be introduced. Pricing and the various influences on the price will be addressed using the mechanisms from level one. Other marketing issues like product properties and added value, market research, promotion and communication, distribution and cooperation will be addressed throughout the game.

A play board for level three will look as follows (figure 3):

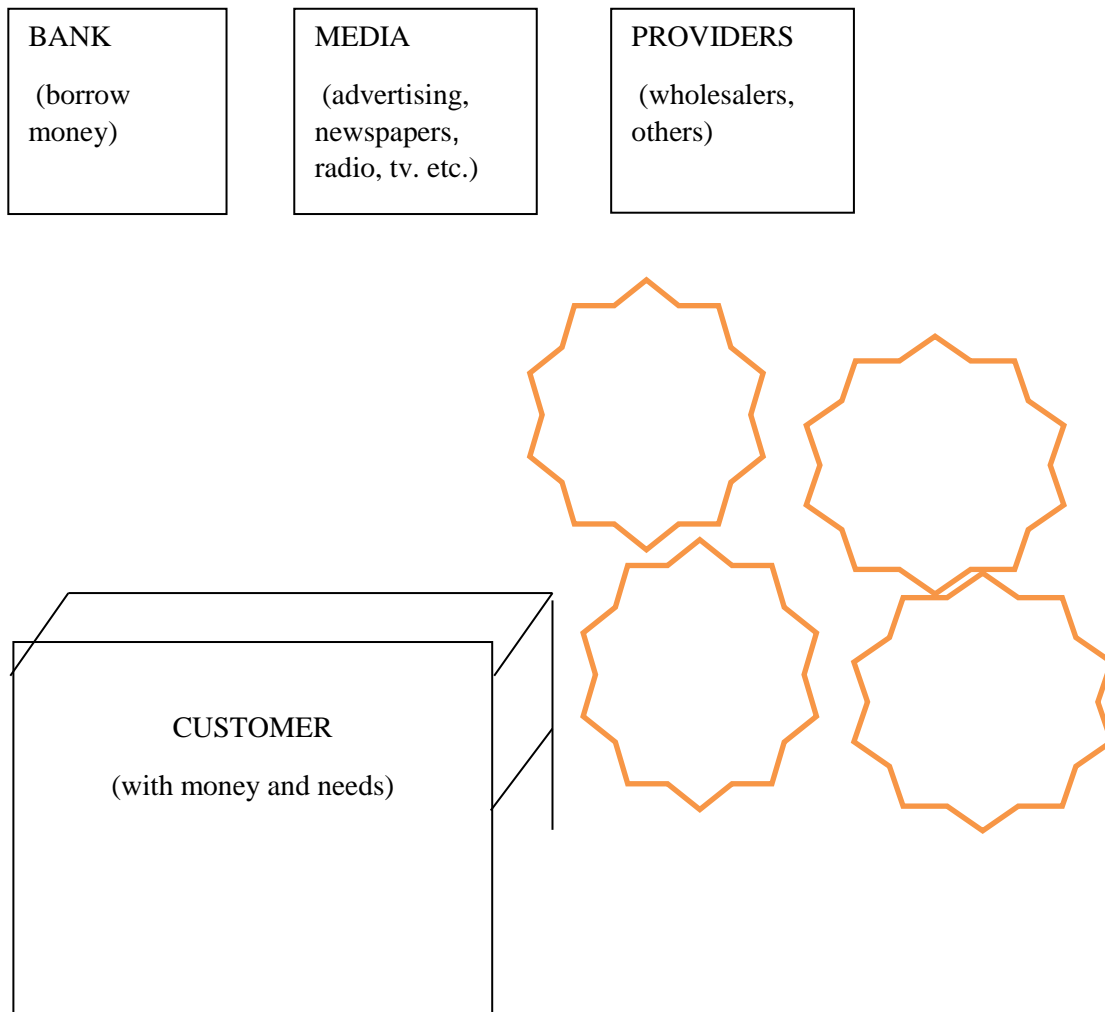


Figure 3: Marketing dynamics

Concepts like the four P's, basic product and price strategies, marketing segmentation, SWOT analysis and the influence of competition will be explained to trainees in this level.

5.2.9. Level Four: Management (Lego Tower; Leonardo Bridge)

Games on this level address the planning and managerial skills.

The planning game LEGO TOWER on project management (Holzbaur, 2001) is also a planning game for entrepreneurship. While the basic game is focused on the optimal trade-off between the components of the project triangle (quality, cost and time) the winning criterion is the proposal price which must be an optimum balance between two requirements typical for an entrepreneurial situation: it must cover the expenses and be high enough to achieve financial gain and is must be low enough to be competitive against the other players.

The planning game LEONARDO BRIDGE is based on a bridge construction concept primarily described by Leonardo da Vinci. It urges the players to cooperate due to a division of information (Technology, Economics). This game should promote interaction within the group, strengthen teamwork and leadership and show up the interfaces between Technology and Economics.

5.2.10. Level Five: Strategy and Sustainability (Sustainable Puzzle; Fish Pond)

Sustainable Puzzle clearly indicates the theoretical knowledge about sustainable development. The aim of the game is to quickly sensitise and to show that all the aspects are depending on the others.

Fish pond is an educational game on environmental management, where the participants have to face the problem of the “Common Good Resources“ – Dilemma. The players play anonymously and try to catch as many fish as possible. On the other hand, the population of fish will not recover from a certain point, so that nobody wins and everybody loses. The players have the possibility of using sanctions to give the fish population time to recover.

The effects of egoistic actions should be simulated and the effects shall be shown to the participants in a playful way.

5.2.11. Level Six: Business Plan

In the final role based game, the participants will get in touch with a business plan and its elements with their already acquired business knowledge. The purpose of this educational game will be to educate on how to develop an effective business plan.

This level is special, since it integrates the former levels and uses their results (e.g. on marketing, finance, skills and planning). A business plan structure is already given to the participants – the task will be the assignment of activity cards to the different fields of the plan.

Below, please find an example of a basic business plan template, as depicted in figure 4:

FINANCIAL PLAN	Income statement
	Balance sheet
	Cash flow projection
	Break-even analysis
	Amount of funding needed
	Investors interested in profitability
ORGANISATION & MANAGEMENT	Organisational chart
	Shareholders
	Board of Directors
	General management
	Middle management
OPERATION & PRODUCTION	Production process
	Facilities needed
	Contracts
	Equipment
	Operational plan
	How products are promoted, distributed and sold
	Capacity
	Production schedule
	Quality management

Figure 4: Basic business plan template

6. PRACTICAL ROLL-OUT

6.1. Tshwaranang – Rorisang Day Care, Bloemfontein

The first training occurred in Rocklands – a township in the Greater Bloemfontein area – for a business venture called Tshwaranang. Tshwaranang is a community-based venture which is managed on a co-operative basis. Tshwaranang raised R1 500 as seed funding with the support of CUT to buy raw materials to start the business. The business aims at providing affordable and quality meals to poor kids in the surrounding area. The products of the business include fat cakes, liver spread, polony, salt, snoek and juice. The target market consists out of learners from various schools in the area. The business owners intend to expand operations to the entire township and later to other parts of Bloemfontein and beyond as the business grows. The venture team is made-up of unemployed parents from the community.

6.2. Training of small business owners in Thabong, Welkom

Recently a group of small business owners in Thabong, Welkom were trained in Level one of the Planning Games. The training team plans to continue training the Thabong small business owners on subsequent levels two to six in the future.

6.3. Harmony business suppliers, Welkom

This group was already trained in Levels one to three and the next sessions are already scheduled.

7. CONCLUSION

The Planning Game Project VAL-U aims to contribute towards socio-economic development via Entrepreneurship and therefore creating growth. After passing the six levels of the game, participants are able to create their own business plan and to start their own business.

The participants should have learned a lot about basic Economics, more complex Accounting; they should have get sensitised about the needs of their customers and about Marketing aspects and should have received an insight of how teamwork, leadership and management should look like. They have been educated into Sustainable development and at least how to create and organise a Business Plan.

8. THE WAY FORWARD

A comprehensive manual for each level of the VAL-U game was developed. In addition, the board games for the various levels were developed. Together, it will be used as a vehicle to take this concept beyond the borders of CUT and the Free State Province. A funding proposal writer was appointed in order to prepare the VALU-game concept in a user-friendly format for potential funders. Discussions are underway with various role-players, such as public sector organisations, private sector businesses, etc. and interest in implementing the game is huge. Chambers of Commerce in other provinces of South Africa, amongst others, already showed a keen interest to implement the game in their areas.

In addition to the planned roll-out in the wider community, it is also envisaged that many more students will be trained in entrepreneurship through the VAL-U game concept – in line with CUT's strategy to become a true entrepreneurial university.

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Cultivating Entrepreneurial Culture among Engineering Students in South Africa

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ABSTRACT

The purpose of this study was to investigate the influence of entrepreneurial culture on engineering students' entrepreneurial intention towards business start-up based on Theory of Planned Behavior (TPB). Participants were selected from a population of approximately 180 final-year engineering students from one University of Technology in South Africa. A total of 156 randomly selected students completed the questionnaire. Descriptive statistics analyses revealed that personality traits such as self-efficacy, risk taking, initiative for business startup and initiative for business start-up have a strong impact on the attitude towards self-employment. The study also found that a large majority of the respondents perceive personal attributes (entrepreneurial potentials), values, mindset and behaviour as factors influencing entrepreneurial culture at an individual level. Other external factors such as teachers, family members and friends as business role model are found to have an effect on university students' inclination towards entrepreneurship. One Way ANOVA test revealed that the majority of students in Building and Civil has a common agreement on entrepreneurial behaviours, family business exposure and entrepreneurship education as major factors influencing entrepreneurial culture. Therefore, this study presents a number of implications. The outcomes of this study may help managers understand the impact of culture on entrepreneurial behavior and experience. The findings of this study also provide university authority with the need to integrate entrepreneurship study across all disciplines. Furthermore, the findings of this study bring to the fore opportunities for further research.

1. INTRODUCTION

Entrepreneurial culture has become a buzzword among scholars and several governments in their bid to promote entrepreneurship as a way of job creation to reduce unemployment. Although the term 'entrepreneurial culture' is frequently used in various studies, what it actually means and represents is not usually explicitly discussed (Brownson, 2014). Entrepreneurial culture is a term derived from two words 'entrepreneurial' and 'culture'. Understanding the meaning of these two words can aid the conceptualization of entrepreneurial culture. Wickham (2006) defined the term entrepreneurial as an adjective describing how the entrepreneur undertakes what they do. He asserted that to use this adjective suggest that there is a particular style to what entrepreneurs do. Atherton (2004) consider being entrepreneurial as a behaviour that can be demonstrated and manifested regardless of the nature of involvement in an organisation. Brownson (2011) defines culture as an attribute, values, beliefs, and behaviour which can be learned or acquired by man from one generation to another, from one individual to another, from one group to another as long as one is a member of the society and it has the ability of distinguishing one group from another. Therefore, the nurturing of certain attributes, values, beliefs and behaviour indicates an attempt to foster a certain type of culture.

The entrepreneurial culture as a concept in both the entrepreneurship and broader management literature has been described for example as "a form or type of culture which is creative, innovative, takes risks and challenges the status quo" (Ireland, Hitt, & Sirmon, 2003). The term culture has been applied at the national level to "describe country or societal values and attitudes towards entrepreneurship" (e.g., Birkinshaw, 1999; Tan, 2002, 2006; Hayton & Cacciotti, 2013). For example, Birkinshaw et al. (1998) defined entrepreneurial culture as an organisational context in which certain behaviours, including initiative are fostered. This definition confines entrepreneurial culture in a business context. In the same vein, Prabhu (2005), Conrad (1999) and Dulcic (2003) both defined entrepreneurial culture as a type of organizational culture while Dulcic (2003) further described it as a mix of all the factors that form the entrepreneur's personality.

Beugelsdijk (2007) and Chen and Lin (2006) on the other hand defines entrepreneurial culture in terms of characteristics of entrepreneurs; Benneworth (2004) asserts that entrepreneurial culture reflects localized social mores and accumulated economic success which are not easily replicated elsewhere. These different perspectives define entrepreneurial culture within the context of established businesses

limits and the applicability of such conceptualization to the development; of entrepreneurship among individuals in the society. Pettigrew (1990) classified three levels of entrepreneurial culture: Level 1: The unconscious and invisible level (attributes and values); Level 2: Semi-visible level (entrepreneurial mindset); and Level 3: The conscious level (entrepreneurial behavior).

According to Taylor and Wilson (2010), entrepreneurial culture can change over time, that is, either slowly or more rapidly than others depending on the existing environment can. This implies that one or more constituent of entrepreneurial culture may be nurtured more rapidly than others depending on the time span it may take such constituent to be nurtured. In this regard, Brownson (2013) identifies four constituents of entrepreneurial culture – personal attributes, values, behavior and mindset. Attributes are indicators of entrepreneurial potentials. They can be acquired from both nature and nurture (Bridge et. al, 2009) thereby implying that every individual may have some entrepreneurial attributes though most of them may not realise it. Kluckhohn (1967 cited in Kundu, 2009) defines value as a conception, explicit or implicit, distinctive of an individual or characteristics of a group, of the desirable, which influences the selection from available modes, means and ends of actions.

According to McDonald et al. (2015) entrepreneurial culture can be associated with a group of individuals who have suppressed individual interests in an effort to achieve group success because group success will advance their individual interests. Thus, cultivating youth entrepreneurial culture in any country calls for two-pronged strategy. The first and foremost platform for building the awareness and initiating the youth into the concept of youth entrepreneurship is by investing into entrepreneurship education. Mansor and Othman (2011) goes further to define entrepreneurial culture as a mindset that covers an individual's motivation and capability, independently or within the context of an organization, to spot an opportunity and to pursue it in order to create wealth or economic success. It is not just about business, but most of all about people, their choices and actions in starting, running and growing a business, or their involvement in a firm's strategic decision making. At a personal level, entrepreneurial culture demand being focused on a task, creating things through innovation and change, attention to the basics, hands-on-management, doing the right thing, freedom to grow and fail, commitment and personal responsibility and emphasis on the future (Dhliwayo, 2007).

It is apparent from the various definitions that there exists no such thing as one identifiable and universal entrepreneurial culture. Furthermore, the key to initiating the process of entrepreneurship lies within the individual members of society, and the degree to which a spirit of enterprise exists, or can be stimulated (Morrison, 2000). The key question is what triggers the release of this invaluable enterprising spirit? Research has shown that entrepreneurial spirit can be nurtured through different ways. One way is through entrepreneurship education. Entrepreneurial education helps in entrepreneurial intention (Izedonmi et al., 2010) to create profits from business and provides confidence to the entrepreneur (Ahmed et al., 2010). Through entrepreneurial education, university students have the ability to equip themselves with entrepreneurial intention, which helps them to meet the challenges of market needs and satisfy those needs. Those who have higher entrepreneurial efficacy are more likely to engage themselves in entrepreneurship (Pihie & Akmaliah, 2009).

Another way of nurturing entrepreneurial spirit is through family members and friends involved in business activities. As always the case, family represents the most important part of culture and has a significant impact on the performance of its members. Moreover, family provides opportunities to its members to develop entrepreneurial culture. Traditional families play important roles in business and society because of the stronger ties and relationships for the enhancement of business, for maintaining their position as well as power in society (Steier et al., 2004).

Given the role entrepreneurship education plays in promoting entrepreneurial culture, it has recently become a university-wide trend to offer such education programme across academic disciplines (Streeter, Kher & Jaquette, 2011). Gibb (1999) distinguishes three aims of entrepreneurship education. The first is to learn to understand entrepreneurship: what it is, what entrepreneurs do and why entrepreneurship is needed. The second aim is to become entrepreneurial as a person: to take responsibility for learning, career, and life. The third aim is to become an actual entrepreneur: how to

start and manage a business. In the United States, for example, many entrepreneurship programmes have found an academic home in both business and engineering schools, and a growing number of American schools offer concentrations or majors in entrepreneurship (Wilson, 2008).

In contrast, entrepreneurship culture landscape in Africa is largely defined by economic activities that people are engaged in. A Global Entrepreneurial Monitor (2015) report on entrepreneurship behaviour and attitudes noted that although most African societies have of recent bestowed a 'seal of approval' on entrepreneurship; efforts still need to be made to promote high-impact entrepreneurship based on opportunity rather than necessity.

While South African government has implemented various strategies to encourage entrepreneurs and small businesses (Herrington, Kew & Kew, 2009; Urban & Barreria, 2010) it has a relatively small informal sector compared with other African countries (Kingdon & Knight, 2004:392). There are a number of possible explanations for this phenomenon (Banerjee, et al., 2008; Rodrik, 2008). A nationwide survey by Co and Mitchell (2006) revealed that although South Africa has made much progress in entrepreneurship education, it has not translated into a strong entrepreneurial culture. Dekelver, Deconick and Brebels (2011) argue that despite the presence of entrepreneurship education in most Universities of Technology, there is still general lack of entrepreneurs among the graduates (Isacs, et al., 2007). The Global Entrepreneurial Monitor (2015) report on entrepreneurial landscape in Africa revealed that Kenya have an education system that produces adequate skills for entrepreneurial ventures, limited administrative burdens and a strong culture of entrepreneurship. The report also indicates that Nigeria's key entrepreneurial strength is more individualistic in nature, like the mind-set towards entrepreneurship and a limited fear of failure.

Since the end of apartheid, several measures have been undertaken by the government of South African to diversify the curriculum in order to address the many socio-economic challenges inherited from the past regime. Among the measures that have been implemented by government is the inclusion of the entrepreneurial subjects or courses related to entrepreneurship from high school to tertiary level. Apart from reducing unemployment rate among the youth, which according to South Africa Statistics (2016) quarterly survey stand at 26.5%; the introduction of entrepreneurial studies is also part of government strategy to change the mindset of graduates from being salaried workers to becoming self-employed. Banerjee et al. (2008:717) sees several reasons why unemployment has remained at such high levels. Unlike other African countries, the informal sector has grown very little as participation and unemployment rates have risen. They go on to state that crime rates and high start-up costs for small businesses probably impede its growth. Small, Medium and Micro Enterprises (SMMEs) are an important source of employment and economic growth in most countries.

In recent years, entrepreneurial research has focused on the teaching and learning of entrepreneurship to accelerate economic growth and development. A study carried out by Do Paco et al. (2015) revealed that entrepreneurship education is not just about teaching someone to run a business. It is also about encouraging creative thinking and promoting a strong sense of self-worth and empowerment. This is what is desirable for economic growth and development. However, very few studies have attempted to establish the association between entrepreneurship education and entrepreneurial culture among engineering students particularly in South Africa. As research show, developing entrepreneurial culture among the youth is necessary since it can lead to a situation where the majority of the population takes up self-employment as a career rather than wage employment (Gibb, 2003). The question then arises: How can entrepreneurship education help promote entrepreneurial culture and intentions among the youth in South Africa? An empirical study on the influence of entrepreneurial culture among engineering students could provide answers to this question.

2. DISCUSSION OF LITERATURE REVIEW

There have been numerous studies aimed at gaining understanding of the factors influencing entrepreneurial culture of university students. As a result, various theories of intentions (e.g. Ajzen's (1991) theory of planned behaviour, Shapero and Sokol's (1982) model of the entrepreneurial event and Bandura's (1977) model of social learning have been used by researchers to predict personal

behaviour with respect to entrepreneurship. The theoretical framework of this study (see Figure 1 below) is adapted from Ajzen's (1991) Theory of Planned Behaviour. It suggests that antecedent of entrepreneurial culture influence attitude towards entrepreneurship, which lead to intention to become an entrepreneur.

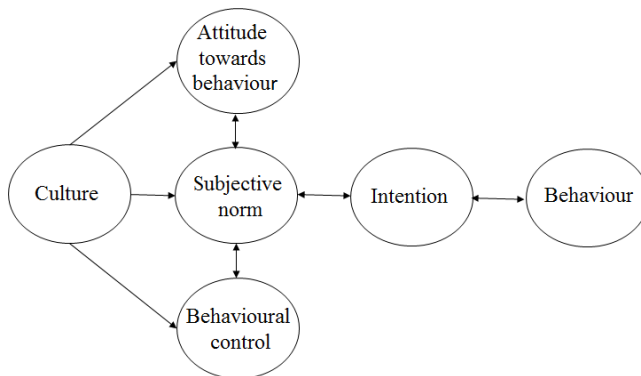


Figure 1: Adapted from Ajzen's (1991) theory of planned behaviour

Krueger et al. (2000) and Kolvereid and Isaksen (2006) claim that intentions are the single best predictor of most planned behaviour, including entrepreneurial behaviour. Bird (1988) defined entrepreneurial intentions as the entrepreneur's state of mind that directs attention, experience, and action toward a business concept and sets the form and direction of organizations at their inception. Other researchers (Nabi et al., 2006; Guerrero, et al., 2008; Wu, 2008) have described entrepreneurial intention as a state of mind where people wish to create a new firm or a new value driver inside existing organisations. Wilson et al. (2007) went further to state that entrepreneurial intentions is a deliberate and conscious decision that requires time, considerable planning and a high degree of cognitive processing.

Entrepreneurship research has identified a number of personal characteristics believed to be instrumental in motivating entrepreneurial behavior. Two frequently cited entrepreneurial culture and personal traits such as internal locus of control and innovativeness (Mueller & Thomas, 2001). Hofstede's (1980) extensive culture study, leading to the development of four culture dimensions, provide a clear articulation of differences between an individual's values and beliefs on and attitudes towards entrepreneurship. Although Hofstede does not specify the relationship between culture and entrepreneurial activity per se, his culture dimensions are useful in identifying key aspects of culture related to the potential for entrepreneurial behavior. Chell (1999), who examined numerous psychological trait-based approaches, concluded that psychological aspects such as 'entrepreneurial intention' and the 'ability to recognise opportunities' are strongly linked to entrepreneurial behaviour.

Timmons et al. (1977) have identified a number of important entrepreneurial characteristics of successful enterprise owners. These include self-confidence, high initiative and personal responsibility, internal locus of control, low fear of failure, moderate risk taking, self-imposed standards and clear goal setting. Therefore, to be motivated to act, a potential entrepreneur must perceive himself or herself as capable and psychologically equipped to face the challenges of a global, competitive marketplace.

The links between entrepreneurship education and culture have been widely researched. Afriyie and Boohene (2013) studied entrepreneurial culture among 350 students using four dimensions relating to entrepreneurial orientation; proactiveness, perseverance, innovativeness and risk taking propensity. They reported a significant relationship between entrepreneurship education and entrepreneurial culture. This study suggests that entrepreneurship education has the ability to equip the students with the skills with which to be self-reliant. The results of study also hold the view that if entrepreneurship education is made as a core subject and studied by all students irrespective of their areas of specialization, it could inculcate the culture of entrepreneurship in students making them become job creators rather than job seekers.

On the contrary, there is still a lack of knowledge regarding the effect of different educational programmes on students' behaviour and subsequent performance as entrepreneurs (Peterman & Kennedy, 2003). Specifically, it is indicated that most research assume a causal relationship between the entrepreneurship education and entrepreneurial behaviour (Gorman et al., 1997). Although research investigating alumni from entrepreneurship education programmes in the USA and Norway (Kolvereid & Moen, 1997; Webb et al., 1982; Sweden Johannisson et al., 1998) all show that graduates from entrepreneurship programmes more often become self-employed by starting new businesses compared to business graduates with a general business degree, it is unclear whether this is attributable to selection and self-selection to these programmes of students with entrepreneurial potential, or if the programmes actually foster entrepreneurship.

Other studies examined the influence of entrepreneurial culture and entrepreneurial intentions. Huyghe, and Knockaert (2015) who studied the impact of university's culture and climate on entrepreneurial intentions of research scientists from Sweden and Germany reported that the extent to which universities articulate entrepreneurship as a fundamental element of their mission fostered research scientists' intentions to create innovations where intellectual property rights are required. Furthermore, the study also reported that university as a role model positively affected research scientists' propensity to engage in entrepreneurial activities, both directly and indirectly through entrepreneurial self-efficacy.

Surprisingly, empirical studies linking entrepreneurial culture and engineering students' entrepreneurial behaviour remains sparse and inconsistent, and often dogged by methodological challenges. Yet, an engineer instilled with the entrepreneurial mindset places product benefits before design features and leverages technology to fill unmet customer needs (Kriewall & Mekemson, 2010). He or she takes leadership roles within companies and define, design, create incremental improvements to products intended to retain and expand market share. This ensures that the business stays ahead of competition and meets the needs of changing markets. Kriewall and Mekemson (2010) regard the following as attributes of an entrepreneurial engineer: a deep knowledge of engineering fundamentals, lifelong learning and commercialise the design and manufacture of goods. Personally an engineer must have integrity, tenacity and be financially astute, the ability to engineer products for commercialization, a penchant for, and an ability to see how his or her ideas fit into the larger context of society, and proficiency in communicating his or her ideas. These attributes can be developed only through strong entrepreneurial culture and positive behaviours.

The objective of this study is to investigate the influence of entrepreneurial culture on business startup. The focus of this study is on final-year engineering students at one University of Technology in South Africa. Research on the influence of entrepreneurial culture on business startup is important in many respects. First, the information available on the influence of entrepreneurial culture on business startup is insufficient. The lack of integration of entrepreneurial studies in engineering curriculum forms part of the reason why there is not a strong entrepreneurial culture among engineering students in South Africa. Yet, entrepreneurship is the catalyst for the development of an entrepreneurial orientation and intentions within individuals. The purpose of this study is therefore to investigate the influence of entrepreneurial culture on engineering students' entrepreneurial intention. Such knowledge will contribute to the ongoing debate about making entrepreneurship education a core course at all levels of higher education.

3. RESEARCH METHODOLOGY

This research surveyed engineering students' perceptions regarding entrepreneurship education, entrepreneurial culture and entrepreneurial intentions. Coen et al. (2013) maintains that surveys are useful for gathering data on attitudes, and preferences, beliefs and predictions, behaviours and experiences both past and present. In this particular study, survey research design was employed for analytical purposes to provide inferential information, which was used to support existing literature. The independent variable for this research is the entrepreneurial culture. Entrepreneurial intention is a dependent variable and includes self-efficacy, risk taking, attitude towards self-employment, behavioural control and need for achievement.

The participants for this study were randomly selected from a total population of approximately 180 students from the four departments of the Faculty of Engineering at one university of technology in South Africa. The sample size of students was calculated using Raosoft® 2007. From the calculation, 156 students were found to be appropriate sample number, giving a confidence level of 95% and with an expected response rate of 50%.

The survey questionnaire was made-up of three parts. Part A consists of questions requiring respondents to provide answers to their biographical data. Part B comprises items related to entrepreneurial culture and entrepreneurial intentions. The respondents were required to indicate the level of agreement on the item under entrepreneurial culture on a Likert scale 1 to 5 where 1= Strongly disagree 2= Disagree = Not Sure 4= Agree 5=Strongly agree for each of the respective statements. Part C of the questionnaire required the respondents to indicate their level of agreement on various entrepreneurship intentions on a Likert scale 1 to 5 (1= Strongly disagree 2= Disagree 3= Not Sure 4= Agree 5=Strongly agree) circling the number for each of the respective statements.

Prior to conducting the main study, a pilot test was conducted to improve the reliability and validity of the questionnaire and further moderated by a senior post-doctoral fellow. The internal consistency of the questionnaire was measured using Cronbach Coefficient Alpha test. Table 1 below presents the improved of the analysis when selected items were improved or deleted. As can be seen, all the measures of the five scales have the reliability of more than 0.5. Therefore, theoretically, a Cronbach Coefficient Alpha of .78, indicate the questionnaire items were consistent.

Table 1: Reliability analysis of all items in the questionnaire

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Self-efficacy	40.54	26.217	.002	.230	.114
Risk-taking	41.61	25.406	.024	.187	.104
Initiative for business startup	41.45	24.470	.107	.270	.061
Favourable attitude towards business	41.48	24.763	.062	.297	.083
Behavioural control	40.80	25.106	.063	.229	.084
Need for achievement	40.71	27.117	-.082	.185	.155
Culture is a source of entrepreneurial behaviour	40.80	27.179	-.081	.133	.153
Family business exposure is a source for entrepreneurial behavior.	40.86	23.325	.162	.177	.025
Entrepreneurship education is a cause for entrepreneurial behavior	40.73	26.054	-.014	.094	.123
Most of my family members are entrepreneurs	41.77	24.981	.122	.276	.060
Most of my friends and acquaintance are entrepreneurs	41.59	25.701	.035	.174	.098
Majority of lecturers have strong entrepreneurial culture	41.70	24.870	.081	.191	.075
I am motivated by the faculty culture to start my own business	42.13	25.384	.109	.394	.069
Our province has a high prevalence of entrepreneurship	42.18	28.622	-.185	.312	.194

To conform to ethical requirements, the participants were informed through the questionnaire instructions that participation in the survey was voluntary and the information they provide will be treated as confidential and will only be used for the purpose of the study.

IBM statistical Package for Social Sciences (SPSS) for Windows, Version 24 was used to analyse the statistical data. Both descriptive statistics and independence samples t-test were employed. Descriptive statistics was used to describe the basic features of the data in section A and B. Independence Samples and a T-Test on the other hand were used to determine whether there is a significant difference between the mean scores of students from the four departments and whether there is a correlation between entrepreneurial culture and entrepreneurial intentions.

4. RESULTS

Table 1 presents the results of descriptive characteristics of the respondents. The results show that, out of 56 students who participated in the survey, 39 (69.6%) were male and 17 (30.4%) were female. A glance through Table 1 also show that, 13(23.2% of respondents were from Building engineering, 16(28.6%) from Civil engineering, 11(19.6%) from Electrical engineering and 16(28.6%) from Computer systems.

Table 2: Descriptive Statistics of the Profile of Respondents

Gender	Frequency	Percentage
Male	39	69.6
Female	17	30.4
Total	56	100
Programme		
Building Engineering	13	23.2
Civil Engineering	16	28.6
Electrical Engineering	11	19.6
Computer Systems Engineering	16	28.6
Total	56	100.0

Table 3: Descriptive statistics of students' perceived entrepreneurial behaviours (N = 56)

	Min	Max	M	SD
Self-efficacy	1	5	2.64	1.394
Risk taking	1	5	3.71	1.202
Initiative for business startup	1	5	3.45	1.320
Favourable attitude towards business	1	5	3.54	1.293
Behavioural control	1	5	2.82	1.377
Need for achievement	1	5	2.77	1.427

Table 4: Descriptive statistics of students' perceived entrepreneurial culture (N = 56)

	Min	Max	M	SD
Entrepreneurial behaviors influence entrepreneurial culture.	1	5	3.45	1.249
Family business exposure is a source for entrepreneurial behavior.	1	5	3.39	1.448
Entrepreneurship education is a cause for entrepreneurial behavior	1	5	3.52	1.348
Most of my friends and acquaintances are entrepreneurs	1	5	2.66	1.240
Majority of lecturers have strong entrepreneurial culture	1	5	2.55	1.320
The faculty has a strong entrepreneurial culture that may motivate me to start my own business	1	5	2.13	1.063

Table 5: Entrepreneurial behaviours between programmes

	Sum of square	df	Mean square	F	Sig.
Self-efficacy	3.441	3	1.147	.785	.508
Risk-taking	7.816	3	2.605	1.368	.263
Initiative for business start-up	15.916	3	5.305	3.327	.027
Attitude towards business	.673	3	.224	.105	.957
Behavioural control	3.944	3	1.315	.744	.531
Need for achievement	2.610	3	.870	.506	.680

Table 6: Entrepreneurial culture between groups

	Sum of Squares	df	Mean Square	F	Sig.
The attributes, values, mindset and behaviour of an individual influence entrepreneurial culture.	2.600	3	.867	.541	.656
Family business exposure is a source for entrepreneurial behavior.	8.664	3	2.888	1.834	.152
Entrepreneurship education is a cause for entrepreneurial behavior	4.244	3	1.415	.768	.517
Most of my family members are entrepreneurs	1.441	3	.480	.354	.786
Most of my friends and acquaintances are entrepreneurs	2.056	3	.685	.432	.731
Majority of my lecturers have strong entrepreneurial culture	3.873	3	1.291	.730	.539
I am motivated by entrepreneurial culture in the faculty	2.235	3	.745	.647	.588
Our province has a high prevalence of entrepreneurship	4.780	3	1.593	1.136	.343

5. DISCUSSION OF RESULTS

The purpose of this study was to explore the influence of entrepreneurial culture on engineering students' entrepreneurial intentions. By placing entrepreneurial intentions in the foreground, this study not only examined the relationship between entrepreneurial culture and entrepreneurial intentions, but also examined other moderators such as entrepreneurship education, gender, business role models and family background.

Looking at the means score and standard deviations in Table 2, it can be said that the majority of students strongly agree and agree that risk-taking ($M=3.71$, $SD=1.20$), initiative for business startup ($M=3.45$, $SD=1.32$), and favourable attitude towards business ($M=3.54$, $SD=1.29$) are important entrepreneurial behaviours. On the contrary, a very small percentage of the respondents do not consider self-efficacy, behavioural control and need for achievement as important entrepreneurial behaviours. This research outcomes is consistent with early studies on entrepreneurial intentions (Raab et al., 2005; Gürol & Atsan 2006; Ferreira et al., 2012) which found entrepreneurial behaviours such as internal locus of control, risk-taking propensity, tolerance of ambiguous situations problem-solving ability self-confidence, individual creativity are positively linked to entrepreneurial intentions. In particular, Chen (2010) found that entrepreneurial self-efficacy was a positive mediator of the relationship between entrepreneurship education and entrepreneurial intentions. These findings support the theory of planned behaviour, which is a key factor in entrepreneurial intentions.

Many studies have reported the role educational institutions play in promoting entrepreneurial behavior. Gerba (2012) who studied the impact of entrepreneurship education on entrepreneurial intentions on both management and engineering students found that male students in management science have a higher personal attraction towards entrepreneurial career, self-efficacy and achievement needs than female students do. The study also found that students in management have a higher level of intention compared to engineering students.

Table 3 shows the results of descriptive statistics of students' perceptions regarding their own individualistic entrepreneurial culture and entrepreneurial orientation. Analysis of the results revealed that a large majority of the respondents agree that personal attributes (entrepreneurial potentials), values, mindset and behaviour of an individual influences entrepreneurial culture at an individual level. Other external factors such as family business background, involvement of friends and acquaintances and a strong entrepreneurial culture with the learning institution was found to be positively linked to individualistic culture. The results of this study support the proposition that, family, friends and

teachers' in business play a very important role in motivating individual's entrepreneurial behavior (Ijaz, Yasin & Zafar, 2012). Regarding individualistic cultures, Muelle and Thomas (2001) found an increased likelihood of an internal locus of control orientation. This finding has a support for the hypothesis that an entrepreneurial orientation, defined as internal locus of control combined with innovativeness, is more likely in individualistic, low uncertainty avoidance cultures than in collectivistic, high uncertainty avoidance cultures (Muelle & Thomas, 2001).

The results of this study are similar to early research findings on the relationships between entrepreneurial culture and entrepreneurial behaviours. For instance, Luiz and Mariotte (2011) noted that socio-economic environment plays a very important role in people's perceptions of the value of entrepreneurship. Gray et al. (2006) found personal entrepreneurship attributes to be a critical factor in influencing an individual's entrepreneurial decisions to start a business. Personal entrepreneurship attributes have also been found to predict entrepreneurial behaviour that is, new firm formation (Lee et al., 2004; Rauch & Frese, 2007) and a strong impact on individuals' mindset towards self-employment (Lüthje & Franke, 2003). Thus, these findings have policy implications for both the government and South Africa universities of technology. To foster entrepreneurial culture at the individual level implies that the government and the university should adopt a policy that anchor on the promotion of the attributes, values, mindset and behaviour associated with entrepreneurs in individuals, which will influence such individuals' mindset towards entrepreneurship.

Table 4 shows a correlation between entrepreneurial culture and entrepreneurial behaviours. The results shows no significance correlation between the two variables. However, favourable attitude towards business indicated a positive correlation with entrepreneurial culture at ($r=.367$, $p=.005$). Although the findings of this study are limited in scope, it does however suggest that entrepreneurial culture may influence an individual' intention to start a business. This notion is supported by Ireland et al. (2009) who found culture as one of the factors influencing an entrepreneur's intention to start a business. A similar study by Tanveer, et al. (2013) on the impact of culture on entrepreneur intention found that national culture of a country has a great influence on an entrepreneur's intention to start new business. The study also found that different cultures have different ways of influencing entrepreneurial intention.

Table 5 shows the results of means scores between programmes on entrepreneurial culture. Analysis of group statistics shows that the majority of students in Building and Civil has a common agreement that entrepreneurial behaviours, family business exposure and entrepreneurship education play an important role in fostering entrepreneurial culture. On the contrary, a very small number of students from both programmes agreed on the lack of entrepreneurial culture among their friends, acquaintances, lecturers and the faculty at large. Literature shows that different students in higher education have different perceptions of entrepreneurship. For example, a study by Luiz and Merioti (2011) found MBA students to be more responsive to entrepreneurship than Commerce students. Students' responsiveness to entrepreneurship suggest that student in MBA programme had prior experience in entrepreneurship education. Wu and Wu (2008) who investigate the relationship between Chinese university students' higher educational background and their entrepreneurial intentions suggest that diversity of educational background offers plausible explanations on the difference of entrepreneurial intentions of Chinese university students. These findings have wide-ranging implications for lecturers in South Africa universities of technology. As alluded to by Boyle (2007), the role of teachers is indispensable in education as they 'prepare, encourage and cultivate students'. Hytti and O'Gorman (2004) maintains that teachers are a critical element to the development of effective enterprise education initiatives. The role played by educators, in this instance, is to actively guide and inspire students' interest towards entrepreneurship by providing real-life business experiences (Hannon, 2005). On the other hand, friends are also found to influence individual's inclination towards entrepreneurship. Dillard and Campbell (1981) point out that most white American students are influenced more by non-parental factors such as peers when deciding on their career development.

6. LIMITATIONS

The present study mainly focused on the influence of entrepreneurial culture on an individual intention to start a business. The study was confined to one University of Technology. Given the small number

of students admitted to studying engineering courses, it was not feasible to survey a large sample of students. As such it was difficult to measure with precision the level of agreement on all aspects of culture and intention. However, this study provides further understanding of the influence of culture on entrepreneurial intentions which may help entrepreneur to be students to take appropriate decision.

This study examines only two entrepreneurial traits (innovativeness and internal locus of control) and only one of the many contextual factors (culture) which may explain differences among engineering students' intention to take entrepreneurship as their future career. In terms of further research, Action research focusing on the use of entrepreneurship education, seminars and workshops could be used to foster entrepreneurial culture among engineering students. This would help to assess the impact such intervention and increase intention to pursue a career in entrepreneurship. Alternatively, the present study could be replicated in a more comprehensive fashion, covering more students and universities. Furthermore, the question of whether students in engineering and management science faculties differ in terms of entrepreneurial culture and intentions could be an interesting topic for further research.

7. CONCLUSION

The present study examined the influence of entrepreneurial culture on entrepreneurial intentions of the engineering students. From the foregoing, it can be summarized that the majority of students do not consider all entrepreneurial behaviours as important factors in fostering entrepreneurial culture. However, the majority of students consider four main constituents of entrepreneurial culture namely: personal attributes, values, mindset and behavior that have direct influence on individual's entrepreneurial intention. While entrepreneurial culture attributes allow a practical understanding of how it influences entrepreneurial intention, this study found no correlation except having favourable attitude towards business. Although this study might be limited in scope, it is hoped that this small contribution will stimulate greater interest in the topic at a more international level.

8. MANAGERIAL IMPLICATIONS

The outcomes of this study may help managers understand the impact of culture on entrepreneurial intentions and experience. In particular, a strong business, entrepreneurial culture makes a company more profitable by attracting and retaining innovative, creative and loyal employees. Thus, a well-established entrepreneurial culture creates a business that continue to grow, thus adapting to change and new opportunities in the market. A good supportive culture also helps promote the development of the organization. Favourable government policies and favourable lending conditions by banks and financial institutions are important aspects that enhances the entrepreneur's intentions to start a new business venture.

The first step is recognizing the fact that engineering education needs improvement, given the global economic context and future society needs, but this may cause tensions between academia. Therefore, the initial goal is to change the mentality of lecturers, because they should focus more on the quality of entrepreneurial solutions in engineering education. To produce an 'entrepreneurial culture, engineering students must nurture and cultivate the values of innovation, catalytic change, opportunity, resourcefulness, creativity and ethics. In the short term, the Faculty of engineering should integrate entrepreneurship education into the engineering curriculum, adopt competition to promote valuable entrepreneurial ideas and set up summer/winter schools for engineers. As a medium term solution, Entrepreneurial modules should be offered to all engineering courses. Where this is not possible, elective courses on entrepreneurship should be offered to some students. A Club of entrepreneurship for students in engineering should be established. As a long-term solutions, the Faculty of engineering should explore the possibility of developing a Center for Entrepreneurial Education and Innovation, creating strong links with industry/internships and lifelong learning programmes.

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South African University of Technology students' Entrepreneurship intentions: Does gender really matter?

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ABSTRACT

While the gender gaps in entrepreneurial behaviour are closing in emerging economies, a generally discomforting feature in the venture creation terrain is that women remain concentrated in low technology intensive and service-oriented services with sub optimal value creating capabilities. This domain specific concentration of females does not only raise misgivings about the efficacy of national institutional interventions such as university entrepreneurial courses in equalising entrepreneurial opportunities but rather raise perturbing questions about whether gender parity can ever be elided in the entrepreneurship intentions discourse. Given the subtle institutional gender biases and prejudices that continue to permeate student choices in their pursuit of different academic careers, we were intrigued by whether, and the extent to which gender matters in the students' intentions to engage in entrepreneurship. Informed by a quantitative approach and survey research design, a self-administered questionnaire was employed to collect data from 130 undergraduate students randomly selected from an entrepreneurship education class at a university of technology in South Africa. To establish the existence of any significant gender-based differences in the mean scores for entrepreneurship intentions and its antecedents, the Mann-Whitney test, a non-parametric test, was used. The results confirmed that there were significant variances in entrepreneurship intention, perceived behavioural control and attitude towards entrepreneurship. This study recommends the formulation of gender sensitive approaches to entrepreneurship development and support.

Keywords: Gender, entrepreneurship intention, gender, university of technology, South Africa

1. INTRODUCTION

Extant literature in the entrepreneurship domain affirms the significance of gender parity in entrepreneurial activities in advanced and developing economies across the globe (Insight Report, 2014; Singer, Amoros & Arreola, 2015; Witteloostuijn & Dejardin, 2015). According to Greene, Blattman, Jamison and Amman (2016), female entrepreneurial activity is envisaged to positively impact the global economy through the introduction of innovation, job and wealth creation. The positive impact necessitates increased female ownership of businesses worldwide. As an illustration, 25% of business entities across the globe are owned by women (Wilson, Kickul & Marlino, 2007), with the rates much higher in the developed world (Kelley, Brush, Greene, Herrington, Ali & Kew, 2016). In the United States of America, women own 33% of the 28 million firms in the country (American Express, 2014). According to Kelley et al. (2014), the firms employ 7.9 million people and raise over \$1.4 trillion in revenues per annum, making the contribution of women entrepreneurs impossible to ignore. In fact, Green et al. (2011) warns that the underutilisation of the potential of women entrepreneurs in economic activity denies nations of substantial value. The International Labour Organisation's World Economic and Social Outlook (WESO) Report (2015) concurs that economies with high female labour force involvement are more robust, female labour force involvement is a potent tool for confronting poverty; and that countries and regions with the largest gaps in female labour participation tend incur income losses of up to 30 per cent of GDP per capita.

Empirical studies suggest that the minimal participation of women could be attributed to individual and contextual factors (De Vita, Mari & Poggiosi, 2014; Naguib & Jamali, 2015). At a personal level, scholars identify the relatively higher risk aversion among females as a key deterrent to their participation in the risk-ridden domain of entrepreneurship and hence the dominance of males in venture creation (Rad, Yazdanfar & Ohman, 2014; Dawson & Henley, 2015; Marlow & Swail, 2015). Emami (2017) observes that male entrepreneurs are more inclined to choose higher risky opportunities than the female entrepreneurs. Contextually, the predominant social and cultural prejudices that continue to project entrepreneurship as male domain contribute to males' domination of certain

occupations and sectors (e.g. construction, engineering and technology) (Garcia & Welter, 2013; Jaafar, Othman & Jalali, 2014; Jones, 2014; Hechavarria & Ingram, 2016).

While the gender gaps in entrepreneurial behaviour are closing in emerging economies with women's total entrepreneurial activity (TEA) rates ranging from a high of 41% in Nigeria and Zambia (Herrington & Kelley, 2012), a generally discomfoting feature in the venture creation terrain is that women remain concentrated in low technology intensive and service-oriented services with sub optimal value creating capabilities (Kelley et al., 2015). This domain-specific concentration of different gender does not only raise misgivings about the efficacy of institutional interventions such as entrepreneurial programmes to equalise entrepreneurial opportunities, but rather raise perturbing questions about whether gender parity can ever be elided in the entrepreneurship intentions discourse. Given the subtle institutional gender biases and prejudices that continue to permeate student choices in their pursuit of different academic careers (e.g. the concentration of females in social sciences and humanities and their marginalisation the Science, Technology, Engineering and Mathematics), the researchers were intrigued by whether, and the extent to which gender matters in the students' intentions to engage in entrepreneurship.

1.1. Theorisation of intention

Whereas there are numerous theoretical formulations that strive to explain the complexity of human behaviour, this study used Ajzen (1991) Theory of Planned Behaviour. The theory which was primarily meant for human behaviour in general has been effectively applied to the entrepreneurship field with good results (Knippenberg, 2012; Heuer & Kolvereid, 2013; Kautonen, Gelderen, & Fink, 2013; Lortie & Castogiovanni, 2015). The theory postulates that much of human behaviour, entrepreneurship activity included, is largely deliberate and thus pre-conceived. Drawing on this argument, the theory proposes a several concepts that are employed to explain intended and actual behaviour of individuals.

The theory of planned behaviour proposes that any intention to engage in entrepreneurship is a direct result of an individual's attitudinal, normative and self-efficacy beliefs (Ajzen, 1991; Knabe, 2012). Attitudinal beliefs relate to one's predisposition towards a particular phenomenon. Malebana (2014) observes that the strength of one's attitude explains 45.8% of the variance in one's intent to engage in entrepreneurship. This means that some females' risk-averse attitudes towards engagement in risk ventures compromise their willingness to engage in such behaviour. To the contrary, those males that demonstrate a more daring attitude towards venture creation and have strong perceived entrepreneurial beliefs, may be more pre-disposed to create new businesses compared to their counterparts (Ndofirepi & Rambe, 2016).

Normative beliefs represent the influence of one's significant close such as friends, family and workmates on the willingness to engage in particular course of action; in this case, entrepreneurship (Ajzen, 1991). Literature strongly firms that individuals who have family role models and mentors who are running successfully are naturally inclined to create their own new ventures compared to those who are not exposed to these resourceful individuals (Verheul, Thurik, Grilo, & van der Zwan, 2012; Songini, Gnan & Malmi, 2013; Rambe & Mokgosi, 2016). However, the strength of the influence depends on the extent to which one yields to these social circles' voices of approval or disapproval. In fact, there is potentially contradictory evidence on the extent to which family entrepreneurial values and significant others exert influence in one's entrepreneurial behaviour (Kirkwood, 2012; Rametse & Huq, 2013), complicating the knowledge on exact impact of close social influence on entrepreneurial intentions. For instance, while Kirkwood (2012:142) conceives "norms, attitudes and values within the family may have an impact on the venture creation decision, influencing founding strategies and processes", Rametse and Huq (2013) contend that the significance of a parental, entrepreneurial role model in entrepreneurial pursuits is mediated by improved education and training goals, task self-efficacy, and expectancy of one's entrepreneurial career. Therefore, the influence of normative beliefs on entrepreneurial intentions has not been conclusive, with some scholars questioning its contribution in shaping intentions and behaviour (Fayolle, Gailly, & Lassas-Clerc, 2006; Liñán, Rodríguez-Cohard & Rueda-Cantuche, 2011).

Lastly, perceived behavioural controls pertain to self-confidence and belief in one's abilities to carry out a particular course of action (Krueger, Reilly & Carsrud, 2000; Linan, 2008). The strength of one's perceived behavioural control determines whether a particular action will be undertaken or not. Related to gender-based perceived behavioural control are issues such as one's perceived entrepreneurial efficacy, their capacity to identify business opportunities in scenarios where an average person perceived risks (i.e. their opportunity recognition beliefs) and their extent of resilience to pursue their business motives in the face of environmental hostility. Of the three aforementioned antecedents of intention, perceived behavioural control exerts the greatest influence.

2. LITERATURE REVIEW

2.1. Overview of entrepreneurship in South Africa

The environmental climate for entrepreneurial pursuit of South Africa should be conceived in light of the sluggish performance of her economy in the past six years compared to most countries in sub-Saharan Africa. The country recorded a sustained decline in GDP per capita (USD) from \$8656 in 2011 to \$5994 in 2015, which is unsettling to policy-makers and indicates a decline in the general quality of life in South Africa (African Development Bank, 2016). Consistent with the Theory of Entrepreneurial Event, it would be logical to assume that discomfiting displacement events (Shapiro & Sokol, 1982; Lin, Carsrud, Jagoda & Shen, 2013) such as an economy slump and declining living standards should unleash the entrepreneurial spirit among female entrepreneurs. To the contrary, the opposite scenario seems to persist – there is no compelling evidence of growth in female entrepreneurship with South Africa despite Statistics SA (2015) showing that the national unemployment rate hovered around 27 % in 2016, 12 million South Africans continue to be classified as poor and income inequality gaps are widening.

The aforementioned discomfiting national picture does not only call for high commitment from the South African government and other stakeholders to make significant structural reforms in order to create more jobs but raise critical questions about gendered dimensions of entrepreneurship if balance economic growth and venture creation are to thrive. The elimination of skewed gender disparities in entrepreneurship is particularly urgent in view of the Organisation for Economic Co-operation and Development's [OECD] (2016), claim that the encouragement of entrepreneurship and proliferation of SMMEs are fundamental to socio-economic transformation in emerging economies such as that of South Africa. This can be enhanced through removing barriers to entrepreneurship and equipping the citizenry with the requisite skills and knowledge.

The South African government has taken measures to enhance entrepreneurship within the country, but with disproportionately lower than expected impact. The significance of entrepreneurship to South Africa manifests in the integration of entrepreneurship in the Accelerated and Shared Growth Initiative of South Africa (ASGISA) policy (Herrington, Kew & Kew, 2010) and the National Development Plan. However, compared with other efficient driven economies both in Africa and across the globe, the country's Total Entrepreneurial Activity (TEA) remains noticeably lower at 10.9% per annum. This raises critical questions about leveraging the levels of entrepreneurship through increased women participation in venture creation and SMME development. Furthermore, the entrepreneurship intention of the country's inhabitants was relatively low at 10.9% in 2015, sharp decline from 15.4 in 2013 (Kelley, Singer & Herrington, 2016). In fact, South Africa's entrepreneurial indices are discouraging. For instance, the perceived desirability, fear of failure and lack of self-belief indicators of South African nationals rank unfavourably against those prevailing in some sub-Saharan African countries. However, the merit of the nature of entrepreneurship in the country lies in the relatively higher level of innovation and entrepreneurial orientation (Kelley, Singer, & Herrington, 2015). In view of such ambivalence, critical questions can be raised about the extent to which gender considerations in entrepreneurship could have an equalising effect on balanced growth and increasing TEA.

To address the aforementioned question, the gender profile of South African entrepreneurs cannot be ignored. Just like common trend across the globe, entrepreneurship in the country remains a male-dominated field. Table 1 illustrates the male and female TEA trends in South Africa since 2001 which

reflect the widening gap between males and females. The same Figure also illustrates its equivalence to other African and efficiency driven economy averages.

Table 1: TEA Rates in South Africa

	2001	2005	2009	2013	2014	2015	Africa (average)	Efficiency-driven economies (average)
Male TEA rate	7.3*	5.9	7.2	12.3	7.7	11.6	22.7	17.0
Female TEA rate	5.8	4.5	4.7	9.0	6.3	7.0	17.0	13.0
Ratio female to male	0.79	0.76	0.65	0.73	0.8	0.6	0.75	0.76

(Source: Kelley et al. 2015)

The statistics are ironic in a country where the government gives substantially higher support to women entrepreneurs as compared to other countries. Kew and Herrington (2015) list the following as some of the factors limiting women’s entrepreneurial participation: comparatively lower levels of education for women, lack of business networks in local vicinity, lack of female role models, limited access to capital and financial support, and more importantly, negative gender stereotyping. There is compelling evidence suggesting the open or subtle discrimination of women politically, socially and economically and hence hinder their full participation in economic activities. Gender stereotypes have been considered to work even against those who are highly educated (Nani, 2013).

2.2. Entrepreneurship intention and gender

In this study, we treat the notion of gender from the perspective of biological classification of sexes i.e. male and female, rather than the sociological constructs of masculinity and femininity. At the same time, we define entrepreneurship intention as the “percentage of the adult population between 18-64 years (excluding individuals already engaged in any stage of entrepreneurial activity) who intend to start a business within the next three years” (Kelley, Singer & Herrington, 2016). While some studies confirm a positive association between entrepreneurial intentions and actual entrepreneurial activity (Liñán et al., 2011; Fayolle & Gailly, 2013; Fayolle & Liñán, 2014), there is an observable unbalanced pattern in the development of nascent entrepreneurs as more men than women exhibit a tendency towards entrepreneurship careers (Rambe & Ndofirepi, 2016). This is contrary to the views of the proponents of ‘Smart economics’ who believe that that for equitable socio-economic development to occur, there is need for gender parity in economic participation.

The speculation concerning the higher proclivity of male students towards entrepreneurship compared to their female counterparts is explained by the inconclusiveness of the studies on entrepreneurial intentions of university students. Farrington, Gray and Sharp’s (2012) study on undergraduate business students at a South African university and small business owners revealed significant gender-based perceptions of entrepreneurial intentions between males and females, albeit their different reasons. Because of their household commitments, female respondents perceive entrepreneurship careers as affording them the flexibility and autonomy to balance household and work responsibilities. On the other hand, male respondents attached less value to flexibility and autonomy and emphasised the entrepreneurial environment as their natural habitat. Overall, male respondents had higher entrepreneurial intentions than females. This corroborates Herrington and Kew’s (2016) report on the gender gap in TEA in South Africa. A possible explanation for the dissimilarities between men and women is provided by social role theory, which asserts that gender differences affect the decision and behaviour of men and women (Eagly & Wood, 1999). The United Nations Development Programme Human Development Report (2015) emphasise the comparably larger volumes of unpaid care work (e.g. housework, such as preparing meals for the family, cleaning the house and gathering water and fuel, as well as work caring for children, older people and family members who are sick) that women

are continually embroiled with compared to men in African countries. This demonstrates how local values, social traditions and historical gender roles are undermining female engagement in entrepreneurial activity.

Yet country-by-country variations persist in the relationship between gender and entrepreneurship. For instance, Bhandari's (2012) study on the influence of gender on entrepreneurial intentions of selected undergraduate students at the Lubin School of Business, Pace University in New York revealed no significant differences between male and female respondents. This finding suggests that entrepreneurial intentions of students are gender neutral. Correspondingly, Olomi and Sinyamule (2009) studied the entrepreneurial proclivities of vocational training centres (VTCs) using a sample of 508 learners from 12 Vocational Training Centres in the Iringa region, in central Tanzania. They established that gender differences had no significant effects on the start-up inclinations of respondents who had participated in entrepreneurship courses.

Pruett (2012) employed participants in an entrepreneurship education programme consisting of interlinked workshops and executive mentoring to assess gender differences in the entrepreneurship intentions of students in the USA. The study reported that there were no significant difference between men and women regarding interest in entrepreneurship. The preceding findings suggest an inconclusive debate on the direct influence of gender on entrepreneurial intentions, which warrants exploration particularly in developing countries where such empirical studies are scarce. Thus, the study hypothesises that:

There are differences in entrepreneurship intention between male and female students attending entrepreneurship courses at a South African university of technology.

2.3. Attitude and gender

Previous studies demonstrate varying results on the impact of gender on attitude towards entrepreneurship (Engle, Schlaegel, & Delanoe, 2011; Santos, Roomi, & Liñán, 2016; Fatoki, 2014). However, the predominant view is the dominance of male positive attitude towards entrepreneurship intention compared to females. For example, Kickul et al. (2008) observes the existence of gender variations in the way in which self-beliefs and attitudes about entrepreneurship are handled and established among females and males (Kickul et al., 2008). Chinomona and Maziriri (2015) find that South African women entrepreneurs face substantial challenges compared to their male counterparts. As a result, an environment perceived to be more hostile to females than males may lead to the development of negative attitudes and predispositions towards entrepreneurs among female potential entrepreneurs.

However, findings from other studies do not reveal any gender-based disparities in attitude towards entrepreneurship. Majumdar and Varadarajan's (2013) study based on a sample of first-year business students at Dubai Men's College and Dubai Women's College in United Arab Emirates revealed comparable levels of entrepreneurial attitudes between male and female students. In fact, female respondents showed higher risk propensity compared to males, a finding which is contrary to the common observation that women are more risk adverse compared to men. This outcome suggests that perhaps gender plays a minor role in shaping an individual's attitude towards entrepreneurship when compared to other factor like exposure to entrepreneurship education and social capital. The preceding findings corroborate those of Packham, Jones, Miller, Pickernell and Brychan (2010) whose study on entrepreneurial attitudes of students within European higher education institutions (HEIs) in particular France, Germany and Poland revealed no gender-driven polarities in the entrepreneurial attitudes of students at the country level. At the institutional level, no significant differences were noted between male and female Polish or French students. However, male students at German institution showed a significantly more positive attitude towards entrepreneurship compared to their female counterparts. Although gender differences impacts on attitude towards entrepreneurship significantly, fewer empirical studies have been undertaken on this topic in the South African university of technology system. The strong tradition of Universities of Technology of training graduates for particular

professional occupations and for entrepreneurship makes them a fascinating target population for evaluating the influence of gender on attitude towards entrepreneurship careers. Thus we hypothesise that:

There are differences in attitude towards entrepreneurship between male and female students attending entrepreneurship courses at a South African University of Technology.

2.4. Subjective norms and gender

Societal factors influence entrepreneurial behaviour as they have a direct impact on individuals' entrepreneurship intention. An individual's significant others can encourage or discourage an individual's participation in entrepreneurship (Ferreira, Raposo, Rodrigues, Dinis & Paço, 2012; Gerba, 2012; Walker, Jeger, & Kopecki, 2013). For instance, it widely held view in developing countries that entrepreneurship is a masculine activity compared to women who tend to concentrate on marginal subsistence activities (Santos et al., 2016). Hence, men are considered to be more inclined to engage in entrepreneurship in emerging economies while women may be marginalised from entrepreneurship by risk-averse behaviour and strongly held social expectations and values (Byrne & Fayolle, 2010).

However, some exceptions to this view are that findings from economically advanced economies demonstrate the fast closing gender gap in economic participation. For instance, even though still lagging behind man, women have at least 51% ownership of 33% of the 28 million firms in the United States (Kelley et al., 2014). Such a positive trend is partially attributed to the high social status ascribed to entrepreneurship, as well as the substantial entrepreneurial social capital that women in the United States possess. It would be interesting to evaluate if gender variations in subjective norms towards entrepreneurship exist among male and female college students who have received a similar level of formal exposure to entrepreneurship education. Hence, we hypothesised that:

There are some differences in subjective norms between male and female students attending entrepreneurship courses at University of Technology.

2.5. Perceived behavioural control and gender

Perceived behavioural control is similar to, and is often used interchangeably with perceived self-belief (Krueger et al., 2000). Some studies based on socio-psychology theories of entrepreneurship highlight a stark contrast between males and females' self-efficacy with men showing greater self-belief. The higher perceived behavioural control of males is often attributed to culturally informed gender stereotyping of roles based on masculinity and femininity. These discrepancies persist despite the provision of various kinds of support from different social circles. A study by Dabic, Daim, Bayraktaroglu, Novak and Basic (2012) which used data collected from 3420 university students in more than 10 countries (among them (Croatia, Austria, Belgium France, Israel, Lithuania, Poland, Slovenia, India) to assess gender differences in perceived behavioural controls revealed that females were not confident of their abilities and were reluctant to engage in entrepreneurship as compared to males. This was in spite of receiving support from families. Another investigation by Kickul, Wilson, Marlino and Barbosa (2008) on 5000 middle - and high school students in the USA observed disparities in self-efficacy and entrepreneurship intention. A major observation made in the study was that boys had higher self-efficacy than girls because the boys took extra jobs outside school hours which helped in cultivating self-belief and confidence in their abilities to engage in entrepreneurial ventures. Sweida and Reichard (2013) observe that such variances are reflected in the constrained participation of females in high growth entrepreneurship. In summary, the evidence laid out in the preceding discussion cement the view of marked differences in perceived behavioural control among females and male. Hence, this study hypothesises that:

There are some differences in entrepreneurship intention between male and female students attending entrepreneurship courses at a university of technology.

3. RESEARCH METHODOLOGY

3.1. Research design

This study employed a quantitative research approach and cross-sectional survey research design. A quantitative research approach solicits numeric data and allows for the establishment of precise inferences from the sample data to the target population (Nenty, 2009). A cross-sectional survey research design seeks to gather data from a single point in time (Punch, 2013) to provide comprehensive evidence on the status of affairs at that time. Such a design is conceived appropriate when the intention of the researcher is to gather large quantities of data in short time and reasonable cost.

3.2. Target population and data collection

The target population for this study consisted of undergraduate students who had completed an introductory course in entrepreneurship in 2015 at a University of Technology in South Africa. The unit of analysis of the study was the individual student who had enrolled and completed this programme. Class registers sourced from class lecturers revealed that there were 250 students on this entrepreneurial programme and these comprised the population of the study. From this total, 160 students were randomly selected using an online random number generator. A total of 130 self-administered questionnaires were completed and returned, denoting an 81.25 % response rate.

3.3. Data collection

A self-administered questionnaire characterised by closed questions on demographic characteristics, attitude, subjective norms, perceived behavioural control and entrepreneurial intention was used for data-gathering purposes. The scales on the questionnaire were adapted from Linan and Chen (2009) and Autio, Keeley, Klofsten, Parker, and Hay's (2001) instruments. In their respective studies, the scales yielded Cronbach's alpha values greater than 0.7. Thus, the questionnaire comprised numerous pre-validated items.

One of researchers collected data over a three week period during February and March 2016. The assistance of the relevant subject lecturers was sought given that the data was collected during lecture periods. Before administering the instrument, permission to conduct the study was sought from the Faculty Research and Innovation Committee of the Faculty of Management Sciences and the Director of Institutional Planning at this University. No incentives were offered to respondents to complete the research instrument.

3.4. Measures

3.4.1. Demographic variables

The questionnaire included questions to determine the respondents' age, marital status, field of study, occupation/previous employment experience.

3.4.2. Entrepreneurship intention

Linan and Chen's (2009) entrepreneurship intention scale was used to measure the entrepreneurship intention of students. This 6-item scale was in the form of 5-point Likert statements. All the 6 statements were labelled ranging from 1 (strongly disagree) to 5 (strongly agree). The responses by each respondent were aggregated to give an overall entrepreneurship intention score ranging from 5 to 30. The Cronbach alpha score for the scale was 0.91, indicating good internal consistency reliability.

3.4.3. Attitude towards entrepreneurship

The attitude towards entrepreneurship was assessed through a 3-item, 5-point itemised scale ranging from 1 (strongly disagree) to 5 (strongly agree) adapted from Linan and Chen (2009). The 3 items were totalled to give a summed score for attitude. These ranged from 5 to 25. A higher score on these scales indicated a higher level of attitude. The internal consistency reliability was good, with an alpha coefficient of 0.78.

Duijn's (2003) normative beliefs scale was used to establish the respondents' subjective norms. This consisted of 3 items on a 5-point Likert form statements. All scale points were labelled ranging from 1 (strongly disagree) to 5 (strongly agree). The scores were summed up to derive a composite score which ranged from 5 to 15. The Cronbach's alpha value was good at 0.86.

3.4.4. Perceived behavioural control

Four items from Autio et al. (2006) were used to assess the perceived behavioural control of respondents. The measurement scale consisted of Likert-based statements which were on a 5-point itemised scale.

4. RESULTS

Table 2 presents the demographic details of the respondents. As can be seen from the table, female respondents constituted the majority at 58.5 %. In addition, most respondents were from the 21 to 30 years age group (44.6%), followed by the 31 to 40 years age group (40%). Furthermore, most respondents (64.6%) were single, while the remainder were married. In terms of educational qualifications, the majority of respondents at least had attained a diploma. Lastly, most (85.4%) of the respondents came from "Business" programmes.

Table 2: Demographic details of respondents

Variable	Category	Frequency	%
	Gender	Male	54
	Female	76	58.50%
	Total		
Age	Below 21	5	3.80%
	Between 21 – 30	58	44.60%
	Between 31 – 40	52	40%
	41-50	14	10.80%
	50 and above	1	0.80%
	Total		
Marital status	Never married	73	56.20%
	Married	46	35.40%
	Divorced/Separated/Widowed	10	7.70%
	Widowed	1	0.80%
	Total		
Highest qualification level	High school/ Matric only	0	5%
	Tertiary certificate only	11	8.50%
	Diploma/degree only	114	87.70%
	Other	5	3.85%
	Total		
Current field of study	Applied sciences	3	2.30%
	Business	111	85.40%
	Engineering	5	3.80%
	Humanities and Other	11	8.50%
	Total		

The Mann-Whitney U test, a non-parametric test, was used to assess the presence of significant differences in the mean scores for the following constructs: Entrepreneurship intention, attitude towards entrepreneurship, subjective norms and perceived behavioural control. The results of the test are presented in Table 3.

Table 3: Results of the Mann-Whitney U Test

	Gender	N	Mean Rank	Sum of Ranks	
Entrepreneurial intention	Male	50	70.91	3545.5	Mann-Whitney U 132.95, $z=-2.46611$, $p=0.013659$
	Female	72	54.97	3957.5	
	Missing				
	Total	122			
Subjective norms	Male	50	57.27	2863.5	Mann-Whitney U 2210.5, $z=-1.44689$, $p=0.147926$
	Female	75	66.82	5011.5	
	Missing				
	Total	125			
Perceived behavioural control	Male	51	69.24	3531	Mann-Whitney U 1467, $z=-1.89667$, $p=0.047871$
	Female	72	56.88	4095	
	Missing				
	Total	123			
Attitude towards behaviour	Male	49	69.61	3411	Mann-Whitney U 1048, $z=-3.23$, $p=0.001$
	Female	66	49.38	3259	
	Missing				
	Total	115			

Table 3 demonstrates that the results of the Mann-Whitney U Test for entrepreneurship intentions is significant, $U 132.95$, $z=-2.46611$, $p=0.013659$. The mean rank were 70.91 for the ‘Male’ category was and 54.97 for the ‘Female’ group. This suggests that the distribution of entrepreneurship intentions variable for ‘Males’ is significantly different from the distribution for ‘Females’.

In the case of the subjective norms variable, the results of the same test were not significant (2210.5, $z=-1.44689$, $p=0.147926$). This means that there are no significant differences based on gender in the mean scores for subjective norms.

Furthermore, significant differences in the mean scores for perceived behavioural control ($U 1467$, $z=-1.89667$, $p=0.057871$) can be observed between the two gender categories (Males and Females). This means that the distribution of perceived behavioural control variable for ‘Males’ is significantly different from the distribution for ‘Females’.

As Table 3 also shows, there is a significant difference in the mean score for attitude towards entrepreneurship ($U 1048$, $z=-3.23$, $p=0.001$) between ‘Males’ and ‘Females’.

5. DISCUSSION

This study sought to ascertain whether significant differences existed between gender on one side, and entrepreneurship intention and its antecedents on the other. From Table 3, the findings reveal that three of the hypotheses were proven. Only one was not proven i.e whether they are any significant differences in subjective norms based on gender.

The fact that significant gender-informed variations are observed in most of the Theory of Planned Behaviour constructs i.e. entrepreneurship intentions, attitude towards entrepreneurship and perceived behavioural control corroborates findings from previous studies which vouch for the influence of gender on entrepreneurship-related constructs (Kickul et al., 2008; Byrne & Fayolle, 2010; Farrington et al., 2012; Malebana, 2014). Despite literature' undermining of demographic factors as influential forces in entrepreneurship activity in literature, the findings demonstrate the significance of their consideration in entrepreneurship research. Although the reasons for the pattern of results may not be apparent, possible explanations include the comparatively lower levels of education for women, lack of business networks for women in local vicinity, lack of female role model, limited access to capital and financial support for women and negative gender stereotyping. According to Karimi, Biemans, Lans, Chizari and Mulder (2014) role models are an important practical resource for learning and providing inspiration. Therefore, the existence of female role models in women's local vicinities may augment their attitude and self-efficacy towards entrepreneurship. The relatively low numbers of women entrepreneurs in South Africa perhaps explains the relatively lower scores on attitude towards entrepreneurship, entrepreneurship intention and perceived behavioural control scores by female respondents in this study (Derera, Chitakunye & O'Neill, 2014; Malebana & Swanepoel, 2015).

Another possible explanation for the differences in attitude and perceived behavioural control are the differences in societal roles between men and women in developing economies. In the African context where societal expectations ascribe men as heads of households who should be independently oriented, assume key-decision making roles, men are conceived as not naturally fazed by ambiguity and taking risks (Farrington et al., 2012). On the other hand, women are considered as more family oriented and their decisions are guided by those around them. Thus, their locus of control is external and therefore, explains their lack of self-belief and confidence.

Contrary to expectations, this study did not find a significant difference on the subjective norms on the basis of gender. This is ironic, particularly in the Africa context, where gender disparities in entrepreneurship participation are often attributed to cultural values and identities. Taken together, the preceding findings shed light on the influence of gender on career decisions, and thus call for gender-sensitive understanding when creating policy restructurings to inspire entrepreneurship.

6. LIMITATIONS

Finally, a number of important limitations need to be considered. First, this study was limited to students of a particular University of Technology who had undergone entrepreneurship education. Perhaps, undertaking a similar study with students of a different demographic profile and at a different South African tertiary institutions might yield different results. Secondly, the gender distribution of respondents was uneven, with the majority being female. As a result, the findings from the current study may be skewed towards the views of female respondents. Therefore, the sample sizes of future studies on the same topic should be more representative if a clear picture on the variables investigated is to obtain. Lastly, the effect of student self-selection bias in the current study cannot be overlooked. As such, future studies should incorporate control variables.

7. IMPLICATIONS FOR THEORY AND PRACTICE

Despite its shortcomings, the findings from the current study provide critical implications for both theory and practice. The study findings strived towards enhancing our understanding of the influence of gender on the cognitive processes often associated with entrepreneurship. Using variables from the Theory of Planned Behaviour, the findings suggested that influence of demographic factors on entrepreneurship should not be under-estimated. Although caution has to be exercised in interpreting the results of this study because of the relatively small sample size, the findings put to question

suggestions that demographic factors play an insignificant role in shaping future entrepreneurship behaviour. Thus, demographic variables like gender should not be ignored in entrepreneurship research as they aid our understanding of factors influencing entrepreneurship.

An implication of the findings is the need for gender-sensitivity when drafting curriculum measures for promoting entrepreneurship at departmental and programme implementation levels. There is convergence of literature on the view that women perceive more barriers to entrepreneurship than men mainly because of social and stereotypical constructions. Thus, policy-makers should come with policy measures that regulate societal prejudices in general and women's negative perception of entrepreneurship careers in particular.

Furthermore, the study revealed women's willingness to participate in entrepreneurship augmented by their self-belief in their entrepreneurial capabilities and competences (perceived behavioural control). This revelation is critical to entrepreneurship educators whose duty is to develop a steady supply of confident and capable future entrepreneurs. Hence, entrepreneurship education curricula should, apart from teaching the technical aspects of business, incorporate self-efficacy building measures. Equipping women with the appropriate skills inventories and mind-sets would possibly promote their future participation of women in economic activities. To a great extent, South Africa requires the economic participation of married women in entrepreneurship because of their key responsibility of assisting their spouses in taking care of their families.

8. CONCLUSION

This study tested the existence of gender-based differences in the mean scores for entrepreneurship intentions, attitude towards entrepreneurship, subjective norms and perceived behavioural control. The evidence from the study revealed significant differences between the gender categories of respondents in the scores for all the stated variables except subjective norms. This outcome implies the need for gender sensitive approaches when devising and implementing entrepreneurship development and support measures at South African universities of technologies.

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Evaluating the Impact of Information and Communication Technologies on SMMEs in South Africa: A City of Johannesburg Perspective.

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ABSTRACT

In order to develop insights and further extend knowledge on how technology is changing the manner in which small business initiatives operate in South Africa, an analysis of the impact of information and communications technologies (ICTs) in small, micro and medium-sized enterprises (SMMEs) is conducted from a perspective of SMMEs in the City of Johannesburg (CoJ). The purpose of this study was therefore twofold; to investigate how the South African SMME sector views ICTs and what their growth rate implies to them; and to examine how these technologies influence SMMEs in their daily business operation. The present study followed a quantitative approach and a total of 81 SMMEs participated in the study by means of a structured interviewer-administered questionnaire. A Cronbach's alpha was used to test the internal consistency of this questionnaire. This study modeled the impact of ICTs within the South African SMME sector. Results suggest that ICTs have a significant impact on improving communication, fastening business processes, satisfying customers, increasing productivity output, making information accessible, leading to competitive advantage, and increasing revenue and minimizing risks, as well as adding to product or service innovation.

1. INTRODUCTION

Indeed the Information and Communications Technologies (ICTs) have become the most groundbreaking and the cutting-edge business transformers of the new age. Increasingly, forcing businesses at all levels to become full-time web-based business players for market visibility and survival in this highly competitive environment. However, in terms of technology adoption, it is still broadly recognized that, the South African SMME environment is still in its infancy, despite the growing number of Internet usage in South Africa. Statistics shows that the Internet user base in South Africa increased 4 percent Year-on-Year (YoY) in January 2016 to 52.6 percent (28.6 million total penetration) (just 2% more of half the population) (Internet World Stats [IWS], 2016; and Internet Live Stats [ILS], 2016). Furthermore, active social media users across web and mobile according to Htxt.africa (2016), stand at 13 million (24%), while mobile social media users stand at 10 million (18%). Generally, these statistics have been increasing since we have entered into the 21st century. Htxt.africa (2016), is of the notion that, in South Africa, there are 85.6 million mobile connections, which means there are quite a number of people with more than one connected SIM card linked to them. Going forward, Cisco Visual Networking Index (2015), predicts that South Africa will have the highest IP (Internet Protocol) traffic growth rate by 2019 with 189.9 million networked devices, and 59 percent of them being mobile-connected. Despite this growth rate in the ICT usage, research still shows that both the strategic use of ICT, and ICT as a concept are major problems facing the South African SME sector (Modimogale, 2008: 53).

2. OBJECTIVE OF THE STUDY

To investigate the impact of using ICTs in SMMEs in South Africa.

3. LITERATURE REVIEW

In the past decades, there has been an overflow of reports on the impact of ICTs within the SMME sector across the globe. These reports increasingly show that ICTs are regarded as important tools for managing a business, helping various decision-making levels to exchange information, enabling instant communications among business executives, employees, channel members, and also creating opportunities for marketing communications (Nieman and Bennett, 2005: 288; Clow and Baack, 2010: 37; Matlala, 2014: 24). However, despite the benefits put by ICTs on the table, it is still necessary and imperative to note that, not all businesses, including SMMEs, have tapped into the new information and technological era. For instance, Nieman and Bennett (2005: 291) note that some organizations have not yet evolved enough to realize the value of information management and still view technology as a mere enabler of other business functions. In contrast, online companies exploit the synergies of the Internet and web to gain competitive advantage and outsource some of the components of their value chain, and

by means of using online technologies, more organizations can decrease the time needed to produce their products, which allows them faster access to the market ahead of their competitors (Nieman & Bennett, 2005: 291).

4. DEFINITION OF SMME

Providing an accurate definition of SMME is difficult as entrepreneurs and researchers across the globe seem to define it from their own vantage points. The South African Reserve Bank (SARB) (2015: 5) also agrees with the authors that ‘Small business’ is difficult to define. Furthermore, the Wholesale and Retail, Sector Education and Training Authority (WRSETA) (2014: 6) also agrees with the notion that, defining SME is a challenging task as every country has its own definition. Literature also reveals that, there is no single, universal, uniformly acceptable definition of SMEs (Abor and Quartey, 2010: 225; Storey, 1994 as cited in WRSETA, 2014: 6). However, in an attempt to defining ‘SMME’, the literature has found and validated a comprehensive South African definition of SMME. Therefore, a “Small business” in South Africa is defined as a separate and distinct business entity, including cooperative enterprises and non-governmental organisations (NGOs), managed by one owner or more which, including its branches or subsidiaries, if any, is predominantly carried on in any sector or subsector of the economy which can be classified as a micro-, a very small, a small or a medium enterprise (National Small Business Act, 1996: 2); (National Small Business Amendment Act, 2004: 4). While this definition is welcome, this study also tries to define ‘SMME’ as any small-to-medium sized business adventure which can be run by one person or more, however, with numbered employees or persons not exceeding two-hundreds.

4.1. Definition of ICTs

ICT is an umbrella term that includes any communication device or application, encompassing: radio, television, cellular phones, computer and network hardware and software, satellite systems and so on, as well as the various services and applications associated with them such as video conferencing and distance learning (TechTarget, 2005). They are often spoken of in a particular context, such as ICTs in education, healthcare, or libraries (TechTarget, 2005). Therefore, ICTs relates to networked equipment through Local Area Network (LAN) or Wide Area Network (WAN) that allows for intra-and inter-network communication via email and the Internet (Reference, 2016). For the purpose of this study, ICTs refers to the use of technologies such as computers, Internet, mobile devices, Automated Teller Machines (ATMs), Closed-Circuit Televisions (CCTVs), POS systems and other forms of technology to collect, store, retrieve, transfer and communicate data and information from one object to another.

4.1.1. ICT: A world perspective

In 1995, less than 1 percent of the world population had an Internet connection (ILS, 2016). The number of Internet users has increased tenfold from 1999 to 2013. The first billion was reached in 2005, second in 2010 and third in 2014 (ILS, 2016). Today, more than 3 billion (3.42) world’s population is online, approaching half the population at 46 percent. This according to Htxt.africa (2016), means global Internet usage grew 10 percent in 2016, adding 332 million more users. However, despite this growth, it is still broadly recognized that, more than half the population is offline today. Recent statistics by the International Telecommunications Union (ITU) (2016: 2), shows that, by the end of 2016, more than half the world’s population (3.9 billion people - 54%) - is not using the Internet. In the Americas and Commonwealth of Independent States (CIS) regions, about one-third of the population is offline, while almost 75 percent (74.9) of people in Africa are non-users; only 21 percent of Europeans are offline. In Asia and the Pacific and the Arab States, the percentage of the population that is not using the Internet is very similar; 58.1 and 58.4 percent (ITU, 2016: 2). These statistics, focusing in Africa particularly, shows that the percentage of the digital divide in the region is very high, (74.9%). Africa has the lowest international connectivity of all regions (ITU, 2016: 2). In South Africa, the Internet of Things (IoT) is still in its infancy, 5 out of 100 Machine-to-Machine (M2M) subscriptions per 100 mobile-cellular subscriptions (ITU, 2016: 7).

4.1.2. ICT: Africa's perspective

IWS (2016) and ILS (2013) estimates 340.8 million Internet users in Africa with a 28.7 percent penetration and 9.3 percent of total world users. Africa as a whole has a fairly poor Internet penetration rate compared to the rest of the world (White Africa, 2010). In 2016 alone, about 75 percent (74.9) of the population was offline. Nigeria is ranked well (97.2 million users) against fellow African countries in terms of Internet usage and penetration in the region. Behind it is Egypt with 34.8 million users, followed closely by Kenya with 31.9 million and South Africa with 28.6 million, while Morocco maintains the tail with 33.6 million users.

4.1.3. ICT: A South African perspective

In 2000, Internet users in South Africa totaled 2.4 million or 5.5 percent population penetration. Going forward, the number of Internet users increased tenfold in millions from 2001 to 2015. The third million was seen in 2002 (3.1 million), the fourth was reached in 2004 (4.0 million) and the number tripled to 17.7 million in 2011. Today active Internet users in South Africa is approaching one-third (28.6 million) at 52.6 percent penetration which translates into 1.2 million people or 2.6 percent more than half the total population. According to Htxt.africa (2016), the majority (92%) of South Africa's adult population owns a phone whether dumb, featured or smartphone. Smartphones take the lion's share of this majority (60%), and only 3 percent own a television streaming product (e.g. Apple TV), while 1 percent own a wearable device (e.g. Apple Watch). Furthermore, South Africans spend nearly 5 hours (4H54M) on average on the Internet using either Personal Computer (PC) or laptop, followed by those who spend about 3 hours (2H59M) using mobile phones or any other device, and those spending 2 and a half hours of television viewing (We are social, 2016: 389). Moreover, about 60 percent (59) of South Africans go online every day, 26 percent go at least once per week, and 12 percent goes online at least once per month, while 3 percent only go online less than once per month (We are social, 2016: 392). Furthermore, active social media users in South Africa grew 10.2 percent Annual Growth Rate (AGR) or by 1.2 million people to 13 million in 2016 from 11.8 million in 2015. According to Htxt.africa (2016) and We are social (2016: 395), South Africa's 28.6 million Internet users spend almost three hours a day on social media with WhatsApp being the top (33%), followed closely by Facebook (30%), Facebook Messenger (20%), Google+ (15%), LinkedIn (13%), Twitter (12%), Pinterest (11%), Instagram (10%), BlackBerry Messenger or BBM (9%) and Skype at 9 percent.

4.1.3.1. Technology usage in SMMEs and their impact

Despite the slow growth rates in technology usage within the South African SMME sector, it is still imperative and necessary to acknowledge the current technological presence that we have in this sector. Research increasingly shows that indeed technology does exist within the South African SMME environment, more specifically in the mobile communication technologies (MCTs). A recent study conducted by Matlala, Shambare and Lebambo (2014: 180) reveals that the use of MCTs in micro enterprises, particularly mobile phones, is high. According to their findings, these were used particularly to communicate with both suppliers and customers, and the most popular devices being mobile phones, smartphones, laptops, iPads and tablets (Matlala *et al.* 2014: 180). Another study conducted by Modimogale (2008: 42) reveals that almost 9 out of 10 SMMEs use some form of IT or ICT in their businesses, mainly being a telephone, fax machine, POS system and credit/debit card reading machine. While these technologies are used in the business operation of the SMMEs, a study conducted by Matlala *et al.* (2014) observed that ICTs have a significant impact in terms of productivity output, increasing revenue and minimizing operating costs, increasing the level of new information acquisition, finding new business and having a positive influence on customer satisfaction.

4.2. Some advantages of ICTs in SMMEs

It is against this background that, ICTs in general, more particularly across the globe, embrace a great number of opportunities, benefits and advantages to individual citizens, societies, businesses, governments, institutions of learning, the healthcare and many other related through their unique and incomparable capabilities, in particular the 'e' lexicon which claims the following; e-Government, e-Learning, e-Commerce, e-Business, e-Participation, e-Filing, e-Voting, e-Democracy, e-Health, e-Toll, and many others. Therefore, it is within this context that, as far as SMME is concerned, ICTs claim to enhance communication and marketing channels by making use of MCTs to communicate with

customers and suppliers, as well as marketing a product or service using the Internet and the social media; improve business processes by introducing new technologically-orientated processes such as POS systems, credit/debit card readers (which minimizes the risk of carrying hard cash), clock cards (which replaces manual process of signing in and out); and technology innovation by inventing, improving or modernizing products and services using some form (s) of technology.

4.3. Some disadvantages of ICTs in SMMEs

Despite their capabilities of transforming and moving small businesses into the digital era, improving their business processes, increasing their productivity, reducing costs and maximizing their revenues, and bringing innovative products and services, ICTs can also be disadvantageous and disappointing as well, although not so often, but the bottom line is “They can be”. Literature reveals that, the disadvantages of ICTs stem largely from the technology architecture, which is complex and therefore contain some inherent disadvantages, namely; User competence - ICTs they require more and more training as systems become more and more complex; Vulnerability - networks are open to abuse in the form of hacking. Viruses also spread on a network and it is open to things like email spams and phishing. Lastly but not least; complexity, because if one part of the system breaks down it can affect many others. If the server of a network is down, for instance, no one can work; therefore, productivity is compromised in this sense and revenue is likely to decline as a result.

4.3.1. Some challenges of ICT adoption in SMMEs

Research increasingly shows that 8 out of 10 new businesses fail within the first three years of operation (Wagner, 2013; Matlala et al., 2014; Mason, 2016). In South Africa alone, an estimated 70 - 80 percent of SMMEs fail owing to a number of factors (Lekhanya, 2015). The contributing factors amongst others, include but are not limited to lack of basic knowledge and skills, lack of financial literacy (poor money management), insufficient research, inability to secure funding, ignoring the customer voice, poor management, leadership breakdown, no or poor business planning, poor choice of location, ineffective marketing, insufficient capital, starting for the wrong reasons, failure to communicate value propositions, failure to differentiate between personal and company accounts (Abor and Quartey, 2010: 224; Dlodlo and Dhurup, 2010; Fin24, 2010; Small Enterprise Development Agency (SEDA), 2012: SME South Africa, 2012; Wagner, 2013; Standard Bank, 2014; Benamoz, 2015; allBusiness, 2016; JTB Consulting, 2016; Schaefer, 2016; ShowMe, 2016:). Furthermore, technology is also painted as one of the factors contributing to the failure of SMMEs in South Africa. According to Fin24 (2010), AllBusiness (2016), Schaefer (2016) and ShowMe (2016), SMEs in South Africa lack ICT infrastructure and fail to change with the times (new technologies), they also operate without accessible websites and networks - which also contribute heavily to this failure. Authors such as Dlodlo and Dhurup (2010) observe that technology-disorientated SMEs find it challenging to adopt online marketing strategies. Modimogale (2008) in his dissertation found that both the strategic use of ICT, and ICT as a concept are major problems facing the South African SME environment. His findings emphasized the lack of Information Technology (IT) skills as a problem, and that IT specialists come with big price tags. Moreover, Aryeetey, Baah-Nuakoh, Duggleby, Hettige and Steel (1994), as cited in Abor and Quartey (2010) observe that SMEs often have difficulties in gaining access to appropriate technologies and information on available techniques. Meanwhile, Abor and Quartey (2010) also observed that SMEs in most cases, utilize foreign technology with a scarce percentage of shared ownership or leasing because they usually acquire foreign licenses as the local patents are difficult to obtain. For this reason, Modimogale (2008) generally concludes that SMEs cannot afford expensive skills, whether ICT or otherwise, because of their small turnover and limited budget.

5. METHODOLOGY

In this study, a quantitative approach was considered applicable, following the nature of the study and that data is collected using a questionnaire. To support this decision, authors such as Vanderstoep and Johnston (2009) point out that quantitative research specifies numerical assignment to the phenomena under study.

5.1. The sampling method

In the present study, a probability sampling approach was used and a pluralistic (stratified and systematic) sampling method was considered applicable following the nature and the size of the sample element (CoJ). However, authors such as Berndt and Petzer (2011) and Tustin et al. (2005) suggest that, if a probability sample is to be taken, a sample frame is essential and definitely required. Furthermore, when a stratified sampling is to be employed, first the researcher needs to group the heterogeneous population into homogeneous strata that are mutually exclusive and comprehensive, then a random sample of elements is drawn independently from each stratum using either random sampling or systematic sampling (Berndt & Petzer, 2011). In this sense, the geographical areas of the CoJ were grouped into strata and systematically drawn from the stratum using a systematic sampling method. The reasons for using stratified sampling was to separate the population into different subgroups (strata) and also to reduce the sampling error, while the reason for using systematic sampling was to sample the stratum at a regular interval.

5.2. Population and the sample

In order to reduce sampling error and bias, a systematic sampling method which samples stratum at a regular interval was deemed applicable. In this study, the CoJ - which is the largest metropolitan municipality in Gauteng Province and in South Africa, was the sampling frame in the present study. The city is located in the central part of Gauteng, with more than 4 million residents in more than 30 places. The reasons for choosing CoJ amongst others are that the city is considered the economic and business hub of South Africa, owing to its ability to contribute more than 16% of the country's Gross Domestic Product (GDP) through its eminent business activities, ranging from key sectors such as retail, banking, manufacturing, mining, telecoms and media. Furthermore, the city is also considered the most technologically innovative in South Africa, while in Africa is in the top 10, and according to BusinessTech (2013), the majority (26.45%) of the South African Internet users live in Johannesburg. Therefore, it is within these motives and many others that the CoJ came out relevant for this study and its geographic city map became a sampling frame. The main places of the CoJ which were selected systematically at a regular interval of selecting every 8th member of the 40 places, became sampling elements in the present study, while those conducting businesses within them (SMMEs) became the units of analysis respectively. Therefore, after a careful consideration of the sample sizes used in previous studies, a total sample size of 80 SMMEs in the CoJ was deemed applicable, originating from Soweto, Johannesburg CBD, Braamfontein and Bramley.

5.3. The measuring instrument (questionnaire)

The measuring instrument used in this study was a 4-page structured interviewer-administered questionnaire (including the cover page), divided into 3 sections. Section A measured the business profile (demographics), Section B measured Internet and Technology Familiarity and Usage Patterns, while Section C which terminated the questionnaire, measured Views and Perceptions towards the use of the Internet and Technology. A preliminary study was also conducted with 10 similar respondents (SMMEs in Daveyton) to test the data gathering instrument developed for this study. Therefore, the questionnaire was validated, based on the satisfactory feedback from the participants, however with some minor changes here and there.

5.4. Data collection

For validity and security issues, the author did not want to employ anyone to assist in the data collection; instead, he collected all the data by himself using the aforementioned questionnaire which was developed specifically for this study. For a better understanding of the respondents, the author gave to the participants of the study a short-content briefing, explaining the nature and objectives of the study. This was also consolidated by the questionnaire cover page - which also provided an introduction to the phenomena under study, as well as general instructions to the respondents. The respondents completed the questionnaires and had to return them on the spot. Those wrongly filled or with missing answers were rejected by the author.

6. RESULTS

A total of 87 questionnaires was distributed. All the questionnaires were returned to the authors the same day, but only 81 could be statistically analyzed. Because anonymity of respondents was guaranteed, it was not possible to carry out any telephonic or mail follow-ups to obtain any missing data from the 6 questionnaires (Gallant, 2009:51). This converted into a response rate of 93.1 percent.

6.1. Business profile (Appendix B)

6.1.1. Years of operation

Almost 60 percent (58) of South African SMMEs have been in operation for 2 - 10 years, while nearly 30 percent (28.4) have been in operation for more than 11 years and the remaining 13.6 percent have been in operation for less than a year.

6.1.2. Type of enterprise

The results indicate that, Clothing outlets (11.1%) and Hair salons (11.1%) are the most operated SMMEs in South Africa, followed by Automotive or Motor spares at 8.6 percent and Street vendors at 8.6 percent then Furniture shops at 7.4 and Cosmetics at 7.4 percent, the least operated SMME in South Africa appears to be Super or Hypermarkets at 4.9 percent.

6.1.3. Industry

The data shows that nearly 35 percent (34.6) of the South African SMMEs operate within the Retail and Wholesale industry, followed by Telecoms and Services at 14.8 percent each, then Restaurants accounting for 11.1 percent with Households products, Hospitality and Entertainment being the least operated industries at 1.2 percent.

6.1.4. Registration status

Almost 80 percent (77.8) of SMMEs in South Africa are registered, 16 percent is not registered, 3.7 percent is in the process of registering their businesses and the remaining 2.5 percent is still to think about whether to register or not.

6.1.5. Size of the business

Almost 70 percent (67.9) of the South African SMMEs are very small enterprises, 21 percent are survivalists (micro), 6.2 percent are small enterprises, and 4.9 percent are medium enterprises.

6.1.6. Respondent's position and computer literacy

34.6 percent of the respondents are business founders or owners, 32.1 percent are managers and regular employees of which 75.3 percent of them are computer literate and the remaining 24.7 percent is not.

Internet and technology familiarity within SMMEs

Table 1: Internet and technology familiarity

Question No.	Questionnaire item	% Yes	% No
Q.10	Do you have a business bank account?	74	26
Q.11	Are you a computer literate?	75.3	24.7
Q.12	Is your enterprise using the Internet?	70.4	29.6
Q.13	If Yes, do you own a business website?	47.0	23.5
Q.14	If Yes, do you make use of it?	45.7	2.5
Q.18	Is your enterprise familiar with technology?	100	0.0
Q.19	If Yes, do you make use of it?	96.3	3.7

Q.15: If Yes in terms of Q.14, how long has your enterprise been using this website?

Table 2: Years of website activeness

Criterion	Percentage
< 1 Year	2.5
1 – 3 years	17.3
4 – 6 years	11.1
7 – 10 years	3.7
11 > Years	11.1

The results indicate that 74 percent of the South African SMMEs have a business bank account; 70.4 percent of them are online, of which 47 percent own a business website and 45.7 percent have used it for 1 to 3 years, 4 to 6 years at 11.1 percent, 7 to 10 years at 3.7 percent and more than 11 years at 11.1 percent. Moreover, 100 percent of SMMEs in South Africa are familiar with the technology - of which 96.3 make use of it within their business operation.

Q.16: If Yes in terms of Q.12, where does your enterprise access this Internet?

Table 3: Where the internet is accessed

Internet access	Percentage
Business Internet	43.1
Internet café	5.0
Free Wi-Fi	0.0
Public library/school	0.0
At home, 3G, Wi-Fi Router	7.4
cell phone/Tablet/Laptop	14.9

The data shows that 42 percent of South African SMMEs access the Internet within their business premises. Followed by those accessing the Internet using either a Cell phone, Tablet or Laptop at almost 15 percent. In total, 70.4 percent of SMMEs are online.

Q.17: If your business uses the Internet, please indicate what it does on the Internet?

**Table 4:
Internet activities**

Technology	Percentage
Online ads/Marketing/Promotions	37.0
Online orders/payment processing	32.1
Receiving and sending emails	40.7
Watching/reading online news	12.3
Desktop/market/marketing research	16.0
Updating company website/responding to complaints/comments	19.8

The data shows that 40.7 percent of South African SMMEs use the Internet to send and receive emails, followed closely by those using the Internet for Online Advertising, Marketing or Promotions (37%), and those using the Internet for Online orders or payment processing accounted for 32.1 percent.

Q.20: If Yes in terms of Q.19, please indicate which technologies are currently in use within your enterprise.

Table 5: Types of technologies used in SMMEs

Technology	Percentage
Speed points	51.9
POS system	38.3
Censoring security system	17.3
Print, copy or fax machine	50.6
Fixed telephone line	39.5
Computers and server systems	45.7
Digital screens	17.3
Remote CCTV cameras	43.2
Secured Wi-Fi hotspots	26.0
Mobile phone/Smartphone/Laptop/Tablet	79.0

Nearly 80 percent (79.0) of the South African SMMEs use either Mobile phone, Smartphone, Laptop or Tablet within their business operation, 52 percent use Speed points, 50.6 percent use either print, copy or fax machine, 45.7 percent use computers and server systems and 43.2 percent have CCTV cameras installed within their business premises, while Censoring security system and Digital screens remains the least used technologies at 17.3 percent each.

Q.21: If your enterprise is making use of mobile devices (Smartphones, laptops, tablets), please indicate their primary functions within your business.

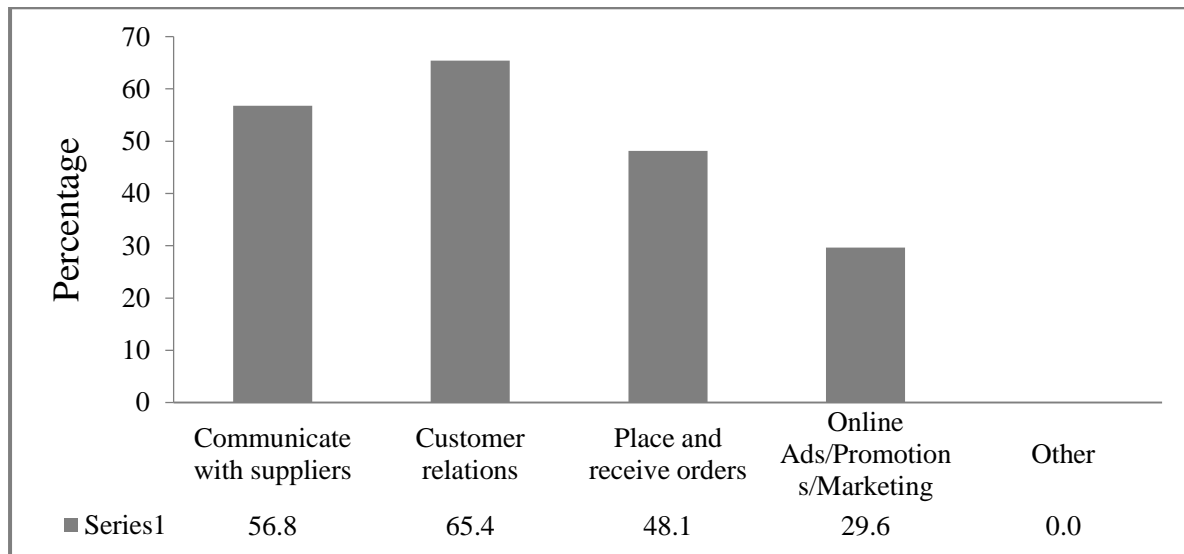


Figure 1: Primary Functions of Using Mobile Devices (Excel 2013 output)

The data shows that more than 60 percent (65.4) of the South African SMMEs use mobile devices to communicate with customers, 56.8 percent to communicate with suppliers, while 48.1 percent to place and receive orders, and 29.6 percent for Online Advertising, Promotions or Marketing.

Q.22: Generally, what impact do technologies have over your business?

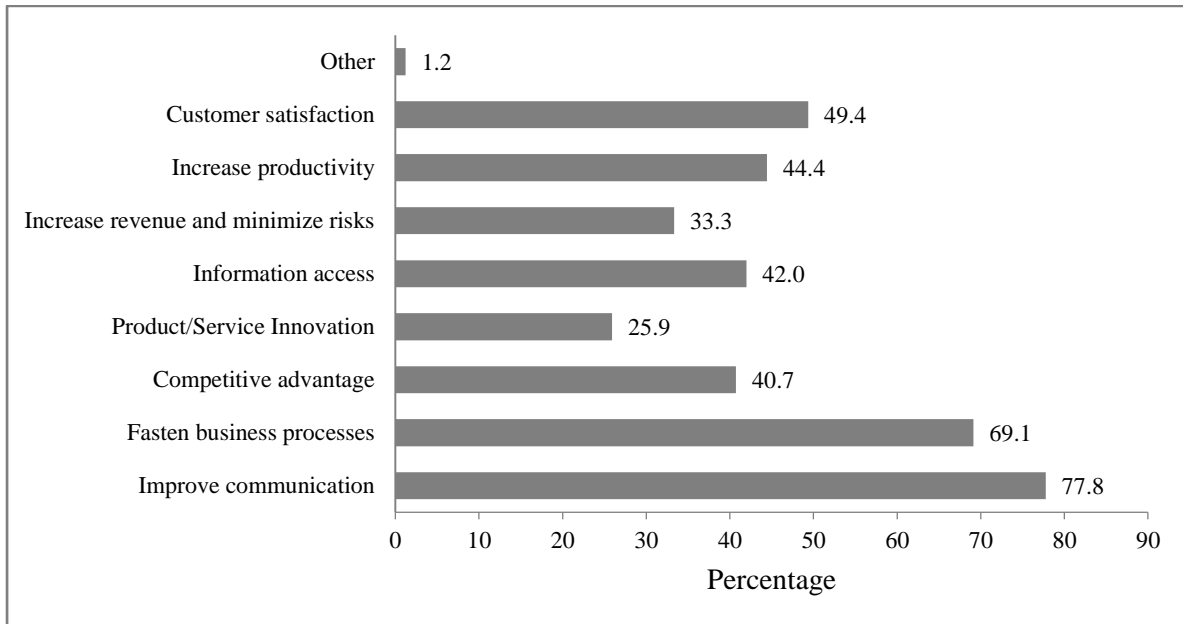


Figure 2: The Impact Of Technology In SMMEs (Excel 2013 output)

The highest technological impact within the South African SMME sector is to improve communication at nearly 80 percent (77.8), followed by fastening business processes at 69.1 percent, customer satisfaction at 49.4 percent, increasing productivity at 44.4 percent, information access at 42.0 percent, competitive advantage at 40.7 percent, increasing revenue and minimizing risks at 33.3 percent and product or service innovation at 25.9 percent.

Q.23: If No in terms of Q.19, please indicate the reason/s why your business do not use technology.

Table 6: Reasons for not using Technology

Measuring Criterion	Percentage
Technologies are too expensive	1.2
Lack of ICT skills	1.2
Lack of Internet access	0.0
Lack of technological devices	0.0
Prefers Face2Face interaction with clients or customers	1.2
Prefers manual processes	0.0
Other	0.0

The results show that less than 5 percent (3.7) of the South African SMMEs are not using technology because technologies are too expensive, they possess inadequate ICT skills, and that they prefer a face-2-face interaction with their customers.

6.2. Reliability test

Just like any other Likert-scaled instrument, the instrument used in this study also needs to be tested to gauge its reliability. To do that, a number of reliability tests such as, but not limited to Item analysis, Cohen's Kappa, Fleiss' Kappa, Kendall's W, Weighted Kappa and Cronbach's Alpha are in place to perform a reliability test. However, one of the most commonly used measures of reliability to test the

internal consistency of a 5 or 7 point-scaled psychometric instrument (questionnaire) is Cronbach's Alpha. Therefore, in this study Cronbach's Alpha is deemed favorable to measure the reliability of our psychometric instrument. Appendix D depicts an Excel output of the reliability test performed using a Cronbach's Alpha on Real Stats Add-On.

Taking into account the statistics presented in Appendix D, a commonly accepted rule of thumb is that an alpha of 0.7 (some say 0.6) indicates acceptable reliability and 0.8 or higher indicates good reliability (Zaiontz, 2016). Therefore, in this study, all independent variables (sub-scales) were tested for internal reliability using a Cronbach's alpha and the resulted alpha ranged from 0.805 (PEU4) to 0.861 (PR1) which indicated a good reliability as noted by Zaiontz. Appendix D shows Cronbach's alpha for each of the seven scales used to measure the 'Views and Perceptions' towards using technology and the Internet within the South African SMMEs.

Table 7: Cronbach's Alpha for the scales

Instrument (Scale)	Cronbach's alpha (α)
Internet and Technology Adoption (ITA)	0.813
Trust of the Internet and technology (TIT)	0.812
Use Intentions (USE)	0.818
Perceived Risk (PR)	0.861
Perceived Ease of Use (PEU)	0.810
Perceived Privacy (PP)	0.824
Structural Assurance (SAR)	0.817
All variables (scales)	0.832

As it can be observed in Table 7 above, and further observed in Appendix D, all measuring scales have an alpha above 0.8 which indicates a good reliability of our psychometric instrument.

Section C: Views and Perceptions towards technology and the Internet (Likert scales)

As presented in Appendix C, ITA was scored very high with mean values above 4.00 for both ITA1 (4.14) and ITA2 (4.19), thus telling us that the majority of the SMMEs in South Africa would adopt the latest technologies, including the Internet to become more effective (88.9%), as well as to promote and advertise their products or services online (90.1%). Following suit is TIT, which also scored high with mean values above 3.50, thus indicating that almost 80 percent (77.8) of the SMMEs in South Africa trust the Internet and technology, especially in their business processes. Of which 75.3 percent could count on technology for working correctly. Furthermore, USE also scored high in terms of mean values (3.50 >), thus indicating that more than 80 percent (81.5) of the South African SMMEs would use the Internet to market their business and promote their products or services online. Of which 71.6 percent would take advantage of the latest technologies to restructure their business operation model. Moreover, PEU and SAR also scored mean values above 3.50 which indicates that the majority of South African SMMEs (60%+) views technology and the Internet as easy to use (PEU); and are also happy to do business online, as well as being in favour of receiving online compliments and/or complaints from their customers with regard to their products or services offered (SAR).

While ITA and other measuring scales score mean values above 3.50, PR and PP as shown in Appendix C, seem to have scored low mean values (below 3.50) where PR scores very low (below 3.00). However, despite the low mean scores, the majority of the SMMEs disagreed to the following PRs; the decision to use the Internet and technology in our day-to-day business operation is risky (53.1%); I am scared of deploying my business processes digitally because of hackers and computer viruses (43.2%); and lastly, I don't think it's safe to do business on the Internet or using technology (64.2%). These results indicate that the South African SMME sector does not believe it is risky or unsafe to do business online, and is not scared of hackers and computer viruses. Similar to PR, PP also scored very low mean values, but the majority of the SMMEs were not sure whether the Internet privacy and security level of information published via the Internet are safe or not (45.7%), also not sure whether the Internet does not share any private information with anyone unless permitted to do so (46.9%).

7. DISCUSSION

Today we are living in a world that is digitally disrupted with a vast of technologies available to individuals and businesses, regardless of their sizes. As a result, SMMEs across the globe take full advantage of these technologies to, among other things, market their products and services online, improve business processes and improve communication with customers. South African SMMEs are no exception, they follow suit using mobile devices and other forms of technology to remain relevant in this highly competitive environment. This is supported by a study conducted with 113 micro enterprises in Hammanskraal (Northern Gauteng) by Matlala et al. (2014:187) which found 62 percent of these micro-enterprises using mobile devices to place orders, 45 percent to communicate with suppliers, 25 percent for customer relations and 19 percent to receive orders from customers. Furthermore, Modimogale (2008:42) in his study conducted with 10 SMEs in Pretoria found that 90 percent of these SMEs uses some form of IT or ICT technology within their business operation, this included telephone, fax, POS and speed points. While this literature is welcome, the present study however, attempted to extend knowledge on how technology is changing the manner in which SMMEs operate in South Africa by means of investigating the impact of using ICTs within the South African SMME sector. In an attempt to do so, the findings from this study therefore indicate that all SMMEs (100%) in South Africa are familiar with technology. Of which a vast majority (96.3%) use it within their business operation, and only less than 5 percent (3.7) do not use it because technologies are too expensive; they lack ICT skills; and they prefer Face2Face interaction with customers.

Nevertheless, of the 96.3 percent SMMEs that use technology in their businesses, 70.4 percent of them are online. Of which 47 percent own a business website and 45.7 percent has used their business websites for 1 to 3 years with Internet accessed mostly within business premises, while minority access it from Internet café or using cell phones, Tablets or Laptops. Furthermore, this study also found that 40.7 percent of South African SMMEs uses the Internet to send and receive emails, followed closely by those using the Internet for Online Advertising, Marketing or Promotions (37%), and those using the Internet for Online orders or payment processing at 32.1 percent. The most popular and usable technologies in SMMEs were observed to be mobile or Smartphones, Laptops and iPads, and were mainly used to communicate with suppliers (56.8%). These were also used for customer relations (65.4%), place and receive orders (48.1%), and for Online advertising, Promotions or Marketing (29.6%). Similar findings were also reported in the literature, particularly from a study conducted by Matlala *et al.* (2014:187). Adding to the technologies available to South African SMMEs, the following were also found to be in place; Speed-points, Print, copy or fax machines, computers and server systems, Remote CCTV Cameras, Fixed telephone lines, POS systems, secure Wi-Fi hotspots and Digital screens. Their impact, views, perceptions, and growth rate, as well as their influence towards the South African SMME sector are discussed in the sections that follow.

The impact of using ICTs within SMMEs in South Africa, findings from the study

- ICTs improve communication, fasten business processes, satisfies customers, increase productivity, make information accessible, adds to competitive advantage, increase revenue and minimize risks, and innovate products or services. These findings are also confirmed by the literature that, businesses with the aid of technology can greatly improve their productivity, reduce costs of doing business, and discover information that was impossible or costly to access (Matlala et al., 2014: 183).

How SMMEs views ICTs

- As far as 'views towards ICTs' is concerned, the South African SMME sector views technology, and Internet adoption as enablers to business effectiveness (ITA1); assistants to promoting and advertising their products and services online (ITA2). Furthermore, SMMEs in South Africa trust the Internet and technology in their business process (TIT1); and could count on them for working correctly (TIT2). Moreover, SMMEs views ICTs to be safe for use in their day-to-day business activities (PR1); views them to be safe in that they can deploy their business processes digitally without fear of hackers and computer viruses (PR2); and also views them to be safe for doing business using them (PR3).

What does the growth rate in the South African ICTs mean to the SMME environment?

- According to the findings from the study, the growth rate in the South African ICT Infrastructure to the SMMEs means using the Internet to market their businesses and promote their products or services online (USE1), and taking advantage of the latest technologies to restructure their business operations model (USE2).

How ICTs influence SMMEs in their daily business operation?

- ICTs influence SMMEs to grow and remain competitive (PEU1); to find them user friendly (PEU2 and PEU3); to improve their business processes (PEU4); to make it easier for SMMEs to interact with their customers online and process online orders and payments (PEU5); and also influence them to simplify their business processes (SAR1); as well as to make them receive online compliments or complaints from their customers regarding their products or services (SAR2).

8. LIMITATIONS OF THE STUDY

Just like any other study, the present study also has limitations that the readers should take into consideration, especially when comprehending the findings of this study. Therefore, the current study followed a quantitative approach only and was strictly limited to investigating the impact of using ICTs in SMMEs in South Africa. Data was therefore collected in the CoJ only; however, a combination of other South African cities may have given a different picture (findings) compared to the current one. Furthermore, this study did not use a sample size exceeding 100 due to the costs associated with data collection. Nevertheless, the readers of the present study should exercise caution when realizing the findings of this study.

9. CONCLUSION

The purpose of this study was to investigate how the South African SMME sector views ICTs and what their growth rate implies to them; and also to examine how these technologies influence SMMEs in their daily business operation, while the objective was to investigate the impact of using ICTs in SMMEs in South Africa. Both the purpose and the objective of the study were successfully achieved with the findings from the study where it was observed that ICTs have a substantial impact on improving communication; fastening business processes; satisfying customers; and increasing productivity. Furthermore, ICTs were also observed to have an impact on increasing revenue and minimizing risks; making information accessible; and leading to competitive advantage; as well as contributing to product or service innovation. Alongside this, the growth rates in the South African ICT infrastructure to SMMEs means using the Internet to market their businesses, and promote their products and services online, and also to restructure their business operations models. Overall, the South African SMME sector as a whole exhibits a high level of technology awareness and usage, and what is more encouraging is that the Internet is accessed mostly within their business premises.

10. IMPLICATIONS

The objective of this study was to investigate the impact of using available technologies by the South African SMMEs in their daily business operation. In an attempt to do so, the present study, as with any other study, is therefore successful and has certain implications that should be considered by fellow South African citizens and industry researchers.

10.1. South African citizens

The majority of small operated businesses in South Africa are owned by citizens from other nations. The 92.6 percent (as seen in Table 2) of unfunded SMMEs in South Africa does not come as a surprise as the majority of them are owned by foreign nationals. Therefore, South Africans should start realizing the importance of domestic entrepreneurship and take advantage of the opportunities associated with SMMEs - in particular, the funding opportunities, coupled with market openness for emerging enterprises in order to drive economic growth through youth employment.

10.2. Researchers

More research is needed in order to derive more insights and knowledge within this topic. This also suggests a pluralistic or hybrid research approach (both quantitative and qualitative) to be followed using a larger sample size and different settings in order to refine and expand the current results.

11. LIST OF APPENDIXES

Secondary/Literature Appendixes

Appendix A: South Africa's ICT and Telecommunications Indicators

Indicator	Number
Communications, computer, etc. (% of service imports, BoP)	35.01
ICT service exports (BoP, current US\$)	2.54 billion
ICT service exports (% of service exports, BoP)	16.89
Communications, computer, etc. (% of service exports, BoP)	21.66
Investment in telecoms with private participation (current US\$)	1.24 billion
Mobile-cellular telephone subscriptions	85 197 164
Mobile-cellular telephone subscriptions (per 100 inhabitants)	159 27
Active mobile broadband subscriptions	24 815 991
% Data to Voice	31
Average retail cost of a call on the mobile network (per minute)	R0. 65
% population penetration of communications services (voice services)	90+
Fixed telephone subscriptions	4 131 055
Fixed telephone subscriptions (per 100 people)	8
Fixed broadband subscriptions	2 809 043
Fixed broadband subscriptions (per 100 people)	5
% ADSL to Voice	40
Secure Internet servers	7 143
Secure Internet servers (per 1 million people)	130
Personal computers (per 100 people)	21
Active Internet users	28 580 290
Active Internet users (% of population)	52.6
Internet users (per 100 people)	52
Internet usage frequency (% of every day)	59
Top active social platforms (% of WhatsApp and Facebook)	33 and 30
No. of sound broadcasting licenses (commercial and public)	36
No. of television licenses (community and commercial)	18
No. of active radio stations (commercial, community and Internet)	286
No. of television channels	621
No. of network operators (fixed and mobile)	6
No. of fixed line operators	50+
No. of spectrum licenses issued (fixed, radio dealer and satellite)	4 211
No. of Equipment Type Approval Certificates/Licenses	19 429
No. of mobile connections	85 530 000
Active social media users	13 000 000
Active mobile social users	10 000 000
Industry average in-bundle rate/MB	R0.10

ICT goods imports (% total goods imports) (Telecoms, Audio and Video, Computer and related equipment, ICT goods, etc. (excl. Software)	8.18
High-technology exports (% of manufactured exports)	5.85
Computer, communications and other services (% of commercial service imports)	33.20
ICT service exports (% of service exports)	16.89
Computer, communications and other services (% of commercial service exports)	19.58

Source: Digital Yearbook (2016: 198): World Bank, (2015/16): ICASA, (2015): (2015): Internet Live Stats, (2016): Internet World Stats, (2016), TekCarta (2012): UN, (2016)

Primary Appendixes (Findings from the study)

Appendix B: Business Profile

	Criterion	Percentage
Years of operation	< 1 year	13.6
	2 – 5 years	29.6
	6 – 10 years	28.4
	11 >	28.4
Type of enterprise (Top ten)	Automotive/Motor spares	8.6
	Clothing/Fashion/Boutique	11.1
	Electronics	6.2
	Furniture	7.4
	Hair salon/Barbershop	11.1
	Internet café	6.2
	Restaurant	11.1
	Street vendor	8.6
	Super/Hypermarket	4.9
	Cosmetics	7.4
Received start-up funding/capital	Yes	7.4
	No	92.6
Industry	Automotive/Motor parts	7.4
	Entertainment	1.2
	Healthcare	2.5
	Hospitality	1.2
	Manufacturing	2.5
	Retail and Wholesale	34.6
	Telecoms	14.8
	Services	14.8
	Informal	8.6
	Restaurants	11.1
	Households	1.2
Registration status	Registered	77.8
	Not registered	16.0
	Registration in progress	3.7
	Still to think about it	2.5
Enterprise size	Strictly 1 person	21.0
	2 - 10 employees	64.2
	11 - 20 employees	3.7
	21 - 50 employees	6.2

	51 - 100 employees	0.0
	101 – 150 employees	1.2
	151 -200 employees	3.7
Respondents position	Founder/Owner	34.6
	CEO	0.0
	Manager/Director	32.1
	Regular employee	32.1
	Other	1.2

Appendix C: Views and Perceptions towards technology and the Internet

Frequency distribution table				Questionnaire items	
n = 81					
Mean	% Disagree Totals	% Neutral	% Agree Total	Description	Code
4.14	4.94	5.0	88.9	Using latest technologies, coupled with the Internet would enable my business to be more effective.	ITA1
4.19	6.2	3.7	90.1	Using the Internet would help us to promote and advertise our product or service online.	ITA2
3.91	7.4	14.8	77.8	I generally trust the Internet and technology, especially in our business processes.	TIT1
3.86	7.4	17.3	75.3	I could count on technology for working correctly.	TIT2
3.96	13.6	4.9	81.5	I would use the Internet to market our business and promote our product or service online.	USE1
3.83	14.8	13.6	71.6	I would take advantage of the latest technologies to restructure our business operations model.	USE2
2.60	53.1	27.2	19.8	The decision to use the Internet and technology in our day-to-day business operation is risky.	PR1
2.86	43.2	25.9	30.9	I am scared of deploying my business processes digitally because of hackers and computer viruses.	PR2
2.44	64.2	17.3	18.5	I don't think it's safe to do business on the Internet or using technology (Trust issues).	PR3
3.88	2.4	30.9	66.7	Using the Internet and latest technologies have helped my business grow and remain competitive.	PEU1
3.88	3.7	29.6	66.7	Using the latest technological devices, including computer technologies is simple.	PEU2
3.80	6.1	30.9	63.0	I find it easy to use the Internet and latest technologies in my business.	PEU3
3.91	3.7	29.6	66.7	I enjoy using the Internet and relevant technologies to improve my business processes.	PEU4
3.88	2.4	30.9	66.7	The Internet makes it easy for us to interact with our customers and process online orders and payments.	PEU5
3.25	17.3	45.7	37.0	The Internet privacy and security level of business information or confidential data published via the Internet are safe.	PP1
3.44	9.9	46.9	43.2	The Internet does not share any private information to anyone unless permitted to do so.	PP2
3.80	3.7	34.6	61.7	We are so happy to be doing business online and using latest technologies to simplify our business processes.	SAR1

3.70	3.7	29.6	63.0	We are in favour of receiving online compliments or complaints from our customers regarding our product or service.	SAR2
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Appendix D: Cronbach's alpha for the Sub-Scales

Cronbach's Alpha																		
	0,832																	
Cronbach's Alpha with missing item																		
	Adoption		Trust		Use intens..		Perceived Risk			Perceived Ease of Use					Percieved Privacy		Structured Assurance	
	ITA1	ITA2	TIT1	TIT2	USE1	USE2	PR1	PR2	PR3	PEU1	PEU2	PEU3	PEU4	PEU5	PP1	PP2	SAR1	SAR2
	0,814	0,812	0,810	0,813	0,817	0,820	0,861	0,861	0,860	0,812	0,810	0,809	0,805	0,814	0,825	0,823	0,810	0,825
Split-half																		
Halves	0,574																	
OddEven	0,928																	

Excel 2013 Output, Real Stats

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Technological creativity, self-efficacy and entrepreneurial career choice: A case of South African University of Technology students

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ABSTRACT

The self-efficacy literature which has gained currency in explaining entrepreneurship intentions, does not seem to give sufficient credence to the significance of technological creativity in explicating entrepreneurial behaviour. Yet in poverty ridden emerging economies like that of South Africa where the dominance of replicative entrepreneurship tends to generate survivalist and necessity driven entrepreneurship devoid of innovation, the contribution of technological creativity to sustainable entrepreneurship and venture creation cannot be taken for granted. To breach this research gap, this study explores the impact of technological creativity and self-efficacy on the entrepreneurship intentions of prospective entrepreneurs (university entrepreneurship students) in an agile, efficiency-driven economy. Drawing on a quantitative approach and survey design, a questionnaire was administered on 130 undergraduate students at a South African university of Technology enrolled for an entrepreneurship course, to determine the influence of technological creativity and self-efficacy on their entrepreneurship intentions. The results revealed that there are positive, statistically significant correlations between technological creativity and self-efficacy; self-efficacy and entrepreneurial intentions as well as technological creativity and entrepreneurship intention. The outcome of the study underscores the significance of considering techno-cognitive aspects like technological creativity and self-efficacy when grooming future entrepreneurs.

Keywords: Entrepreneurship intention, self-efficacy, technological creativity, university of technology, South Africa

1. INTRODUCTION

There is surging consensus on the centrality of creativity in the understanding entrepreneurship in the contemporary economic settings (Fillis & Rentschler, 2010). In fact, Gemmill, Boland, and Kolb (2012) contend that entrepreneurship is an act of creativity. This interpretation is supported by Nieuwenhuizen and Groenewald (n.d.:73) who characterise creativity as "...creating something new, for example, creating a new business by developing a new product or service, building an organisation by financial manipulation, reshaping an existing business, creating a business that will exist on its own, and a financial fortune as testimony to the entrepreneur's skill".

The significance of creativity in emerging economies like South Africa where unemployment, poverty and social exclusion rates are rife cannot be under-estimated. For instance, Mihai-Yiannaki and Savvides (2012) assert that the application of creativity in business lays the foundation for huge returns on investment, transnational competitiveness and industrial revolutions. It is in this spirit that the immense contribution of creativity to socio-economic transformation and economic re-generation should be conceived and understood especially for the South African economy reeling under the quadruple challenges of poverty, unemployment, social inequality and social deprivation.

In addition, in the modern technology-driven world, the effectiveness of creativity is hinged on the acquisition and positioning of appropriate cutting-edge technology that enhances the chances of business enterprises' survival (Rambe, Ndofirepi & Dzansi, 2015). Arguably it is technological creativity, an under-researched variant of creativity, which drives entrepreneurship behaviour in modern economies. This concept relates to "the willingness on one's part to experiment with new ideas with the objective of solving everyday problems" (Rambe et al., 2015:577). Preliminary research results provide evidence of a positive link between technological creativity and entrepreneurship intentions (Rambe et al., 2016; Ndofirepi, 2016). Using the Ajzen's Theory of Planned Behaviour as a guiding framework, Rambe et al. (2016) observed that technological creativity has a significant and positive correlation with the entrepreneurship intention as well as the antecedents of entrepreneurship intention. Their findings

seem to corroborate those from previous studies, which link general creativity with entrepreneurship intention (Berglund & Wennberg, 2006; Zampetakis and Moustakis, 2006; Hamidi, Wennberg & Berglund, 2008; Zampetakis, 2008; Zampetakis, Gotsi & Andriopoulos, 2011). However, what remains speculative and conclusive is the mechanism through which technological creativity impacts on entrepreneurship intention. Since boldness and self-belief to experiment with ideas is integral to successful ideas, the current researchers hoped to postulate the effect that technological creativity may have on self-efficacy, and subsequently one's willingness to engage in entrepreneurship in the future. In the compelling evidence on this relationship, the current study sought to breach this gap.

To unravel the association among the technological creativity, self-efficacy and entrepreneurship intentions of prospective entrepreneurs, the current study employed students enrolled for an entrepreneurship course at a South African University of Technology. While both technological creativity and self-efficacy are often separately linked to entrepreneurship intentions in some studies, no empirical study to our knowledge explicitly sought to examine the correlations between these three variables, hence this study. The study, therefore, seek to address the following objectives, namely,

1. Determine whether technological creativity, self-efficacy and entrepreneurship intention are correlated.
2. Ascertain whether self-efficacy mediates the relationship between technological creativity and entrepreneurship intention.

The rest of the paper is structured as follows: First, the extant literature on self-efficacy, technological creativity and entrepreneurship intention is explored. This is followed by a description of the research methodology used in the study. The findings are discussed and the implications for practice and theory are deliberated.

2. LITERATURE REVIEW

This literature review discusses the main concepts that foreground this study; namely, technological creativity, self-efficacy, entrepreneurship intention and the moderating/mediating role of entrepreneurship. These concepts are discussed in subsequent sections of this study.

2.1. Technological creativity

According to Rambe et al. (2015), the concept of technological creativity is a complex amalgam of creativity and technological innovations. The term hence is a derivation from creativity which means the ability to come with new ideas (Amabile, 2012) and technological mind-set which emphasises orientation towards useful innovations (Johnson, 2001) and complex business-informed problem solving. Hence, the authors operationalize technological creativity as the ability to come up with new ideas and resolve complex technical-oriented business problems whose consequence is the development of useful innovations. The distinguishing characteristic of technological creativity from general creativity is the former's functional purpose (Cropley, 2010). In an organisational context, technological creativity generates business value through producing innovations and inventions that solve society's complex challenges. In the contemporary business environment where entrepreneurs encounter rapidly evolving needs and forms of competition, technological creativity plays a key role in the strategic performance and survival of firms (Nabergoj, 2014). Through the new products, services and technology that technological creativity generates, market value of commercial entities is augmented, their competitive edge and chances of survival are increased. According to Fillis and Rentshler (2010), creativity should be concerned with the continued generation of alternative solutions to problems and identification of new opportunities as a competitive tool.

2.2. Self-efficacy

Self-efficacy relates to self-belief and confidence in one's abilities to pursue and accomplish a particular course of actions (Sweida and Reichard, 2013; Bullough, Renko and Myatt, 2014; Bignotti, 2016). Urban, Van Vuuren and Owen (2008) draws parallels between Bandura's self-efficacy concept and Ajzen's perceived behavioural control concept and Shapero and Sokol's perceived feasibility concept.

In spite of the potpourri of terms that describe self-efficacy, the overriding issue is this term's preoccupation with an individual's projection of his/her capacity to pursue and successfully accomplish a course of action in social life or in the business world. In the entrepreneurship context, self-efficacy comprises an important part of the process of deliberating those tasks that relate to the initiation and development of new ventures (Luis & Campo, 2010). Hence, intentional or pre-planned activities like initiating a new business venture, launching a new product or entering a new market depends on one's self-efficacy. Laguna (2013) argues that the strength of one's entrepreneurial self-efficacy determines the degree to which one intends to engage in entrepreneurship and thus separates entrepreneurs and non-entrepreneurs. Individuals with high self-efficacy levels have daring tendencies and are inclined towards performing challenging tasks (Bandura & Walter, 1970). On the other hand, those with low level of self-efficacy shy away from risky ventures. The ambiguity and risk associated with the contemporary business realm creates an environment that only those with high self-belief and confidence in their abilities can withstand (Dinis, Paço, Ferreira, Raposo, & Rodrigues, 2013). Given that the modern business environment demands a greater supply of current and future innovation and growth-oriented entrepreneurs (Griffiths, Kickul, Bacq, & Terjesen, 2012), a high level of entrepreneurial self-efficacy cannot be insulated from the formation of successful businesses. Therefore, it would be interesting to ascertain the level of entrepreneurial self-efficacy of students undergoing entrepreneurship education who have a choice to seek employment or to incubate their own ventures. We note that entrepreneurial self-efficacy is a quality that can be modified through entrepreneurship education and one's creativity levels.

2.3. Entrepreneurship intention

The term entrepreneurship intention relates to one's willingness to engage in a business start-up or new venture creation in the future (Krueger, Reilly, & Carsrud, 2000; Uddin & Bose, 2012). Whether one eventually engages in that particular behaviour is of no consequence. Generally, past studies reveal that people exhibiting strong intentions to engage in a particular behaviour tend to engage in the actual entrepreneurship behaviour (Fayolle, Liñán, & Moriano, 2014; Liñán & Fayolle, 2015). For instance, some previous studies show evidence that entrepreneurial intentions account for 30% of the variance in actual entrepreneurship behaviour (Gelderen, Brand, Poutsma, & Gils, 2008; Liñán & Chen, 2009). Other studies from other realms like voting behaviour, birth control and consumer behaviour confirm the significance of intention in predicting behaviour (Ajzen, 2015). To this end, intentions are the single most important driver of behaviour.

The predominance of intent as a predictor of planned activity or behaviour is important to educators and socio-economic policy-makers in South Africa. The significantly high unemployment rate (StatsSA, 2014) as well as the failure of many new start-up businesses calls for deliberate policy measures to prop youths' willingness to engage in entrepreneurship. To enhance the effect of such interventions, it would be essential to understand the factors shaping an individual's entrepreneurial intentions. A number of theories have been put forward to explain intentions, the most prominent and widely applied being Ajzen's Theory of Planned Behaviour (Ajzen, 1991), Shapero and Sokol's Theory of Entrepreneurial Event and Bird's Theory of Entrepreneurial Ideas (Bird, 1988, 2015). For Ajzen (1991), intention and subsequently behaviour are an outcome of attitude, subjective norms and perceived behavioural control. Other exogenous and endogenous variables may moderate/mediate the effect of these preceding factors. Though using different terminology, Shapero and Sokol's theory suggest that intentions are shaped by perceived desirability, feasibility and propensity to act. Lastly, Bird's theory postulates that entrepreneurship intentions arise from the interaction of rational and intuitive thoughts within various personal and social-political contexts. Both Shapero and Sokol's perceived feasibility and Ajzen's perceived behavioural control concepts are often equated and used interchangeably with self-efficacy. Apart from that, they are widely regarded as potent antecedents of entrepreneurship intention and behaviour.

While the models highlighted in the preceding paragraph are comprehensive in explaining intentions, it would essential to understand other factors that shape intention in order to enhance current interventions as well as avoid overlooking other factors that may shape intentions. Hence, we propose that technological creativity can directly or indirectly shape entrepreneurship intention.

2.4. Relationship between technological creativity, self-efficacy and entrepreneurship intention

A survey of extant literature reveals that the relationships between creativity and entrepreneurship intention as well as self-efficacy and entrepreneurship intention have been explored separately. Hamidi et al. (2008) suggest that the creativity levels of tertiary education students are positively correlated to entrepreneurship intentions. This finding is corroborated by Zampetakis and Moustakis (2006) whose study of selected undergraduate students from two Greek universities: the Technical University of Crete (TUC) and the Technological Education Institute of Crete (TEI) revealed that students' self-perception of creativity and a family environment that promotes creative thinking can predict increased levels of entrepreneurial intention. A later study conducted by Zampetakis et al. (2011) on business school students at a British university located in England revealed that whilst creativity was positively correlated to entrepreneurship intention, entrepreneurship course attendance moderates the relationship. In the South African context, to our knowledge, Ndfirepi (2016) has undertaken a study that links technological creativity to entrepreneurship intention.

Numerous studies in both the developed and developing world also provide evidence of a robust relationship between self-efficacy and entrepreneurship intention (Cardon, 2010; Luis & Campo, 2010; Bullough et al., 2014; Malebana, 2014; Malebana & Swanepoel, 2015). Since entrepreneurial self-efficacy (ESE) is seen as having the potential to modify a person's belief in their ability to successfully initiate and establish a new business venture, it is logical to estimate a positive relation between the construct and entrepreneurship intention. A study conducted by Luis and Campo (2010) on undergraduate students in Barranquilla-Colombia revealed a positive relationship between entrepreneurial self-efficacy and entrepreneurship intention. Urban et al. (2008) confirm self-efficacy as an important antecedent to entrepreneurship intention.

Although some research has been carried out on the separate relationships between technological creativity and entrepreneurship intention on one hand, as well as self-efficacy and entrepreneurship intention on the other, no single study exists which adequately covers the linkage between the three variables in a single study in the South African context. Only one recent study by Biraglia and Kadile (2017), which targeted home brewers in the United States, addressed self-efficacy's mediation of the impact of general creativity on entrepreneurship intention. The results from the study revealed that, indeed, the relationship between creativity and entrepreneurial intentions is mediated by entrepreneurial self-efficacy. To expand on this, we sought to ascertain whether the self-efficacy of students from a University of Technology in South Africa mediated the effect of their levels of technological creativity on entrepreneurship intention.

3. RESEARCH DESIGN

The study adopted a quantitative survey design. A survey design is ideal for the testing of associative and predictive relationships between independent variables and dependent variables. It also has a key advantage of facilitating the gathering of precise self-reported data required to meet the research aim.

3.1. Target population

The target population for this study were students from various faculties of a University of Technology in South Africa. These students had been exposed to an introductory course in entrepreneurship and therefore were conceived to possess wider career options. The reason behind having individual students as the unit of analysis was to establish how the individuals differed on technological creativity, self-efficacy and entrepreneurship intention. To the extent that the study was not testing actual engagement in entrepreneurship behaviour but rather entrepreneurship intentions of prospective entrepreneurs, university students were considered an ideal target population of the study. Thus, active entrepreneurs were not suitable candidates for this study.

3.5. Sampling plan

A sample size of 200 was considered to satisfy the condition of normal distribution as well as to give allowance for non-response. Saunders et al. (2009) suggest that a data-set of 30 elements can be normally distributed and, therefore, yields results that are generalizable. Of the initial sample of 200

students, 70 students declined to participate in the study and did not complete the questionnaire. The sample elements were randomly selected using an online random number generator from class lists, which constituted the sampling frame. The sampling frames comprised students from different fields of study including business, applied sciences, humanities and engineering who enrolled from the entrepreneurship course.

Prior to the commencement of the study, ethical clearance was sought from the Institution Office of the participating University of Technology. Self-administered questionnaires were then distributed to respondents during lectures assisted by some lecturers. The questionnaires were then collected upon their completion by the respondents.

3.6. Research instrument

A structured questionnaire was used, with the first section (i.e., Section A) focusing on demographic variables on a nominal scale. Section B had Likert-scale items with scores ranging from 1 to 5 (strongly disagree to strongly agree). The measures for technological creativity were adapted from Ndofirepi's (2016) scale. Entrepreneurship intention measures were adapted from Linan and Chen (2009), while the last section on self-efficacy was borrowed from Forbes (2005).

3.7. Reliability and validity measures

The reliability of the three continuous variables was tested using Cronbach's alpha test. The results are presented in Table 2.

Table 1: Reliability Test results

Variable	Number of items	Cronbach's alpha value
Technological creativity	12	0.881
Self-efficacy	16	0.914
Entrepreneurship intention	6	0.926

According to George and Mallery (2016), an alpha value greater than 0.8 is good while one greater than 0.9 is excellent. Hence, the reliability test results for the current study ranged from good to excellent. Even though prevalidated scales were used, we tested the instrument for construct validity using exploratory factor analysis. The Kaiser-Meyer-Olkin (KMO) measure of sampling and Bartlett's test of sphericity were conducted to ascertain the appropriateness of the data for factor analysis. The KMO measure of sampling adequacy of 0.841 derived was above the minimum accepted level of 0.5 while the result of the Bartlett's test of sphericity i.e. $\chi^2(561) = 2654.655, p < 0.000$ suggests that the pattern of correlation of the items on the scales were compact and could yield reliable factors. An orthogonal rotation (varimax) was performed on the 34 items of the measuring scale using principal component analysis as the extraction method. Using the Kaiser criterion to determine the number of factors in the scale to retain, only three factors emerged (technological creativity, self-efficacy and entrepreneurship intention) and these explained 52.934 % of the variance. Thus, the sufficient loading of all 34 items of the scale exhibited convergent validity. Table 3 shows the factor loadings after rotation.

Table 2: Exploratory Factor Analysis results-Rotated Component Matrix^a

	Component		
	1	2	3
Ready to do anything to become an entrepreneur?			0.694
Professional goal is to become an entrepreneur?			0.843
Will make every effort to start and run own business?			0.879
Determined to create a business in the future?			0.900
Have a serious thought of starting a business?			0.879
Have a firm intention of starting a business someday?			0.827
Believe can identify opportunities	0.630		
Believe can create ways to improve business and products	0.635		
Believe can create products and services that meet needs	0.675		
Believe can successfully develop new business	0.711		
Believe can think creatively	0.738		
Believe can inspire others	0.667		
Believe can conduct market analysis	0.723		
Believe can formulate set of actions	0.680		
Believe can identify financing opportunities for business	0.603		
Believe can identify good management team	0.671		
Believe can build good management team	0.714		
Believe can build business relationships	0.633		
Believe can tolerate unexpected change	0.652		
Believe can persist in the face of setbacks	0.621		
Believe can work productively under pressure	0.560		
Believe can successfully start own business			
I usually consider more than one solution to address a problem in my day to day activities		0.499	
I enjoy trying out new ideas in my daily activities		0.524	
I purposefully seek problems where nobody else sees any		0.577	
I always adopt new ways of doing things even if I am not sure about the outcome		0.719	
I am willing to try an original, new technology supported method even if there is a chance it could fail		0.736	
I have purposefully mastered some creativity techniques, e.g. brainstorming		0.756	
I easily make connections between trends in the technological environment and opportunities for improvement in my life		0.727	
When brainstorming for ideas I am quick to air my view that something will not be practical/plausible		0.727	

I like to modify and adapt my daily routines in line with new technology	0.716
I am continually looking for new technology driven ideas to make life easier	0.715
Once I have developed a technology supported plan I am prepared to stick to it	0.619
I continuously look at old problems with a fresh mind-set guided by latest technology developments	0.628

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

a. Rotation converged in 5 iterations.

3.8. Data analysis

Data analysis was conducted using Statistical Package for the Social Sciences (SPSS) version 23. Both descriptive techniques and inferential statistics were applied. To realise the research objectives, the following tests were conducted: frequency, percentage, Pearson's correlation test, regression analysis and Sobel's mediation effect test.

4. RESULTS

Table 3: Distribution of Respondents by Qualification

Highest qualification level	Frequency	Percent	Cum.
Tertiary certificate	11	8.46	8.46
Diploma/degree	114	87.69	96.15
Other	5	3.85	100
Total	130	100	

As shown in Table 3, most of the respondent (87.69%) at least had a degree or diploma qualification. The remainder had lower qualifications.

Table 4: Distribution of respondents by field of study

Current field of study	Frequency	Percent	Cum.
Applied sciences	3	2.31	2.31
Business	111	85.38	87.69
Humanities	5	3.85	91.54
Engineering	3	2.31	93.85
Other	8	6.15	100
Total	130	100	

Table 4 illustrates that the majority of respondents (85.38%) in this study came from business course. The remainder were drawn from Humanities, Business studies and Engineering.

Table 5: Distribution of Respondents by Marital Status

Marital status	Frequency	Percent	Cum.
never married	73	56.15	56.15
Married	46	35.38	91.54
divored/separated	10	7.69	99.23
Widowed	1	0.77	100
Total	130	100	

The statistics shown on Table 5 reveal that the majority of respondents (74.62%), as represented by the total of “never married”, “divorced” and “widowed”, were single. Only 35.38% were married.

Table 6: Distribution of Respondents by Age Group

Age	Frequency	Percent	Cum.
below 21	5	3.85	3.85
btwn 21-30	58	44.62	48.46
btwn 31-40	52	40	88.46
btwn 41-50	14	10.77	99.23
More than 51 years	1	0.77	100
Total		130	

Table 6 shows that the majority of respondents were above 21 years. The 21-30 age group constituted 45% of the total sample while the 31-40 age group comprised 40% of this sample.

Table 7: Distribution of Respondents by Qualification

Gender	Frequency	Percent	Cum.
Male	54	41.54	41.54
Female	76	58.46	100
Total	130		

Table 7 shows that there was an uneven distribution of respondents based on gender. Females constituted the majority (58.46%) while males made up the remainder (41.54%).

The results of the Pearson’s correlation test reveal that all the three variables were positively and significantly correlated. The correlation between technological creativity and self-efficacy was moderate and positive [$r=0.372$, $n=130$, $p<0.000$]; that between technological creativity and entrepreneurship intention was weak and positive [$r=0.195$, $n=130$, $p>0.035$]; and between self-efficacy and entrepreneurship intention was moderate and positive [$r=0.461$, $n=130$, $p<0.000$].

Table 8: Correlations Matrix

		Self-efficacy	Technological creativity	Entrepreneurship intention
Self-efficacy	Pearson Correlation	1	.372**	.461**
	Sig. (2-tailed)		.000	.000
	N	130	130	130
Technological creativity	Pearson Correlation	.372**	1	.195
	Sig. (2-tailed)	.000		.035
	N	130	130	130
Entrepreneurship intention	Pearson Correlation	.461**	.195	1
	Sig. (2-tailed)	.000	.035	
	N	130	130	130

** . Correlation is significant at the 0.01 level (2-tailed).

Regression analysis was used to investigate the hypothesis that self-efficacy mediates the effect of technological creativity on entrepreneurship intention. Preliminary analyses were performed to ensure

no violation of the assumptions of normality, linearity and homoscedasticity. Results indicated that technological creativity was a significant predictor of entrepreneurship intention, $b = 0.161$, $SE = 0.077$, $p < 0.05$, and that self-efficacy was a significant predictor of entrepreneurship intention, $b = 0.329$, $SE = 0.064$, $p < 0.05$. These results support the mediational hypothesis. Technological creativity was no longer a significant predictor of entrepreneurship intention after controlling for the mediator, self-efficacy, $b = 0.25$, $SE = 0.075$, $p = 0.734$, not significant, consistent with full mediation. Approximately 47.2% of the variance in entrepreneurship intention was accounted for by the predictors ($R = 0.472$). The indirect effect was tested using a Sobel test and confirmed the full mediation ($z = 3.44$, $p = 0.000$).

5. DISCUSSION

This study sought to assess the relationships among technological creativity, self-efficacy and entrepreneurship intention amongst university students. Our results confirm positive and significant correlations between technological creativity and entrepreneurship intentions; technological creativity and self-efficacy; as well as self-efficacy and entrepreneurship intention. However, the strength of the linkages ranged from weak to moderate. The findings on the technological creativity-entrepreneurship intention link build on entrepreneurship intention research which seeks to infuse cognitive processes affecting entrepreneurship behaviour through its demonstration of the link between these three variables (Hamidi et al., 2008; Zampetakis, 2008; Fillis and Rentschler, 2010; Lourenço and Jayawarna, 2011; Zampetakis et al., 2011; Chen, 2012; Olim, Mota, & Silva, n.d.; Sun, 2012). Furthermore, it adds weight to findings from the previous studies that confirm the positive relationship between self-efficacy and entrepreneurship intentions (Alvarez, DeNoble, & Jung, 2006; Cardon, 2010; Luis & Campo, 2010; Arora, Haynie, & Laurence, 2013; Braun, 2014; Bullough et al., 2014).

The second objective was to ascertain whether self-efficacy mediated the relationship between technological creativity. The results derived proved that self-efficacy fully mediates the mentioned relationship. This finding is consistent with Biraglia and Kadile's (2017) revelation that self-efficacy accounts for a significant amount of variance in the relationship between technological creativity and entrepreneurship intention. Besides proving that individuals need to be self-efficacious to voluntarily engage in entrepreneurial careers, their exclusive possession of creative qualities may not be enough to remove learners' perception of barriers and risks of entrepreneurship. Apart from this, the results support Social Learning Theory's claim that self-efficacy is key to all intentional behavior. Lastly, the findings from the study insinuate that as an independent concept, technological creativity is a weak predictor of entrepreneurship intention. Therefore, technologically creative individuals need to hold strong beliefs in their competencies and capacity as precursors to demonstrating willingness to engage in entrepreneurship.

6. CONCLUSIONS AND MANAGERIAL IMPLICATIONS

Considered collectively, the findings of this study highlight the need to integrate cognitive variables like technological creativity in intention-based models of entrepreneurship. Evidence from the current study and extant literature underscore the fact that such cognitive factors are key to new venture creation. The implication for practice is that entrepreneurship educators in higher education institutions should incorporate technological creativity and stimulation of self-efficacy in their curricular programmes if they are to sustainably nurture potential entrepreneurs. Such concepts would be critical to nurturing the risk-propensity, tolerance of ambiguity, locus of control and need for achievement, which are fundamental to new venture creation.

The preceding results give pointers on the areas which policy-makers, entrepreneurship educators and others interested in the development of future entrepreneurs need to focus on. Education and training measures, thus, need to employ teaching and learning methods that stimulates the creativity and self-efficacy of learners as these contribute to student willingness to engage in entrepreneurship in the future. Arguably, the development of such qualities in learners creates individuals who perceive fewer barriers to entrepreneurship and are more inclined to experiment with business ideas and opportunities.

7. LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

Given the small sample size of students from a University of Technology in South Africa, the findings might not be transferable to higher education students at different institutions. Thus, future studies may need to integrate learners from comparable colleges in their investigation to augment the representativeness of the sample. Apart from that, most of the respondents (85.38%) were from the Faculty of Management while the technical and other areas were underrepresented in the sample even though these disciplines also mentor prospective entrepreneurs. Given the aforesaid deficiency, we suggest that prospective studies should thus use comprehensive samples of respondents, reflecting the various programmes of study that learners are undertaking. Lastly, the purely quantitative nature of the study may have missed the more revealing and richer qualitative data from the students, which would provide explanations and motivations of why certain students responded in a particular way to the questions covering the concepts investigated. Accordingly, we propose that future studies would benefit from considering a mixed-method approach that would avail more inclusive explanatory data and enhance the depth of the research outcomes.

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Impact of Public Funding on SMMEs' Acquisition of Technology: A Hair Salon Business Perspective

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ABSTRACT

Despite the avalanche of literature that identifies finance as a main obstacle to the survival of small, micro and medium enterprises (SMMEs), there is paucity of evidence on the exact impact of public funding on the acquisition of technology by SMMEs. Yet the appropriation of poor, outdated and unsophisticated technology is often conceived as a significant barrier to the thriving and sustainability of SMMEs. To breach the aforementioned research gap, the current study examined the influence of financing on the adoption of technology by hair salon SMMEs, which tend to be discriminated against by public funding institutions and agencies in South Africa. The study drew on a quantitative approach and survey research design, in which 150 structured questionnaires were administered to hair salon SMMEs in the Mangaung Metropolitan Area in the Free State. A total of 110 questionnaires were correctly completed and returned, representing a response rate of 73%. The findings suggest that the prime sources of public funding for hair salon businesses are National Youth Development Agency and Small Enterprise Development Agency. The results also demonstrate that public funding has a negative and significant impact on technology acquisition, perhaps suggesting the complexity of debt financing and the exorbitant interest rates charged on principals borrowed by foreign nationals. The study recommends the quintessence of relying on inexpensive ubiquitous technologies (e.g. social media platforms), gradual adoption of complex technologies and personal savings before resorting to external borrowing.

Keywords: Public funding; Technology acquisition

1. INTRODUCTION

The current study examines the impact of public funding on the technology acquisition of small, micro and medium enterprises (SMMEs) particularly Afro hair salons in the Mangaung Metropolitan Area, Free State Province in South Africa. In South Africa, a small business is defined as a separate and distinct business entity, including co-operative enterprises and non-governmental organisation that is managed by one owner or manager (National Credit Regulator [NCR], 2011:24). Afro hair salons fall under SMMEs because they are distinct entities independently owned by one or more owners.

The importance of examining the impact of public funding on technological acquisition of SMMEs of hair salons arises from the fact that since most small enterprises - especially foreign owned ones - tend to be excluded from public funding. The reasons for funding institutions' exclusion of hair salon SMMEs include: their consideration by such institutions as high risk borrowers due to the diverse nationalities of their owner/managers (Quaye, 2011; Maloka, 2013), their lack of collateral (Badulescu, 2011; Quaye, 2011), lack of an established borrowing history (Katwalo & Mwititi, 2010; Badulescu, 2011) and the high volatility of SMME income, which makes loan repayments uncertain (Obamuyi, 2011).

The need to explore the impact of public funding on technology acquisition also arises from the limited technological capabilities of most SMMEs, especially those in the hair salon sector. While SMME owner/managers are compelled to use technology to successfully operate in their enterprises, most of their staff are technologically challenged, busy or do not have time to attend technology training (Hanclova, Rozehnal, Ministr & Tvrđikova, 2015). Apart from acute skill shortages, SMMEs considerably lack the critical skills and knowledge required to use technology effectively (Hanclova et al., 2015). Perhaps this dearth of technological and technical skills explains the limited use of technology such as blowers, hair dryers, relaxer chemicals and computers in most hair salon SMMEs in South Africa. In view of the aforementioned limitations, the current study seeks to address the following research question:

What is the impact of public funding on the level of technology acquisition of Afro hair salons in the MMA?

The rest of the paper is organised as follows: a problem background is first presented, the problem statement is then provided, the literature review is provided next, after which the methodology and data are presented and discussed. The implications for future research are noted and a conclusion is provided.

2. PROBLEM BACKGROUND

This study explores the impact of public funding on technological acquisition of hair salon businesses. In the hairdressing and beauty industries, it is very important to keep abreast of the latest technology and developments. Successful salons employ the latest computer technology to streamline day-to-day administration (AIAS, 2012). In every corner of the beauty world, tools and technology are being developed at a rapid rate and the key for any hairdresser or beautician looking to grow their business is to stay informed. Trade shows, industry websites and courses are just a few ways to ensure those in the industry remain up to date on the latest industry developments (AIAS, 2012).

The lack or inaccessibility of funding for the acquisition of technology is a serious constraint for small businesses as it requires additional inflows of capital to support expansion and growth (Nieuwenhuizen & Groenewald, 2004). Financial support is crucial for hair salon operations such as the acquisition of hair dryers, relaxers, straighteners, hair pieces and the payment of employee salaries. Even the management of the business is often determined by the availability of finance, an absence of which is often reported as the major obstacle to business success (Brink & Cant, 2003). Yet, many hair salons struggle to get finance for various reasons, such as lack of reliable financial records and inflexible business locations, which make tracking after extending loans difficult. More so, most of these businesses are not registered and have a high temptation to evade tax payment, which makes lending them money risky. Technology acquisition and the maintenance of websites are very complex and requires a great deal of money, but such financial support is acutely lacking.

Previous literature shows that financial growth matters for the successful performance of any firm (Stulz, 2000; Kapopoulos & Lazaretou, 2005; Fafchamps & Schundeln, 2013). Some studies have shown that SMMEs in developing countries have problems in accessing funding (North, Baldock & Ekanem, 2010). This failure to access funding arises from the fact that most SMMEs are considered as not financially viable, which makes it difficult for them to apply for funding as owner/manager usually cannot qualify for loans owing to their businesses often lacking audited financial statements and bank accounts. Furthermore, the start-up capital is very difficult to accumulate for one to start trading and fund growth.

This study's preoccupation with funding options also stems from the ambivalence about what constitutes public support for SMME development. For instance, although lack of government support is highlighted as an obstacle to the local growth of most hair salons, the nature of such support, whether financial or in the form of business skills, is never clarified in most studies. Mbonyane's (2006) exploration of factors that lead to the failure of small businesses indicates that the nature of South African government support has been the complicated and there is an accusation that government support has been piecemeal and lacking coherence. It is also argued that there has been limited financial and business support, a lack of coherent financial policies and procedures from national government, and provisions by multi-agency provisions have done little to assist small business.

The lack of financial support to finance technology acquisitions is very disappointing - especially in view of the critical role that small, micro and medium enterprises (SMMEs) play in economic development, employment creation and income generation (Harash et al., 2013; Harash et al., 2014). Financial access is important for SMMEs' growth and development, and the availability of external finance is positively associated with growth and productivity. Yet, access to financial services remains a difficulty for most SMMEs' growth and development.

3. PROBLEM STATEMENT

Although there is compelling evidence that the use of modern state-of-the-art technology contributes directly to the improved performance (increased sales, profitability increased return on investment) of SMMEs (Duan, Xiaojie Han & Yang, 2009; Kaufman, 2013 & Labonte, 2015), most of these small businesses such as hair salons are relying on outdated and inefficient technologies (Mpiti & Rambe, 2016), due to the lack of finance (Fatoki, 2014; Mpiti & Rambe, 2017). While the provision of sufficient funding is often conceived as a critical contributor to the success of SMMEs, the same way technology use is integral to the success of small firms, what remains under-explored in literature is the contribution of public funding in particular to the acquisition of technology by these firms.

4. LITERATURE REVIEW

4.1. Public funding

Government support/public funding provides a range of direct financial assistance packages to the SMMEs which include subsidies, grants, tax benefits such as tax rebates and deductions, which play an important role in assisting the growth of SMMEs (Xiang & Worthington, 2013). For Storey (2003) public funding is defined as the various means through which government intervenes to fill/close the funding gap left by private financing (Storey, 2003). However, Xiang and Worthington (2013) argue that the role of the government is to ease the SMME financial constraints by helping them to generate additional cash flows or assisting them in obtaining finance. There are institutions that help SMMEs in obtaining financial assistance.

From an enabler perspective, the task or role of the government/public funding is to provide financial assistance to the SMMEs to improve their production facilities and working environments (Xiang & Worthington, 2013). They elaborate that the government also assists SMMEs with the education and training critical to improving and also identifying, evaluating and investigating projects or activities for the expansion of their enterprises (Xiang & Worthington, 2013). Government justifies providing support to SMMEs in various ways – that SMMEs are generators of employment, are critical vehicles for poverty reduction, and serve as mechanism for employment creation.

In the South African context, the Department of Trade and Industry (DTI) has identified various supporting programmes, which are: Khula Enterprise Development Fund (Khula), the National Youth Development Agency (NYDA), the Small Enterprise Development Agency (Seda) and the Tsumisano Trust (NCR, 2011:38). Khula Enterprise Development Fund is government's small business finance organisation that was established in 1996 to help fund small businesses/enterprises. Khula is a wholesale finance institution which operates across the public and private sectors through a network of channels that supply funding to small business. According to Mutezo (2005), Khula does not provide financial assistance directly to SMMEs/entrepreneurs, but this wholesale financier is responsible for financing SMMEs through various delivery mechanisms including commercial banks, retail financing intermediaries (RFIs) and lastly the micro credit outlets (MCOs). The financing that is offered by Khula includes credit guarantee schemes and loans. Khula provides guarantees to registered commercial banks and other private sector financial institutions to help finance the SMME sector (Mutezo, 2005). Hence, as Rwigema and Venter (2004: 396) note, "These guarantees serve as collateral for SMMEs, and are based on a risk sharing arrangement, whereby Khula assumes a portion of the risk associated with lending to the SMME sector".

National Youth Development Agency (NYDA) this agency was created in 2009 out of a merger between the National Youth Commission and the Umsobomvu Youth Fund. The NYDA aims to assist the youth with their career skills and to help them start their own businesses. The NYDA funds training and gives out loans to small businesses (National Credit Regulator, 2011). At the community level, the NYDA encourages young people to be catalysts for change in their communities through involvement in community development, social cohesion, national youth service programmes, dialogues and activities. At a Provincial and National level, the NYDA facilitates the participation of youth in developing key policy inputs, through its policy development, partnerships and research programmes, which shape the socio-economic landscape of South Africa (NYDA, 2015). The Small Enterprise Development Agency

(SEDA) is an agency of the DTI, directed to support small enterprises, which was formed out of a merger between the Ntsika Enterprise Promotion Agency, National Manufacturing Advisory Centre (Namac) and the Community Public Private Partnership Programme (CPPP). The Godisa Trust and the Technology Programmes were integrated into Seda in 2006, becoming Seda Technology Programme (STP) (National Credit Regulator, 2011).

4.2. Inaccessibility of appropriate technology

According to Wahab, Rose and Osman, (2012: 62) “technology consists of two primary components: a physical component which comprises of items such as products, tooling, equipment, blueprints, techniques, and processes; and the informational component which consists of know-how in management, marketing, production, quality control, reliability, skilled labour and functional areas”. The physical component of technology readily adopted and used in the hair salon businesses includes blowers, dryers, hair chemicals (imported/local), reliable power supply, hair food and hair relaxers. The information component involves knowledge of the latest trends in hair styles and skin treatments, knowledge of manicure, pedicure styles and hair chemical product ranges preferred by clients. Thus, SMMEs need to keep abreast with modern technology in order to be more knowledgeable about consumer preferences and trends.

Access to modern technology, however, is a milestone around the necks of SMMEs that struggle to have financial breakthroughs. Since the use of technology is costly (Chimucheka, 2013), many new start-ups may not be able to afford it because of their survivalist orientation. Even in situations where SMMEs owner/managers may have the luxury of accessing technologies, they may lack the technological skills and digital competencies to make effective use of them. Even where they have some digital competencies to use these technologies effectively, they may face the conundrum of the high opportunity cost of scarce management of time, learning from technology and isolating the cash flows relating to the project they want to use the technology for (Mbonyane, 2006). Hence, a limited use of technology is a barrier to the growth and development of the enterprises.

4.3. Factors that affect the implementation of Technology in the SMME sector:

4.3.1. Organisational factors

In organisational contexts, where owner/managers have the competence to use technology to successfully operate in their enterprises, their staff may be technologically ill-equipped as they may not have time to attend technology training (Hanclova, Rozehnal, Ministr & Tvrdikova, 2015). Apart from the shortage of staff to run these entities efficiently, SMMEs often lack the necessary skills and knowledge required to use technology effectively (Hanclova et al., 2015). Perhaps the lack of technological skills in addition to financial constraints explain the limited use of technology, such as blowers, hair dryers, relaxer chemicals and computers in the hair salons.

4.4. Economic and financial factors

Even though technology is an economic factor that bring economic and financial benefits to the firm, it also serves as a cost driver for SMME owner/managers (Hanclova et al., 2015) whose finance options are limited. Yet when technologies such as hair dryers, blowers, and hair chemicals are harnessed as efficiency enhancers, they have potential to create multiplier effects that create economic advantages for the firms. Hanclova et al. (2015) argue that the possession of technology enables an enterprise to access global markets and new markets, improve communication channels with other enterprises, and maintain a market position in the community. The dilemma is that in spite of the acknowledged economic advantages of communicative technologies and production tools and techniques, the acquisition and effective use of such technologies are constrained by lack of financial resources, treak speed of technological changes and limited digital technologies of hair salon owner/managers. Access to modern technology is a huge challenge for the SMMEs, as they struggle to have financial breakthroughs. The use of technology is costly (Chimucheka, 2013) and many new start-ups may not be affordable.

5. METHODOLOGY

This paper adopts a survey research design. A survey approach is considered desirable when the researcher intends to test associative and predictive relationships between independent variables and dependent variables. A survey normally seeks to answer questions that have been raised, to solve problems that have been posed or observed, to assess needs and set goals, to determine whether or not specific objectives have been met, to establish baselines against which future comparisons can be made, to analyse trends across time, and generally, to describe what exists, in what amount, and in what context (Glasow, 2005). Given that the focus of this study was to determine the impact of public funding on the acquisition of technology in the hair salon industry, a survey design best suited this investigation.

5.1. Population, sampling, data collection and analysis

The scope of the empirical enquiry was limited to SMMEs particularly Afro hair salons in the Mangaung Metropolitan Area (MMA) in the Free State Province of South Africa. The Free State Development Corporation (FDC) estimates that there are about 500 Afro hair businesses in MMA. A sample of 150 Afro hair salons was drawn from the population using sample size calculator. Simple random sampling was adopted for this study. Simple random sampling ensures that each element of the population is given an equal chance of being selected in the sample (Zikmund, Babin, Carr & Griffin, 2013:396).

In conformance with the quantitative design, the measurement instrument is a structured questionnaire was designed, distributed to and completed by the respondents. For Dzansi and Okyere (2015), “the determination of what is to be measured should flow from the research problem and objectives of the study”. Therefore, these two informed the design of the questionnaire. The collected data was analyzed using the latest version of Statistical Package for the Social Sciences (SPSS). The data analyses employed were descriptive analysis and inferential statistics. Descriptive statistics was used to describe characteristics of the study subjects (Neuman, 2011). The descriptive statistics analysis was used to determine the mean, mode, standard deviation of variables, while the inferential statistics analysis were used to test the relations of associations between concepts. Lastly, the Cronbach's Alpha was employed to determine the reliability of instrument items.

5.2. Validation of the questionnaire

The self-constructed, structured questionnaire instrument was validated for reliability using Cronbach's alpha, which generated a value of 0.937. With $R = 0.937$, the questionnaire was regarded as reliable.

The construct of technology acquisition consisted of 7 questionnaire items with very high internal consistency (Cronbach's Alpha=0.911), hence it is reliable. The construct retained all 7 items as they have high coefficients (all positive and above 0.750), which shows that it is well constituted.

5.3. Sample demographics

Table 1 provides an overview of the demographic profile of the sample. Table 1 illustrates a moderately balanced representation of male Afro hair salon owner/managers (53.6%) and female Afro hair salon owner/managers (46.4%). About 55.5% of Afro hair salon owner/managers are a youthful population aged between 25-34 years. The Table illustrates that there are 15.5% Sesotho speaking owner/managers in the hair salon industry in MMA. The Table shows that the majority (50.9%) of the hair salon owner/managers respondents were non-South African.

Table 1: Biographical information of the respondents

Biographical Information	Category	Frequency	Percentage
Q1. Gender	Female	51	46.4%
	Male	59	53.6%
Q2. Age	< 25 Years	12	10.9%
	25-34 Years	61	55.5%
	35-44 Years	27	24.5%
	45-54 Years	8	7.3%
	55 and Above	2	1.8%
Q3. Home Language	English	1	0.9%
	Afrikaans	3	2.7%
	Setswana	13	11.8%
	Sesotho	17	15.5%
	Xhosa	10	9.1%
	Zulu	5	4.5%
	Other Language	61	55.5%
Q4. Other Languages	Shona	30	49.2%
	Igbo	9	14.8%
	Swati	1	1.6%
	Hausa	8	13.1%
	Yoruba	8	13.1%
	Ndebele	3	4.9%
	Tsonga	2	3.3%
Q5. Nationality	SA Citizen	53	48.2%
	SA Perm Res	1	0.9%
	Non SA Citizen	56	50.9%

Table 2 shows that the majority (61.8%) of the respondents come from businesses owned by sole proprietors, while 39% of the respondents are owner/managers. Table 2 also shows that a majority of the businesses had a turnover of less than R100 000, just as the majority (75.2%) of the businesses have been in existence for not more than six years.

Table 2: Business/Job profile

Business/Job Profile	Category	Frequency	Percentage
Business Role	Owner	27	24.50%
	Manager	20	18.20%
	Owner/Manager	43	39.10%
	Employee	20	18.20%
Form of Business	Sole Proprietor	68	61.80%
	Partnership	42	38.20%
Nature of Job	Stylists and Technicians	81	74.30%
	Receptionist	4	3.70%
	Salon assistant	23	21.10%
	Other	1	0.90%
Highest Academic Qualification	None	1	0.90%
	Primary School	4	3.60%
	Matric and below	38	34.50%
	Tertiary Certificate	37	33.60%
	Diploma/Degree	28	25.50%
	Postgraduate	2	1.80%
Years of Experience in Management	Below 1 Year	11	10.00%
	2-5 Years	56	50.90%
	6-10 Years	31	28.20%
	11-15 Years	6	5.50%
	16-20 Years	4	3.60%
	Over 20 Years	2	1.80%
Years of Experience on the Job	Below 1 Year	5	4.50%
	2-5 Years	52	47.30%
	6-10 Years	35	31.80%
	11-15 Years	12	10.90%
	16-20 Years	4	3.60%
	Over 20 Years	2	1.80%
Number of Employees	1 employee	17	15.50%
	2-5 employees	52	47.30%
	6-10 employees	34	30.90%
	11-15 employees	6	5.50%
	Above 20	1	0.90%
Gross Turnover per Annum	Below R100 000	93	84.50%
	Between R100 000 - R499 999	16	14.50%
	From R5 000 000 - R9 999 999	1	0.90%
Return on Investment for Previous Year	Loss making	21	19.10%
	Break even	46	41.80%
	up to 2%	35	31.80%
	3-5%	5	4.50%
	More than 5%	3	2.70%
Age of Business	1-3 Years	39	35.80%
	4-6 Years	43	39.40%
	8-10 Years	11	10.10%
	11-15 Years	9	8.30%
	More than 15 Years	7	6.40%

Table 3 presents the results from a questionnaire item that sought the respondents' views on technology acquisition. As shown in the Table 3, a majority (85.5%) of the respondents were of the view that technology assists them in daily activities, while 89.1% also concurred that they use technology to adapt to routine activities.

Table 3: Technology acquisition by hair salon SMMEs

Technology acquisition		Frequency Distribution					Descriptives			Latent Factor Coefficient
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	% Agree/Strongly Agree	Mean	Std Dev	
Q57. Technology helps in the daily activities in the company	Count %	2 1.8%	1 0.9%	13 11.8%	44 40.0%	50 45.5%	85.5%	4.26	0.84	0.885
Q58. Acquiring the latest technology helps to keep up to date	Count %	1 0.9%	3 2.7%	9 8.2%	51 46.4%	46 41.8%	88.2%	4.25	0.79	0.883
Q59. Use of new technology to adapt daily routines	Count %	0 0.0%	4 3.6%	8 7.3%	52 47.3%	46 41.8%	89.1%	4.27	0.75	0.810
Q60. Technology makes one's job easier	Count %	0 0.0%	3 2.8%	11 10.1%	48 44.0%	47 43.1%	87.2%	4.28	0.76	0.805
Q61. Public funding helps to acquire latest technology	Count %	3 2.7%	11 10.0%	20 18.2%	36 32.7%	40 36.4%	69.1%	3.90	1.09	0.792
Q62. Public funding enables the purchase of needed equipment	Count %	4 3.6%	12 10.9%	17 15.5%	38 34.5%	39 35.5%	70.0%	3.87	1.13	0.760
Q63. Public funding helps the business to keep up to date with latest technology	Count %	4 3.6%	14 12.7%	17 15.5%	36 32.7%	39 35.5%	68.2%	3.84	1.15	0.793
		Cronbach's Alpha						0.911		
		% of total variation accounted for by latent factor						67.13%		

Effects of public funding on technology acquisition

Table 4 below presents the correlations between the various public funding variables and technology acquisition. All four variables of public funding have a negative and significant impact on technology acquisition. Accessibility to public funding institutions (correlation=-0.424, p-value=0.000), attractiveness of interest rates of public funding institutions (correlation=-0.328, p-value=0.000), accessibility of public equity financing (correlation=-0.419, p-value=0.000) and accessibility of public debt financing (correlation=-0.368, p-value=0.000, all have a significant, negative and medium impact on technology acquisition.

Table 4: Correlations between public funding and technology acquisition

Pearson's Correlations			Public Funding				Technology Acquisition
			Accessibility to Public Funding Institutions	Attractiveness of interest rates of Public Funding Institutions	Accessibility of Public Equity Financing	Accessibility of Public Debt Financing	
Public Funding	Accessibility to Public Funding Institutions	Correlation p-value N	-				
	Attractiveness of interest rates of Public Funding Institutions	Correlation p-value N	0.848** 0.000 108	-			
	Accessibility of Public Equity Financing	Correlation p-value N	0.760** 0.000 109	0.757** 0.000 109	-		
	Accessibility of Public Debt Financing	Correlation p-value N	0.861** 0.000 109	0.859** 0.000 109	0.816** 0.000 110	-	
Technology Acquisition		Correlation p-value N	-0.424** 0.000 108	-0.382** 0.000 108	-0.419** 0.000 109	-0.368** 0.000 109	-

** . Correlation is significant at the 0.01 level (2-tailed).

6. DISCUSSION

In Table 1, the comparatively higher participation of males in such business is surprising as the establishment and operation of hair businesses has traditionally been considered to be a female domain. This perhaps shows the increased interest of males in such businesses. This finding, thus, contradicts other studies conducted on hair salon businesses in South Africa. For instance, Mosweunyane's (2013) survey on hair salon SMMEs owner/managers operating in the Dr Ruth Segomotsi Mompati District Municipality area, in the North West Province of South Africa, revealed that a majority (60%) of the owner/managers were female, while 40% were male. The age of the owner/managers can be interpreted that a majority of the respondents belong to the economically active population of the nation. This finding buttresses Mosweunyane's (2013) findings that the economically active groups normally establish and operate hair salons. The 15.5% Sesotho language demographic clearly resonates with the South Africa Statistics Census (2011), which indicates that the main language spoken in the Free State is Sesotho. In fact, this centrally located province within South Africa is generally known for Sesotho speaking people. South Africa Stats Census (2011) further reveals that the dominating language in the Free State province is Sesotho (63%). About 50.9% of respondents were non-South African, although a sizable number of South African nationals are operating hair salons businesses; the statistics show that slightly greater number of foreign nationals are in this trade, even if those with national residence status were discounted. Kalitanyi and Visser (2010) maintain that foreign-owned SMMEs are a particularly significant element of the changing economy and landscape of different cities and conclude that foreign migrant involvement in the SMME sector of South Africa is visible in a narrow band of activities, mostly in retail or service than in production.

In Table 2 shows that the majority (61.8%) of the respondents come from businesses owned by sole proprietors, while 39% of the respondents are owner/managers. Most of the businesses have between two and five employees (47.3%) with only one business having more than twenty employees. Most SMMEs are owned by sole proprietors and the owners are often referred to as owner/managers with the employees of SMMEs being less represented. Table 4.2 also shows that a majority of the businesses had a turnover of less than R100 000, just as the majority (75.2%) of the businesses have been in existence for not more than six years.

In Table 3, technology is frequently used in the hair industry. SMMEs in this sector must have adequate as well as up to date equipment and technology to effect their current industry practices. Mudzingwa and Kabote's (2014) study on the adoption of modern technology adoption in Zimbabwe's beauty therapy industry supports the view that the use of technology assists employees with their daily activities and enhances their job performance.

The majority (88.2%) of hair salon SMME owner/managers claimed that they acquire the latest technology and that technology makes their job easy (87.2%). A sizable percentage (69.1%) of entrepreneurs also indicated that public funding helps in acquiring latest technology (69.1%). When hair salon businesses source public funding to acquire the latest technology, the work of employees' was simplified and new customers were attracted to the salons by the use of latest technology. Mudzingwa and Kabote's (2014) demonstrate the multiplier effects associated with the acquisition of new technologies - such as clients' increased satisfaction with services of salons, increased services for the businesses and increased efficiency of the cosmetology sector as a whole.

Table 4 shows the correlations between the various public funding variables and technology acquisition. All four variables of public funding show a negative and significant impact on technology acquisition. Accessibility to public funding institutions (correlation=-0.424, p-value=0.000), attractiveness of interest rates of public funding institutions (correlation=-0.328, p-value=0.000), accessibility of public equity financing (correlation=-0.419, p-value=0.000) and accessibility of public debt financing (correlation=-0.368, p-value=0.000), all have a significant, negative and medium impact on technology acquisition. The negative relationship between access to public finance and technology acquisition could mean that SMMEs are borrowing from multiple sources of public funding, creating the pressure to service these loans simultaneously, thus eroding hair salons' revenue base required to acquire the latest technologies.

The negative relationship between accessibility of public equity and debt financing and technology acquisition can be interpreted to mean that with the increased accessibility of public debt and equity financing for business start-up or working capital, the capacity of the salons to access technology dwindles significantly. This also means that with increases in the attractiveness of interest rates of public funding institutions and accessibility of public debt financing, the ability of the firm to source technology also dissipates considerably.

The shrinking of technology acquisition capacity of the hair salons with increases in accessibility of public financing suggest that perhaps the strict payment terms and the short grace periods for public loans repayment could be contributing to the diversion of money reserved for technology acquisition. This interpretation somewhat coheres Gurbierl's (2002) finding on the impact of innovation and technology transfer on economic growth which found out that most businesses have to deal with a lack of funds to undertake necessary investments, which is a barrier to offer a competitive supply of technology. In the current study, there was a reported decline in technology acquisition with increases in public borrowing, which suggests availability of such funds; in Gurbierl's (2002) study, public funding was conceived to be in short supply and hence, a structural constraint.

The attractiveness of interest rates of public funding institutions was negatively associated with the acquisition of technology. This could be interpreted to mean that when frugal hair salon owner/managers are bestowed with more attractive public loans, they are induced to immediately pay off large sums of their principal debt and interest, which result in a fiscal squeeze - which complicates the acquisition and adoption of new technology for their businesses. Similarly, the opportunity cost that hair salon owner/managers have to bear for their increased access to public equity finance and public debt finance is their reduced capacity to purchase new technology such as computers, laptops, hair dryers and other technologies relevant to the cosmetology industry. This finding is incongruent with Mingle's (2014) finding on the adoption of Information and Communications Technology (ICT) in Polytechnic Libraries, which revealed that without funding the business cannot provide technology. In the current case study, public debt and equity financing was conceivably available even though the

burden of its repayment could have exerted pressure on hair salon businesses to pay back immediately. In cases where public loans are short term, the payment period is often compressed, thus compelling borrowers to start repayments immediately after securing these loans, hence making finances unavailable for the purchase of technological tools and resources relevant to the businesses. The National Credit Regulator's (2011) popular view is that public funding was created to support small enterprises. The overall expectation in view of these organisations would not only be easy accessibility but considerably low interest rates to support small start-ups.

7. IMPLICATIONS FOR FURTHER RESEARCH

Other studies should consider the mechanisms of improving funding for foreign immigrant-owned businesses as they are the critical vehicles to economic growth, job creation and poverty reduction in South Africa.

A negative significant relationship was observed between private funding options (public debt and equity financing) and the acquisition of new technologies. Future studies may need to explore hair salon SMMEs' reliance on inexpensive ubiquitous technologies (e.g. social media platforms; low grade blowers and dryers) before the gradual adoption of complex technologies. The studies may then establish the impact of various funding sources on the adoption of such inexpensive, ubiquitous technologies.

8. RECOMMENDATIONS

In view of the negative relationships between access to public financing, the attractiveness of interest rates, public debt and equity financing and the acquisition of technology, the following strategies are recommended:

- There focus of public funding for hair salon SMMEs should shift from improved accessibility to public funding to increasing the period for loan repayments. Even though this could imply increases in loan interest repayments in the long term, the duration for loan repayments will reduce the principal payable in the short term, thus availing some income for other business commitments such as the acquisition of technology by the business.
- While the attractiveness of interests on loans would ideally compels the hair salon SMMEs to immediately pay back loans, the public funders may need to procure latest technologies for well performing hair salons in exchange for equity of such businesses in the short term. This will allow such SMMEs to service their loans while at the same time acquiring technology for use in the business.
- The hair salon's possible servicing of multiple public loans simultaneously due to the increased availability of such loans could be putting these businesses under intense financial pressure. As such, debt counselling and debt restructuring for such SMME owner/managers would be critical to the financial stability of their businesses. Debt restructuring would mean progressively reducing public debt financing and gradually increasing equity funding to reduce the increased chances of debt traps.

9. CONCLUSION

The study was conducted against the widely held assumption that many SMMEs such as foreign owned hair salon owner/managers struggled to access public finance from public agencies leading to their incapacity to acquire the new technology, which is quintessential for the performance of their businesses. The study also acknowledged the lack of studies that explore the nexus between public funding (access to such loans, interest rates charged on these loans, use of equity and debt finance) and the acquisition of technology. There was limited evidence to substantiate the claim that foreign owned hair salon SMMEs have constrained access to public funding options, even though there were negative relationships between various public funding options and the acquisition of technology by the businesses.

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The Influence of urban infrastructure on the Information Communication Technology (ICT) industry: A case of an Indian City

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ABSTRACT

The emergence of Information Communication Technology (ICT) industry has a significant influence on the economy of many developing countries. While ICT industry has found to bring economic opportunities, it has also created urban infrastructural challenges. On the other hand, it is argued that success of ICT industry also depends on the availability of adequate urban infrastructural facilities. Therefore, using a case study of an ICT industrial activity oriented city in India - Pune, this study examined the linkages between various urban infrastructures and the performance of ICT industry. A survey research method and quantitative analysis were used. Findings suggest that among the various urban infrastructures availability of adequate urban roads, power, housing and commercial built up spaces for ICT industry significantly influence the growth of ICT industry in terms of earnings from ICT product export although to varied extents. While road and power have continual gradual effects on the performance of ICT industry, the influence of housing and commercial built up spaces stabilizes after a certain level. It is envisaged that the findings of this study could contribute to engender apposite policy interventions for urban infrastructure development to enhance ICT industry growth in similar cities of the developing world.

Keywords: ICT Industry; ICT export; Knowledge workers; Urban Infrastructure; Economic landscape

1. INTRODUCTION

The growth of the Information Communication Technology (ICT) industry has changed the economic landscape in many developing countries. In recent years many cities in developing countries like India, China and South Africa are increasingly embracing ICT-oriented industrial activities in addition to the traditional manufacturing industrial or service oriented economy. However, while the ICT industry has brought some economic opportunities, it has also brought certain urban infrastructural challenges (Das & Sonar, 2013). Moreover, the ICT industry also suffers because of the inadequate urban infrastructural facilities.

Consequently, policies and strategies are framed both at country and city level to make these cities competitive. The focuses of the policies are to attract international investment and encourage economic growth and to create adequate and infrastructural facilities. In other words, one of the major focuses of the policies and strategies is the creation of high level of physical-commercial infrastructures and social amenities, which would facilitate growth of the ICT industry in such cities (Young & Keil, 2010; De Silva & McComb, 2012; Francis, Babajide & Niki, 2014; Abraham, & Mario, 2015). The primary reason being, the cities having adequate and satisfactory level of such infrastructure along with high level of living satisfaction and lesser environmental stress attract and retain talented knowledge workers (human resources) (Florida, 2002, 2005), who form the core component of the success of an ICT industrial city, which generate and foster a knowledge base and encourage new businesses for the industries and people in such cities (Ergazakis, Metaxiotis & Psarras, 2006; Van Winden, Berg, Van Den & Peter, 2007; Yigitcanlar, Baum, & Horton 2007; Yigitcanlar, O'Connor & Westerman, 2008; Yigitcanlar, Velibeyoglu & Baum, 2008a; Young, & Keil, 2010; De Silva & McComb, 2012).

Scholars also argue that every ICT industrial city is different and requires different qualities to grow. However, there are certain characteristics, which are common and highly essential for the success of an ICT industrial city that include knowledge base, industrial structure, quality of life, urban infrastructure and amenities, urban diversity and cultural mix, and scale of a city (Yigitcanlar, O'Connor & Westerman, 2008; Das & Sonar, 2013). In other words, an ICT industrial city can be seen as an integrated city, which physically and institutionally synergises the functions ICT industrial activities, commercial activities, residential functions, and other civic functions to create an effective paradigm for creation of a sustainable city (Barcelona City, 2003; Velibeyoglu & Baum, 2008a; Yigitcanlar, O'Connor, & Westerman, 2008; Das & Sonar, 2013).

Thus, ICT-based industrial activities require spatial and environmental conditions, which are very different from those required by normal cities of commodity-based manufacturing or service activities (GlobeScan, 2007). The most paramount among these factors is an appropriate built environment, especially in the form of residential housing (Das & Sonar, 2014), built-up space for ICT industrial activities and other related commercial transactions as well as road infrastructure for an efficient internal transportation system (Florida 2005; Baum, Yigitcanlar, Horton, Velibeyoglu, & Gleeson, 2006; Moussiopoulos, Achillas, Vlachokostas, Spyridi, & Nikolaou, 2010; Das & Sonar, 2013). For example, housing is one of the most essential elements, which people look for before deciding to relocate and, in the case of knowledge workers, it is a very important determinant (Ergazakis, Metaxiotis & Psarras, 2006; Van Winden, Berg, Van Den & Peter, 2007; Berry & Okulicz-Kozaryn, 2009). These aspects need to be carefully assessed for their qualitative and quantitative adequacy and planned for their supply in the city. Concurrently, it is also essential to comprehend the influence of these infrastructures on the functioning and performance of the ICT industries before evolving any policies.

Therefore, using a case study of an ICT industrial activity oriented city in India - Pune, this study examined the linkages between urban infrastructures such as roads, power, housing and commercial built-up spaces for ICT industry, and growth of the ICT industry. A survey research method and quantitative statistical analysis were used. Findings suggest that the various urban infrastructures - availability of adequate urban roads, power, housing and commercial built-up spaces for ICT industry - significantly influence the growth of ICT industry in terms of earnings from ICT product export although to varied extents. While road and power have continual progressive effects on the growth of ICT industry, the influence of housing and commercial built up spaces stabilizes after a certain level. The findings of this study or similar studies from cities of other developing countries including African cities can assist to develop apposite policy interventions for urban infrastructure development to enhance ICT industry growth in similar cities of the developing world - including that of Africa.

2. CASE STUDY: PUNE CITY, INDIA

Pune city of India was used as a case study for this investigation. The city is located in Maharashtra province of India, about 160.00 kms South-East of Mumbai City by road (between 18^o 32' North and 73^o 51' East). It has a population of about 5.0 million and area of 500 sq. km. It is established as the sixth largest Metropolitan economy having highest per capita income in India with the least income disparity. It contributes about \$48 billion per year to the GDP of the nation and offers opportunities for large-scale employment generation. A large number of domestic and multinational ICT companies have been established in the city in the last two decades, which have attracted huge investment in this sector. The reasons for establishment of the ICT industries are argued to be the availability of adequate basic urban infrastructure facilities, including relatively better transport and communication services, presence of skilled manpower and its proximity to Mumbai - regarded as financial capital of India. It is estimated that the export from ICT industries from Maharashtra is estimated to about 9400 million USD, of which a lion share comes from Pune city (Times of India, 2015). The large scale ICT industrial activities along with the location of a large number technological and management institutions, universities and research centres engaged in developing knowledge-based and ICT products and adept human resources helped the city to emerge as one of the leading ICT-based industrial cities of the country. However, the growth of large-scale ICT-based industrial activities is creating pressure on the urban infrastructures, and demands planned effort for their development. Further, it is also argued that ICT based industry is also influenced by the physical and spatial infrastructure. Evidently, the large-scale growth of ICT industrial activities and consequent urban activities - such as the increase in commercial activities, educational institutions, demand for road transportation and growth in population particularly the student population and knowledge workers - have brought the city under various infrastructural stress. Therefore, infrastructure and performance of ICT industry are interlinked and influence each other in the city. Thus, there is a need for accessing the relationship between various urban infrastructure and performance of ICT industry in cities of developing countries like India, and Pune city becomes an ideal candidate as a case study for this investigation.

3. METHOD

The study followed an exploratory survey research method. Quantitative data were collected from both people of the city and ICT industries through survey and secondary statistical sources. For this purpose, two types of survey, a household survey and an ICT industry survey, were conducted. The household survey was conducted among 450 selected households in selected wards of six sub-regions of the city specifically delineated for the survey purpose. The six representative sub-regions are Pune Municipal Corporation in the South-east, Pimpri - Chinchwad Municipal Corporation in the North-west, Pune Cantonment Board, Kirkee Cantonment Board, Dehuroad Cantonment Board, and Dehu - a census town of the city. The wards for survey in the six sub-regions were selected based on their geographical locations, demographic characteristics, availability of ICT industrial and other economic activity areas, density, and connectivity. The household survey questionnaire comprised the challenges the people faced with regards to spatial and physical infrastructure and if these infrastructures are influenced by ICT industry and vice versa. The survey questionnaires were administered among all the 450 households selected for survey. About 438 filled-out questionnaires were returned from households as 12 households did not respond to the survey. However, after thorough scrutiny and elimination of incomplete questionnaires, 424 questionnaires are found to be useful and thus used for analysis. Similarly, from about more than 200 ICT industries located in the city, a survey was conducted among 50 industries in the same sub-regions of the city to understand the income, export, infrastructural requirements such as roads, power, commercial built space and houses. For this purpose, an ICT industrial survey questionnaire was prepared and administered among the selected ICT industries. The survey was conducted by using a systematic stratified random sampling process. Both types of questionnaires were also pretested through pilot surveys before their final use. Further, time series statistical data pertaining to city level socio-economic, physical, and infrastructural parameters as well as the ICT industry parameters were collected from the published and unpublished statistical reports, literatures, and documents available at city, provincial and national level. The data collected were analysed by relevant statistical analyses, such as descriptive statistics, percent analysis, and regression analysis. The regression analyses between various important infrastructure and performance of ICT industry in the city were conducted by considering the ICT export generated and the availability of various infrastructures over the period 2000-2015 (estimated values as obtained from various literatures and reports).

4. RESULTS AND DISCUSSION

Table 1 presents the perception of the people of the city on the various infrastructural challenges faced by the city in general. It is found that inadequate road and traffic congestion (91.56%) followed by unavailability of adequate number of houses (88.67%) are the two most important infrastructure challenges. Furthermore, according to the people surveyed, inadequate power supply (86.22%), unavailability of public transportation (83.78%) and built-up space for offices and industries (73.78%) are major challenges in the city. Besides, unavailability of organized water supply (61.33%), sanitation facilities (59.33%) open space (53.78%), unavailability of parking facilities and solid waste management (52.00%) are the next set of infrastructural challenges faced by the city. However, lack of health facilities (49.11%), unavailability of commercial centers (47.11%), lack of entertainment spaces (30.00%) and lack of educational institutions (27.33%) are lesser challenges.

Table 1: People’s Perceptions of Infrastructural Challenges in The City

Infrastructural facilities	Frequency	Percent (%)	Rank
Road and traffic congestion	412	91.56	1
Parking	237	52.67	9
Public transportation	377	83.78	4
Housing	399	88.67	2
Power	388	86.22	3
Built of space for office and industrial space	332	73.78	5
Health facilities	221	49.11	11
Water	242	61.33	6
Sanitation	267	59.33	7
Solid waste	234	52.00	10
Entertainment spaces	135	30.00	13
Commercial centres	212	47.11	12
Educational institutions	123	27.33	14
Organised open spaces	276	53.78	8

An analysis of the perception of the ICT industry surveyed on the infrastructural challenges that influence ICT industry revealed that inadequate road and traffic congestion (86.00%), unavailability of houses (78.00%), built-up office and industrial space (specifically for ICT industry) (76.00%) and inadequate power (72.00%) are the major challenges that influence the ICT industry in the city (Table 2). On the other hand, parking facilities (48.00%), water supply (44.00%), sanitation facilities (42.00%), solid waste management (46.00%), public transportation (38.00%) and health facilities (32.00%) are marginal challenges (Table 2). Moreover, the respondents also revealed that unavailability of educational institutions, lack of adequate entertainment spaces, lack of adequate commercial centers and lack of organized open spaces do not necessarily influence the performance of ICT industry in the city.

Table 2: Perception of ICT industry on infrastructural challenges in the city influencing ICT industry

Infrastructural facilities	Frequency	Percent (%)	Rank
Road and traffic congestion	43	86.00	1
Parking	24	48.00	5
Public transportation	19	38.00	9
Housing	39	78.00	2
Power	36	72.00	4
Built of space for office and industrial space	38	76.00	3
Health facilities	16	32.00	10
Water	22	44.00	7
Sanitation	21	42.00	8
Solid waste	23	46.00	6
Entertainment spaces	9	18.00	12
Commercial centres	7	14.00	13
Educational institutions	12	24.00	11
Organised open spaces	7	14.00	13

Consequently, according to the analysis of perception of both the people in the city and the ICT industry, the four major important infrastructures, which influence the ICT industry as well as city are road, houses, power and built up space for office and industries. Therefore, regression analyses have been conducted to examine the influence of these infrastructures on the ICT industry. For this purpose, the performance of ICT industry is considered in the form of income (for this purpose the estimated values as obtained from various reports and documents and survey) generated from the ICT industry.

Figure 1 presents the relationship between roads against ICT export. The road infrastructure is considered in terms of length in lane-kms (calculated based on distance and number of lanes). It is revealed that road infrastructure has a linear relationship with ICT export indicating that with increase in road infrastructure export from ICT industry is expected to increase. On average, exports from the ICT industry increased by 123.0278 million USD per 100 lane-km increase in road infrastructure. However, as observed from Figure 1, exports from the ICT industry increased significantly as road length increased from 5000 lane-kms to 6000 lane-Kms, and after which it has experienced a gradual growth.

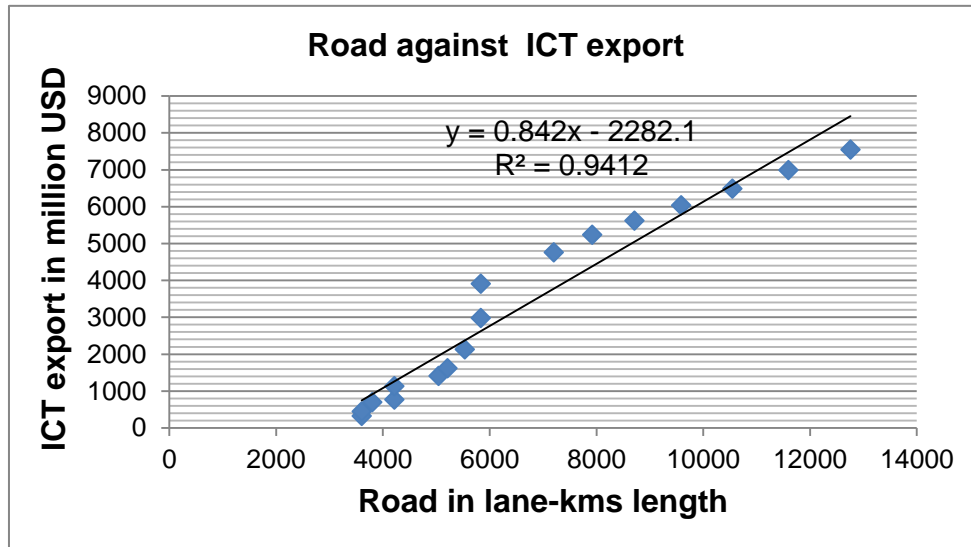


Figure 1: Influence of road in lane-kms on export from ICT industry

Figure 2 presents the influence of power on the performance of ICT industry in Pune city. A linear relationship between availability power in Mega Watt (MW) in the city and exports from ICT industry in the city is established. It is revealed that on average the ICT industry export increased by 17.86 million USD with every 1MW increase in power. However, it is also revealed that ICT export was almost similar at the power availability between 500 and 600 MW and there is a sudden spurt in ICT export when the power situation improved between 600 MW and 800 MW, after which the increase is gradual.

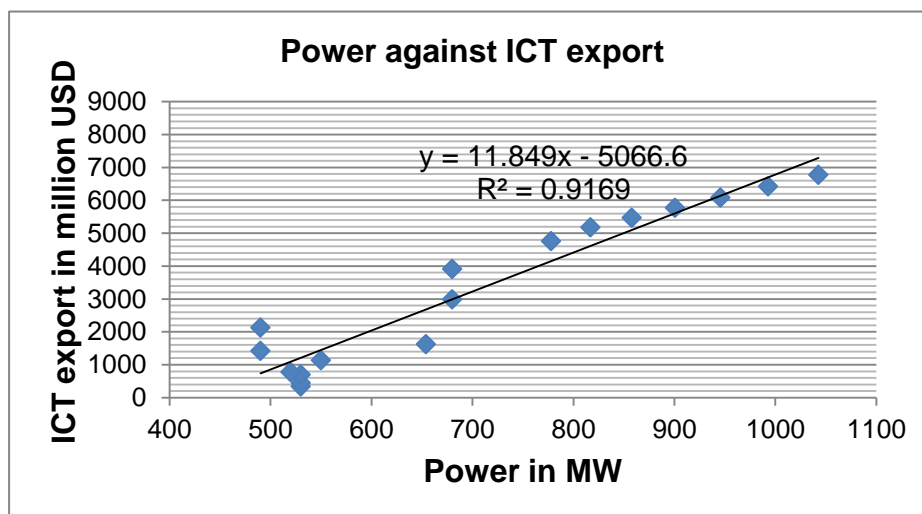


Figure 2: Influence of Power in MW on export from ICT industry

The relationship between availability of houses and ICT export is presented in Figure 3. Apparently a linear relationship is established with a reasonable R^2 value (0.843). It is found that on average a 65.89 million USD increase in export from ICT industry is experienced with every 1000 units of increase in houses. However, it is also revealed that initially there was a very slow growth in availability of houses and that did not have much influence on the ICT exports. Further on, with the increase in number units of houses in the city, ICT export increased at a gradual rate.

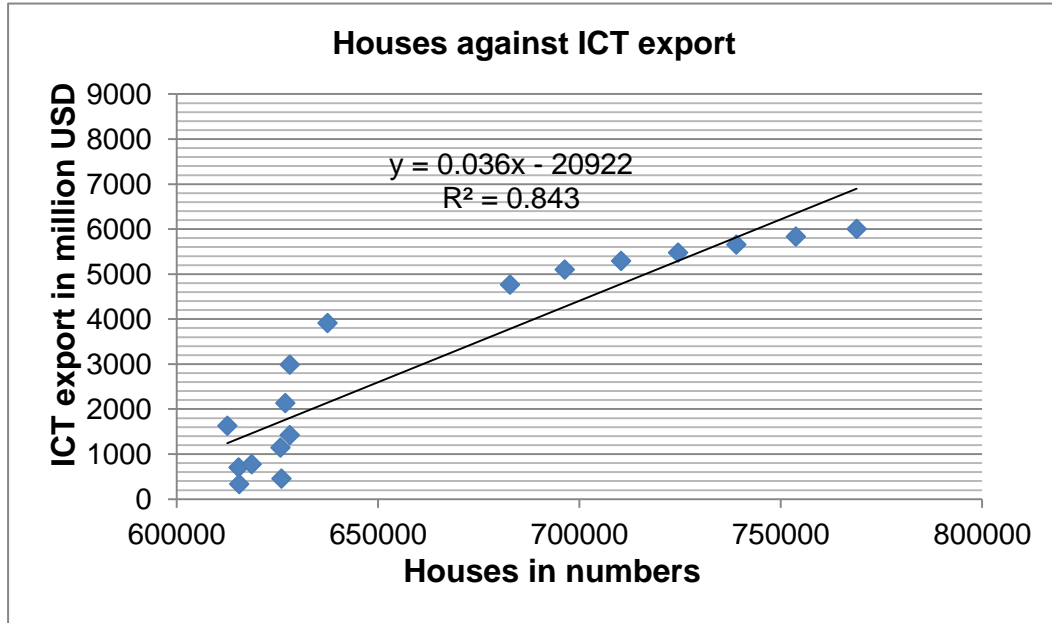


Figure 3: Influence of Houses on export from ICT industry

Figure 4 presents the relationship between the built up area for ICT industry and export from ICT industry. It revealed a linear relationship between the two variables which indicates that with increase in built up area for the ICT industry, the ICT export is increased. On average, it is found that the ICT industry export increased by 17.18 million USD per every 1000 sq.m increase in built up area. However, it is also revealed that export from the ICT industry show a very marginal growth with increase in built up area after a certain level of attainment of built up area. This indicates that built up area will have limited influence on ICT export after a certain stage.

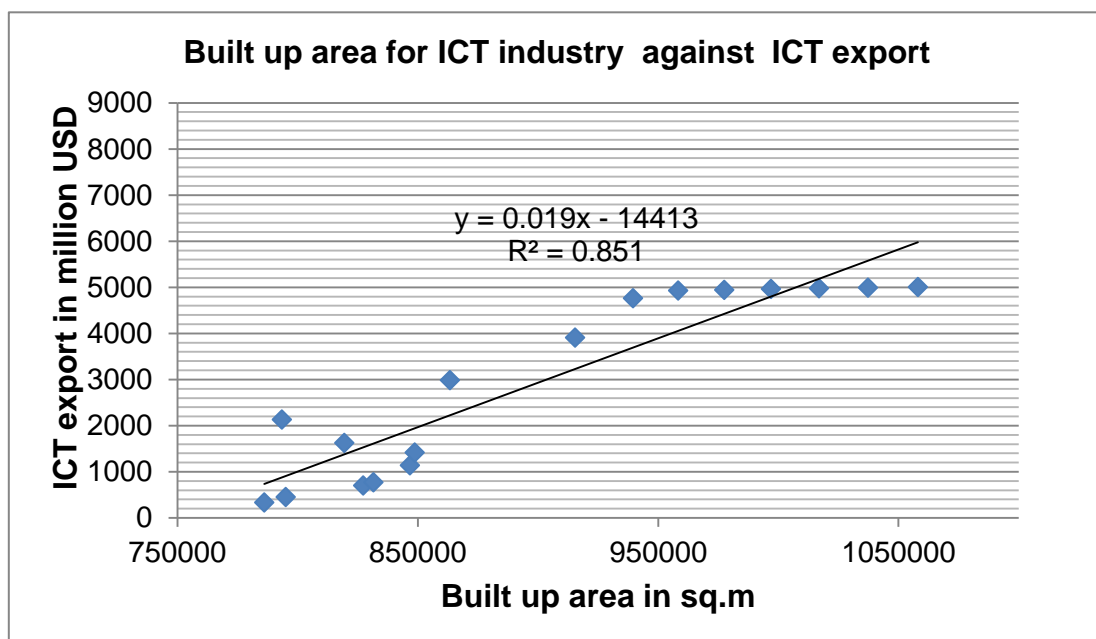


Figure 4: Influence of Built up area on export from ICT industry

Thus, it is found that urban infrastructures such as road length (lane kms), power, houses and built up area have fairly linear relationship with the performance of ICT industry. However, while road, and power have gradual influence on ICT export, the influence of houses and built up area will be limited on the ICT export after achievement of a certain limit of the infrastructures.

5. CONCLUSION

ICT industry in developing countries like India has become an integral part of the cities. However, growth of the ICT industry is also dependent on the availability of various urban infrastructures in the city. Simultaneously, growth in population and urban activities in cities due to the establishment of ICT industry causes infrastructure challenges in cities. So, there is a need to examine the influence of the various urban infrastructures on the ICT industry in cities. Using a case study of Pune city in India, this study examined the how and to what extent urban infrastructures influence the performance of ICT industry in cities of developing countries. A survey research method to collect data and statistical analyses were used to conduct the study. Findings revealed that amongst various urban infrastructures, availability of adequate urban roads, power, houses and commercial built up spaces for ICT industry significantly influence the performance of ICT industry significantly but to varied extents. It is found that road and power have continual progressive effects on the growth of ICT industry. However, the influence of houses and commercial built up spaces on the performance of ICT industry stabilizes after a certain level. It is envisaged that the findings of this study could contribute to engender apposite policy interventions for urban infrastructure development to enhance ICT industry growth in similar cities of the developing world. The study contributes in the form of establishing interlinkage among the urban infrastructures and performance of ICT industry in predominantly ICT industry dominated cities of developing countries like in India. The study has, however, certain limitations as it is conducted based on a limited sample size and limited survey of ICT industries, Furthermore, the scope is limited to establishing the relationship between various urban infrastructures and ICT export independently, although analysis of combined effect of various infrastructures could provide more comprehensive scenarios. However, despite the limitations, as many African countries including South Africa are in the path of encouraging ICT industries in their cities, it is envisaged that the findings of this study or similar studies in developing countries including African cities can contribute to engender apposite policy interventions for urban infrastructure development to enhance ICT industry growth in similar cities of the developing world.

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The Influence of Creative Broadcasting Techniques on the Social Sustainability of Community Radio Stations

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ABSTRACT

Although community radio stations (CRS) have traditionally focused on rendering counter narratives to the hegemonic propaganda of mainstream radio of the apartheid regime, their role has significantly transformed in the post-apartheid era to embrace community development, rendering a voice to marginalised citizens at the grassroots and promoting socio-economic empowerment. However, the failure of CRS to develop sophisticated creative broadcasting techniques (CBT) (e.g. live audio streaming programmes, use of social media technologies, podcasting and use of websites) has largely undermined the transformation of these small community-based organisations to become commercial entities and negatively impacted their long-term social sustainability. As such, notwithstanding their long tradition of existence, it is unsurprising that a small staff compliment, outdated equipment, lack of training, an unambitious budget remain perennial features of CRS' operational outlook. Drawing on a quantitative approach, a case study of two CRS in Bloemfontein was adopted, utilising a survey of 50 participants in order to develop a solid grasp of the constitution of CBT and their implications for CRS social sustainability. The architecture of CBT comprised live streaming of audio content, social media broadcasting, use of content websites and podcasting of radio content. Although social media broadcasting and livestreaming of radio content (news, promotions, shows, and events) were very popular among the CRS, podcasting and web-based creation and broadcasting of content were sub-optimally exploited by these radio stations. Phone-ins and feedback interaction is significantly correlated with social sustainability (SOSUS) of CRS (correlation = 0.393, p - value = 0.005, the effect size is very low. Social media (SM) broadcasting (correlation = -0.140 p - value = 0.0337), live audio-streaming (LAS) (correlation = -0.222, p - value = 0.122) and podcasting (correlation = -0.098, p - value = 0.497) are not significantly related to social sustainability of CRS. The study recommended a more hands-on, collaborative approach to the entire process of technology-based local content selection, generation, hosting and broadcasting to improve the social sustainability of such community based organisations.

1. INTRODUCTION

Before South Africa's transition to multiracial democracy in 1994, the minority white government's use of apartheid laws won global notoriety for separating citizens into geographical, social and political enclaves (Olorunnisola, 2000). While the first white English speakers radio station was established in 1927 (Hachten & Giffard, 1987), the first community radio stations (CRS) emerged in the early 1990s to challenge the Apartheid ideology and generate the black majority's counter narratives to the projected supremacy of the White regime. CRS are those that are grounded in a community, represent that community, equip the community with a platform to communicate their views and regard the development of the community which they serve as an integral part of their existence. Earlier media scholars such as Steinberg (1995) and Johnson (2001) highlight that CRS were often established as a response to different kinds of struggle about social, economic or cultural issues encountered by the majority of marginalised groups (i.e. blacks, coloured and Indians) in South Africa. With reference to the above authors, it is evident that the purpose of CRS is to serve a society of people, thus highlighting that the continuation of a quality broadcasting service is dependent on maintained social sustainability.

Mitra (2004) and Scott (2010) assert that over 850 million people in emerging economies continue to be excluded from a wide range of information and knowledge. With the emergency of community radio, the capacity to penetrate the remotest of rural hinterlands now exists as these stations are used as the tool of first choice for development communication activities (Singh, 2010). Many new local independent community radio stations start with high flown ideals of development programming, community service and self-sustainability. However, practice has produced mixed and sometimes contradictory results in that they stray away from broadcasting for the development of the communities they serve and they fail to be the voice of the community (Siemering & Fairbairn, 2007). The sustainability of radio broadcasting plays a significant role in providing essential information and knowledge to listeners so that they are able to respond successfully to opportunities and challenges presented by social, economic and technological changes (Osunkunle & Wozniak, 2015). Although CRS, such as Radio Zibonele in Khayelitsha and Radio Winterveld in the North-West province, were created to serve marginalised communities (Osunkunle & Wozniak, 2015), the social impact of these radio stations continues to be minimal due to their multiple sustainability challenges.

Siemering and Fairbairn (2007) define sustainability as the ability of a radio station to maintain a good quality developmental broadcasting service over a period of time. Even with their significance, CRS remain entrapped in obscurity and fail to fill the developmental void left by large commercial radio stations. Megwa (2007) emphasises the importance of social sustainability by stating that in granting or renewing operating licenses for CRS, South Africa's broadcast licensing authority, the Independent Communication Authority of South Africa (ICASA), takes into account community participation and support. When there is a lack of a continued relationship between CRS and the communities that they are supposed to serve, the core existence of these stations ceases. With the emergence of new media technology, 'virtual communities' have emerged, where people can talk to each other as though they were in one geographical community (Nassanga, Manyozo & Lopes, 2013), which provides CRS an additional platform in order to reach its listeners. CBT have opened up doors for listeners to engage and to contribute in programmes (Domingo, Quandt, Heinonen, Paulussen, Singer and Vujnovic, 2008) thus allowing some sense of ownership on the part of the listeners and results in heightened engagement with CRS (Rosales, 2013). Arora, Ramakrishnan and Fernandez (2015) state that CRS that have created and maintained communication process with its communities can have sustainable broadcasting. It is uncontested that without adopting the latest state-of-the-art technologies to improve their broadcasting of content and increase their clientele base, CRS will remain at the lower rungs of the broadcasting landscape and continue to encounter sustainability challenges. Thus, the focus of this study is to understand the influence of CBT on the social sustainability of CRS

The current study, therefore, addresses two fundamental research questions:

1. What is the influence of creative broadcasting techniques on the social sustainability of community radio stations?
2. What are community radio station listeners' perspectives of the creative broadcasting techniques used by their preferred radio stations?

The rest of the paper is presented as follows: the literature review is given, research design is rendered, the findings are presented and discussed, and the conclusion and recommendations are presented.

2. LITERATURE REVIEW

2.1. Creative broadcasting techniques

According to the European Interactive Advertising Association (EIAA) report (2006), radio has the highest level of parallel media use in comparison with other media, particularly the internet. It is within this breadth of the ever-evolving architecture of the radio-listener relationship including the changing, hybrid roles of listeners that the creative broadcasting techniques (CBT) should be interpreted. CBT are defined as the application of new media technology for the development, aggregation, dissemination and transmission of digital audio content to multiple audiences via the radio, satellite connectivity and web-based technologies. With the advent of low-cost, low threshold technologies (Gilbert, 2002), such as social media technologies, where users can generate radio content and engage in social commentary on radio websites, CBT have created a 'virtual bridge' that allows for easier and faster communication between stations and the communities that they serve. While essentialist views of technology tend to value technological affordances over broadcasting practices, Price, Haas and Margolin (2008) warn CRS against developing wrong platforms that may divorce them from their broad base of listeners. For this reason, this study provides web-based platforms and social practices through which CRS could optimise their listenership and leverage radio content users' participation in their broadcasting activities. CRS in Asia use a number of platforms in order to engage with their listeners, these include phone-ins, social media, websites and listenership survey. Although there is a wide range of emerging technological applications and practices relevant to creative radio broadcasting techniques, this study will concentrate on institutional websites, social media, podcasts and live streaming due to their interactive and low cost affordances. These CBT are discussed in subsequent sections of this paper.

2.1.1. Website

Although institutional websites may have relatively high costs of development for CRS, Hung, Lai and Chang (2015) reiterate that they constitute effective communication channels that increase the global reach of messages and are less expensive than other alternatives. In their study of CRS in South-East Asia, Arora et al. (2015) found that radio stations' websites enabled community members to stay abreast of and comment on ongoing activities/news in their communities. Websites are an important tool for CRS to build and maintain good relationships with listeners (Hart, 2002). With the shift in readership from newspapers to websites (Pe' rez-Pena, 2008) the broadcasting of local news and information via websites is important to CRS listeners (Magpanthong & McDaniel, 2015). Additionally, in order for CRS to ensure return visits to their websites, they should offer downloadable information, recent local news stories, social media links (Park & Reber, 2008; Bentley & Barnes, 2015), giveaways and entertainment related content.

2.1.2. Social media

Dictionary.com (2015) defines social media as websites and other online means of communication that are used by large groups of people to share information and to develop social and professional contacts. With Global Web Index (2015) reporting that the use of social media has increased from a daily average of 1.61 to 1.72 hours between the period of 2012 and 2014, CRS should tap into the popularity of social media technologies to increase the readership of their content and charge subscription fees for use of their content. Whittle (2012) suggests that social media connect communities that CRS serve to the stations' broadcasters, content that they create and the collective experience of listening to a radio show. BCB FM in England and North Manchester FM in the United States of America make ample use of social media in order to observe what people are talking about, build better partnerships, inform

listeners about the content of upcoming shows and keep people aware of the station (Anon, n.d). According to Kusnitz (2014), 92% of marketers in 2014 claimed that social media marketing was important for their business, with 80% indicating their social media efforts increased traffic volumes to their websites. Since social networking sites have increasingly become one of the most used online services, community radio should be taking advantage of them (Staksrud, Olafsson & Livingstone, 2013), additionally, the growth of user trust and loyalty with increased use of such platforms cannot be discounted (Mattern, n.d).

2.1.3. Live Audio Streaming

Live audio streaming enables locally based community radio's parameters to be expanded so that they can reach wider audiences across countries (Nassanga, 2009). Through live audio streaming, stations are available for listening to their listeners from anywhere in the world; distance and space are eliminated (Ikpe & Olise, 2010). The synchronous nature of such broadcasting benefits the broadcaster through instantaneous informational communication and dissemination while the listener receive current, trending news in real time. Therefore, live audio streaming increases CRS' accessibility to community members without any geographical hindrances (Osunkunle, 2008); the same way communities render instant feedback to the CRS.

2.1.4. Podcasts

Podcasts are audio files that can be downloaded to a desktop computer, iPod, or any other portable media player for playback at a later stage (Potter, 2006; Harris & Park, 2008). Chan and Lee (2005) suggest that podcasting combines the broadcast nature of radio with flexibility and listener control. In their research about the motives of podcast users, McClung and Johnson (2010) found that listeners used this technology because of its time shifting capabilities, socialisation and entertainment qualities. Due to their niche appeal, some CRS use podcasts to go in depth on a topic that is important to its community, with the knowledge that the listeners are interested in the topic (Jācapps, n.d). "Commercial radio stations turned to podcasting as a way to increase listenership involvement" (Meduni, 2007:15), CRS should exploit podcasts' popularity as they are easy to create, easy to use and are portable, to the convenience of the listener (Anderson, 2009).

2.2. Social sustainability

Social sustainability "refers to community ownership of the station and participation in the production and airing of programmes at both decision-making and operational levels" (Arora et al., 2015:12). CRS are characterized by a high level of participation by the community they serve, not just as passive listeners - but also as active decision makers/contributors to what constitutes relevant information for them, programme production and management of the radio station (Shukla, 2014). The continued listening and support of CRS by its community is of utmost importance to its survival. Gumucio-Dagron (2003) explains that without community participation, the communication experience between a community radio and its listeners becomes an island amid the human universe in which it operates. Without the support of the community, CRS run a risk of having to close their doors as without a recipient, the service provided becomes impractical.

2.3. CBT to sustainability

Although the relationship between CBT and radio remain spurious, emerging evidence points to CBT being integral to the sustainability of these entities. Garcia-Aviles (2012) notes that the synergies between radio and CBT have brought about innovative ways of considering the role of listeners in broadcasting, amplifying the reception of shows and increasing listener feedback

and engagement with shows. Semujju (2014:197) emphasises the importance of community participation by noting that “one of the essential ingredients of community media is participation”. Community stations should thus use CBT to enable this participation in order to ensure their social sustainability. The fact that 40% of the South African internet users use the internet and listen to radio at the same time (EIAA Report, 2006) means that the sustainability of CRS lies in their ability to tap into this online networked community. Through satellites and listeners’ exploitation of new media technologies, such as laptops and smartphones, CRS are just an arms-length or click away from their listeners and have thus become placeless (Croteau & Hoynes, 2011). As a result of this important link between community media and CBT, one can postulate that with the correct application, social sustainability can be better maintained.

3. METHODOLOGY

The study adopted a quantitative case study approach. Yin (1984) highlights that a case study allows researchers to develop holistic narrative of real-life events. The narrative provides a descriptive account of respondents’ perceptions about phenomenon at a given point in time. To make meaning of the constitution of CBT in CRS, including its relationship with organisational sustainability, the perspectives of two CRS personnel were examined.

3.1. Target population and sampling

Polit and Hungler (1999: 232) define a population as “the totality of all subjects that conform to a set of specifications comprising the entire group of persons of interest to the researcher and to whom the research results can be generalised”. The researchers’ target population was two CRS in Bloemfontein, as these institutions formed the central study point of this paper.

Since the CRS listeners' were the unit of analysis for this study, the sample was drawn from this population. Sampling is the procedure of selecting a portion of the population to represent the entire population (Polit & Hungler, 1999). Snowball sampling, a non-probability sampling technique (Bryman & Bell, 2007), which involves selected key respondents (i.e. CRS personnel) referring the researchers to other knowledgeable respondents (i.e. CRS listeners) consecutively until sample base is created, was adopted for this study. The personnel of two CRS (i.e. station managers, producers and disk jockeys [DJs]) provided regular listeners of their stations, who upon being surveyed, referred the main author to other listeners until data saturation was reached. A final number of 50 listeners, 25 listeners per station, was reached using this method.

3.2. Data collection techniques

A survey was conducted to examine the relationship between CBT and the sustainability of CRS. Surveys are conceived ideal when the researcher intends to examine relations between variables occurring in particular real-life contexts (Muijs, 2011). The main author administered the survey on the 50 listeners of the two CRS situated in Bloemfontein in the Free State province. The data collection was conducted over a period of one month.

3.3. Data analysis

All collected data was coded, entered into Excel, cleaned to correct inconsistencies and exported to Statistical Package for the Social Sciences (SPSS) for detailed analysis. Descriptive statistics and inferential statistics were employed for the analysis of demographic data and variables data respectively.

4. FINDINGS

4.1. Reliability Analysis

The Cronbach's Alpha coefficient was used to measure the internal consistency of the questionnaire items. The reliability analysis of the entire questionnaire was 0.700. Therefore, the items in the questionnaire were regarded as reliable.

4.2. Sample demographics

The demographics of the sample comprised the gender, age, race, home language, geographic location, educational attainment and occupational levels of respondents.

Table 1: Demographical Information of Participants

Demographic Variables	Category	Frequency	Percentage
Q1. Gender	Female	29	58.0%
	Male	21	42.0%
Q2. Age	Below 21 Years	14	28.6%
	Between 21 - 30	33	67.3%
	Between 31 - 40	2	4.1%
Q3. Race	Black African	33	66.0%
	White	5	10%
	Coloured	11	22.0%
	Others	1	2.0%
Q4. Home languages	English	5	10.0%
	Afrikaans	12	24.0%
	Sesotho	15	30.0%
	IsiXhosa	5	10.0%
	IsiZulu	6	12.0%
	Other (Setwana)	7	14.0%
Q5. Geographical location	Bloemfontein	43	86.0%
	Thaba Nchu	1	2.0%
	Botshabelo	3	6.0%
	Brandfort	2	4.0%
	Others (Kimberly)	1	2.0%
Q6. Highest educational level	Grade 12	28	56.0%
	National Diploma	6	12.0%
	Degree	14	28.0%
	Honours	1	2.0%
	Others	1	2.0%
Q7. Occupation	Student	24	48.0%
	Government	4	8.0%
	Private Organisation	11	22.0%
	Self Employed	5	10.0%
	Unemployed	5	10.0%
	Others (volunteer)	1	2.0%
Q8. Socioeconomic status	Lower Class	1	2.0%
	Lower-Middle Class	14	28.0%
	Middle Class	25	50.0%
	Middle-Upper Class	9	18.0%
	High Class	1	2.0%

Table 1 shows that female participants slightly dominated the study with 58% as compared to their male counterparts who made up forty-two per cent of the participants. The higher representation of females can be attributed to CRS' preferential hiring of females as they tend to struggle to adjust to male discussions compared to males' conceived easy flexibility to female topics.

The 21-30 years age group dominated the sample (67.3%), followed by the below 21 years age group who made up twenty-eight-point-six per cent of the respondents. These demographics could be attributed to the fact that all CRS were campus-based radio stations that hired young university students. These demographics buttress the Council of Higher Education South Africa's (2016) claim that a majority (over 60%) of South Africa's university student population falls in the age groups of 20-35 years of age (Council of Higher Education of South Africa, 2016). Given the ages of the respondents, it shows that CRS could exploit CBT as a Pew Research Center (2013) survey confirmed the growing popularity of new technology use with it finding that 27% of internet users ages 18 and older downloaded or listened to podcasts as compared to the 21% of 2010.

The majority of the participants were Black African (66%) followed by Coloured (22%) with Whites (10%). The Council of Higher Education South Africa (2016) found that a majority (70%) of students enrolled in universities around the country were African in 2013, a finding consistent with our sample demographics. This high percentage of Black African respondents further emphasises that the CRS in this study should utilise CBT as 57.97% of internet users in South Africa are a part of that racial group (Anon, 2015). This means that the listeners of the community stations under study have a high possibility of having access to the new technologies under investigation.

The majority of the respondents (86%) were from the Bloemfontein area with the surrounding towns sharing very small percentages. This is largely because the CRS under study are based in Bloemfontein, making that area's community its core listeners.

A total of fifty-six per cent of the respondents had Grade 12 as their highest level of education followed by only twenty-eight per cent who have attained a degree qualification and twelve per cent with national diplomas. This can be attributed to the fact that a majority of students enrolled at university have matriculated and some of these are employed by campus-based CRS.

4.3. CBT used by CRS

In this section, the CBT used by CRS are summarised in order to determine which technology-mediated techniques are popular. The CBT that are summarized in this section are phone-ins, use of social media, live audio streaming, websites, and podcasts.

Table 2 focuses on the use of phone-ins and the encouragement of feedback by CRS.

Table 2: Creative Broadcasting Techniques: Phone-Ins and Feedback Interaction (PF)

Creative Broadcasting Techniques: Phone-ins and feedback interaction (PF)		Frequency Distribution						Descriptive		Latent Factor (Principal component) Coefficient
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	% Agree/Strongly Agree	Mean	Std Dev	
Q28. Community radio encourages comments through phone-ins	Count	1	2	6	28	13				0.134
	%	2.0%	4.0%	12.0%	56.0%	26.0%	82.0%	4.00	0.86	
Q29. Interacts with radio through phone-ins	Count	6	15	13	13	3				0.889
	%	12.0%	30.0%	26.0%	26.0%	6.0%	32.0%	2.84	1.13	
Q30. Radio accept and implement constructive feedback	Count	1	3	18	23	5				0.851
	%	2.0%	6.0%	36.0%	46.0%	10.0%	56.0%	3.56	0.84	
		Chronbach's Alpha						0.461		
		% of total variation accounted for by latent factor						51.12%		

4.3.1. Phone-ins and feedback interaction

The construct of CBT: Phone-ins and feedback interaction (PF) are made up of three questionnaire items that are summarized in Table 2 below. The results in Table 2 show that the majority (82%) of the respondents claimed that their community radio encourages comments through phone-ins and more than half (56%) agreed/strongly agreed that their radio accepts and implements constructive feedback. However, only thirty-two per cent claimed to interact on a regular basis with their community radio through phone-ins (disagreeing/strongly disagreeing).

Table 3 comprises of the active use of social media by CRS the encouragement of listeners to use these platforms to voice out their opinions.

Table 3: Social Media

Social Media (SM)		Frequency Distribution						Descriptives		Latent Factor (Principal component) Coefficient
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	% Agree/ Strongly Agree	Mean	Std Dev	
Q31.Radio encourages listeners to follow programmes using social media	Count %	0 0.0%	1 2.0%	2 4.0%	15 30.0%	32 64.0%	94.0%	4.56	0.67	0.786
Q32.Radio has live and active Facebook fan page	Count %	1 2.0%	1 2.0%	2 4.0%	10 20.0%	36 72.0%	92.0%	4.58	0.84	0.862
Q33.Radio has live and active twitter fan account	Count %	1 2.0%	1 2.0%	4 8.0%	11 22.0%	33 66.0%	88.0%	4.48	0.89	0.814
Q34.Radio encourages listeners to contribute content	Count %	1 2.0%	4 8.0%	8 16.0%	19 38.0%	18 36.0%	74.0%	3.98	1.02	0.617
Q35.Radio encourages listeners to critically comment on issues via social media	Count %	0 0.0%	0 0.0%	7 14.0%	26 52.0%	17 34.0%	86.0%	4.20	0.67	0.781
Q36.Radio provides relevant and informative updates through social media	Count %	2 4.0%	3 6.0%	10 20.0%	24 48.0%	11 22.0%	70.0%	3.78	1.00	0.695
Q37.Interact regularly with community radio through social media	Count %	2 4.1%	3 6.1%	17 34.7%	16 32.7%	11 22.4%	55.1%	3.63	1.03	0.600
		Chronbach's Alpha						0.845		
		% of total variation accounted for by latent factor						55.10%		

4.3.2. Social Media

Respondents indicated that their community radios have active Twitter (88%) and Facebook fan page (92%). The majority (74%) of the participants asserted that their community radios encourage listeners to contribute content whilst 70% claimed that their community radios provide relevant informative updates to listeners via social media. Participants also agree/strongly agreed that their radios encourage listeners to critically comment on issues (86%). Slightly more than half (55.1%) of the respondents interact regularly with community radio through social media. As literature stated, the use of social media by CRS enables the community to participate in radio shows, which is vital for the maintenance of social sustainability. Table 4 concentrates on the use of live audio streaming by the CRS under study.

Table 4: Live Audio Streaming

Live Audio Streaming (LAS)		Frequency Distribution						Descriptives	
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	% Agree/Strongly Agree	Mean	Std Dev
Q38.Radio uses streaming to ensure listeners receive programmes	Count	1	2	8	17	22			
	%	2.0%	4.0%	16.0%	34.0%	44.0%	78.0%	4.14	0.97

4.3.3. Live Audio Streaming

There was only one item under live audio streaming hence the construct comprised of this item. No dimension reduction in the form of a principal component is required. As shown in Table 4, the majority of the respondents (78%) confirmed that their community stations use audio streaming to ensure that listeners in distant locations receive their programmes. Table 5 Dealt with whether the CRS had active websites.

Table 5: Websites

Website (WB)		Frequency Distribution						Descriptives		Latent Factor (Principal component) Coefficient
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	% Agree/Strongly Agree	Mean	Std Dev	
Q39.The radio station has active website	Count	20	14	8	2	6				
	%	40.0%	28.0%	16.0%	4.0%	12.0%	16.0%	2.20	1.34	0.944
Q40.The radio station encourages listeners to access news via its website	Count	20	16	8	3	3				
	%	40.0%	32.0%	16.0%	6.0%	6.0%	12.0%	2.06	1.17	0.951
Q41.The radio station encourages listeners to access competitions via its website	Count	18	16	7	6	3				
	%	36.0%	32.0%	14.0%	12.0%	6.0%	18.0%	2.20	1.23	0.928
Q42.The radio encourages listeners to access events via its website	Count	20	15	6	5	4				
	%	40.0%	30.0%	12.0%	10.0%	8.0%	18.0%	2.16	1.28	0.962
		Chronbach's Alpha						0.960		
		% of total variation accounted for by latent factor						89.54%		

4.3.4. Websites

The results presented in Table 5 indicate that most of the participants believed that their community radios do not have active websites (only 16.0% agree or strongly agree to the existence of websites). Only twelve per cent agreed or strongly agreed with the statement that their radio encourages listeners to access news via websites. Only eighteen per cent indicated that their radio stations encouraged

listeners to access competitions via websites and only eighteen per cent indicated that their community radio stations encouraged listeners to access events via websites. Table 6 focuses on the use of podcast services by the CRS under study.

Table 6: Podcasts

Podcasts (POD)		Frequency Distribution						Descriptives		Latent Factor (Principal component) Coefficient
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	% Agree/Strongly Agree	Mean	Std Dev	
Q43.The radio has podcast service	Count	22	11	9	4	4	16.0%	2.14	1.29	0.913
	%	44.0%	22.0%	18.0%	8.0%	8.0%				
Q44.The radio encourages listeners to download podcast	Count	23	13	8	2	4	12.0%	2.02	1.24	0.977
	%	46.0%	26.0%	16.0%	4.0%	8.0%				
Q45.That radio creates buzz about broadcasted topics	Count	24	13	7	1	5	12.0%	2.00	1.28	0.977
	%	48.0%	26.0%	14.0%	2.0%	10.0%				
		Chronbach's Alpha						0.952		
		% of total variation accounted for by latent factor						91.42%		

4.3.5. Podcasts

The results presented in Table 6 points to limited podcasting across community radios with only sixteen per cent of the participants acknowledging the existence of a podcast service and 66% believing that no such service exist. A total of seventy-two per cent disagree/strongly disagree that their community radios encourage listeners to download podcast whilst seventy-four per cent believe that their community radios do not create a buzz about broadcast topics.

4.4. Social Sustainability

Social sustainability was the main response variable, a construct which composed of six questionnaire items. As shown in Table 7, the majority of the respondents (60%) believed that their community radio allowed consistent participation from listeners whereas only thirty-four per cent claimed that their radio stations had implemented successful outreach programmes. The fact that the CRS hosted outside broadcasts (OB) seems to have contributed highly in enabling participation with listeners. OB, which entail radio stations broadcasting away from their studios, allows for heightened participation as the station leaves its walls and moves broadcasting where its community members are gathering (musical event, school event, etc.). This type of broadcasting increases social sustainability as listeners not only get to participate in radio shows, but it also allows them to see how their favourite shows are created.

Table 7: Social Sustainability

Social Sustainability (SOSUS)		Frequency Distribution						Descriptives		Latent Factor (Principal component) Coefficient
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	% Agree/Strongly Agree	Mean	Std Dev	
Q46.The radio has allowed consistent participation from listeners	Count %	4 8.0%	3 6.0%	13 26.0%	27 54.0%	3 6.0%	60.0%	3.44	0.99	0.661
Q47.The radio has implemented successful outreach programmes	Count %	5 10.0%	9 18.0%	19 38.0%	15 30.0%	2 4.0%	34.0%	3.00	1.03	0.842
Q48.The radio has conducted outside broadcasts in the last three years	Count %	5 10.0%	4 8.0%	20 40.0%	14 28.0%	7 14.0%	42.0%	3.28	1.13	0.904
Q49.The radio uses outside broadcasts to engage with community	Count %	2 4.0%	5 10.0%	20 40.0%	17 34.0%	6 12.0%	46.0%	3.40	0.97	0.756
Q50.The radio host annual gala for listeners	Count %	19 38.0%	19 38.0%	10 20.0%	1 2.0%	1 2.0%	4.0%	1.92	0.92	0.566
Q51.The radio hosts annual general meetings for listeners	Count %	3 6.0%	11 22.0%	14 28.0%	12 24.0%	10 20.0%	44.0%	3.30	1.20	0.203
		Chronbach's Alpha						0.742		
		% of total variation accounted for by latent factor						48.29%		

The Table also shows that forty-two per cent of the participants claim that their community radios conducted outside broadcasts in the previous three years with forty per cent being neutral. Only forty-six per cent claimed that their community radios used outside broadcasts to engage with the community, while forty per cent remained neutral on the issue. The majority of the radio stations did not host annual galas for their listeners (only 4% indicated that they do) and only forty-four per cent believed that their community radios hosts annual general meetings for listeners. In general, the indicators of sustainability are quite low - hence, the radio stations need to do more to improve. These split findings could be an indication that community members are not aware of the events/meetings that are hosted by their community station - which could be interpreted as these community radios not using their social media to advertise their events, as literature suggested that they do.

4.5. Influence of CBT on the sustainability of CRS

Correlation analysis was conducted and a regression model was fitted to the data with Social Sustainability (SOSUS) as the response variable and creative broadcasting techniques variables, namely, Phone-ins and feedback interaction (PF), Social Media (SM), Live Audio Streaming (LAS), Website (WB) and Podcast (POD) as independent variables.

Table 8
Correlations between Sosus and Creative Broadcasting Techniques Variables

Pearson Correlation			Creative broadcasting techniques				
			Phone-ins and feedback interaction (PF)	Social Media (SM)	Live Audio-Streaming (LAS)	Website (WB)	Podcast (POD)
Creative broadcasting techniques	Phone-ins and feedback interaction (PF)	Correlation p - value N	-				
	Social Media (SM)	Correlation p - value N	0.136 0.350 49	-			
	Live Audio-Streaming (LAS)	Correlation p - value N	0.135 0.348 50	0.469** 0.001 49	-		
	Website (WB)	Correlation p - value N	0.195 0.175 50	0.000 0.998 49	-0.086 0.555 50	-	
	Podcast (POD)	Correlation p - value N	0.156 0.279 50	0.031 0.832 49	0.044 0.762 50	0.781** 0.000 50	-
Social Sustainability		Correlation p - value N	0.393** 0.005 50	-0.140 0.337 49	-0.222 0.122 50	0.137 0.344 50	-0.098 0.497 50

Correlations between SOSUS and CBT variables

The results in Table 8 show that CBT variables are not very strongly correlated to SOSUS. There is significant correlation between Phone-ins and feedback interaction (PF) and social sustainability (SOSUS) (correlation = 0.393, p - value = 0.005) but with very low effect size. Social Media (SM) is not significantly correlated with SOSUS (correlation = -0.140 p - value = 0.0337).

Additionally, there is no significant correlation between Live Audio-Streaming (LAS) and social sustainability (SOSUS) (correlation = -0.222, p - value = 0.122). There is no significant correlation between Podcast (POD) and social sustainability (SOSUS) (correlation = -0.098, p - value = 0.497).

Table 9: Regression of Sosus on Creative Broadcasting Techniques Variables

Dependent Variable: Social Sustainability (SOSUS)	Parameter estimates		T	p-value
	Coefficient	Std. Error		
(Constant)	2.798	0.706	3.961	0.000
Creative Broadcasting Techniques: Phone-ins and feedback interaction (PF)	0.413	0.118	3.500	0.001
Social Media (SM)	-0.125	0.166	-0.749	0.458
Live Audio-Streaming (LAS)	-0.134	0.111	-1.215	0.231
Website (WB)	0.275	0.128	2.137	0.038
Podcast (POD)	-0.291	0.124	-2.352	0.023
R-Square = 0.348				

4.6. Regression of SOSUS on CBT variables

A regression model, with CBT variables as independent variables and SOSUS as the dependent variable, was fit to the data. The results in Table 9 show that when all the CBT variables are fitted together in a regression model with SOSUS as the response variable, Phone-ins and feedback interaction (PF) has positive impact on social sustainability (coefficient = 0.413, $t = 3.500$, $p - \text{value} = 0.001$). Website (WB) also has positive impact on social sustainability (coefficient = 0.275, $t = 2.137$, $p - \text{value} = 0.038$).

A very interesting result is that Podcast (POD) has a negative impact on social sustainability (coefficient = -0.291, $t = -2.352$, $p - \text{value} = 0.023$). The other two CBT variables do not have significant impact on SOSUS ($p - \text{values} > 0.05$) but they have a negative impact on SOSUS albeit not significant.

5. DISCUSSION

Though community broadcasters encourage participation via CBT, it is evident – in Table 8 - that phone-ins are the only ones that seem to have an influence on the sustainability of CRS. The popularity of phone calls is buttressed by literature. In their study which explored radio stations' use of social media, Zoellner and Lax (2015) found that communication between radio and listeners mainly unfolded via traditional modes of communication such as phone-calls, text messages and e-mail and not necessarily via new media technology. This means that even though new technology has been widely studied in recent years, old media (i.e. telephone lines) are still widely used as a participatory tool, thus still being able to maintain social sustainability.

There was sufficient evidence to suggest that there was no significant relationship between new media technologies (social media, live streaming and podcasts) usage and the social sustainability of CRS. It can be inferred that despite the increasing popularity of these emerging technologies in the social world (i.e. their use by individuals for entertainment), the CRS, under study, have been hesitant to intensively exploit these technologies. This underutilisation could be as a result of the busy workload of radio broadcasters; the pressure that the fast-paced online world exerts on radio stations; the different skills set which such content creation and broadcasting require; and the risk that online content may be contradictory to on-air content if produced by multiple employees (Zoellner & Lax, 2015). Alternatively this could mean that their use of social media has not been sufficiently creative and innovative. Frey (2010) posits that social media creativity is all about sparking conversations in order to keep listeners interested, which is an inexorably complex practice to engage in and sustain over a long period. Additionally, Frey (2010) highlights that maintaining social sustainability on social media requires a constant supply of ideas and knowledge of what listeners really want, which these CRS could be failing to do. The absence of a statistically significant relationship between social media usage and social sustainability of CRS is surprising as there is extensive use of such

technologies (see Table 3). Such extensive use is consistent with Zoellner and Lax's (2015) study that found radio broadcasters used Facebook and Twitter to find sources of information, interviewees and sometimes news stories.

Though podcasting provides an opportunity for listeners to create their own listening schedules (McClung & Johnson, 2010) as well as a platform to generate revenue (Pizzi, 2008) in McClung and Johnson (2010), none of the CRS in this study made use of this service. Perhaps, the limited use of podcasts could be attributed to CRS personnel's lack of technological competence, digital skills and resources to make the podcasts and upload them onto the CRS websites. Sprague and Pixley (2008) emphasise that environmental concerns such as "audio quality in podcasts must be considered". Furthermore, podcast users have a tendency of having higher educational levels, earning greater salaries and spending more time on the internet than the average user (McClung & Johnson, 2010) and such people may not be listening to CRS but the perceivably trendy commercial radio.

While podcasts software such as Audacity are user friendly and customizable, the editing of audio files is often laborious and requires considerable digital skills, which most average CRS presenters and DJs do not have. Tavhiso (2009) supports this statement by noting that because of broadcasters' lack of technical skills, broadcasting service quality is usually compromised. Therefore, the limited use of podcasts complicates the determination of its effect on social sustainability of CRS, thus cannot be fully measured. Perhaps the high costs of data for listeners to download podcasts and CRS to upload them also explain their limited use, notwithstanding time-shifting capabilities. Data prices in South Africa are on average 134% more expensive compared to other BRIC (Brazil, Russia, India and China) countries including Kenya and Australia (Anon, 2016).

The use of web sites to broadcast news, competitions and events was also not popular among CRS. Perhaps the high initial costs of developing a website, web development and design knowledge expected of CRS managers, producers and DJs could explain such limited use of web sites by CRS. According to SA web designer (2014), designing a good quality business website could cost anything from R9 000.00 upwards including a monthly maintenance of R750.00 (Cyber SEO, 2016). In addition to the costs of designing and maintaining a website, website designers must possess and demonstrate programming, web production in HTML/CSS, search engine optimization and website security management skills (Hunt, 2009; Blake, 2014).

Although phone-ins and feedback interaction had a significant positive impact on social sustainability the same way websites management had a positive impact on social sustainability, the former had higher coefficient than the latter. This seems to suggest intensive use of phone-ins as well the CRS' continued dependence on traditional technologies. This supports Bailey, Cammaerts and Carpentier's (2008) claim that despite the prevalence of the Internet in the contemporary society, traditional media continues to dominate the media landscape.

6. CONCLUSION

This study sought to determine the influence of CBT on CRS' social sustainability. The constitution of CBT from the perspective of CRS comprises the use of social media technologies, livestreaming of news, events and programmes, podcasting and the development of websites. Despite the prominence of social media usage in CRS, there was no statistically significant relationship between social media technologies (social media podcasts, websites, live streaming) and the social sustainability of CRS. In terms of relations of association, only traditional technological practices, that is phone-ins, were positively and significantly related

to the social sustainability of CRS. The findings suggest that even though the demographics of the community radio's listeners allow for the exploitation of new technologies, there seems to be no evidence linking these technologies to the maintenance of social sustainability. CRS seem to be maintain their social sustainability without the intense usage of CBT. But with the world going 'digital', the lack of use of new technologies by CRS may not have the same results as it has now. Baxter-Reynolds (2014) posits that a digital station uses social (social media platforms) to interact with listeners, both proactively and responsively. There is no doubt that CRS across the globe need to start becoming digital – hence going digital must be on everyone's agenda, from board members down (Andersson, 2016).

7. STUDY IMPLICATIONS AND RECOMMENDATIONS

The fact that there was no statistically significant relationship between the use of social media, podcasts, live streaming and websites and the social sustainability of CRS could truly imply that CBT do not have a noticeable influence on social sustainability. On the other hand, this lack of a significant impact could be attributed to the limited creative, innovative and intensive use of such technologies to generate social value for these organisations. Future studies should expand the focus of the study to include other radio stations in other regions or nationally to develop a more comprehensive picture of the relationship between CBT and social sustainability of CRS.

The dominance of phone-ins and feedback interaction implies that the experimentation with new technologies should be conducted in conjunction with the continued use of such traditional technologies before phone-ins are increasingly phased out. This should be done until emerging technologies such as social media gain prominence in community radio broadcasting, which may ensure maintained social sustainability as digital platforms become prominent. In order to ready for the digital change that literature is highlighting (O'Connor, 2013; Baxter-Reynolds, 2014; Perumal, 2017) and be prepared for the change in preferences of their listeners, the following recommendations are suggested for CRS:

- The perceived lack of technological and digital skills among CRS could be ameliorated through the channelling of community contributions towards training CRS staff in web development and design. The training of web design specialist could increase the targeted and innovative use of websites and social media technologies by CRS.
- CRS should hire volunteers that will be dedicated to maintain their CBT.
- CRS should compile CBT manuals, in order to assist volunteers to manage and utilise CBT effectively and efficiently.

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A Framework for Accessing Internet-based Security Threats faced by Small Micro and Medium-Sized Enterprises in Tshwane

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ABSTRACT

The ongoing research study aimed to investigate the internet-based security threats faced by small and medium-sized enterprises in the city of Tshwane in South Africa. The study contributed to sustainable internet security and strategic development plans to ensure economic growth for Small, Micro and Medium enterprises. The main goal of this study is to develop a conceptual framework for accessing internet-based security threats faced by SMMEs in the city of Tshwane. The study used developed a critical analysis from the existing framework bringing in the social economic factors, Technology factor, and factors that could suggest internet-based security in SMMEs. A structured, pre-tested and validated questionnaire was developed and used for data gathering, following a rigorous application process, by the approval of the research committee. All statistical analyses were performed by using structural equation modelling (SEM) with the statistical package for the social sciences (SPSS) version 14.0.

Keywords: *Conceptualize, Framework, Internet, Security threats on SMEs*

1. INTRODUCTION

A conceptualized framework can be defined as a support to organizations on what is required to be protected in terms of assets and infrastructure in their company operations (Patricia, 2006). In a study conducted by Onwubiko (2007) on managing security threats and vulnerabilities for small to medium enterprises in the UK, a conceptual framework is proposed to assist small and medium enterprises to recognize the important of asset they have, determine how to protect their infrastructure from weaknesses, threat that exist in businesses. Furthermore, he suggests what can be enforced to prevent and mitigate threats and vulnerabilities. In the research work of Michael and Johannes (2013), they established the challenges affecting South African SMEs. The study mentions two important factors that may cause failure of SMEs in South Africa: internal factors and external factors. Furthermore, other factors that the study suggests which may cause the failure of SMEs are: economic environment, high rent rate, information technology, networking, infrastructure, crime, corruption, labour and regulation. Van Scheers and Cant (2012) conducted a study that examined how marketing-related challenges and marketing skills could have a negative influence leading to an unsuccessful business in South Africa. The study indicated that properties (rents) have negative influence towards unsuccessful SMMEs. Additionally, Bouazz et al. (2015) conducted a study in Algeria on factors affecting the growth of small and medium-sized enterprises, where they discovered some problems which may cause failure of a business, including business environment factors, technology factors, marketing skills and entrepreneurial capacities. David and Barry (2010) conducted a study which reviewed the availability of advice on security for small and medium-sized organizations. The study emphasizes that small and medium-sized enterprises face a growing range of information security threats. Therefore, this means that SMMEs do not apply sufficient control to safeguard their sensitive information and the results suggest that the growing risk of security breaches of sensitive business information or customer data, many cause a damage to SMMEs. Lastly, Russell (2005) conducted a study which investigated information security for small businesses. The study suggested that new technology allows small businesses to use many of the same information systems employed by large enterprises; however, by doing so, small businesses open themselves to many threats that traditionally are associated with large corporations and this can cause failure of a business.

2. LITERATURE REVIEW

In a study conducted by Kwebena Obiri-Yeboah, et al. (2014), they focused on deepening the knowledge on information security management in developing countries and used Ghana as a case study. Through their investigation, they found that usage of internet and integration of computer information systems has rapidly increased successful business transactions and communication worldwide, which also impose threats on the security of information and data of an organization. This allows hackers to launch cyber-attacks on businesses, public communication, and organizations, which can cause inadequate security to businesses in Ghana. The study used quantitative and qualitative methods to investigate the level of security and threats on businesses and management practice. The findings of the study indicate that human factors contributed to internet security and threats to information security. Furthermore, risks of vulnerability also expose business to external attack. They concluded that government, small and medium enterprises, firm and organizations' management should recommend periodic educational training on information security in order to sustain their economic growth in Ghana. In addition, the findings also show that the result is good but fails to develop a framework to ascertain the problem.

A UK scholar, Vadim (2014), conducted research on implementing information security management systems on SMEs. The study intended to cover the gap-security management systems in SMEs in the UK and also emphasised that many organizations do not genuinely know how to protect their business information because of insufficient IT knowledge maturity. The problem is made worse by the fact that most of the available security standards and guidance were not built with enough most recent technology tailoring to the SMEs level of expertise. The risks are more significant as most of the SMEs do not implement security control due to the false perception of threats only targeting the big corporations. The findings of this study enabled SMmEs to overcome the weakness of existing security implementation approaches, and suggest education and training as a priority in the workplaces and/or organizations. Based on this study, the research showed that the result is good but fails to help the government look into the existing programme, by established the measuring variables with use of hypotheses are yet to be explored. In the research conducted by Michael and Johannes (2013), they estimated the percentage of SMMEs that fail to be successful in their business in South Africa. The study investigated the extent to which factors like environmental factors, the human factor, tribalism, crime, unemployment, low demand of product, the wrong pricing strategies implementation and location of the business were major challenges affecting South African SMMEs. Furthermore, inflation and interest rate also contributed to unsuccessful SMMEs. The challenge was to improve the skills and competencies experiences of SMMEs to ensure adequate security measures to small businesses in the South African economy. In the their research study, the findings show that although the result is good, it failed to use a case study to determine the challenges affecting South African SMEs. In the study of Omar-Hassan (2011), he investigated the importance of data protection process in the small and medium enterprises in Jordan. The study developed new factors which could increase data protection risk; then create the small and medium-sized business data protection position to avoid missing information and data. The study concluded that SMMEs should backup their information and treat the problem promptly as soon as they experience a difficulty in their firm. Based on this, the study suggest that Structural Equation Modelling (SEM), regression analysis and correlation have not been tested on the variables on important data protection process in SMMEs with the use of hypotheses. In the research study conducted by GFI (2010), on security threats to guide small and medium enterprises, they highlighted that security threats are becoming increasingly sophisticated and harder to detect in our daily activities. Moreover, many SMEs are still convinced that firewalls, antivirus and anti-spam software are enough to protect their network. Likewise that, most organization do not knowing that as internet usage increases, it is imperative that many organizations are not aware of security threats that face our daily basis, business transaction and decision taking. The study aimed to help SMMEs focus on threats that are likely to have an impact and effect on businesses. Thus, the threats specifically target SMMEs in order to handicap economic growth and cause disability of a country. The study shows that the results are good, but failed to adopt a framework to determine level of security threats faced by SMMEs, and to also offer a solution to the problem.

3. BACKGROUND TO THE RESEARCH PROBLEM

In South Africa, small, micro and medium enterprises play a major role in the sustainable growth of economy and development. A strategic plan of a country is to create employment for individuals, secure sustainable economic growth and protect the businesses. The expectation of SMMEs is to improve the economic growth of a country, and to protect the internet threat and challenges face small and medium enterprises. Various survey questionnaires show that SMMEs are facing more challenges in developing countries due to the open nature of the internet.

Russell (2005) conducted a study where he concluded that people are not familiar with threats from the internet because they are not oriented on security and threats faced by SMMEs. Likewise, Asma, et al.'s 2015 study examined various aspects of internet-based security and threats faced by SMMEs. The study also revealed that business environment factors, internal factors, external factors, and technology factors are causing the failure of SMMEs. Fatoki and Garwe (2010) also examined factors that may cause internet security threats faced by SMMEs; for example, network work problems, inadequate management skills, lack of technology infrastructure, corruption, crime, and economic environment.

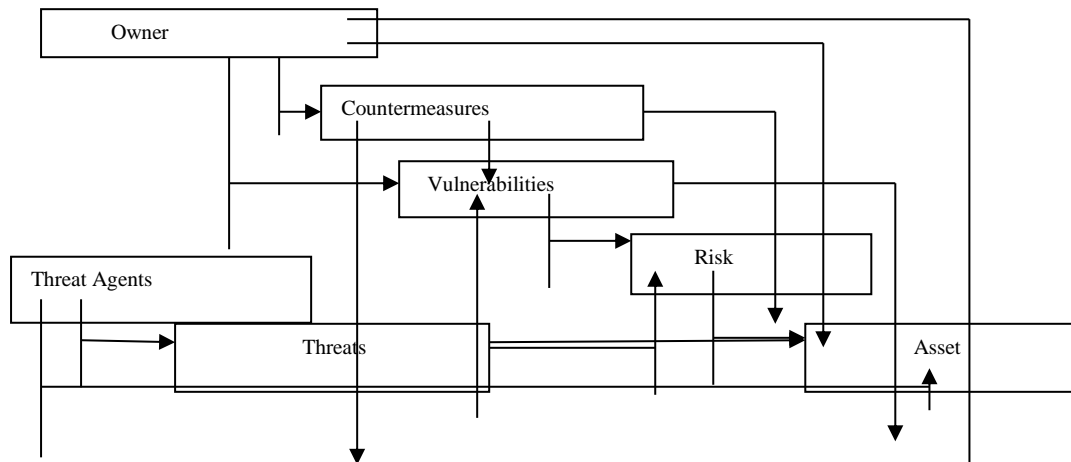
4. RESEARCH MOTIVATION AND SIGNIFICANCE

This study was motivated by academic literature and also observes that very few studies have been done in the area of Framework for Accessing Internet based Security Threats faced by Small Micro and Medium-Sized Enterprises in Tshwane. Its also focus on internet security measures that could motivate all SMMEs to adopt a new economic development and stability in businesses. However, the present study will contribute to literature on how to develop a conceptualized framework that will secure sustainable internet security in a developing country and most especially in the South African context. This study will protect confidentiality in information system, business purposes, and authentication in security and privacy of users and customer identification and then integrity of internet security in SMMEs of Tshwane in South Africa.

5. BENEFIT OF SECURITY MEASURE IN BUSINESS

Security has contributed to development of a new business, with expansion of technology and innovation to emphasise rapid growth in the economy. These gave an opportunity to education, skills, technology and science. Security measures provide adequate advantages for SMMEs by protecting businesses from threats, which align with the strategic plan of organization, infrastructure, information systems, physical security and training, in order to prevent the business from threats. However, stakeholders, SMMEs and government, cannot ignore security and internet threat in business. They must participate in information security capacity of SMMEs by providing sustainable information technology security for the internet. This is essential because it allows internet security for SMMEs by providing comprehensive guidelines and frameworks to organisations that assist them to fully understand their unique business requirements. This is compulsory for SMMEs in order to identify what exactly needs to be protected.

6. ADOPTED SECURITY CONCEPTUAL FRAMEWORK



Owners: These are organizations or individuals who own the asset. Owners value their assets, they are sometimes aware of the vulnerabilities on their assets, but they ultimately want to reduce the likelihood of their assets being compromised by threats, so they impose countermeasures to prevent and/or mitigate vulnerabilities, threats and associated risks to assets. **Countermeasures:** These are protection controls (safeguards) imposed by the asset owners to mitigate vulnerabilities, threats and risks to assets. **Vulnerabilities:** These are flaws in assets or the absence of security controls that could lead to a security breach when exploited by threats that increases the likelihood of risks to assets. **Threat Agents:** These are entities with the capability to introduce threats to assets. **Threats:** These are entities that exploit vulnerabilities in assets, thereby increasing the likelihood of risks to harm or cause harm to assets. **Risk:** The probability (likelihood) that assets may be compromised by threats. **Asset:** Systems infrastructure, information, data, applications and programs owned by the owners.

6. METHODOLOGY

The present study was conducted by using the case study approach in the city of Tshwane in Gauteng. A survey questionnaire was adopted to establish internet-based security threats faced by small, micro and medium-sized enterprises. To address the problem, the research methodology was based on primary and secondary data. For the purpose of this study, the target population comprised existing SMMEs based in Gauteng. The sample consisted of 386 participants from five geographical zones of Gauteng. The first section of the questionnaire relates to demographics: education, gender, age, race; while the second part of the questionnaire investigated the perception of the problems experience by SMMEs. To perform data analysis, simple regression analysis was used. Through this study, we hope that the method of data analysis is capable of measuring the degree of relationship between the independent and dependent variables; and at the same time, pinpoint the extent to which they affect each other.

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Adoption of emerging technologies to enhance the networking capabilities, export orientation and absorptive capacity of South African SMMEs: An internationalisation perspective

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ABSTRACT

In spite of the increasing diversity of South African's manufacturing sector, its manufacturing output as a percentage of total World manufacturing output has declined considerably. This contraction of production invokes the need to strengthen the country's manufacturing position given its potential to impact economic growth and employment creation and export earnings. This call is particularly acute in the textile and clothing industry, which has been negatively affected by the volatility of the rand and increased import competition from textile and garment producing countries such as India, Bangladesh and China. The thesis of this theoretical paper is that exploring the networking capabilities, export orientation and absorptive capacity of the South African textile and clothing industry is instrumental to improving market intelligence, improving export competitiveness and international presence of such firms. Building on mainstream literature, this theoretical paper argues that the clothing and textile industry's use of emerging technologies (e.g. social media platforms, interactive business websites) is fundamental to leveraging the networking capabilities, export orientation and absorptive capacity of such firms. Such a technology-mediated, competitive strategy could ultimately lower the risk and uncertainty associated with the process of internationalisation and increase the comparative advantage of such firms over their competitors.

Keywords: Internationalisation, emerging technologies, networking capabilities, export orientation, absorptive capacity, SMMEs

1. INTRODUCTION

While firms the world over have engaged in international trade and cross-border activities for centuries, globalisation has increased the complexity of these processes by ushering in a more dynamic business environment. With more trade agreements and reduced trade barriers propelled by the forces of globalisation, formerly closed markets have become magnets for business investment by local and multi-national corporations (Sandberg, 2012:1). To further compound this tenuous commercial terrain, international competition has been accentuated by liberalisation that has triggered the global presence of many corporations (Jansson & Sandberg, 2008:2). Even though multinational corporations have dominated the international scene, a growing body of extant literature points to the capacity of small, micro and medium enterprises (SMMEs) to gain foothold in these murky terrains (Todd & Javalgi, 2007; Organisation for Economic Cooperation and Development [OECD], 2009; Hagsten & Kotnik, 2014; April & Reddy, 2015).

The South African clothing and textile industry is a mature and highly diverse industry. It is one of the most labour-intensive segments of South Africa's manufacturing industry, even though it contributes less than 1% to gross domestic product (GDP) (Statistics South Africa, 2014). However, this industry has suffered a huge blow over the last 10-15 years driving many companies out of business. This serious economic misfortune has been caused by the industry's inability to compete with the influx of cheaper garments and apparel from garment-producing countries such as Bangladesh, India and China. Another reason contributing to this eventuality is the South African manufacturing sector's failure to keep pace with technological innovations steered by its Chinese counterparts, resulting in comparatively poor efficiency.

Although emerging technologies (ETs) cannot be conceived as silver bullets for capturing and apprehending the internationalisation crusade for manufacturing SMMEs, the transactive, informative and interactive capabilities of such technologies can be appropriated by such firms to locate foreign business opportunities; forecast global market trends; and connect with prospective overseas customers.

In fact, advances in communication infrastructure and information technology are credited with widening SMME participation in global markets in both developed and developing countries (Todd & Javalgi, 2007). Given their uncontested ubiquity and affordability, ETs are considered susceptible to wide application by resource-stricken SMMEs, which command a majority in emerging African economies (Consoli, 2012). Regrettably, the nexus among such ETs, SMME internationalisation, SMME export-led growth and their deployment of internal capacities (e.g. their absorptive capacity) is hardly known in mainstream literature. For instance, Gashi, Hashi and Pugh (2014) and April and Reddy (2015) bemoan the paucity of research into the role of ETs in the internationalisation of SMMEs. For this reason, this theoretical study interrogates the potential of ETs to enhance the networking capabilities, export orientation and absorptive capacity of the manufacturing and textile industry in the Free State of South Africa.

The study seeks to address the question: What is the status, role and significance of emerging technologies (ETs) in enhancing the networking capabilities, export orientation and absorptive capacity of small internationalising textile and clothing manufacturing firms in the Free State region?

2. PROBLEM BACKGROUND

South Africa is an emerging market offering vibrant efficiency-driven services and a unique combination of highly developed first world economic infrastructures. She is the world's largest producer and exporter of coal, diamond, gold and platinum. In 2011, South Africa's exports were valued at about R63 billion (Shree, 2012). Although the manufacturing sector in South Africa can be seen as diverse, its scale of production is low and declining. For instance, her international manufacturing output as a percentage of total world manufacturing output fell from 0.61% in 1990 to 0.5% in 2010. This statistic indicates the need to strengthen the country's manufacturing position given its potential to impact export earnings, economic growth and employment creation (Um Jwali Market Research, 2012). The production levels of South African manufacturers - especially those in the textile and clothing industry - have also been affected by the volatility of the rand and increased import competition from textile and garment producing countries such as India, Bangladesh and China (Williams, Cunningham & De Beer, 2014).

Apart from the declining productivity in this strategic sector, there is evidence to suggest that many clothing and textile manufacturers are not exploiting the government support programmes available, such as the Department of Trade and Industry's (DTI) Export Marketing and Investment Assistance Scheme (EMIA) and the Support Programme for Industrial Innovation (SPII). The underutilisation of these services could be attributed to this industry's underutilisation of ETs to gain access to marketing information, improve their export competitiveness, international posture and presence (April & Reddy, 2015). This underutilisation of such government services has resulted in reduced export competitiveness and the loss of international competitive advantage of this industry's products compared to those of other textile exporting countries (April & Reddy, 2015).

3. PROBLEM STATEMENT

The problem, therefore, is the stunted growth of the clothing and textile SMMEs when it comes to internationalisation due to their limited internal capacity (e.g. their limited use of ETs for their internationalisation efforts) and their inability to exploit their international capabilities (e.g. export orientation and international networks). These challenges have constrained the clothing and textile firms' capacity to produce and access international markets competitively. In view of our limited knowledge on the depth of involvement of Free State textile and clothing SMMEs in internationalisation on the one hand, and the under-explored relationships among performance enhancers (especially ETs), the internal capacity of the firm (especially absorptive capabilities) and the internationalisation processes of the emerging firms (especially export-orientation and international networks) on the other, this study attempts to fill this research gap. This is particularly critical given that the few small firms that strive to internationalise tend to reach global markets via metropolitan cities such as Johannesburg, Cape Town, Durban (Lockefer, 2010:18) and hinterlands like Bloemfontein seem to be in the periphery of the internationalisation drive.

4. LITERATURE REVIEW

4.1. Information and Communications Technologies (ICTs) and Emerging Technologies (ETs)

A qualitative distinction should be made between ICTs in general and emerging technologies (ETs) in particular. ICTs relate to growing assortment of technological infrastructure networks, hardware (backend), software (front-end tools and processes) and devices that enable communication but may (/ may not) necessarily enable networking and collaboration. On the contrary, ETs describe those Web-based technologies whose networked power, collaborative capabilities, social interaction potentialities and transactive abilities augment their usability and growth in interactive learning/professional communities (Rambe, 2013). In spite of the contested definition of ETs (Veletsianos, 2010; Bozalek, Ng'ambi & Gachago, 2013, Horizon Report, 2013; 2014), the use of the term is positively identified with the newness of technologies in particular context (Siemens & Titenberger, 2009). In the same vein, Halaweh (2013:110) defines ETs "as technology not widespread in a particular context with no limited or fixed life". This means the emergent nature and novelty of these technologies in terms of their access, rollout, application and usage in a particular context makes them "new" even though they might not necessarily be in other contexts (Rambe, 2013; Rambe & Nel, 2014).

According to Grunfeld (2011) Information and Communications Technologies (ICTs) refer to all technologies providing access to information through telecommunications. Though similar to Information Technology (IT), the primary focus of ICT is on communication technologies and includes the "old" technology forms such as telephone, radio and television and "new" ICT forms such as the internet, computers, satellite and wireless technology. Furthermore, Laronde (2010:4) defines ICTs as a set of diverse technological resources and tools used to create, disseminate, communicate, manage and store information such as peripheral devices, hardware and software, media and delivery systems. Since ICTs are technologies that enable society to communicate, collect, consolidate, create, manage and process information in various digital formats for different purposes (Mathew, 2011:11), they can be appropriated in the search for new markets, for the development of new networks and promotion of value added exports (Kramer, Jenkins & Katz, 2007; Ashington, 2009; Apulu & Latham, 2010).

Multimedia and telecommunications technologies like CDROM, cellular phones, personal computers, the internet and cable TV have the tremendous power to transform long-distance communication channels and patterns, capacity to augment transactional commercial activities, ability to increase and trigger export potential of organisations and increase hence can leverage the internal dynamic capacities of organisations. These new ICTs are believed to have dramatically changed the way firms innovate, organise and create value. As such, ETs can also be used as enablers for improving the dynamic capabilities of SMMEs (Tejumade, 2011; Kiveu & Ofafa, 2013). It can be postulated that as new ICTs emerge, organisations should devise new directions and strategies to make use of these platforms, tools and applications to improve the operational efficiency of textile and clothing SMMEs as well as reach out to their national and international business partners and customers (Eze, 2013:16).

4.2. International networking

Since this study is preoccupied with internationalisation and international networking (the establishment of international subsidiaries and international collaboration with foreign firms and individuals), a distinction between the two is necessary. Chelliah et al. (2010:3098) define internationalisation as "the extent of a firm's involvement in international business." It includes exporting, the presence of foreign subsidiaries, shared ownership by foreigners and the appointment of foreigners in the organisational structure of the business. Ruzzier and Antoncic (2007:122) highlight that internationalisation refers to "the geographic expansion of economic activities of a business across national borders". According to Oviatt and McDougall (2005:540), internationalisation "is the discovery, enactment, evaluation and exploitation of opportunities across national borders to create future goods and services". It is clear that while internationalisation focus on the leveraging and growth of business' economic activities through exports, foreign subsidiaries and international collaborations, international networking is just a component of the internationalisation process; it focusses on the development of business connections, partnerships and collaborations with or without the enabling

affordances of relevant Web-based technologies. International networking can be defined as the use of network relationships in the pursuit of international opportunities (Musteen, Francis & Datta, 2010).

4.3. Export orientation

Garg & De (2012:8468) define export orientation as “the willingness of business management structures to export by dedicating adequate human, managerial and financial resources to export-related activities.” They elaborate that export orientation is mostly affected by the owner/manager of the small firm’s attitude, his/her risk taking abilities and ability to sail in uncharted waters (Garg & De, 2012). To a limited scale, the South African clothing and textile industry’s owner/managers have embarked on the exportation of their products to the United States (US), the European Union (EU), the United Kingdom (UK) and the Southern African Development Community (SADC) region. According to the Department of Trade and Industry (DTI, 2015), the export-orientation growth of the clothing and textile manufacturing industry over the years reflected a less competitive currency and a stagnant domestic demand. Perhaps, assuming that conduciveness of the domestic environment, coupled with strong marketing and financial support, the effective use of ETs could be useful for improving SMME international presence, competitiveness of their exports and the general global reach of their goods and services.

Despite this growth in international demand for clothing and textiles, the South African clothing and textile industry is threatened in the international market such as India, Bangladesh, and China who produce similar products at relatively lower cost and sell them at cheaper prices. To further compound this problem, the weak rand makes exportation from South Africa relatively more expensive compared to other countries, thereby making South African goods less competitive on the international market. Perhaps, the generally lower competitiveness of South African clothing and textile SMMEs could be attributed to, inter alia, the suboptimal utilisation or failure to exploit the networking and communicative affordances of ETs. A research conducted by the Research Group Leaders (2015) points out that the South African clothing and textile industry has failed to keep abreast of the technological prowess demonstrated by its Chinese counterparts. In this paper, the researchers postulate that the appropriation of ETs for the international branding, marketing, export value addition and enhanced dynamism of the clothing and textile products has potential to increase the competitive edge of clothing and textile manufacturing industry relative to its technologically advanced counterparts.

4.4. Absorptive Capacity

Absorptive capacity (ACAP) at firm level was originally coined by Cohen and Levinthal (1989) and later expanded in their 1990 seminal article in the field of business strategy. The term is used to refer to “the acquisition of new knowledge and the use of this knowledge to improve the competitiveness of the organisation” (Cohen & Levinthal, 1990:128). Their original concept captured a firm’s ability to recognise the value of new, external information, assimilate it and then apply it to commercial means. Absorptive capacity describes an organisational capability that enables the firm to benefit from external knowledge (Flatten et al., 2011). To the extent that ETs can be adopted and built into the organisation to facilitate and enhance communicative and operational efficiency as well as to source value creating information of competitors, they can contribute directly to the improved absorptive capacity of textile and clothing firms.

Absorptive capacity is defined as one of the firm’s key learning processes for identifying, assimilating, and exploiting knowledge available in the environment (Cohen & Levinthal, 1989; Lubatkin; 1998; Lane et al; 2006). Cohen and Levinthal (1990: 128) conceive it as the organisation’s ability to ‘recognise the value of new information, assimilate it, and apply it to commercial ends’. Cohen and Levinthal (1989, 1990, 1994), elaborate that absorptive capacity employs external knowledge to foster internal innovation. It can be argued that absorptive capacity builds on existing knowledge and allows such knowledge to develop cumulatively, allowing it to be tapped into as the “selling point” and value creating base of an organisation.

In their initial paper on ACAP, Cohen and Levinthal (1989) introduced three ACAP process steps, namely: identification, assimilation and exploitation. Since then, a gigantic volume of literature has

been allocated to ACAP by scholars in different fields of organisational science as a multi-dimensional construct (Lewin et al, 2010; Saeedi, 2014). This revisited ACAP process encompasses four dimensions: acquisition, assimilation, transformation and exploitation. Zahra and George (2002) divided the ACAP process into two sections; potential ACAP and realised ACAP. Potential ACAP comprises the first two process steps, namely acquisition and assimilation of knowledge, whereas realised ACAP incorporates the transformation and exploitation of knowledge. Below are the four dimensions of ACAP elaborated.

Acquisition pertains to the identification and acquisition of new external information that is relevant to a company's operations. Acquisition could also be seen as the organisation's ability to locate, identify, evaluate, and acquire outside knowledge regarded as essential for the organisation's survival. Previous investment and previous knowledge positively influence this step (Cohen & Levinthal, 1990; Zahra & George, 2002).

The second process of ACAP, assimilation, represents the inclusion, conversion and interpretation of the acquired knowledge. Assimilation is the organisation's capability to analyse, classify, process, interpret and eventually internalise and comprehend the external knowledge via its routines. In this step, the members of the organisation need to understand and interpret the external knowledge in order to be able to assimilate and later benefit from it (Zahra & George, 2002).

The third step of ACAP, transformation, involves the combination of existing new knowledge. This step encompasses the ability to internalise and convert the newly acquired as well as assimilated knowledge. It is the organisation's capacity to bring together the existing and the newly acquired knowledge (Zahra & George, 2002).

The last process step of exploitation involves the organisation's capacity to bring together acquired, assimilated and transformed knowledge for application and use in the organisation (Cohen & Levinthal, 1989). This capability is based on routines enabling a firm to incorporate new knowledge into its operations. Due to the competitive nature of the South African clothing and textile industry, this industry has seen a shift from the traditional fabric design to a new performance-based and industrial innovation approach in which sales are dependent on design creativity and skills levels.

4.5. International Entrepreneurship Theory

The two most relevant theories for explaining internationalisation facilitated by ETs are International Entrepreneurship and Network Theory. According to Masum and Fernandez (2008:17), the term "international entrepreneurship (IE)" first appeared in an article by Morrow in 1988. Morrow (1988) pointed out that declining cultural barriers, increasing cultural awareness and advancement in technology have opened foreign markets once-remote to all kinds of companies; new ventures, small firms and well-established companies as well. McDougall's preoccupation with IE as "the discovery, enactment, evaluation and exploitation of opportunities across national borders to create future goods and services" paved the way for academic studies in international entrepreneurship (Oviatt & McDougall, 2005:537). Masum and Fernandez (2008:18) argue that "discovery refers to finding innovative opportunities while enactment means to proactively put opportunities into use acquiring a competitive advantage. Evaluation is required to interpret the actions taken thus developing experience and knowledge". Mtigwe (2006) posits that international entrepreneurship theory argues that individual and firm entrepreneurial behaviour are the basis of foreign market entry. In the context of the clothing and textile manufacturing SMMes, the need to discover and exploit untapped markets and use innovative capabilities can provide important reasons for SMMes' engagement in international ventures. ETs can serve as an information bridge through which access to underexplored markets can be gained, new information about effective and efficient production methods and export opportunities can be exploited.

4.6. The Network Theory

According to Eberhard (2013), the fundamental focus of the Network Theory is that faster internationalisation is achieved through the resources and experience of network partners facilitated by

modern high-technology firms. Although SMMEs in developing countries are not by nature high tech firms, their internationalisation can help them adapt to secure international partnerships, increase the flow of foreign direct investment and internationalisation of labour. Internationalisation is perceived as naturally developing connections based on relationships with foreign firms and individuals (Masum & Fernandez, 2008). The Network Approach, therefore, emphasises using information acquired by the firm to establish close relationships with suppliers, customers, distributors, public and regulatory agencies and other market actors. Information sourcing, assimilation and integration is the domain of ETs as these technologies have deliberative, interactive and communicative affordances.

Lockefer (2010) suggests that traditional patterns of internationalisation emphasise that SMMEs in developing countries should extend their businesses to other less developed economies. If this claim is to be ascertained, this study may need to establish whether SMMEs in Bloemfontein exhibit the same entrepreneurial behaviour of establishing foreign businesses and creating international partnerships in foreign lands such as Lesotho and Botswana, to name a few. Consistent with the Network Theory, this may mean examining the nature of the host economy, push and pull factors of internationalisation as well as the characteristics of the owner manager. More importantly, this may require a proper understanding of the role and status of ETs (such as social medial platforms, content repositories, data banks, and educational games) in the harnessing of resources and commercial experience to establish a foothold in foreign nations and increase international partnerships for massive productions, marketing and sales.

The strength and value of business networks can also be informed by the host government's regulatory regime (e.g. customs regime, laws governing international trade and export policy), environmental (political, social, legal, technological, and economic) considerations and market environment (sales growth potential of SMMEs and the size of the market) requirements in the host country. The drivers of internationalisation include; liberalisation of trade, removal of trade barriers, resources of partners and information and communication technologies (ICTs). Push factors will include demands for technological change by customers, suppliers and competitors, competitive strategy and challenging market environment in the home country.

The characteristics of the owner manager to be examined may consider the age of the manager/owner, the absorptive capacity of the business, the size and networking abilities and relationships of the business/owner manager with both the home and foreign country.

5. METHODOLOGY

This paper adopts a theoretical approach. The purpose of a theoretical paper is to understand and draw upon current research literature with the aim of furthering theoretical work in the field of interest (University of Sydney, 2015). The lack of contemporary research on the use of ETs to foster the internationalisation of SMMEs prompted this study which examines how SMMEs in the clothing and textile industry could use such to enhance their networking capabilities, export orientation and absorptive capacity in SA in general and Free State Province in particular. Thus, this study reviews literature on internationalisation, networking capabilities and the absorptive capacity of SMMEs in an attempt to develop a comprehensive conceptual framework on the effective and sustainable internationalisation and growth of SMMEs.

6. PROPOSED CONCEPTUAL FRAMEWORK

The important constructs drawn from the three theories and literature review are international market knowledge, uncertainty and risk. For instance, the decision to draw on the affordances of ETs to internationalise SMMEs embodies some risk and uncertainty as the international market is neither predictable nor a familiar terrain for most SMMEs. While the use of ETs such as the Internet can provide some base line information of how to explore and navigate the international market, sufficient knowledge of the dynamics of the international market is critical for the improved competitiveness of the textile products and services. In the context of the clothing and textile manufacturing SMMEs, such international dynamics will include knowledge of the international customer base, international strategic alliances required, the legal systems of new markets and potential international competitors.

Therefore, the internationalisation process unfolds as a sequence of stages where firms reduce uncertainty, build management competence and gain experience in order to incrementally increase investments in target markets abroad (Hermannsdottir, 2008).

Consistent with the Uppsala Model, according to which incremental learning at the level of the firm is the chief factor that explains a firm's decision making process and international behavior, the internationalisation process requires psychic distance comprising factors such as cultural and language differences and political systems, which if not well handled may disturb the flow of information between the firm and the new market (Hermannsdottir, 2008). The use of ETs such as the Web, social media platforms and content repositories for increasing the networking capacity and the access to new external information (absorptive capacity) and the export orientation of firms may be critical to the reduction of uncertainty in the new market and the amelioration of the psychic distance between the owner/manager and the stakeholders (i.e. customers, suppliers, regulators, investors) in the international market.

The psychic distance in the clothing and textile manufacturing sector could take the form of the cultural norms that inform dress codes, consumer tastes for luxury clothes, external trends that shape buying behavior and patterns. From a political perspective, the apparel worn on national political festivals and celebrations and the influence of political systems on consumer behaviour may all determine whether clothing and textile SMMEs can perform well in foreign lands.

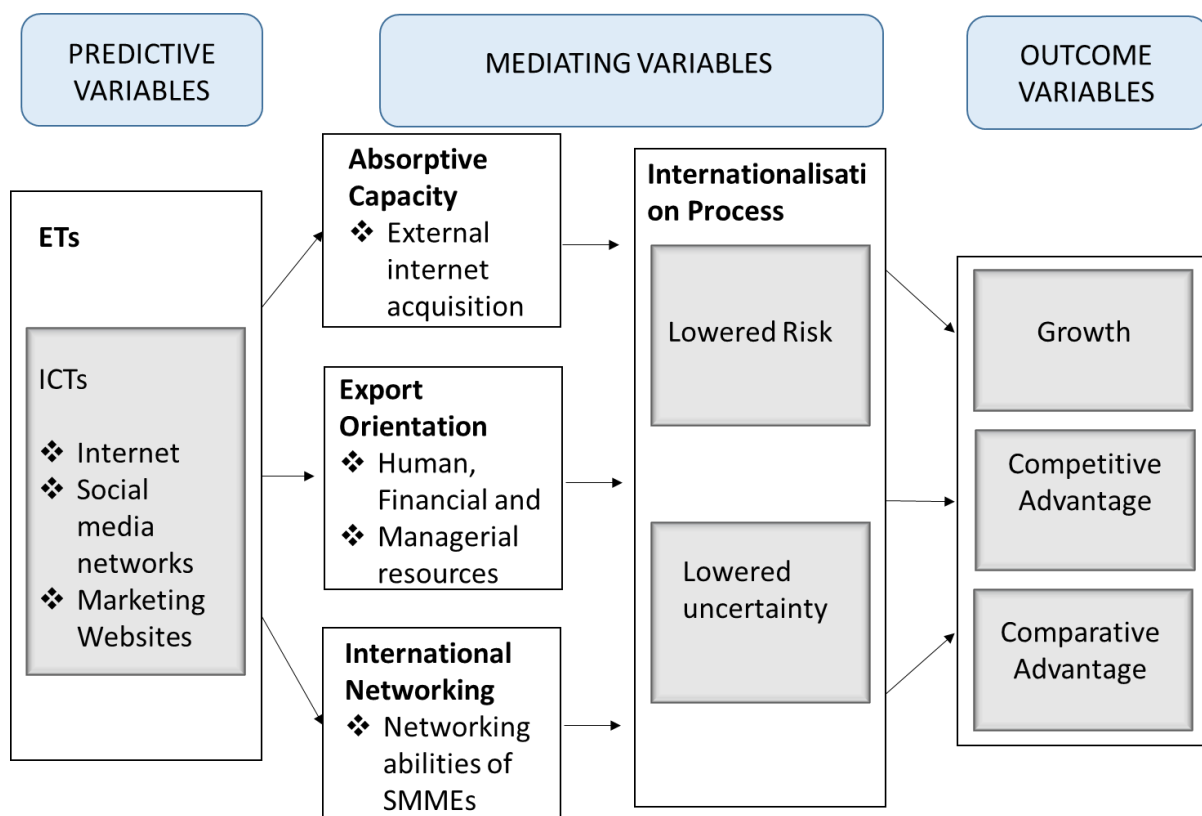


Figure 1: Authors' Proposed Conceptual framework

7. OBSERVATION AND DISCUSSION

Contrary to the Uppsala model's emphasis on incremental steps to enter foreign markets, the effective use of ETs for identifying, evaluating and integrating information about the new markets may accelerate the pace of internationalisation by many SMMEs. More so, the ETs such as the World Wide Web, social media platforms and applications and content management platforms can increase the conversion of corporate experience gained from the exporting country into value adding and value creating competencies. ETs can also reduce the level of risk and uncertainty of textile and clothing SMMEs by

increasing the level of awareness of these exporting firms to socio-economic (e.g. purchasing power, consumer tastes), cultural (e.g. cultural values and practices, cultural dress codes) and political dynamics (e.g. tax regime, political systems and values) of the foreign market.

In view of the International entrepreneurship theory, ETs can assist SMMEs in acquiring international competitiveness over their rivals. SMMEs can harness their entrepreneurial experience to identify a gap in the international market and then employ their technological prowess to enhance their international business exploits. Such entrepreneurial experience can involve harnessing financial, human, marketing and managerial competencies and technological innovations to creating synergies and competitive advantages over rivals in foreign markets

Building on the Network Theory, it can be argued that the effective use of emerging technologies (ETs) by textile and clothing SMME owner/managers could accelerate the internationalisation process. This could happen through the forging of technology-enhanced business partnerships, collaborations, and strategic alliances that improve the market, product/service and organisational innovations in ways that improve the competitive advantage, comparative advantage and economic growth of these firms in international markets.

8. EVALUATION AND CONTRIBUTION OF THE STUDY

The adoption and effective utilisation of ETs cannot be taken for granted in view of the high failure rate of SMMEs in South Africa. For instance, about 80% of start-ups in South Africa fail within the first three years of operation (Tengeh, 2011:1). Although such failure is often attributed to a combination of factors such as lack of finance, lack of managerial competencies and general poor marketing competencies (Ndjike, 2014), the SMME owner/managers' failure to effectively employ ETs cannot be ignored as large volumes of local and international business transactions (e.g. purchases, marketing, inbound and outbound supply chain activities) are being conducted via the web and online platforms. ETs can be the heartbeat for the formation of business transactions such as business partnerships, collaborations and strategic alliances with foreign business players.

The researchers postulate that different ETs should be harnessed for different levels of entry into foreign market. For instance, while the Internet and the World Wide Web could be instrumental in reducing the risk and uncertainty of operating in a foreign land for the first time, social media technologies (e.g. Facebook, LinkedIn) and online purchase applications may be critical for maintaining online business communities and lasting partnerships. Social media technologies may also be useful for establishing an online presence of brands and customers' social commentary about the performance of brands in international markets.

9. CONCLUSION

Exploring the networking capabilities, export orientation and absorptive capacity of the South African clothing and textile industry can be considered as a learning process of internal and external knowledge acquisition to lower the risk and uncertainty of internationalisation. This process of internationalisation is envisaged to increase the firm's international growth, competitive advantage and comparative advantage.

Put differently, emerging technologies such as ICTs in the form of the internet, social media networks and marketing websites will increase the absorptive capacity, export orientation and international networking capabilities of SMMEs, thereby lowering the risk and uncertainty of the process of internationalisation, leading to growth, competitive advantage and comparative advantage.

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The Impact of Foreign Investment on the Macro-Economy of Nigeria

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ABSTRACT

This study investigates the impact of Foreign Investment on some macro-economic businesses in Nigeria during the period of 1990-2009. The title supposes that there are some impacts of direct foreign private investment on the Nigeria economy, which may be positive or negative. Developing countries are in predicament arising from the desire for foreign capital for internal economic development, yet there is the fear that foreign investors (which are already said to be at commanding heights of some sectors of the economy) may wrestle complete control of the international economy and render it an adjunct of the western economic supremacy. Thus, a developing country may have to determine the actual sector(s) which has or have to attract foreign private investment and also determine the optimum level of foreign investment that is necessary in order to supplement its internal resources by maintaining a balance between economic development and economic independence. Over the years, the Nigerian economy seeks to promote the policy of self-reliance and maintain both the economic and political independence. The objectives relying on foreign private investment will jeopardize this attempt of self-reliance, which itself could constitute a barrier on rapid economic development since we lack the necessary resources needed for internal development. The main reason for this study is to investigate why direct foreign investment in developing countries especially in Nigeria has continued to generate much controversies among different authors. The supporters of foreign private investment are of the view that FI serves as a channel for augmenting Nigeria's domestic resources and stimulate competitions, innovations, savings and capital formation and through these effects, lead to job creation and economic growth. The aims of this study is to review the previous literatures on the field of study, settle the controversies by examining the costs, benefits and the correlation that exists between foreign investment and some macro-economic. The study used quantitative analysis of the actual data available in the country, with the help of regression analysis of ordinary least square. It is believed that the findings of this study provide basis for the government to adjust her stand towards foreign private investment while trying to maximize the benefits or minimize its costs. Finally, scholars will no doubt find the ideas expresses in the study as addition to those already gained from the work of other writers.

Keywords: Foreign investment, macro-economy, developing country.

1. INTRODUCTION

The need for Foreign Investment (FI) is embedded in the Harrod-Domar and Chenery-Strout two gap models, which hold the views that developing countries could neither save enough nor import enough capital goods from abroad to satisfy their investment requirements. These models, therefore, advocate that private capital inflow and aid will be needed to bridge the two gaps. However, experience shows that most developing countries, Nigeria inclusive, did not appreciably exploit foreign investment (FI) as a source of external financing due to non-conducive investment climate and their love-hate attitudes. Arguably, Foreign Investment has been characterized as the best form of foreign finance, since it comes in package, which, as pointed out by Lall and Streeten (1977), include finance, technology and highly skilled personnel. Most scholars agreed that the motivation by Multinational Corporations (MNCs) to invest abroad is to take advantage of their technology superiority over their domestic counterparts (Mansfield, 1974; Helleiner, 1975; Hymer, 1976; Hood & Young, 1979). According to Helleiner (1975), this technology superiority can be in the following categories: Technology in the legally recognized forms of patents or trademarks; Technology in the forms of unpatentable or unpatented know-how; Technology embodied in skilled labour; and Technology embodied in physical goods. The general argument is that technology is not traded at the arms-length market price. Instead, its price is essentially intra-firm. Accordingly, the MNCs undertake FI in order to internalize the benefits. Foreign Investment (FI) usually consists of external resources, including technological, managerial and marketing expertise,

in addition to capital. These may generate considerable impact on Nigerian production capabilities, since they are directly linked to productive investment. Foreign Investment also facilitates transfer of technology and managerial and marketing skills, which are indispensable in the quest for viable solution to the problems of industrial inputs and diversification as well as expansion of exports. The ability of Nigeria to sustain growth and development as well as meet her external obligations depends on adequate inflow of foreign investment resources. The country has been experiencing difficulties in her effort to meet external commitment since 1981. At the current level of foreign exchange earnings and high external debt-servicing obligation, little or nothing is available for new investments. Consequently, given the low level of per capital real income characterizing underdeveloped economies, traditional model of economies assumes that average and marginal consumption propensities are high, that savings are low and that the formation of new productive capital is restricted. Usman (1998) highlighted some reasons for the slow economic growth in Nigeria to include monocultural economy, high population growth, import dependency, misguided deregulation, lack of incentives for investment in terms of infrastructure, globalization and political instability. Based on the above scenario, it is discovered that there exists a gap between the domestically available supply of savings, foreign exchange, government revenue and skills and the planned level of the resource necessary to achieve development targets (Todaro, 1977).

This gap necessitates the need for external resources to augment domestic resources in the country. These external resources could be in the form of foreign aids or grants, short-term credit, state loans and private investments. But it is the interest of many countries in getting out of their respective economic crises through foreign private investments, because FI provides investment capital, technical skills and enterprise, since natural resources are available in the developing countries. However, there are political-economic dilemmas facing most less developed countries as a result of foreign investments. These countries have at one time or another being colonial territories of metropolitan European powers. Former colonial territories attached great importance to their independence and watch suspiciously any foreign relationship, which may affect their sovereignty. In these countries, one of the popular objectives is to achieve economic independence.

The leaders of the less developed countries often realized the importance of foreign capital but because of the fear that their nations might suffer economic domination from abroad makes them sceptical about it. This fear is aggravated by the fact that foreign private investment comes also from former colonial state. The fear may be unfounded, but it must be reckoned with, because it has influenced the attitude of most less developed countries to many questions concerning the flow of foreign private capital from abroad. Lewis (1955) makes a critical analysis of the problems of economic developed countries and sums it up as follows: "At present, most of the less developed countries (LDCs) are in a state of reaction against nineteenth century imperialism. They have acquired a distaste for foreign capital and foreign administration and they are more anxious to protect themselves from further exploitation than to take advantage of the current opportunities". In most developing countries, Nigeria inclusive, policies and strategies towards foreign investment are shaped by two main objectives. These are: the need for national economic independence and the need for rapid economic nationalism, the less generous the government will be in its system of incentives and fiscal measures designed to promote and attract foreign investment to the economy, while emphasis on accelerated development would dictate a wider opening for foreign investors. About 90 percent of private capital flows to developing countries in 1991-1994 were concentrated in a dozen countries, mostly income countries in East Asia and Latin American, with the exception of two large-low income countries - China and India. For most low-income countries, which are mainly in Africa, official flows in declining proportion remain dominant, with the declining trend in official flows, recipients need to accelerate reforms that will enable them attract more private capital, for these slow integrators the increases in private capital flows to developing countries in East Asia and Latin America (the fast integrators) has eluded them mainly because of non-conducive investment climate and their love-hate attitude and policy orientation to private foreign direct investors, as well as increasing preference for some regions like East Asia, Eastern Europe and Latin America.

2. LITERATURE REVIEW

Literature on foreign private investment has centered on the concept of cost and benefit of foreign investment, distribution of gains between host and recipient countries and the significance of capital investments for economic development. Lall (1985) explains the cost of foreign investment under three main approaches. These are the Nationalist approach, Dependency approach and Marxist approach. The Nationalist approach argues that there may be various effects of foreign investment which damage host economies, such as the suppression of domestic entrepreneurship, the effect on economy of the importation of unsustainable technology and unsuitable products, the extension of oligopolistic practices and so on. The approach further argues that the cost of foreign investment may be too high compared to the next best alternative, even in the absence of external effect, because foreign investors are able to extract monopoly profit or use superior bargaining power to gain concession or because there are costs inherent in the mode of operation such as the introduction of product or technology, or the misuse of transfer pricing and any other tools, to remit hidden profit. The Dependency approach has most of the features of the nationalist approach.

It discusses the social, political and economic consequences of the penetration of capitalist institution and methods in less developed countries, and stated that the inherently dependent status of these countries can never permit real development. The Marxist approach of foreign investment is conducted more explicitly in terms of class conflict. For instance, Baran (1975) used the concept of economic surplus, which in this sense is extracted from less developed countries by foreign investors. However, Sodersten (1970) argues that the Marxists viewed foreign investment as a necessary event in postponing the collapse of capitalist oppression. He described the exploitative tendencies of the foreign investment to mean that the investing country takes away natural resources of the host country at less than market value and that the foreign investors strive for monopolistic control over foreign sources of supply and foreign markets. Kobrin (1977) views the argument against foreign private as ranging from excessive cost of resources transferred, decrease in competitiveness of domestic market, inefficient use of resources vis-a-vis development goals and inappropriate technology transfer to continued dependence on industrialized countries, a loss of political and economic sovereignty and strengthening of imperial or exploitative relationships.

His arguments further corroborated that of Lall (1985) that foreign investment hinders development by suppression of growth of local entrepreneurs and undermine the indigenous societies by imposing western values and life styles. This position was supported by Kodjo (1982) when he stated that the activities of foreign investment disturb the balance of payment of the host country through their importing of raw materials from their parent countries or affiliates located in other countries when actually these raw materials could be obtained in the host country or any other country at a cheaper rate. Consequently, Ojo (1998) describe foreign investment as one of the chief architects of the failure of monetary policies in the developing countries.

The MNCs use the advantages of their subsidiaries in many countries to move funds or capital from one country to another, contrary to the monetary policies which is being pursued by the domestic monetary authority, hence expansionary or contractionary monetary policies have not been able to achieve the desired result in the less developed economies especially in Nigeria. Zhang (2001) argues that foreign investment has a positive growth impact that is similar to domestic investment along with alleviating partly balance of payment deficits in the current account, the inflow of foreign investment might be able to stimulate a country's economic performance. Flores et al. (2001) examined the impact of foreign investment on the productivity of domestic firms in Portugal. They found a positive relationship between domestic firms' productivity and foreign presence only when a proper account is taken of the technology differences between the foreign and domestic' producers and these spillovers were within the modern sectors.

They used data at 2-digit sectoral level, as this was the only basis on which the authors had access to the data used. Hubert and Pain (2001) using 2-digit industry level panel data for 1983-92 also investigated the impact of foreign investment by foreign firms on the technical progress and labour productivity in the UK and found that foreign firms had significant positive effect on the level of

technical efficiency in domestic firms. Cameron (2002) opined that the resultant capital relocation of foreign investment would boost investment in the recipient country and bring enormous social benefits to such a country. Also Mishra (2001) argued that whereas FI had been associated with higher growth in some countries, it had also been associated with higher incidence of crises. Saggi (2002) observes that there are several important caveats to the expectation of positive impact of FI on the host countries; he argues that a positive correlation exists between the extent of FI and economic growth in cross-country regressions may simply reflect this fact: that countries that are expected to grow faster attract FI because it yields higher returns there. This implies that the causation could run growth to FI suggesting the need to estimate a simultaneous equation system to resolve the issue of which one causes the other. Oyeranti (2003) argues that FI cannot and ought not to be discriminated against both economic theory and recent empirical evidence suggest that FI has likely potential positive impact on developing host countries. According to Wilson (2004), the role of foreign investment cannot be underestimated in the aim of achieving economic growth and development of a developing country because if the country operates at a level where planned investment equal planned savings, development will hardly occur. Therefore, FI needs to be encouraged in order for the economy to achieve desired growth and development. The literature review has, therefore, shown that foreign investment is not as exploitative as shown by many authors, a situation, which has created love-hate relationship between foreign investors and host countries. Instead, such foreign investment has not only avoided creating an overhang of debt, but also facilitated the transfer of technology and managerial skills and hence, it is directly tied to productive investment in the country. Therefore, this study attempt to use quantitative methods to complement the positions of earlier contributors and to exploit the areas yet to be resolved.

3. BACKGROUND TO THE RESEARCH PROBLEM

The title of this study pre-supposes that there are some impacts of direct foreign private investment on the Nigeria economy, which may be positive or negative. Developing countries are in dilemma arising from the desire for foreign capital for internal economic development, yet there is the fear that foreign investors (which are already said to be at commanding heights of some sectors of the economy) may wrestle complete control of the international economy and render it an appendage of the western economic hegemony. However, most of the economic blueprints that have been recommended for developing economies are in agreement on the need for foreign capital. Thus, a developing country may have to determine the actual sector(s) which has/have to attract foreign private investment and also determine the optimum level of foreign investment that is necessary in order to supplement its internal resources, thereby maintaining a balance between economic development and economic independence. Over the years, the Nigerian economy sought to promote the policy of self-reliance and maintain both the economic and political independence.

The objectives of relying on foreign private investment will jeopardize this attempt of self-reliance, which itself could constitute a barrier on rapid economic development since we lack the necessary resources needed for internal development. However, these objectives of economic development and economic independence are often conflicting and contradictory. Therefore, the research work aims at findings out whether direct foreign private investment has been contributing positively as painted by its adherents or it has been contributing negatively as made explicit by its critics. Hence, some contending issues, which are problems in disguise, will be considered. Such issues are: Is there any sense in the growing need for direct foreign private investment in Nigeria? Is a direct foreign investment capital inflow capable of speeding up the development pace in Nigeria? Are there any efforts for proper incentive and better social environmental conditions to be put in place in order to set the stage for direct foreign private investment in Nigeria?

4. NIGERIA AND FOREIGN INVESTMENT

Globally, economists tend to favour the free flow of capital across national borders because it allows capital to seek out the highest rate of return. Nigeria is reputed to be buoyantly blessed with enormous mineral and human resources but believed to be a high-risk market for investment. Also, decades of bad governance have almost crippled the national economy with corruption and misappropriation of funds becoming the norm rather than the exception. What is the way out of this delirium economic state? Many analysts and experts alike have given thumbs up to Foreign Investment as a veritable booster to

kick-start the Nigerian economy. With the enthronement of democratic governance in 1999, the government has taken a number of steps to woo foreign investors into Nigeria. It is thus necessary to assess the inflow of foreign investment and its impact on the Nigeria economy.

5. BENEFITS OF FOREIGN INVESTMENT

Foreign Investment is not only a transfer of ownership from domestic to foreign residents, but also a mechanism that makes it possible for foreign investors to exercise management and control over host country firms - that is, it is a corporate governance mechanism. Nigeria has one of the highest rates of investment returns in the emerging markets, presently estimated to be 30 percent. What are the advantages of FI to the host country economy? According to Feldstein (2000), firstly, international flows of capital reduce the risk faced by owners of capital by allowing them to diversify their lending and investment. Secondly, the global integration of capital markets can contribute to the spread of best practices in corporate governance, accounting rules and legal traditions. Thirdly, the global mobility of capital limits the ability of governments to pursue bad policies. Also, FI allows for the transfer of technology - particularly in the form of new varieties of capital inputs – that cannot be achieved through financial investments or trade in goods and services. FI can also promote competition in the domestic input market. Furthermore, recipients of FI often gain employee training in the course of operating the new business, which contributes to human development in the host country. Lastly, profits generated by FI contribute to corporate tax revenue in the host country.

6. FOREIGN INVESTMENT IN-FLOW IN NIGERIA AND DEVELOPING COUNTRY

Positive developments have occurred in Nigeria since 29 May 1999 when democracy replaced the spate of military governments. This has resulted in a number of spirited moves to attract investors - local and foreign - into the country. The President, Olusegun Obasanjo, in a bid to achieve this end embarked on a globetrotting mission that saw him interacting with other fellow Presidents and the business community of different countries. With a more relaxed taxing system, incentives and the creation of Nigerian Investment Promotion Commission (NIPC), the country was set to lure private sector finance. As a first step, the Government took a bold move to privatize all the ailing public enterprises, Decree No. 25 of July 1996 backs this scheme. The government set up the Bureau of Public Enterprise (BPE) to oversee this crucial venture and the National Council on Privatization (NCP) headed by the Vice President, Atiku Abubakar to formulate pragmatic policies in this area. This privatization drive led to the recent 51 percent botched share sale of Nigerian Telecommunication Limited (NITEL) to investors International Limited (IIL) for the sum of US Dollar 1.317 billion. However, IIL was only able to come up with 10 percent of this payment and as penalty for default lost the initial payment. A number of other enterprises have been earmarked for the same process in a bid for government to divest its investment in public service sector. Perhaps, the most successful of the Governments bid to attract FI finance is the license granted for Global System for Mobile Communication (GSM) to GSM service providers – ECONET (now CELTEL), MTN, GLO, O'NET and NITEL- at a handsome sum of USD \$285 million each. This has really boosted the tele-density of the country and their impacts are felt in the employment market, in terms of massive job creation. There have been countless FI in-roads into the country, which cut across all sectors of the economy - oil and gas industry, capital market, agriculture, solid minerals, information and communication technology, banking and manufacturing.

7. RESEARCH AND METHODOLOGY

7.1. Sources of Data Collection

The source of data collection was from Nigeria data of Foreign Investment (FI) and some macro-economic indicators such as: Gross Domestic Product (GDP), Gross Capital Formation (GCF), Export (EXP) and Industrial Production (PROD) for the period of 1990-2009. Secondary data are majorly made use of and they are sourced from such publications as Central Bank of Nigeria's Statistical Bulletin, Annual Reports and Statement of Accounts and other published materials from the Federal Office of Statistics and International journals of the International Monetary Funds (IMF). Also, data are sourced from other means such as banking magazines, periodicals, Nigeria Journal of Banking and Financial Issues and a various textbooks.

7.2. Method of Data Analysis

This study adopts the ordinary least square (OLS) method of simple regression analysis. A simple regression model was employed in order to effectively analyze the impact of foreign investment on Nigeria's economy using the relevant variables of macro-economic indicators as proxies. It is highly hoped and believed that the method of data analysis is capable of measuring the degree of relationship between the independent variables as well as the dependent variable; and at the same time, pinpoint the extent to which they affect each other.

8. SUMMARY OF THE FINDINGS

In summary, the results show that there exists a positive relationship between GDP and FI. One naira increase in the value of foreign investment will lead to 314.07 naira increase in gross domestic product. If FI is held constant, GDP would have a value of 1,661,193 naira only. The correlation coefficient (r) of the regression is 0.712 (i.e. 71.2%), which indicates a strong positive relationship between GDP and FI. The value of coefficient of determination (r^2) is 50.7% (0.507), showing that 50.7 percent of the variable in the dependent variable of (GDP) has been explained by the independent variable of (DFI) while 49.3 per cent remains unexplained. With a value of 50.7%, the strong positive relationship is further confirmed. In equation two, the regression result indicates that there is a positive relationship between GCF and FI. Every naira increases in foreign investment generates additional 6.79 naira in gross capital formation. If FI is held constant, GCF would have a value of 172043 naira only. The correlation coefficient of the regression of 0.59 (59%) suggests a strong positive relationship between gross capital formation and foreign investment. The coefficient of determination (r^2) indicates that 34.8% of the variation in the gross capital formation has been explained by foreign investment while remaining 65.2% can be explained by other factors outside the model. This further confirmed the strong positive relationship between the GCF and FI. From equation three, the regression result shows that there is a positive relationship between EXP and FI. One naira increases in foreign investment in the country generates 126.23 naira increase in exports. If FI is held constant, EXP would have a value of 612,293 naira only. The coefficient of correlation (r) is 0.713 (71.3%), showing a very strong positive relationship between the dependent variable (EXP) and the independent variable (FI). Furthermore, the coefficient of determination (r^2) is 50.9 percent, which indicates that only 50.9% changes in exports can be explained by foreign investment while the 49.1% unexplained, can be explained by other variables outside the model. Equation four shows that there is a positive relationship between PROD and FI. Every naira increase in foreign investment will lead to 0.03 increases in industrial production. If FI is held constant, PROD would have a decrease value of 46.55 naira only. The correlation coefficient of 0.49 (49%) indicates a weak but positive relationship between industrial production and foreign investment. The coefficient of determination (r^2) shows that only 24 percent of the variation in industrial production can be explained by foreign investment, leaving 76% percent unexplained.

9. CONCLUSION

One striking feature of FI flows is that their share in total inflow is highest in riskier countries either by country credit rating for sovereign debt or by other indicators and also some evidences that its share is higher in countries where the quality of institutional setting is high. Nigeria is enjoying a reasonable level of foreign investment, but caution must be the watchword because the domestic investment undertaken by FI establishments is heavily leveraged owing to borrowing in the domestic investment actually financed by foreign savings through FI flows may not be as large as it seems (because foreign investors can repatriate funds borrowed in the domestic market) and the size of the gains from FI may be reduced by the domestic borrowing done by foreign-owned firms. It is, therefore, important that the government concentrate on providing the basic infrastructures to support the local organized private sectors (OPS) that are ready to invest domestic funds into the economy. The response to private initiatives by the government is quite commendable, but there is need for more favourable policies targeting specifically the locals as opposed to the foreigners. The recent creation of Bank of Industry (BOI) and the Small and Medium Industries Equity Investment scheme (SMEIS) is a pointer to better things to come in the future.

10. RECOMMENDATION

Based on findings in this research, the following suggestions are recommended. The study points to the fact the potentials of foreign investment have not been fully exploited in Nigeria; therefore, it is imperative for the Federal Government to consider a packages of incentives directed at attracting foreign private investment into the country. Regulatory policies aimed at achieving a balance in the flow of foreign investment package and the content of the package received must be appropriate to the country's need. Encouragement should be given to the foreign investors to produce machinery and spare parts within the country and make use of available raw materials so as to develop the capital goods industry in Nigeria. The policy of local content introduced in some sectors of the economy should be encouraged and maintained so as to give room for domestic investors in order to promote entrepreneurship. More also, the problem of credibility of policies and policy reversals must be desisted from in order to produce investors' haven rather than investors' haven many believe Nigeria is. There should be an improvement in the institutional factors; these factors must be endured and maintained. The federal government should provide adequate security of lives and properties and ensure that justice prevail in the country. Finally, government should endeavour to provide stable policy, if foreign investors are to be encouraged to invest in this counter because no rational investor will want to invest in a politically unstable country where capital erosion can occur at any time.

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Examining tourism SMMEs' extent of use of social media technologies to position and market tourism SMMEs' brands

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ABSTRACT

In view of the growing diversity of stakeholders that emerging tourism businesses are envisaged to engage with in their businesses, these small, micro and medium enterprises' sub-optimal utilisation of social media technology (SMT) for branding and marketing of their products and services is ironic and problematic. Perhaps the persistent inability of such businesses to augment their customer base stems from their dependence on traditional technologies such as television and newspapers for marketing their activities. However, these traditional technologies do not actively increase the visibility of brands to customers and to broader markets the same way SMTs would. To close this gap, this paper examines tourism SMMEs' extent of use of SMTs to position and market brands. A quantitative approach and survey was conducted on 234 tourism SMMEs' owner/managers in the Free State Province of South Africa to establish the influence of SMTs on the branding and marketing of their products and services. Only 123 questionnaires were correctly completed, representing a response rate of 53%. The papers' findings revealed that tourism SMMEs in the Free State Province utilise social media technologies to position and market their brands and services. It further demonstrated that SMTs are important for branding tourism SMMEs' products/services as customers and prospective customers often engage with the business via these platforms. The study recommends tourism SMMEs to develop an inventory of customers and potential customers' preferred social media platforms to ensure the optimisation of SMT-based branding and marketing.

Keywords: social media technologies, branding, marketing.

1. INTRODUCTION AND PROBLEM STATEMENT

There has been a proliferation in the SMME customers' use of social media technologies. Nadeema, Andreini, Salo and Laukkanen (2015) postulate that consumers are regularly searching for, evaluating and purchasing items via social media platforms. Hence, it can be argued that social media platforms have been seamlessly integrated into the everyday life of the vast majority of the world population (Alsubagh, 2015). The relative ease with which social media technologies are immersed into the commercial lives of customers is attributed to the customised communication and uncomplicated exchange of ideas among peer groups or communities (Odhiambo, 2012) and the global reach of such communications (Alsubagh, 2015).

There are some substantiated claims that SMT use has become one of the most effective and important business development instrument in the 21st century because of its ability to connect individual consumer with others. For instance, Ioanăs and Stoica (2014) postulate that social networking gives consumers the power to examine products to label them and criticise them in equal measure. Literature posits that the proliferation of SMTs and the widespread adoption of these media tools have brought dramatic changes in the business environment as they foster unprecedented growth in human interaction in modern times (Chan, Cho & Lee, 2013; Balakrishnan, Dahnil & Yi, 2014). The wide avenues through which SMTs facilitate interaction is through inter alia: sending messages, taking images via webcams, posting comments, sharing files, discussing in groups, blogging, or tweeting friends to give them information (Alsubagh, 2015) about brands available in the market. Thus, tourism SMMEs' capacity to tap into emerging technologies such as SMTs will allow them to capitalise on opportunities in the business environment by responding to the customer questions, comments and opinions about their products.

The discomfiting irony is that customers' prominent use of social media is contradicted by SMMEs' erratic, disproportionate and ambivalent deployment of these technologies. In fact, the most

disappointing feature of SMMEs' technology-mediated business operations is their dependence on traditional media technologies such as television, radio and print media. Verheyden and Goeman (2013) concur that in comparison to larger businesses, SMMEs are less likely to implement social media technologies and less motivated to use them intensively. Kohli, Suri and Kapoor (2015) state that the traditional branding pattern continue to involve substantial upfront investments and tightly managing the image via controlled communications with the hope of creating dominant brands that could be leveraged to cultivate loyalty and a long-term, steady stream of profits. This can be interpreted to mean SMMEs' relentless preoccupation with traditional modes of corporate control through the deployment of traditional monolithic communication channels that undermine consumer power and influence in decision-making about brands and purchases. Adegbuyi, Akinyele and Akinyele (2015) affirm that although SMTs are envisaged to play a vital role in marketing and creating relationships with customers tourism SMMEs do not necessarily buy in and capitalise on these opportunities. Despite small businesses' emergent use of such technologies to marketing enabled by low barriers to entry (Adegbuyi et al., 2015), there is growing consensus that the lack of a competitive strategy and basic knowledge of SMT tools and applications to leverage business connectivity remain a millstone around the necks of tourism SMMEs (Lim, 2010; Milano, Baggioc, & Piattelli, 2011; Maha, 2015).

Hudson, Roth, Madden and Hudson (2014) postulate that in this emerging technological era of marketing communication there is little information about how social media interactions with tourism brands affect how consumers think about those brands and the outcomes of such interactions. Yet Verheyden and Goeman (2013) insist that when properly harnessed, SMTs offer strategic prospects to businesses, such as new grounds for branding and new types of interaction. Hence Brennan and Schafer (2010) highlight that the rapid change and growth in SMTs and its transformation of the Web will continue to revolutionise marketing. What remains speculative is the extent to which tourism SMMEs have tapped into this hype about SMTs, especially whether they are exploiting such technologies to brand and market their product/services. The transactive and interactive power of SMTs is considered fundamental to SMMEs' counteracting of negative or positive statements customers may make about their products/services online (Balakrishnan, Dahnil & Yi, 2014). It is in view of the proliferation of SMTs among consumers and their underutilisation by tourism SMMEs for positioning and marketing their brands that this study seeks to interrogate the extent to which tourism SMMEs utilise SMTs in positioning and marketing of their brands and services.

2. RESEARCH QUESTION

To what extent do tourism SMMEs utilise SMTs in the positioning and marketing of their brands?

3. PROBLEM BACKGROUND

Small businesses play a central role in national economic development and are strong drivers of new innovations which stimulate job creation and economic transformation (Adegbuyi et al., 2015). Tourism SMMEs are no exception as tourism itself is an important economic contributor (Blanco-Gomez, 2013). In spite of this envisaged contribution, tourism SMMEs remain entrapped in stunted growth and competitive potential due their location in peri-urban and rural areas, where the operational costs are conceived to be lower than those of urban areas.

Cesaroni and Consoli (2015) posit that emerging technologies represent an opportunity for tourism SMMEs to overcome the liability of being small by encouraging growth and development, developing new products, obtaining new market share and gaining competitiveness. Furthermore, Mosweunyane (2016) affirm that when resource-constrained tourism SMMEs exploit the profound opportunities presented by SMTs to brand and market their products and services as alternatives to the less effective print and electronic media, they are bound to leverage their competitiveness. The exploitation of one-way conventional media such as newspapers, radio, and tourism news channels as marketing tools for local and world tourism is increasing being challenged by the advent of highly interactive, rich text and communicative social media platforms (Mosweunyane, 2016). Brennan and Schafer (2010) concur that consumers want to connect with businesses through social media to learn about business information, products, and promotions. Tourism SMMEs need to follow this trend by using social media because it is a popular marketing tool that allows direct interaction with potential consumers and provides an

incomparable platform for consumers to openly evaluate and share information of products (Nadeema et al., 2015). Yet tourism SMMEs cannot assume that SMTs can be used haphazardly without a coherent competitive strategy. As Brennan and Schafer (2010) advise, social media should first be used to build relationships, which require a balance of relevant information about SMME operations, brand and culture.

In spite of the aforementioned caveats, the business opportunities bestowed by social media technologies cannot be taken for granted, but rather SMMEs should capture the economic value generated from SMT users' exploitation of such technologies (Yadav, de Valck, Hennig-Thurau, Hoffman & Spann, 2013). Van der Bank and Van der Bank (2015) insist that the rise and popularity of social media among customers implies that tourism businesses can no longer rely solely on traditional media for marketing. Mosweunyane (2016) posits that social media platforms such as Facebook, Twitter and YouTube are recognised for creating opportunities for SMMEs to interact with their stakeholders such as customers, suppliers, local communities, regulators and financiers. However, little is known about how small enterprises use these technologies and in particular social media (Cesaroni & Consoli, 2015) for the positioning and marketing of their brands.

4. LITERATURE REVIEW

4.1. Social media marketing

Only recently has SMTs gained their currency and increased used in the tourism sector (Sahin & Sengün, 2015) due to increasing digital competencies of users and communicative affordances of such technologies (Cheung, 2012). Since SMTs render two-way communication between businesses and consumers (Kim & Ko, 2012), tourism SMMEs should demonstrate proactiveness by using such technologies to market themselves to increase their brand presence and visibility. For instance, Cheung (2012) posits that consumers' increasing use of social media enable them to access travel information without guidance from the traditional travel agent. This signifies the power of social media technologies to popularise marketing of tourism products/services without the need for a middleman in the exchange of business-related information. Dodoo and Wu (2015) state that the collaborative nature of SMTs provides marketers with better opportunities to have direct conversations with consumers. Therefore, tourism SMMEs' strategic management of consumer-brand relationship via social media would be instrumental to their improved competitiveness.

4.1.1. Social media marketing in tourism

Owing to the increase in popularity of social media technologies (Balakrishnan, Dahnil, & Yi, 2014; Sahin & Sengün, 2015), many tourism businesses have started using these technologies as one of their marketing strategies (Sahin & Sengün, 2015). The opportunities for direct interaction, instant feedback and open communication with consumers via social media technologies (Dodoo & Wu, 2015) perhaps explains this surging use of these technologies. Aspasia and Ourania, (2014) consider SMTs as the best instrument to reach the customers globally and receive their valuable feedback compared to traditional media, which emphasises one-way communication. Manizzi (2015) further asserts that SMTs play a substantial role in many aspects of tourism, especially in information search, decision-making behaviours, tourism promotion and enhancing interactions with consumers. In spite of these laudable promises, it remains to be seen whether the uptake of such technologies really impact on marketing, branding and ultimately the competitiveness of businesses. Sahin and Sengün (2015) posit that emerging technologies such as Facebook, Twitter, etc. are closely related to the tourism sector as they assist tourism businesses to render flexible services such as the promotion and sales of tourism products/services which will lead to important developments in the field of tourism marketing and tourism activities. As a consequence, consumers increasingly search for, assess, and buy product/service via social media (Nadeem al., 2015). Naidu and Agrawal (2013) concur with this assertion stating that currently social media technologies are useful tools in purchasing decisions. We infer that tourism businesses stand to influence purchasing decisions of consumers if they were to exploit the networking and interactive affordances of social media technologies. Hence, Neti (2011) states that social media increases the accessibility of products/services of the business to potential consumers by increasing their visibility.

4.2. Branding

Given the aggressive competition for the share of tourism market between big corporations and emerging businesses, it is uncontested that SMTs can be exploited as a vehicle for increasing brand presence and brand acceptance within the tourism sector. The importance of SMTs for brands lies in the fact that they constitute a significant means through which brand visibility can be created and maintained thus generating strong relationships between brands and consumers (Trainor, 2012). Since branding plays a central role in the marketplace in establishing the distinctiveness of the business relative to other businesses (Markina & Drogomyretska, 2014) it is logical for tourism customers to make buying decisions about products/services based on their knowledge of brand images portrayed via SMTs. Therefore, tourism SMMEs cannot ignore the perceptions and images portrayed about their brands, products/services via social media if they are to survive their existing and potential well-known competitors such as large tourism enterprises. Kalandides (2011) describes tourism branding as premeditated to improve a business's image by trying to change the perception that people have towards that particular business.

4.2.1. Positioning of brands

Brand positioning plays a role of creating and developing a brand in such a way that it takes a unique image and value in the minds of target customers (Sharma, 2013). Furthermore, Karadeniz (2009) posits that positioning is the development of the image of a product against that of the competitors. In this regard, the lasting impressions about a brand and its easy identification among its competitors, therefore, could be tied to the messages that the tourism SMMEs articulate about such brands. Brand positioning should be conceived as something the business does to the mind of potential customers (Karadeniz, 2009). The current authors interpret this to mean practice-based images that are continually invoked and reinforced with a view to exert an impression on the value and quality of a particular brand. Janiszewska and Inch (2012) concur that positioning is the way a business wants customers to perceive, think and feel about its brand as opposed to competitors. These authors further state that brand positioning describes the brand in question by indicating the differentiating elements in the context of the target group's needs and expectations. Therefore, brand positioning is the foundation for attaining competitiveness over competitors. Karadeniz (2009) posits that positioning can be formed according to the precise features and also a positioning can be developed as directly counter to the main opponent. The place and contribution of SMTs to brand positioning is a function of the firm's competitive strategy and corporate policy and the intended targets.

Janiszewska and Inch (2012) posit that consumption of tourist products has become a common phenomenon with the commercialisation of tourism in recent times. Janiszewska and Inch (2012) further emphasise that commercialisation is detrimental to the distinguishing of tourism businesses with other businesses many areas of activity and sectors. This is because mass consumption tends to be a response to tourists' mass needs, thus differentiation may be based on a consistently implemented concept of brand positioning. Karadeniz (2009) concurs stating that a successful brand positioning is the development of the 'added value' which is improved through a remarkable differentiation from competitors. Such differentiation, however, can be problematic for emerging tourism businesses which are conceived not to offer differentiated products due to their resource constraints. Therefore, while positioning can assist tourism SMMEs to add value to their products/services which will entice customers, this is not always automatic and uncomplicated to do successfully. Sharma (2013) affirms that positioning requires the perception of tourists - which is neither uniform, universal nor consistent. Positioning of different target tourism plans requires identifying opportunities for creation of image and differential aspects of one tourism place from rest of tourism place (Sharma, 2013).

4.2.2. Social media technologies for branding

Since strong brands constitute highly valuable assets for businesses (Gensler, Völckner, Liu-Thompkins & Wiertz, 2013), SMTs can serve as the conduits through which brands express their life. Neti (2011) posits that SMTs should be used as instruments that create a persona behind the brand and create

contacts that businesses otherwise may never gain. Furthermore, Királová, and Pavlíčka (2014) acknowledge that social media play an important role in tourism allowing destinations to interact directly with visitors via various internet platforms and monitor visitors' opinions, reactions and evaluations of services. In view of that, Gensler et al. (2013) state that consumers are now able to share their brand experiences widely through social media technologies. This is a window of opportunities for tourism SMMEs to take advantage and use these social media technologies to brand their businesses.

With the use of new technologies, brands and consumers are allowed to communicate with each other unrestricted in time and place such that old-fashioned, one-way communication is transformed into interactive two-way direct communication (Kim & Ko, 2012). The interactive nature of social media technologies allows not only brands to share and exchange information with their customers, but customers are also permitted to do the same with one another (Tsimonis & Dimitriadis, 2014). In view of this, through social media customers can indirectly help businesses in building their brands. This means that even customers can influence prospective customers positively or negatively to use services/products of a particular business. Thus, social media for these businesses represent brand building opportunity that surpasses the traditional middleman and connects businesses directly with consumers (Neti, 2011; Tsimonis & Dimitriadis, 2014). Kim and Cho (2013) posit that these emerging technologies can thus be a key competitive factor in highly competitive tourism businesses.

5. RESEARCH DESIGN

A quantitative research design was adopted for this paper. The survey instrument was developed to collect quantitative data about the use of social media for the marketing and branding of tourism SMME products and services. The Tourism Grading Council of South Africa estimated that there were approximately 600 registered tourism SMMEs in the Free State Province. A sample size calculator was used to calculate the sample size and the sample was 234 research elements at a confidence level of 95%. The researchers ensured that each unit of the population had an equal probability of inclusion through the use of simple random sampling (Bryman & Bell, 2011). Of the 234 questionnaires distributed, 123 were correctly completed, representing a response rate of 53%.

5.1. Research instrument and data collection

A questionnaire containing closed, Likert-scale questions was developed based on literature that covered social media marketing and branding, and competitiveness. This study reports only on positioning and marketing of branding in tourism SMMEs, though the research instrument was covering a broader range of issues such as level of entrepreneurship and stakeholder management. The instrument was evaluated by experts before being administered to the targeted research subjects. There were four sections in the questionnaires, covering demographic data, social media utilisation, stakeholders and competitiveness.

Questionnaires were distributed by the first author with the help of two trained research assistants. Data collection was deemed complete within two months. The unit of analysis was the owner/manager of the tourism SMMEs.

5.2. Data analysis

De Vos, Strydom, Fouche and Delport (2011) posit that data is analysed for the purpose of reducing it to a logical and interpretable form and to draw conclusions from the data. Therefore, the researcher coded data and submitted it to the statistician who analysed it using Statistical Package for the Social Sciences (SPSS) version 22. The detailed analysis was conducted using descriptive statistics such as frequency tables and inferential statistics e.g. correlation and regression analysis.

5.2.1. Reliability of data

To address the objectives of this study, preliminary checks were done to determine the validity and reliability of the variables (or constructs) used in the analysis. Cronbach's alpha coefficients were calculated to determine whether or not the variables are reliable. A Cronbach's alpha coefficient is used

to test whether or not the items used for a variable actually measure that particular construct. See Table 1.1 below.

Table 1
Cronbach's Alpha

Constructed variables	Cronbach's Alpha	Number of Items
Branding	0.941	5
Marketing	0.956	6

Table 1 above shows that the construct variables are reliable. A construct is reliable when Cronbach's alpha value is above 0.6. Since the constructs have Cronbach's alpha values above 0.6, they are deemed to be reliable and can be used for analysis (Rahimnia & Raude, 2013).

6. FINDINGS

6.1. Demographics data

The demographics data of the tourism SMMEs is illustrated below in Table 2.

Table 2: Sample demographics

Variables	Category	Frequency	Percent
Role in the business	Owner	21	17.1%
	Manager	59	48.0%
	Owner/Manager	18	14.6%
	Other	25	20.3%
Age	21 - 30 years	39	32.0%
	31 - 40 years	38	31.1%
	41 - 50 years	32	26.2%
	Above 50	13	10.7%
Education	High school	42	34.4%
	Tertiary	60	49.2%
	Postgraduate	20	16.4%
Sub-sector of tourism	Accommodation	56	45.5%
	Hospitality & related services	55	44.7%
	Travel distribution services	11	8.9%
	Others	1	0.8%
Years business has been in operation	1 - 5 years	40	33.3%
	6 - 10 years	54	45.0%
	11 - 15 years	15	12.5%
	16 - 20 years	2	1.7%
	Over 20 years	9	7.5%
Number of employees in the business	None	8	6.5%
	1 – 5	63	51.2%
	6 – 9	29	23.6%
	10+	23	18.7%

As indicated in Table 2, about 62.6 percent were managers and only 17 percent were owners. This could be interpreted to mean that the owners of tourism SMMEs (48%) prefer to hire someone to manage their businesses. Furthermore, 63.1% of respondents were between 21 and 40 years old, whereas 36.9% were 41 years and over 50. This finding implies that the tourism SMMEs are predominantly owned or

managed by the economically active population. Respondents who studied up to tertiary education were in the majority (65.6%) whilst only 34.4 percent studied up to high school. The prevalence of well-educated owner/managers, perhaps demonstrates the complexity of navigating the tourism sector, which require higher educational attainments and quality training (Fosso-Wamba & Carter, 2014:7).

6.2. The extent of social media utilisation

Table 3 shows the tourism SMMEs' extent of utilisation of social media technologies. The results are summarised below.

Table 3: Status and utilisation of social media technologies

Variables	Categories	Frequency	Percentage
The business use social media technologies.	Yes	102	82.9%
	No	21	17.1%
How do you rate your social media knowledge?	No knowledge	21	17.1%
	Beginner/Novice	19	15.4%
	Intermediary	55	44.7%
	Advanced	28	22.8%
Which social media technologies does your business use?	None	20	16.3%
	Blogs	2	1.6%
	Social networking site	76	61.8%
	Micro-blogging	11	8.9%
	Collaborative projects	4	3.3%
	Content communities	5	4.1%
	Others	5	4.1%
How often does your business use social media technologies?	Once/more a day	35	28.5%
	Once/more a week	28	22.8%
	Once/more every month	42	34.1%
	Never	18	14.6%
How much time does your staff invest in work-related use of social media technologies?	None	38	31.4%
	Less than 30min	30	24.8%
	30 min - 1 hour	30	24.8%
	1 - 3 hours	20	16.5%
	Over 3 hours	3	2.5%
Who handles the social media technologies in your business?	None	22	18.0%
	Manager/Owner	73	59.8%
	Employees	17	13.9%
	Social media technology specialist	10	8.2%
What are the reasons for your business' use of social media technologies?	Do not use social media	19	15.6%
	Marketing products/service	21	17.2%
	Build credibility	12	9.8%
	Attracting new customers	57	46.7%
	Network	6	4.9%
	Listen to customers	4	3.3%
	Provide feedback	3	2.5%
	Not at all	15	12.2%
	To a little extent	18	14.6%

To what extent does your business consider social media technologies important for its operations.?	Neutral	53	43.1%
	Moderate extent	37	30.1%
How do you rate your staff's knowledge of social media knowledge?	Novice	35	28.5%
	Beginner	20	16.3%
	Intermediary	56	45.5%
	Advanced	12	9.8%
Who are your business trying to reach through social media technologies?	Existing Customers	81	71.1%
	Prospective customers	21	18.4%
	Suppliers	11	9.6%
	Competitors	1	0.9%
Which methods do the business use to communicate with stakeholders?	None	8	6.5%
	Telephone	22	17.9%
	e-mail	70	56.9%
	Letter	4	3.3%
	Social media technologies	19	15.4%

From Table 3 it is evident that the majority (82.9%) of respondents used social media technologies, while only 17.1% did not use such technologies. This illustrates the significance of these technologies to day-to-day operations of tourism SMMEs (Meske & Stieglitz, 2013) and the keenness of these business to have a social media presence. Social networking sites were the most used platform. This is consistent with the high number of Facebook (social network site) utilisation as compared to other social media platforms in South Africa (Goldstuck, 2016; Snyman, 2016).

About 49.6% of respondents reported that their staff invest not more than one hour in work-related social media per day and only 2.5% of respondents reported investing more than 3 hours per day. Although the majority (82.9%) of tourism SMMEs surveyed use social media, the time invested by staff is inadequate for making a great impact on these enterprises. Furthermore, 59.8 percent of owner/managers handled the social media in the business themselves, whilst only 8.2 percent have hired a social media specialist. According to Mosweunyane (2016) tourism SMMEs owner/managers may perceive entrusting to a specialist the duties of positioning and marketing of business on social media as possibly disruptive of their authority.

Table 3 further illustrates that 46.7% of the respondents used SMTs in order to attract new customers and 17.2% used it to market their products/services while 9.8% used it to position their brands (credibility). Despite the majority (82.9%) of tourism SMMEs utilising social media, only 30.1% of respondents perceived social media technologies as moderately important for business operations while 14.6 percent perceive it to be of little importance for their business operations. The findings indicate that regardless of their utilisation of social media, the majority of owner/managers do not see social media as important for business operations.

6.3. Marketing through social media technologies

Table 4 shows that most (65.9%) of the respondents agreed/strongly agreed that their business market their product/services through social media technologies. Additionally, 60.5% agreed/strongly agreed that their businesses conduct product/services promotions via social media technologies. This is popularity of social media use for marketing perhaps is influenced by the increasingly presence of consumers on social media platforms (Popescu & Alecsa, 2015; Van der Bank & Van der Bank, 2015). Therefore, it could be tourism businesses' strategic move to use social media platforms to seize hold of the complex audience of SMT users.

Table 4: Marketing

Marketing		Frequency distribution					Descriptive	Latent factor Factor loading		
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree			Mean	Standard deviation
The business markets its product/services through social media technologies.	n	7	26	9	48	33	65.8%	3.57	1.27	0.90
	%	5.7%	21.1%	7.3%	39.0%	26.8%				
The business conducts product/services promotions via social media technologies.	n	11	18	18	47	25	60.5%	3.45	1.24	0.91
	%	9.2%	15.1%	15.1%	39.5%	21.0%				
The business extends its market share through its social media campaigns.	n	8	23	26	43	23	53.7%	3.42	1.18	0.92
	%	6.5%	18.7%	21.1%	35.0%	18.7%				
The business attracts customers through advertising on social media technologies.	n	7	19	20	40	37	62.6%	3.64	1.25	0.92
	%	5.7%	15.4%	16.3%	32.5%	30.1%				
Social media technologies has an effect when marketing business brands/services.	n	6	24	18	38	35	60.3%	3.61	1.25	0.91
	%	5.0%	19.8%	14.9%	31.4%	28.9%				
Social media technologies play an important role to business marketing efforts.	n	6	26	16	30	45	61.0%	3.68	1.31	0.88
	%	4.9%	21.1%	13.0%	24.4%	36.6%				

A total of 60.3% of the businesses agreed that social media technologies have an influence when marketing business brands/services and 61% agreed that social media technologies play an important role in the businesses' marketing efforts. Table 4 also indicates that 61% of respondents agreed that social media technologies play a vital role to business' marketing efforts. These findings are slightly higher than a study by Tiago and Verissimo's (2014) whereby 41 percent of respondents posited that promotion of their business activities on social media as a primary driver improves their marketing efforts.

6.4. Social media branding

Table 5 shows that slightly above half of the respondents (59.3%) agreed that their business use social media to introduce a particular brand. The finding is interesting as it indicates that almost half of other respondents did not utilise social media to introduce a particular brand. This can be problematic as tourism SMMEs may lose their potential customers to other businesses as they fail to capture their attention and entice them to purchase their products. A further 59.3% agreed that their business use social media technologies to maintain the dominance (positioning) of the brand.

Table 5: Branding

Branding		Frequency distribution						Descriptive		Latent factor - Factor loading
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	% Agree/Strongly agree	Mean	Standard deviation	
The business uses social media technologies to introduce a particular brand/services.	N	6	28	16	44	29	59.4%	3.49	1.22	0.89
	%	4.9%	22.8%	13.0%	35.8%	23.6%				
The business uses social media technologies to maintain the dominance of the brands/services.	N	7	22	21	56	17	59.3%	3.42	1.11	0.88
	%	5.7%	17.9%	17.1%	45.5%	13.8%				
The business uses social media technologies to distinguish a brand for its competing products.	N	7	26	11	62	17	64.2%	3.44	1.14	0.90
	%	5.7%	21.1%	8.9%	50.4%	13.8%				
The business uses social media technologies to demonstrate the uniqueness of its brands.	N	6	26	9	56	25	66.4%	3.55	1.18	0.94
	%	4.9%	21.3%	7.4%	45.9%	20.5%				
The business uses social media technologies to communicate their unique brand position in a way that is compelling to customers.	N	6	21	14	59	22	66.4%	3.57	1.12	0.89
	%	4.9%	17.2%	11.5%	48.4%	18.0%				

As illustrated in Table 5, 66.4% of respondents agreed that the business uses social media technologies to demonstrate the uniqueness of its brands. A further 66.4% reported that their businesses use social media technologies to communicate their unique brand position in a way that is compelling to customers. Moreover, 64.2% of respondents reported that their business uses social media technologies to distinguish their brands from their competing products. SMTs are one of the preeminent opportunities available to a brand for connecting with potential consumers (Neti, 2011) hence tourism SMMEs are calculative in their exploitation of SMTs to brand their businesses. Perhaps these tourism SMMEs have heeded the advice of Vukasovič (2013) who posits that there is a positive relationship between social media and branding. Therefore, tourism SMMEs are perhaps trying to keep up with technological development and by allowing their brand to follow this development (Tsimonis & Dimitriadis, 2014).

7. RECOMMENDATIONS

The results point out that the mainstream (69.9) of tourism SMMEs sampled utilise social media technologies for branding of their product/service. The empirical findings validated that social media

technologies are significant for branding tourism SMMEs' products/services as it is where customers and prospective customers often engage with the business. Strong brands enjoy customer loyalty, have the potential to generate premium prices, and develop considerable brand power to support the introduction of new products and services (Ghodeswar, 2008). Furthermore, Mosweunyane (2016) adds to this assertion that emerging entrepreneurs are embracing social media to leverage their business operations and marketing of the business brands. However, despite the majority of tourism SMMEs using social media for branding, only a few (30.1%) consider social media technologies important for their operations. This finding contradicts Fishcer and Reuber's (2011) study into Tweeter usage, which found that reasonable use of social media benefits important business outcomes.

In view of these finding, it can, therefore, be concluded that a significant majority of SMMEs in the Free State Province utilise social media technologies in positioning and marketing their brands and services. This conclusion is corroborated by Christou (2015) who reported that tourism SMMEs' use of social media technologies for branding builds stakeholder loyalty. Consistent with this argument, we can conclude that tourism SMMEs have successfully taken advantage of social media technologies.

As illustrated in Table 3, only 8.2% of tourism SMMEs make use of social media specialist in their businesses. This is not a progressive view on the popularity of social media amongst marketers and brands. In fact, it can be concluded that perhaps the reason why many tourism SMMEs do not perceive the significance of SMTs could be their failure to use it creatively and innovatively due to the absence of SM specialists who can advise them on the productive use of such technologies. Shortage of resources might be one of the contributing factors to tourism SMMEs' failure to use SM specialists to handle social media use in business. Tourism SMMEs should invest in social media technologies by ensuring that a certain percentage of their total annual budget is allocated to the adoption of the latest technologies such as website development, and employment of social media specialists to run the business social networking sites. This can be done by providing funds for training of SMT specialists and through incentives to encourage tourism SMMEs to hire these trained SMTs specialists.

8. CONCLUSION AND IMPLICATIONS FOR FUTURE RESEARCH

Given the importance of tourism in the South African economy and the proliferation of tourism SMTs in recent years, this study sought to establish interventions for increasing the competitiveness of tourism SMMEs in such a highly competitive multifaceted globalised sector. Despite the majority of sampled tourism SMMEs utilising SMTs, the importance of these technologies is underestimated by these SMMEs. Tourism SMMEs should be encouraged to incorporate social media technologies into their business competitive strategy, marketing and branding and business processes to increase their return on investment. Future study needs to examine the lack of social media policies within SMMEs and despite most business adopting social media technologies, why it is not taken seriously within these businesses. Other studies may also examine the adoption of social media and its effect on customer loyalty.

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The Enhancement of sustainable Municipal service delivery through skills acquisition in selected Municipalities in the North West Province, South Africa.

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ABSTRACT

Skills and capacity hiccups are symptomatic of underlining human capacity management deficiencies in municipal authorities. These compromise quality human capacity value chain and worker value proposition. The research study was confined to local municipalities in Dr Kenneth Kaunda, Ngaka Modiri Molema and Dr Ruth Mompati district municipalities. These municipalities failed to conduct Monitoring and Evaluation exercises to ensure value for money and accounting for resources that are to be utilized for service delivery. Available empirical evidence reflects a critical shortage of human capital skills in the conduct of audit exercises, communication with the general public, accounting, proposal writing and so forth. Thus the study aimed to determine how skills acquisition could enhance service provision in local municipalities in the North West province. The study used a combination of both qualitative and quantitative research methods to gather data. The established results were envisaged to be critical in addressing poor service delivery in the Province. Findings also reflected that services by the sampled municipalities were poor. 90% of the community respondents highlighted that lack of good governance, transparency and accountability were topical. They recommended that a recapitulation on human capital skills promotes municipalities to deliver on their constitutional mandate.

Key words: accountability, impunity, oversight, transparency

1. INTRODUCTION

The core elements of service delivery, inter alia, are accountability, participation, rule of law and transparency. In accountability, decision-makers in the echelons of governance should be answerable to the common people. The rule of law needs to be fair and impartially enforced with respect to human rights regardless of creed, colour, race or religion. In transparency, there is need to partake a free flow of information. Every stakeholder should access requisite information, understand it, monitor it and choose what to do with it. The foregoing interpretations were envisaged to provide a broad-based-consensus building process of understanding the aim of the study. The challenge of governance should aspire to promote, support and sustain human development thus eliminating forms of exclusion (UNDP Human Development Report, 1996). Proponents of human capital management accede that the synergy between employee capacitation and organisational success cannot be under-estimated (Meyer, 2007:54). Knowledge of what one is mandated to do is considered as a currency for success (Wessels, 2014:32). It is further surmised that the quality performance of staff is determinant of the success, progression and sustainability of any organisation. Qwabe and Pillay (2009:67) also concur that a culture of skills acquisition in any organisation edifies the level of service delivery.

However, the extent of service delivery protests in the years ranging from 2008-2015 has been a cause for concern (Municipal IQ Hotspot Monitor, 2015). Absence of anecdotal research work on service delivery in the North West Province had to instigate the promulgation of a research study of this calibre being conducted in its local municipalities. Local residents in these municipalities alleged that lack of human capital skills was the major cause. To recapitulate on the essence of a skills imperative, Coetzee (2007) acknowledges that organisations fail to deliver due to, inter alia, deficiency of skills, staff obsolescence, and failure to promote employment equity. Erasmus, Browert and Van Beek (2009) further assert that with a quality skills dimension; services are improved, corporate image is enhanced, costs are reduced, and a conducive climate for growth, trust and peace is inculcated. Thus informed by the foregoing, this study in the North West Province (NWP) sought to determine how skills acquisition would enhance municipal service delivery.

2. LITERATURE REVIEW

Human resource management's strategic and operational thrust is fundamental in addressing service delivery challenges (White Paper on Human Resource Management, 1997). Thus, any compromise on skills development is self-defeating. It is critical to emphasize the urgent inauguration of the draft Human Resource Planning Strategic Framework whose objectives entail development of policies and guidelines that will entice skilled human capital and addressing human capital skills which hinder sustainable service delivery in local municipalities. Indeed, municipal authorities can be sustainable if continual municipal transformation and amalgamation of new trends are incorporated. However, these should be within the domains of a constitutional framework. Thus, a symbolic representation of phenomena becomes imperative (Hoos, 2012). It enhances reality or a replica of reality (Quade, 2015). The Department of Public Service and Administration (DPSA) (2012) rationalises that policies that focus on human capital development enhance service delivery. Thus this therefore serves as a point of departure to improve staff capacity in the South African public service. Consequently, a framework is designed for purposes of this study (Figure 1).

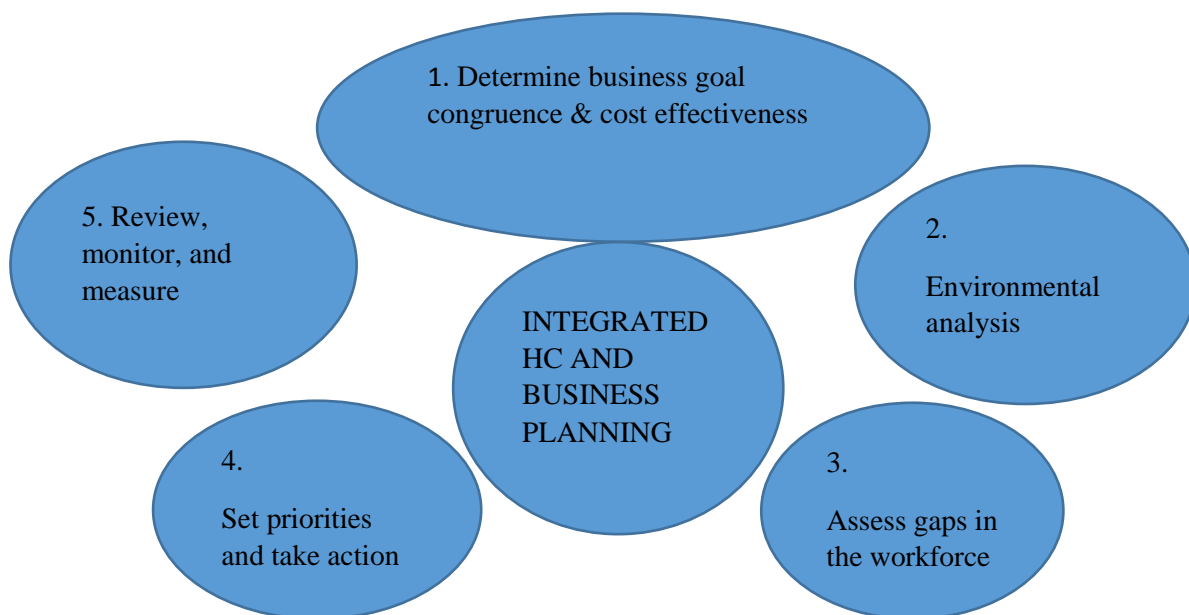


Figure 1: Human Capital Planning Process

(Source: DPSA, 2012)

1. *Goal Determination*: Goal determination is critical. It should be a collective transaction by all concerned stakeholders (Dodaro, 2012:241). The goal should be a guiding factor in identifying the skills requisite in accomplishing organisational mandates, especially community needs.

2. *Environmental Analysis*: This stage analyses the customer base and the capacity thereof (DPSA, 2012). Aspects to consider revolve around skills required for strategic service delivery. It suffices to mention that most South African Municipalities like any other organisations operate on limited budgets and resultantly scarce skills (Dodaro, 2012:248). At this stage, there is need to identify current and future human resource needs and pertinent challenges that may impact on service delivery.

3. *Assess Gaps in the workforce*: Dodaro (2012:256) concurs that scarce skills impact negatively on any organisation's quest for service delivery. Hence corporate strategies should be pursued rigorously to address skills gaps and also to retain well-deserving staff members.

4. *Set Priorities and take action*: Accountable staff members should be the pursuit of every organisation if corporate goals are to be accomplished (Odden, 2011:153). Internal human capital development

would enhance sustainable service delivery. Thus strategies should be put in place to improve on scarce skills either through in-sourcing, outsourcing or both.

5. Review, Monitor and Measure: These focus on on-going corporate processes. Harmonious integration of the five variables proposed in the framework is critical for good governance, robust decisions and requisite service delivery. If some deficiencies continue to prevail, these will be established at this phase.

3. METHODS

A descriptive and cross-sectional research design is used to examine feelings and motivations of a heavy user population size (Coldwell & Herbst, 2004). Descriptive research is used to obtain information concerning the current status of the phenomena in order to describe "what exists" with respect to variables or conditions in a situation (McDaniel & Gates, 2001:10). For the study, this type of design was used. Its advantages entail giving the researcher "the opportunity to use both quantitative and qualitative data in order to find data and characteristics about the population or phenomenon that was being studied, and the data collection for descriptive research presented a number of advantages as it could provide a very multifaceted approach" (Bailey, 2014).

Questionnaires and in-depth interviews were used to gather data from a random sample (n= 340) based on the works of Osborne et al. (2000) and Creswell (2010). The questionnaires were administered to community members and then collected once they had been filled out. The most important advantage of the questionnaires was that a large coverage of the population could be realised with little time and cost. Furthermore, anonymity was assured and that made it easier for respondents to answer honestly.

In-depth interviews were conducted with twenty municipal staff members. An interview involves direct personal contact with the participant and can be structured or unstructured. An interview also allows for the establishment of a list of possible answers or solutions which in turn facilitate the construction of more highly structured interviews. In particular, it facilitates the elimination of superfluous questions and the reformulation of ambiguous ones (Babbie & Rubbin, 2010). The study used structured interview questions which were open-ended in order to solicit for more information from the respondents. This technique was used for triangulation purposes on findings developed from community members. Municipal documents for the local authorities sampled were also consulted.

Simple random sampling bears an unknown or zero equal opportunity to every unit of being selected for study (Mactavish & Schleien, 2004). Notably among the strengths of simple random sampling is that it tends to yield representative samples, and allows the use of inferential statistics in analysing collected data. Further again, advanced auxiliary information on the elements in the population is not required. Such information is required for other probability sampling procedures like stratified sampling (Daniel, 2012).

Leedy and Ormrod (2012) allude that governance theory and management tasks can be compared and contrasted with actual performance in local municipalities. Hence such trajectory builds on theory, determines generalisations emanating from empirical findings. Questions used sought to identify governance issues linked to municipal service delivery challenges.

4. RESULTS

Skilled staff aspire to attain quality service delivery through policies, roles and procedures. It seeks to offer guidance (Sergiovanni, 1994). But against the background of deficiencies in personnel skills, high population density and low disposal incomes, this becomes a nightmare. Results which the study established were based on responses from 340 participants. This aspect of the study focused on the impact of skills in municipalities, their importance and extent of municipal staff in service delivery. The study established that skills acquisition and retention in municipalities in the NWP were a pipe-line dream due to unfavourable conditions.

4.1. Importance of municipal staff in municipal service delivery

4.1.1. Reliability Test Results

Cronbach's Alpha	N of Items
.978	76

The Cronbach's Alpha indicates that the variables are 97.8% reliable hence they are appropriate for factor analysis. This part therefore confirms that the measures used in the study were consistent.

4.1.2. Determination of sampling adequacy and factorability of the correlation matrix

Table 2: Sampling adequacy

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.928
Bartlett's Test of Sphericity	Approx. Chi-Square	10638.879
	Df	2850
	Sig.	.000

The KMO of 0.928 is greater 0.70 implying that the sample is adequate enough for factor analysis to be conducted. A significant Bartlett's test implies that the correlation matrix is factorable. KMO and Bartlett's Test of Sphericity was critical for this study as it provided a measure of sampling adequacy that is recommended to check the case to variable ratio for the analysis being conducted.

4.1.3. Determination of the number of extractable factors

Table 3: Number of extractable factors

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
Staff professionalism	30.116	39.627	39.627
Attitude to work	2.438	3.208	42.835
Talent management	1.98	2.605	45.441
Communication skills	1.787	2.351	47.791
Tolerance	1.699	2.235	50.026
Self-management skills	1.6	2.106	52.132
Self-development capacity	1.444	1.9	58.021
Assessment skills	1.386	1.824	59.845
Diversity management	1.32	1.737	61.581
Evaluation skills	1.228	1.615	64.86

Using the Kaiser's rule of eigenvalues greater one, ten factors should be extracted which will account for about 69.351% of the total variation. These results are true for both Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA).

4.1.4. Pearson's correlation coefficients between the importance of and the extent to which the competencies are demonstrated by municipal staff.

Table 4: The importance of and the extent to which the competencies are demonstrated by municipal staff

		Pearson's Correlation	Direction and Strength
Staff professionalism	Attitude to work	-.217**	Negative and weak
Staff professionalism	Communication skills	-.225**	Negative and weak
Staff professionalism	Talent management	.345**	positive and moderate
Attitude to work	Talent management	-.301**	negative and moderate
Attitude to work	Tolerance	-.311**	negative and moderate
Attitude to work	Self-management skills	.226**	positive and weak
Attitude to work	Evaluation skills	.166*	positive and weak
Communication skills	Diversity management	.203**	positive and weak
Talent management	Self-development capacity	.185*	positive and weak
Talent management	Assessment skills	.173*	positive and weak
Talent management	Diversity management	.311**	positive and moderate
Tolerance	Communication skills	.218**	positive and weak
Self-management skills	Talent management	-.177*	negative and weak
Self-management skills	Tolerance	-.164*	negative and weak

The above table summarises the pairwise correlations between the factors of the importance of and the extent to which the competencies are demonstrated by municipal staff which are significant at 5% level of significance. It can be noticed that most correlations are weak ($0 < r < 0.3$) whereas some are moderate ($0.3 \leq r < 0.5$) but none are strong ($r \geq 0.5$) (Randolph and Myers, 2013). A discussion of these pairwise correlations follows below.

5. DISCUSSION OF FINDINGS

5.1. Staff Professionalism and attitude to work

Certain standards are expected from staff that mould expected professional behaviour (Bianca, 2007). For the employees, they should display behaviour that will be acceptable to the organization. There are certain forms of behaviour that can impact on an organization. Employees should not show preference of other clients when rendering service (Nelson and Quick, 2012). Indeed organisational policies are found at the workplace environment and it is incumbent on staff to be custodians of such a regulatory framework (Hackett, 2010).

The Naledi Co-operative Governance and Traditional Affairs report (2015) revealed the extent of unprofessional culture in the local municipality. The report highlighted the attempted murder of the Municipal Manager on 4 May 2015, division amongst municipal councillors, failure of the municipality to effectively consult on the draft IDP, Budget and Turn-around Strategy, and a recurrence in disclaimers for three consecutive years as matters that required urgent attention. The North-West Department of Local Government and Traditional Affairs (2015) reported that governance related problems in municipalities (political instability) affected the impact of provincial support programmes in Mafikeng Local Municipality. There was general non-compliance with legislation and regulations. There were escalating levels of uncollected debt from consumers (estimated at R4.5 million). There was a high vacancy rate in key positions and a high turnover rate affected the impact of municipal support programmes. A lack of skills and expertise in the local municipality impacted negatively on the sustainability of municipal support programmes.

5.2. Staff professionalism and communication skills

Communication skills can help improve on overall workplace culture. These skills can eliminate barriers and resolve problems (Lussier, 2009). In some instances, effective communication can enhance the promotion of stronger workplace relationships and impact positively on productivity (Lane and DiStefano, 2012). In Naledi Local municipality, it was established that the ruling ANC party had the majority representation in all portfolio committees and thereby influenced most of the municipal decisions under quorate with no recourse to the MSA (2011) as constitutionally required (NLMAR, 214/15). Political allegiance being the criterion for staff recruitment, the AG (2015) has also confirmed the common practice that municipal operations were commandeered under political ideologies. Furthermore, the AG (2015) revealed that in Ventersdorp, senior management positions were occupied by political deployees who hardly had no professional requirements thereby sacrificing the ability of staff to communicate service delivery imperatives to the local communities. The report went further to highlight that professionalism becomes subjective if influenced by extra meta- forces and the culture prevailing tends to borrow on the political adage in control.

5.3. Staff professionalism and talent management

Spencer (2002) in the Human Capital Theory views human capital theory as the sum total of knowledge, talent, skills, experience, and intelligence that should be promoted. This assertion concurs with Nel, Werner and Schultz (2011) when they suggest that right skills and knowledge should determine where to place an employee. In Matlosana, consultations with both community and municipal participants on LED, DED and KEDA indicated that economic growth and job creation had grown by 37% between 2009 and 2014 due to platinum in the locality (SA Cities Network, 2016). The report further reflected that the service economy subsectors had pitched up as follows: Public administration 27, 67%, Education 31, 8%, Health 19, 8% and other services 20, 8%. These positive developments were attributed to the level of influx of experts in the city of Matlosana influenced by mining operations in the municipality (Marais, 2016). Though these developments could not be proved in other sampled municipalities, the researcher perceives it as critical for those failing to learn from such positive initiatives in the city of Matlosana.

5.4. Attitude to work and talent management

Any public entity strives to "...improve organisational performance and grow competitive advantage" (Ingham, 2007:112). MPAC (2015) in Ventersdorp municipality reported that the principles of reporting (transparency, accountability and stewardship) which should underlie the preparation and presentation of financial statements that are required to give a true and fair view of the financial position and performance of a municipality were hardly followed. The report further indicated that the Municipal Finance Management Act (MFMA) and reporting guidelines which add to the onus of quality and relevance of financial reporting were also not complied with. The report emphasized the importance of preparing regular, accurate and complete financial and performance reports that are supported and evidenced by reliable information. The level of attention given reflected the negative attitude to work municipal staff in Ventersdorp have towards their skills mandate.

5.5. Attitude to work and tolerance

There are clear differences between an employee's attitudes and his behavioural tolerance. Attitude describes the way your employee feels inside (Grobler, Warnick & Carrel, 2011). Tolerance manifests in someone accommodating other people's feelings, beliefs and values (Hughes & Rog, 2010). These are one's feelings toward co-workers and his/her position within the organisation. Every employee has an attitude towards the environment; either good or bad. The Service-delivery profile in Mafikeng Local Municipality reflected the ensuing dynamics. The dependency ratio of 40.70% indicated that local residents lacked basic requirements for quality livelihood. An unemployment rate of 32.70% further revealed that the local municipality should engage more with its local residents during IDP consultations so that matters that impinge on local people's lives were accommodated. Participant 8 from the local participants in the study had this to say: *"Municipal staff should understand and tolerate our concerns. Refuse takes weeks to collect, and as I speak now, there has been no water for domestic use for a week. Council hardly tolerates our views."*

5.6. Attitude to work and self-management skills

Attitudes and behaviours displayed in the workplace can directly affect the atmosphere and productivity within an organization (Santiso, 2011). As an employer, one would like to create an environment that is professional and safe. This keeps employees motivated, wherein they are likely to work hard and successfully complete each assignment given. The analysis conducted for the study indicated a positive relationship between attitude to work and self-management skills. In Matlosana municipality, the study established an increasing total vacancy rate from 8, 18% in 2011/12 to 18, 50% in 2014/15. The contributory factors raised by both 96% of municipal staff and 91% of local residents were similar to developments in Naledi Local municipality. They further indicated that municipal staff end up joining the local mining giants like Ashanti Gold Mine which offered better remunerations. Municipal staff member number 4 indicated that, *“You cannot remain out when others go for gravy after having obtained skills that market oneself”*.

5.7. Attitude to work and evaluation skills

In the Mafikeng Local Municipality, the municipality performed unsatisfactorily during the Blue Drop assessments (PFMA, 2015). The report further indicated that the Municipality did not take cognizance of the need to provide the local community with good water quality as the quality of water being served to the public was not up to standard. The overall municipal score of 31.40% (2010 BD assessment) to 0.66% (2011 BD assessment) clearly indicated that the water services were not being managed properly according to the expectations of the Drinking Water Quality (DWQ) regulation programme. What made this challenge worse was the poor submission of the water quality compliance to the Department (MPAC, 2015). The Municipality was instructed to inform the communities regarding the water quality they were serving them and provide alternative good drinking water quality to the public. As many as 97% of local participants in Mafikeng indicated that in terms of water supply amongst a litany of other municipal challenges, a collective assessment with regards to service delivery imperatives would assist municipal staff develop key attributes of attitude to work.

5.8. Communication skills and diversity management

Naledi local municipality official newsletter (2015) quoted the mayor of the municipality as of the view that development communication as critical in resolving diversity management challenges. The Mayor indicated how Naledi municipality had dealt with the Eskom account, repairs to 12 local roads in Huhudi and Colridge and development of social amenities through interactive platforms. As many as 92% of local participants highlighted that it was imperative for them to take part in the business of their local government in Naledi. They further indicated that there was need for a paradigm shift from hearsay and that they should part of their local development agenda. Local resident number 12 had this to say: *“I am challenging all Naledi communities as we start our Fourth Generation I.D.P. to take charge. In this way, we will realize the goals of development communication. It will work for us.”*

5.9. Talent management and self-development capacity

Retaining capable and skilled in local municipalities was established to be mired by numerous challenges. In Naledi local municipality, a soaring crisis in vacant positions for management was established. In 2013/14 the vacancy rate was 12, 5% and by 2014/15 it had risen to 37, 5%. This is a reflection that different strategies for talent management be pursued in order to overcome challenges impacting on talent management and self-development capacity.

5.10. Talent management and assessment skills

The state of municipal finances in the N.W.P. was perceived as poor by the Auditor-General (2015). The report indicated that political will from a leadership core that can be held accountable, but also a sense of ownership by all departmental staff, especially senior staff and managers was critical for talent management and assessment tenets. The report also highlighted that the most important ingredient was sound financial management and it required the deployment of suitably skilled people at the right places, and a continuous building of internal capacity rather than a reliance on external parties such as consultants. *“A lack of proper financial management leads to most of the problems identified by the AGSA as the nature and causes of qualified audits. Chief among these is the need to make adjustments*

to annual financial statements during the audit process. This means municipalities rely on auditing firms to identify errors and omissions,” the report pronounced.

5.11. Talent management and diversity management

Manifestations of diversity at the work place entail race and ethnicity, gender, religion, sexual orientation, age and disability (McDougall, 2014). Effective management of diversity at the workplace promotes flexibility and collegiality in the organization, better customer service, minimum turnover and costs, and improved human capital acquisition and retention (Maxwell & Aspina, 2015). In Naledi municipality, the study established that municipal leadership believed that the success of the Naledi Local Municipality depended on the performance and ability of its employees, and that it is crucial to have a sound policy with regard to the recruitment, selection and induction of personnel. All aspects of the staffing, structuring, recruitment, selection, interviewing and appointment of employees were reported to be non-discriminatory and afforded applicants equal opportunity to compete for vacant positions (NLMAR, 2015). The policy framework for the municipality was envisaged to be in accordance with applicable legislation and any relevant policies and guidelines of Naledi Local Municipality.

5.12. Tolerance and communication skills

In Naledi Local Municipality, it was established that comprehensive consultations with communities, district, provincial and national stakeholders occurred (Naledi IDP, 2016/17). The report further indicated that the municipality regarded its communities as active participants in government services as they helped in shaping their destiny. The focus of the municipality was reported to be “on people not places”. It was further established that the municipality valued “teamwork and inclusivity”. As many as 85% of the community respondents concurred that engagement prevailed, but there was need for periodic studies on matters relating to increasing unemployment levels, declining economy, lack of detailed settlement planning in rural locations and illegal selling of RDP houses. In Ventersdorp municipality, the study established that stakeholder engagement took place through representative forum meetings. However, 91% of local participants felt that the practice lacked collective engagement as only few selected partook in the engagements. The researcher also felt that the practice lacked inclusivity though views of those who participated in the consultations were tolerated and communicated through municipal reports.

5.13. Self- management skills and talent management

The Ventersdorp Annual report (2014/15) reflected an overall performance of 29% from 52% which was instigated by mixed performance results of departments in the implementation of the Service Delivery and Implementation Plan (SDBIP) and the instability of the municipality. The municipality faced a halt in smooth operations for 6 months due to political and administrative instability. As many as 92% of the local participants proposed that the municipality should harness its financial viability, operational systems and internal control. Participant 5 from the sample reiterated that, *“The municipality should improve its organisational performance management culture in order to eliminate hindrances to proper planning and to accurate and credible reporting on performance”*. In Matlosana, the study determined that employment contracts the Municipal Manager, directors of Community services, Engineering services, Planning and Local Economic Development, and corporate services had still not been signed before their commencement of duty nor had they been sent to the MEC within the prescribed timeframe. The Municipal Portfolio Committee on Governance, Finance and Administration (2015) indicated that training of municipal officials in Supply Chain Management, GRAP, and Policies and Procedures had been conducted but the municipality’s internal audit controls remained poor.

5.14. Self-management skills and tolerance

In Ventersdorp Municipality, 10 officials had been subjected to disciplinary action relating to the alleged financial misconduct of R3.8 million and the Mayor had of late been placed on forced leave on similar allegations (MPAC, 2015). As many as 88% local participants indicated that the workplace environment in the municipality was too lax. *“It’s like they don’t learn from the shortcomings of others as they repeatedly fall into similar situations,”* participant 3 from the sample reiterated. The Municipal Audit Committee (2015) established that the municipality had made no progress in preparing annual

financial statements, no proper records management system maintained and there was non-compliance with SCM regulation 32.

6. CONCLUSION

The study sought to explore mechanisms for sustainable municipal service delivery in the North-West Province. This was prompted by rampant public protests, financial mismanagement by municipal staff, poor municipal performance and lack of stakeholder engagement with local communities. An exploratory and descriptive research design was used. Such design use both qualitative and quantitative methodologies to gather data. A target sample size of 340 participants was used based on Hair et al (2000) that any sample size that falls between 200 to 500 respondents' findings are generalisable. Simple random sampling was used to determine sample size. It was established by the study that operations in local municipalities in the North West Province followed a politically-informed process. Stakeholder dynamics, political allegiance and ideology were identified as tenets that informed municipal governance. The following mishaps inter alia were thus established as sequels of frail skills mechanisms: internecine protests, skewed settlement patterns, extreme concentration of taxable economic resources, huge backlogs in service infrastructure, great spatial separations and disparities between towns and townships, urban sprawl, scanty modes of decision making, poor administration and compromised service delivery, inability to leverage private sector resources for development, substantial variations in capacity and the need to rebuild relations between municipalities and the communities they serve. The study alludes that political interference was inappropriate in sustainable service delivery as it created unnecessary bureaucratic mishaps and an administration versus politics dichotomy.

The study further established individual, institutional and environmental challenges that negatively impact on municipal service delivery. These related to; organisational design, human capital strategy, job evaluation, and integrated talent management strategy among other factors. The need to improve on governance was quite evident. In resolving governance challenges, the key lies in strategically selecting the most appropriate combination of individual, institutional and environmental interventions that can be integrated into a coherent and meaningful programme. Governance has a pivotal role in helping to increase the flow and lower the cost of the financial capital that organisations require to finance their investment activities. The importance of this role has grown considerably in recent years, and the issues raised in this study emphasise that the standard of governance matters significantly for developing localities. It was explicitly noted that improved governance can contribute immensely to a country's capacity in order to achieve sustained productivity, growth and perpetual democratic institutions both of which are crucial for long-term national development.

Provision of services to local communities is a constitutional mandate by local municipalities. If this is to go by, local municipalities in contrast continue to experience a high staff turnover. They cannot attract engineers, spatial planners, and chartered accountants - for instance. Staff vacancies are reported to be substantial. Even the implementation of the Local Government Turnaround Strategy (L.G.T.S.) and the roll-out of the National Capacity Building Framework (N.C.B.F.) has not seen the better side of the day. Education, training and development of staff occur in institutions in order to ensure that the labour force possesses the requisite knowledge, skills and attitudes to be able to perform their daily activities.

There was a close link between human capacity and institutional success. Surviving in a rapidly changing environment makes skills imperative. The study had to look at the relevance and impact of skills acquisition in quality municipal service delivery in the North West Province. This emanated from the forum that most senior and influential staff members in the local municipalities in the Province were political deployees with no skills to fulfil their political mandate. The study established that sufficing political allegiance should not be used as an instrument to uphold accountability, transparency, skills, competency and empowerment of local municipalities in matters relating to local residents' basic rights.

7. POLICY IMPLICATIONS

Informed by the foregoing findings, numerous recommendations were developed for policy implications.

Stakeholder audit at all levels of governance, that is local, district, provincial and national was considered to be fundamental in all spheres of local government. It was established that ward committees, district forums, provincial forums and a national steering committee should be invigorated and engaging with each other periodically. Devolution of decision-making to was also proposed that it should be prioritized to local structures. The participants felt that the foregoing should be preceded by stakeholder identification and mapping. In the process of such engagement, it was proposed that there should be alignment of stakeholder engagement to municipal strategy.

The study also recommends that prioritization of stakeholder concerns should be given the vehemence they deserve. Furthermore, apolitical deployment of municipal staff should be merit-based and that Municipal Systems Act should guide the recruitment of municipal staff as opposed to political deployment. The study recommended that implementation of programmes should be governed by existing legislative frameworks where transparency, accountability and oversight should be upheld. The study further recommended that implementation of a results-based monitoring and evaluation system for municipal staff should be promoted in local municipal structures. It was further proposed that regular report back to local communities should be conducted.

Effective human resource management is a key driver of audit outcomes. The study recommended that all key vacancies for Municipal Manager, Chief Finance Officer and Head of supply chain management positions should be filled in Local Municipalities where there are vacancies as these were strategic positions. The study also recommended that local municipalities should ensure that performance agreements are signed with the municipal managers and that regular in-year performance monitoring takes place. Where performance is not at the required level, appropriate corrective actions should be implemented.

Provincial and national government were advised to find a sustainable way to bring the essence of public service home in the hearts and minds of all officials. Without this key breakthrough, the pace of transformation will continue to be unsatisfactory and slow as is evident by the current audit results. The leadership should set the tone by implementing sound performance management processes, evaluating and monitoring performance, and consistently demonstrating that poor performance has consequences. The study further proposed that municipalities should develop frameworks, succession plans and recruitment strategies to ensure that employees with the necessary skills and competencies are employed and retained. It was further proposed that as part of the staff development process, management should ensure that key officials who lack the minimum competencies receive training and on-going learning and development that their positions require, and link these to performance and audit outcomes. There should be a clear understanding that the expected results are higher because up -skilling has taken place.

The mayors and municipal councils are encouraged to address the root causes of poor audit outcomes and inadequate controls through appointing sufficiently skilled personnel in key positions other senior management and ensure that there are consequences for poor performance and transgressions. Furthermore, it should be ensured by municipal management that Municipal Public Audit Committees are adequately capacitated to execute their function of investigating all unauthorised, irregular as well as fruitless and wasteful expenditure.

The councils should implement recommendations made by the internal audit units and audit committees. The study also proposed that management and leadership of the audits and those that perform an oversight or governance function should work towards improving the key controls, and addressing the root causes of poor performance thereby providing assurance on the quality of the financial statements and performance reports as well as compliance with legislation. The roles of the municipal managers and the actions that the councils need to take to drive the municipalities towards

clean administration, as highlighted in this study, are critical to enhance assurance. Only when the municipal managers enforce accountability and ensure timely, credible and transparent records and reports can the councils effectively enhance their oversight function and enhance the assurance they provide. Only when this has been done can all role players and decision-makers take comfort in the knowledge that all information presented to them is credible and that their decisions are based on accurate information. Therefore it was recommended that it is imperative that the coordinating institutions improve their capacity to assist local government and that interventions are adequately coordinated and monitored.

Regular research work is critical in the N.W.P's municipalities to ensure up-to-date findings on municipal matters. Hence, the researcher further proposes that periodic research studies on governance and skills impact on municipal service delivery could be conducted in future.

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Entrepreneurial Orientation as One Construct and the Moderating Effect of Internal Control Measures

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ABSTRACT

Firstly, this paper explores and seeks to confirm if Entrepreneurial Orientation (EO) should be used as five separate dimensions or as one construct. Secondly, this paper used the Balanced Scorecard adopted to measure Firm Performance (FP) as currently literature differ in what is used when the relationship between EO and FP is tested. Thirdly, this paper reports and seeks to confirm the relationship between EO (dimensions) and FP (dimensions). Principle result: A sample size of N = 500 companies was used. Results indicated that EO should be measured as one construct and that tighter Internal Control Efficiency steered towards lower EO and this will impact negatively on FP.

Key words: Entrepreneurial orientation, firm performance, internal processes, balanced scorecard

1. INTRODUCTION

The importance of entrepreneurship in economic development is hardly disputed since entrepreneurs launch successful businesses, which create employment, expand markets, and increase production and services, which can revitalize social and productive networks to bring vigour into communities (Luiz, 2007). Recently, empirical studies were conducted that provided evidence that supports the common understanding that Entrepreneurial Orientation (EO) leads to superior Firm Performance (FP) (Covin & Zahra, 1995). EO as a topic in the entrepreneurship literature is much debated and deliberated. A plea has been made to explore the antecedents External Environment (EE), Internal Organisation (IO), firm demographics, and founder/owner/manager biographical data of EO. The author reports on phase one of the study that was conducted. First, the author set out to confirm existing research published on the EO and FP relationship as it forms the basis of the aforementioned antecedents of EO.

2. LITERATURE REVIEW

2.1. Firm Performance

Exploring the literature (Casillas & Moreno, 2008) postulated that the entrepreneurial literature assumes that there is a positive relationship between a firm's growth and its entrepreneurial activity, even though growth and profitability do not always show a positive correlation. Researchers believe growth to be the most important FP measure and associate it with a firm's EO (Brown, Davidson & Wiklund, 2001). Researchers such as Barkham, Gudgin, Hart and Hanvey (1996) and Casillas and Moreno (2008) who maintain that entrepreneurs consider sales growth to be the most common performance indicator. Other researchers use ratios as predictor variables in models that forecast FP (Altman 1968; Altman, Haldeman & Narayanan 1977; Altman 1984). Financial ratios are most commonly used by academic researchers, accountants, financial services providers, and small business managers (Barnes, 1987).

Significant differences in average industry ratios of small private and large public firms across a large number of well-defined industry groups exist. These differences are apparent for all leverage ratios and for many of the profitability and activity ratios examined. Findings suggest that an appropriate average industry ratio for comparison purposes must be used when examining these ratios. If an appropriate industry average is not available when analysing a small firm in a particular industry, use of industry information of large firms may be useful for comparison purposes. Some ratios are the same across large and small firms. These ratios are the liquidity ratios, quick ratios, accounts receivables turnover ratios, profitability ratios, and expense ratios. As long as industry membership is correctly controlled for, these ratios can be expected to exhibit constant proportionality across differently sized firms. Bias in reported industry averages of the profitability ratios may contaminate results (Constand, Nast & Osteryoung, 1992).

Kaplan and Norton's (1996) Balanced Scorecard deals with four major variables. I) The financial perspective deals with a firm's financial attractiveness to outside investors. II) The learning and innovation perspective asks questions pertaining to improvement and growth. III) The internal business processes perspective addresses the application of resources in order to excel. IV) The customer perspective focuses on customers' perceptions of the business (Kirkwood & Pangarkar, 2007). The Balanced Scorecard shows that customer satisfaction and financials are results, but the antecedents that determine these results are internal business processes, learning, and innovation. Mukherjee and Pandit (2009) state that the Balanced Scorecard is used to project the health of the organisation. Achieving 100% is excellent, 90% to 99% indicates possible problem areas, and any area that has a score of less than 90% needs corrective action. In conclusion, previous research suggested that performance measures should consider both growth and financial performance. When growth is studied, the expansion of sales, employment, owners' achievement orientation and personal initiative, and assets all provide important and complementary information (BSCR Resources, 2010).

The literature on the dimension FP within the EO context showed that there is no clear consensus amongst researchers regarding what should be used to measure FP. Too few studies have been done, and most researchers mainly used the same measures as their predecessors. This researcher therefore decided to use the Balanced Scorecard as adopted by Veldsman and Roodt (2002) and its dimensions (Finance, Internal Business Processes, Customer, and Innovation and Learning) to operationalise the construct FP. Next, EO as a construct will be explored, and thereafter its relationship with FP will be discussed discussing the moderating effect of internal processes on FP.

2.2. Entrepreneurial Orientation

Becherer and Maurer (1997) acknowledged Miller's (1983) work as the earliest operationalisation of the term EO, where the definition's emphasis was placed on the terms pro-activeness, innovation, and risk. EO was further defined as entrepreneurship that takes place inside an organisation run by individuals, referred to as champions, to ensure a profitable return on investment (Pinchott, 1985). Zahra (1991) defined EO as any formal or informal activity that takes place within existing companies through product and process innovation and market initiatives. He also suggested that these activities can take place at any level in an existing business. He further suggested in his definition that EO also included strategic renewal. Hornsby and Kuratko (1998) reasoned that EO requires a complete reengineering of traditional strategies and thinking, and it may possess the critical components needed for better business performance in the future. They further stated that the theoretical basis of the EO construct lies in the assumption that entrepreneurial firms differ from other types of firms, with extant organisational research providing theoretical support for the EO construct in both the fields of entrepreneurship and strategic management. Covin, Kuratko, and Morris (2008) described EO as entrepreneurial behaviour that takes place inside medium and large companies.

In literature, a firm's degree of entrepreneurship is viewed as the extent to which a firm innovates, takes risks, and acts proactively. Actions taken by the firm puts entrepreneurship in a management framework, therefore the study of EO allows the incorporation of traditional management terminology such as strategy, performance, and organisational structure into entrepreneurship research (Wiklund, 1999). He further pointed out that few studies have pursued the long-term effect of EO strategies on the firm, and that managers and owners should first benefit from knowing the performance implications as it is both time and resource consuming to embark on changing the EO of a firm.

A model developed by Covin and Slevin (1989a), based on research conducted by Khandwalla (1977) and Miller and Friesen (1982), further operationalised the EO construct, and is the most widely used measuring instrument in both the entrepreneurship and strategic management literature (Kreiser, Marino, & Weaver, 2002a). Essentially, EO refers to how entrepreneurship is undertaken, i.e. a process-orientated perspective - the methods, practices, and decision-making styles that managers draw on to act entrepreneurial (Dess, Lumpkin, & McGee, 1999; Zahra, 1993a; Dess & Lumpkin, 2005). The entrepreneurial process can be described as the total process

whereby established enterprises act in an innovative, risk-taking, and pro-active manner (Bouchard, 2001).

These evident dimensions (innovation, risk-taking, and pro-activeness) of EO have been derived from a review and integration of the strategy development process, and are used continuously in the literature. The literature suggests that two additional dimensions must be added, namely competitive aggressiveness and autonomy (Frese, Lumpkin, Rauch, & Dess, 2009; Lumpkin & Dess, 1996). A discussion follows to explore and operationalise the dimensions innovation, risk, competitive aggressiveness, pro-activeness, and autonomy. First, innovation will be explored.

2.3. Innovation

The literature shows that Schumpeter (1934) cited in Lumpkin and Dess (1996), was one of the first researchers to highlight the importance of innovativeness in entrepreneurship. Innovativeness addresses the extent to which companies are engaged in developing new, or improving on, aspects related to their products and services (Covin et al., 2008). Many definitions of innovation have been formulated. It remains an important part of EO as it reflects the means by which businesses tails new opportunities in terms of their products, markets, and available technology (Lumpkin & Dess, 1996). To assess innovation, the number of new products and services introduced and the frequency of changes in products and services can be used as a yardstick. Research studies have found innovation and entrepreneurship to be positively correlated, complementary, and vital to business success in today's dynamic environment. It is further stated that innovation can be moderated by organisational culture and the management style practiced (Zhao, 2005). Covin et al. (2008) allocated a vast portion of their research to innovation as a dimension and its relationship with risk as the other dimension. Innovation is further defined by them in terms asking what a firm is doing that is new and unique. It is postulated that innovation can take on various forms, as it applies to products and services. What is new to the world, new to the existing markets, new to the existing company, new to the existing lines within the company, revisions to existing products and services, new applications of existing products and services, the repositioning of existing products and services, and the cost reduction of existing products and services can all be considered innovation. The accomplishment of a task or function in order to create a competitive edge is considered to be innovative. Covin et al. (2008) argue that the pressure to be innovative is mainly caused by pressures from the EE. Innovation is, however, also driven by internal pressure to attract and retain high quality employees and they further made the statement that far too many companies only innovate in response to external forces.

A further distinction is drawn between less innovative firms and highly innovative firms. Less innovative firms will naturally foster a great deal of causal understanding as there is a high level of experience and expertise within the firm. As a result, a larger and more diverse team with a huge pool of past experience in new venture management can quickly be built to facilitate rapid expansion and market acceptance. Some liabilities will remain, as there are uncertainties associated with managing the new firm. However, because of the low novelty setting, information about these uncertainties will be available and accessible to an experienced team proficient in environmental scanning. Therefore, a large, diverse, and experienced team should add the greatest value to the implementation of less innovative new ventures and, in the process, minimise uncertainties that may arise. In contrast, in highly innovative firms, the lack of causal understanding implies that a smaller and less diverse team may actually be better equipped to execute the task (Carton, 2004). Moreover, teams should not rely too heavily on prior experience, as they might set an inappropriate precedent and schema in the novel situation. Innovativeness necessitates the development and sharing of new perspectives, which may not exist at the time. Teams without the baggage of previously accepted "solutions" are more likely to struggle with and discuss possible new ways of dealing with the problems at hand. They are also likely to be better at generating new, innovative knowledge (Carton, 2004).

Customer-centred firms take the entire business concept or the value-creating package as the starting point for innovation. Employees of these firms tend to have a clear focus on the key issues they are trying to accomplish with their innovation efforts (Covin et al., 2008). There is a strong focus on research and development activities that lead to the development of new products, services, and production and administrative processes. If firms favour activities that lead to the development of new products and/or services, the focus of employees is important when engaged in innovation activities. The literature agrees that innovation goes hand in hand with the introduction of new products and services, and that a large team may result in higher levels of innovation. It is argued by Bloom, Hough, and Scheepers (2007) that, in South Africa, the innovation imperative is emphasised by fierce competition, national policies, and the rapid growth of e-business innovations. Too many companies still offer the same products with little emphasis on differentiation. Most South African companies also fail to use the latest technology to gain a sustainable competitive advantage over their competitors (Autio, Bygrave, & Minniti, 2005; Scheepers, 2005). However, it is pointed out that a firm's internal organisation can have a moderating effect on its innovation (Lumpkin & Dess, 1996). Next, risk will be discussed.

2.4. Risk-taking

Risk-taking is defined as the act of taking bold actions by venturing into new markets, accepting the unknown, or accepting that results might differ from expectations. Risks are normally moderate and calculated (Dess & Lumpkin, 2001; Covin et al., 2008; Frese et al., 2009). The emphasis is not on uncontrolled, uncalculated risk, but rather on a moderate, calculated risk. Entrepreneurship risk does not imply reckless decision-making (Covin et al., 2008; Kuratko, 2009). Pro-activeness will be discussed next.

2.5. Pro-Activeness

Pro-activeness is defined as seeking future opportunities whereby companies will introduce new products and/or eliminate products and processes that are obsolete or in their mature or declining cycles (Lumpkin & Dess, 1996). Pro-activeness is also viewed as changing the environment by introducing new products and technologies (Miller & Friesen, 1983). It is also characterized by the showing of initiative and the pursuit of new opportunities, thereby entering into new markets. Lumpkin and Dess (1996) support the definition suggested by Venkatraman (1989) that pro-activeness is the seeking of new opportunities not necessarily directly related to existing products and or services, and introducing them to the market first, and also eliminating outdated operations. It is a forward-looking perspective of anticipating and pursuing new opportunities (Lumpkin & Dess, 1996).

Pro-activeness can be revealed in three key ways: seeking new opportunities that may or may not be related to the present line of products or services, introducing new products and brands ahead of the opposition, and strategically eliminating operations that are in the mature or declining stages of their life cycle (Venkatraman, 1989). Pro-activeness also relies heavily on the development of structural capital resources (Dess & Lumpkin, 2001). Competitive aggressiveness will now be discussed.

2.6. Competitive Aggressiveness

Competitive aggressiveness refers to a firm's drive to outperform individual competition, and is characterized by aggressive responses to competitive threats (Frese et al., 2009). Competitive aggressiveness is further characterized by unconventional behaviour that would lead directly to a firm obtaining a competitive advantage. The importance of this dimension as a salient dimension of EO was emphasized in research conducted by Dean (1993) and Lumpkin and Dess (1996). The last of the five dimensions, autonomy, is discussed next.

2.7. Autonomy

Autonomy refers to an independent action by an individual or section to implement and carry through a business concept. This is also viewed as the catalyst driving the entrepreneurial spirit, and the freedom required to create new products or service resulting in new ventures. This

dimension is viewed as a crucial part of EO (Dess & Lumpkin, 2001). It is emphasized that for this dimension to be strong, the prospective entrepreneur must operate within a culture that enables individuals to act independently (Lee & Peterson, 2000). In the next section, the dependence and independence of the five dimensions will be deliberated.

2.8. Dependence and independence of the five dimensions of EO

Five dimensions, namely innovativeness, risk taking, pro-activeness, competitive aggressiveness, and autonomy are used to describe EO. All five dimensions are central to understanding the entrepreneurial process, although they may occur in different combinations, depending on type of entrepreneurial opportunity the firm pursues. The extent to which each of these dimensions is useful for predicting the success of a business may be dependent on the industry environment and or organisational characteristics (Lumpkin & Dess, 1996). The multi-dimensionality of EO must be recognised. An entrepreneurial activity process may at any time lead to a favourable outcome on any one of the EO sub-dimensions, which in turn leads to improved FP (Cameron, 1978; Chakravarthy, 1986).

Only 13 studies showed how the individual dimensions of EO were related to FP, and the idea that they were all of equal importance when explaining FP was challenged by Frese et al. (2009). Dess, et al. (1999) found that the five dimensions of EO correlated differently with FP. Four of the five dimensions of EO, namely innovativeness, pro-activeness, risk taking, and autonomy showed consistently larger correlations with FP than competitive aggressiveness. They suggested the use of five separate variables and not the customary one summative index when explaining FP.

Studies by Knight (1997) and Muller and Thomas (2001) indicated that certain dimensions may differ across countries. A truly entrepreneurial firm would show high levels of each of these dimensions (Kreiser et al., 2002a). In the above literature, the dimensions of EO, namely autonomy, risk taking, pro-activeness, innovation, and competitive aggressiveness suggested that a configurational approach, as suggested by Lumpkin and Dess (1996), allowed some of the dimensions to be more relevant than others under certain environmental and internal conditions. They may also vary independently of each other.

Covin and Slevin (1989a) theorised that three of these dimensions, namely innovativeness, risk taking, and pro-activeness should be aggregated together when research on entrepreneurship is conducted. This has shown high levels of reliability and validity in numerous studies. A study conducted by Kreiser, Marino, and Weaver (2002b) utilized data from 1 067 firms across six countries to clarify what constitutes EO. Their results, of confirmatory factor analysis, in LISREL, supported modeling EO with the three sub-dimensions innovation, pro-activeness, and risk taking. Correlation analysis also confirmed that the three sub-dimensions of EO can vary independently of one another in many situations. The study also showed strong support for the cross-cultural measuring scale of EO developed and used by Covin and Slevin (1989b).

Recent research, however, suggested that, by aggregating these dimensions into a single measure, researchers may be ignoring the independent contribution of each of the dimensions and that they might not be adequately controlling for type I errors (Dess & Lumpkin, 1997).

In conclusion, the EO construct is accepted as being made up of five dimensions: risk taking, innovation, pro-activeness, competitive aggressiveness, and autonomy. The relationship between EO and FP, as illustrated in the literature, will now be analysed in order to draw a conclusion. Against this background, the following research hypothesis is set: H1.1A: The construct EO can be reliably and validly measured.

2.9. The relationship between EO and FP

Various studies explored the relationship between EO-FP. Moreno and Casillas (2008) divided these studies into two categories: those studies that explored general models and described the

nature of the EO – FP relationship by identifying moderating and mediating variables and attempting to establish wide-reaching propositions (Covin & Slevin, 1991b; Dess, Lumpkin, & McGee, 1999; Lumpkin & Dess, 1996), and those that attempted to empirically verify partial models of these relationships. Partial models incorporate, in an isolated and independent manner, some of the moderating variables related either to the environment (Dess & Lumpkin, 2001) or to the firm's internal dimensions (Wiklund & Shepherd, 2005).

Few studies explored the longitudinal relationship between EO and FP. A study conducted over two years suggested that there was a positive relationship between EO sustainability and FP, and that EO - FP would increase if EO were sustained over a period of time (Wiklund, 1999). In South Africa, evidence was found of a positive relationship between EO and its components with FP, with the most important being owners' achievement orientation and personal initiative (Frese, Friedrich, Krauss, & Unger, 2005). These research findings were supported by studies done in Europe, East Africa, and studies conducted in South Africa (Ventkatrama, 1989; Frank, Korunka, Lueger & Mugler, 2003).

Past research confirmed a positive relationship between EO and FP (Lumpkin & Dess, 1996; Wiklund, 1999; Todorovic & Schlosser, 2007). A meta-analysis conducted on 37 studies found great variances in the magnitude of the correlation between EO and FP beyond what can be explained by sampling error. EO is not an individual activity, but rather an on-going process. Companies actively support entrepreneurial behaviour by including it in its vision and mission from the start. This filters through to their strategies, structures, operations, and culture throughout the organisation. Therefore, EO has a direct impact on FP as suggested by Covin et al. (2008) who also argue that the firm's mission and vision, strategies, structure, objectives, operations, and culture are aligned with EO. Against this background the following research hypothesis was formulated:

Hypothesis H2_A: There is a relationship between EO (independent variable) and FP (dependent variable).

3. RESEARCH METHODOLOGY

The research approach chosen to investigate the hypothesis was a cross-sectional field survey. At the time, the total South African population consisted of 1.5 million small and medium businesses of which one million are micro businesses with less than five employees, with 200 employees as the upper limit (Munshi, 2009). This research aimed to obtain a heterogeneous set of non-diversified, non-affiliated firms in order to allow for more accurate analysis and to increase the generalisability of the findings. A final sample size of N = 500 organisations was sought and obtained. The sample size was statistically tested to ensure that it was large enough to allow the data to be generalised. The results were studied for missing data and the effects it might have had on the study. The internal consistency of the measuring instrument was tested using Cronbach's Alpha coefficient (Pallant, 2007).

3.1. Measuring Instrument

A self-administered questionnaire was developed. An existing instrument developed by Miller (1983) and refined by Lumpkin and Dess (1996) was used in part to serve as a basis to develop the current measuring instrument. The internal consistency of the scale, as well as its predictive validity, has been demonstrated in many studies (Becherer & Mauer, 1999; Kemelgor, 2002). Most studies measured EO as a single construct (Covin & Slevin, 1991b; Wiklund & Wiklund, 1998; Chadwick, Barnett, Brown & Dwyer, 1999; Lee, Lee & Penning, 2001; Shepherd, 2003; Covin, Slevin & Schultz, 2004; Auer, Ritter & Walter, 2005; Frese et al., 2009). The EO section of the questionnaire was supplemented with items by the researcher and developed to capture more in-depth aspects of the five dimensions, (innovation, risk, competitive aggressiveness, proactiveness, and autonomy) not previously included in the scales. This was suggested by Covin and Slevin (1989a); Dess and Lumpkin (2001); Frese et al. (2009); Khandwalla (1977); Kreiser et al. (2002); Wiklund and Shepherd (2005); Miller and Friesen (1983); Wiklund (1999) to increase understanding of the entrepreneurial process. The researcher also added to and altered

some of the existing items. In some instances, they were reworded to gain more clarity on specific aspects, for example the word “and” was avoided to give items a singular focus.

For EO, nineteen (19) items in total was developed to measure EO as a construct. Respondents rated their orientation on a 7-point numerical scale. Items for the EO construct were developed using the theoretical dimension’s innovativeness, risk taking, pro-activeness, competitive aggressiveness and autonomy as a basis, as suggested by Covin and Slevin (1989a); Dess and Lumpkin (2001); and Miller (1983).

Innovation was measured using four items. Risk was measured using four items. Pro-activeness was measured using five items. Dess and Lumpkin (2001) used two items developed by Covin and Slevin (1989b) that asked about the firm’s tendency to lead rather than follow. They added a third item to ask about a firm’s tendency to act in anticipation of future changes and needs. These items were differently worded by the researcher and supplemented with two more items to ask about the firm’s willingness to work with competitors and to ask about a firm’s emphasis on the reduction of internal conflict. Competitive aggressiveness was measured with three items. Lumpkin and Dess (1996) identified competitive aggressiveness as an additional dimension of the EO construct. Items were set individually and not as a group as in the previous instrument. Autonomy was measured using three items that were developed to ask about how the firm views individuals/sections acting independently (Dess & Lumpkin, 2001), the firm’s willingness to allocate new resources, and to establish if there was tolerance for employees bending the rules in an attempt to seek autonomy.

In respect of FP, this section was aimed at measuring FP in terms of shareholder satisfaction, internal process efficiencies, growth and innovation, and financial performance. The instrument as a composite indicator of organisational performance was developed by Veldsman and Roodt (2002), based on the Balanced Scorecard of Kaplan and Norton (1996). Based on the data generated in their study, Veldsman and Roodt (2002) could effectively distinguish between successful and less successful companies. However, no reliability coefficients were calculated for the instrument, owing to incomparable variations in item content. FP was divided into four key constructs, namely stakeholder satisfaction, internal process efficiencies, growth and innovation, and financial performance. Respondents were requested to respond in terms of percentages. The four dimensions of the Kaplan and Norton (1996) Balanced Scorecard provided the theoretical framework for generating the content of the measuring instrument FP. This approach ensured that the questionnaire had face and content validity.

3.2. Statistical Analysis

The approach followed in this research was to first conduct descriptive statistical analysis, and thereafter an exploratory factorial analysis where every level of every variable was paired with every level of every other variable. This allowed for greater generalisability of results. For the purpose of this research, Principal Component Analysis (CPA) was used. In the discussion that follows, the key constructs EO and FP are presented. First, EO, and then FP. The research hypothesis set earlier applies: *H1A: The construct EO can be reliably and validly measured.*

3.3 Descriptive Statistics Results - EO

Detailed analysis indicated that the highest mean response for the item statistics was for item B15: *How much emphasis is placed on reducing conflict in the workplace?* ($M = 5.45$). Item 9 showed the lowest mean ($M = 4.58$): *How often does your firm terminate products/services during their mature stage?* The mean item scores here indicated that firms emphasised reducing conflict in the workplace. Products and services in their mature phase were not easily terminated as this could lead to loss of work opportunities and cause conflict in the workplace. From the item analysis, it is clear that firms did emphasise innovation as important. However, they were hesitant to follow competitors’ actions or cooperate with them, i.e. their pro-activeness (to act) on innovating methods and products were low. There was also an indication that firms valued innovative ideas and actions from their employees but did not condone project champions bending the rules to gain autonomy to see their projects through.

The average mean for the scale EO as a whole was 4.96, which can be considered a medium score, and indicated that South Africa's SMEs' EO was generally risk-averse.

3.4. Descriptive Statistics Results - FP

This part of the questionnaire was divided into four constructs: Stakeholder Satisfaction, Internal Process Proficiencies, Growth and Innovation, and Financial Performance. This part of the questionnaire was not completed by all respondents ($n = 385$) due to the sensitive information required. Although only percentages were requested and not monetary values, respondents still showed an unwillingness to disclose financial information. However, the sample size, as shown below, still far exceeded 200, which was acceptable and may be considered large (Pallant, 2007). This section also incorporated the firm's society/community involvement, employee and shareholder satisfaction, and customer relationships. Respondents provided their answers in percentage format. From item (F1.1) it was concluded that firms spent 1.37% of their revenue on donations and sponsorships (e.g., National Government Organisations, schools, universities, and sports events) and 2.59 percent on community development (item F1.2). Unscheduled leave (Item F1.3) was high at 16.63 percent. This type of leave included compassionate leave, industrial action, and unauthorized leave. Staff turnover came to 1.5 percent, which is low. Shareholders reported a 6.89% earning per share. A ratio of 2.42 percent complaints to number of employees was reported. The number of complaints per R100 000 annual revenue was quite high at 11.25 percent.

On *Internal Process Efficiencies*, three items were measured (F2.1 to F2.3). The analysis review confirmed the firms' average cost to income ratio at 37.07 percent. Their average cycle time was ($M = 5.28$ days to execute an order for the products or service they are offering. Firms further reported that it took an average of 3.85 months to break even after introducing a new product.

On the firm's overall people investment (the total cost associated with the provision of training and development for all employees as a percentage of the total cost-to-company bill). This analysis (F3.1 to F3.5) showed that firms on average spent 4.29 percent of their total salary bill on training and development. With regard to investing in people by job grouping, analysis revealed the following: 32.19 percent was spent on managers, 25.34 percentage administrative and support staff, 10.77% on professional staff, 7.96 percent on supervisors, and 3.93 percent on operators and shop floor employees. A 6.23 percent increase in market share was reported over the 2008/2009 financial year. On average, low revenue (4.66 percent as a percentage of total revenue) was generated by introducing new products. Only 3.17 percent of total revenue was spent on strategic change intervention.

Next, the last construct *Financial Performance* (F4.1 to F4.5), is discussed. This section measured the profit-revenue ratio, profit after tax but before extra-ordinary items, return on equity, percentage sales growth, and asset value.

Firms reported an average of 38.07 percent profit to revenue. Only 18 percent retention of profit once taxes were paid but before extra-ordinary items were bought was indicated. An average mean of 8.24 percent return on equity was reported. A 5.81 percent point of growth in sales was reported, compared with the previous year. A 29.92 percent average asset base was reported in firm balance sheets. Next Exploratory Factor Analysis is reported on.

3.5. Exploratory Factor Analysis

Due to space limitations, only the final results of the exploratory factor analysis are summarized and presented in this section. The results of the factor analysis of the EO scale are summarized and presented in Table 1.

Table 1: Summary of the Exploratory Factor Analysis – EO (Section B)

Key= I= Innovation; R=Risk; PA=Pro-Activeness; CA=Competitive Aggressiveness; A=Autonomy

Theoretical Dimensions				First Level Factor Analysis				Second Level Factor Analysis			
Item per dimension	Item Total Correlation	Item Reliability	Dimension Reliability	Item	Item Total Correlation	Item Reliability	Factor Reliability	Item	Corrected Item-Total Correlation	Item Reliability	Construct Reliability
B1I	.612	.738	$\alpha = .793$	B18	.641	.800	$\alpha = .831$	B1	.649	.901	$\alpha = .909$
B2I	.598	.744		B15	.536	.814		B2	.555	.904	
B3I	.612	.737		B13	.640	.799		B3	.633	.902	
B4I	.595	.748		B10	.535	.814		B4	.522	.905	
B5R	.402	.625	$\alpha = .664$	B17	.564	.810		B5	.454	.907	
B6R	.374	.642		B11	.579	.808		B6	.515	.905	
B7R	.496	.562		B14	.481	.821		B7	.560	.904	
B8R	.510	.551		B6	.480	.821		B8	.577	.904	
B9PA	.428	.727	$\alpha = .742$	B5	.514	.777	$\alpha = .799$	B9	.509	.905	
B10PA	.561	.677		B8	.577	.766		B10	.558	.904	
B11PA	.504	.700		B12	.550	.770		B11	.629	.902	
B12PA	.495	.704		B9	.509	.778		B12	.551	.904	
B13PA	.559	.677		B19	.562	.767		B13	.600	.903	
B14CA	.437	.411	$\alpha = .582$	B16	.513	.777	$\alpha = .793$	B14	.490	.906	
B15CA	.348	.546		B7	.495	.780		B15	.449	.907	
B16CA	.404	.471		B4	.595	.748		B16	.565	.904	
B17A	.582	.592	$\alpha = .724$	B2	.598	.744	B17	.594	.903		
B18A	.577	.608		B3	.612	.737	B18	.620	.902		
B19AU	.491	.715		B1	.612	.738	B19	.578	.904		

In Table 1, the first column lists the items per the underlying theoretical dimensions as they emanated from the literature on EO (Section B). The five underlying theoretical dimensions are: innovation, risk, pro-activeness, competitive aggressiveness, and autonomy. For each dimension, the item-total correlation and dimension reliability are shown. Innovation (Items B1 to B4) yielded a Cronbach Alpha coefficient of .793. This was well beyond the acceptable norm of .70. Risk (Items B5 to B8) reported a Cronbach Alpha coefficient of .664, which is an indication of a moderate internal consistency. For pro-activeness (Items B9 to B13), a Cronbach Alpha coefficient of .742 was reflected. Competitive Aggressiveness (Items B14 to B16) yielded a Cronbach Alpha coefficient of .582, which is low, but can possibly be ascribed to the small number of items included in this dimension. Autonomy (Items B18 to B19) had an acceptable Cronbach Alpha coefficient of .724. Overall, the theoretical sub-constructs showed acceptable internal consistency reliabilities.

The second column depicts the results of the first-level factor analysis where scores on all the 19 items were inter-correlated and three factors were extracted. Note that the internal consistency reliabilities (Cronbach Alpha) of the three factors were close to .80 or higher. Item reliabilities

of these three factors ranged between .737 and .821. These three factors were well determined since more than three items loaded on each factor.

The third column reflects the results of the second-level factor analysis where the sub-scores of the three factors obtained in the second column were inter-correlated and the three factors were postulated based on the obtained Eigenvalues larger than unity. In this case, a single factor with a concomitant internal consistency reliability (Cronbach Alpha) of .909 was extracted.

An iterative item reliability analysis of all the items of the scale yielded acceptable item-total score coefficients and internal consistency reliabilities. All items correlated with the total score of the scale ($> .449$), and item internal consistency reliabilities ranged between .901 and .907. The overall Cronbach Alpha for the EP scale (19 items) was .909.

The total score distribution was slightly negatively skewed. Results of the Kolmogorov-Smirnov test [$df = 437$; $= .104$; $p = .000$] indicated that the total score distribution deviated from a normal distribution and did not meet normality requirements. The Kolmogorov-Smirnov test is, however, a highly sensitive test that will register very small deviations from normality. The possible negative skewness effects will, however, be negated by the use of a larger sample size (> 200) (Fidell & Tabachnick, 2007). It was therefore concluded that the EO scale was suitable for use in further inferential statistical analyses. The results of the inter-correlation of the constructs EO and FP are discussed next.

3.9. Inter-correlation of the constructs EO and FP

In this section, the results of the inter-correlation of the constructs EO and FP are discussed. Pearson product-moment coefficient correlations were calculated between EO and FP used in the study. The following hypothesis, formulated earlier, was tested:

H2_A: There is a relationship between EO (dependent variable) and FP (independent variable).

The Pearson product-moment correlation in Table 2 indicated the following:

Table 2: Pearson Product-Moment Correlations Coefficient between EO and FP

Firm Performance		Entrepreneurial Orientation
	Pearson Correlation	-.065
Firm Performance	Sig. (2-tailed)	.196

$n = 399$; $p \leq .05$

No significant correlation was found between EO and the FP score [$r(388) = -.065$; $p = .196$].

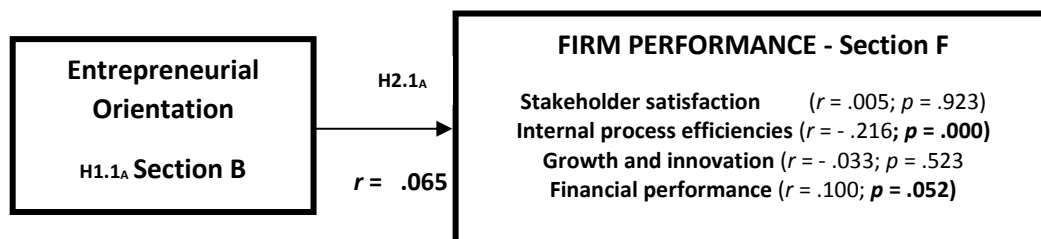


Figure 1: Results of the Inter-correlation of Constructs FP and EO

However, for the sake of clarity, further analysis indicated that the *Internal Process Efficiencies* score showed a small but significant, negative correlation with the EO score [$r(388) = -.216$; $p = .000$]. A small increase in the *Internal Process Efficiencies* score can therefore be associated with a small decrease in the EO score.

The Financial Performance score showed a small but significant ($p < .06$) positive correlation with the EO score [$r(388) = .100; p = .052$]. An increase in the EO score therefore related to an increase in the Financial Performance score. No correlation was found between EO and Stakeholder Satisfaction, or between EO and Growth and Innovation. The second empirical objective of the study was achieved in that the relationship between EO and FP was tested.

3.10. Discussions

Lumpkin and Dess (1996) and, Wiklund and Shepherd (2005) stated that an important message from past findings was that an incomplete picture of FP is provided when only the direct EO - FP relationship is examined. They advised that future research should control internal and external dependent factors when examining the EO – FP relationship (Wiklund, 1999; Wiklund & Shepherd, 2003; Auer, Ritter & Walter, 2005; Covin et al., 2006; Frese et al., 2009). This research however, first focuses on if EO should be measured as one construct or are the dimensions independent. It further investigated FP and the relationship between EO and FP was addressed.

The key concepts FP, EO, were operationalised, and various underlying dimensions were identified according to the current literature. Relationships between the key constructs EO and FP were explained according to the current literature, and research hypotheses were formulated. EO as a construct could be reliably and validly measured as one construct. Using the Balanced Scorecard developed by Veldsman and Roodt (2002) to test FP provided useful insight into the EO - FP relationship. Closer analysis revealed that when the Financial Performance score was higher, it was related to an increase in EO scores, thereby confirming previous research findings that there was a positive relationship between EO and FP. However, further analysis indicated that internal process efficiency whereby organisation exercise more control over the internal organisations moderates the EO – FP relationships. Thus the more formal an organisation becomes the less entrepreneurial the more negatively it will impact on their Firm Performance.

A sample size of ($N = 500$) was obtained, which provided a large enough sample with diverse characteristics. Random sampling was used to allow the researcher to draw inferences on the wider South African population.

It is strongly recommended a uniformed base amongst researchers to test EO - FP relationship, must be developed. Researchers should avoid dividing constructs into unnecessary dimensions. This causes complications in analysis, and the question should be asked if it really adds value.

Structural Equation Modelling (SEM) could have been used, however the data in future will be subjected to more robust statistics such as SEM to verify if observed variables load onto the latent variables as well as suggested in this study.

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Sustainability Challenges and Significance of Informal Sector in Urban Economy in Cities of India

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ABSTRACT

Cities are engines of economic growth in India. They encompass multifarious economic activities both in formal (organized) and informal (unorganized) sector. Informal economy is observed to be critical to the urban economy in India. It offers significant employment opportunities to individuals and families and contributes proportionately to the economy - Gross Domestic Product (GDP). However, significant studies on the performance and influence of this sector on urban economy are scarce, particularly in the Indian context. Therefore, using the case study of Bhubaneswar city - a medium-sized provincial capital city in Odisha state of India, this study explores (1) the various opportunities and challenges which influence sustainability of informal economy in the city; and (2) how informal sector contributes to the overall economy of the city. The study was conducted by use of a survey research method and discussion with stakeholders and by analysing these both qualitatively and quantitatively. It is revealed that lack of availability of employment in the organised sector, compulsion for self-employment in the absence of other opportunities, poor financial condition and family tradition are the major reasons for people to resort to the informal sector. More than two-third people are employed in this sector, and it contributes between 27% and 100% to the families' income in the city. Lack of entrepreneurial knowledge, lack of availability of finance, lack of encouragement from government, and lack of protection from competition are the major challenges faced by this sector. The sustainability of this sector depends on the availability of financial support, supportive policy, development of entrepreneurial attitude and creation of interest and environment for self-employment. However, the informal sector is contributing significantly to employment opportunities and economic earning opportunities despite the various challenges faced in the city.

Keywords: Employment opportunity; Entrepreneurship; Informal sector; Stakeholders; Urban economy

1. INTRODUCTION

Informal economy has been one of the important pillars of economy in most of the populous and developing countries. Because of the limited availability of employment in organised sector and increasing unemployment, many employment-seeking people are increasingly resorting to informal employment. Informal employment has long existed but it is on the rise since 1980s as the governments have turned away from the interventionist models of Fabian Socialism and the "Kenyesian Consensus" to liberalise their economies and integrate them into globalisation (Singer, 1997; Agarwala, 2009). As such, informal economy and consequent employment has become an integral part of life and culture of people in developing countries.

According to ILO (2012), the informal sector constitutes of units that are unincorporated (i.e., not constituted as separate legal entities of their owners), produce goods or services for sale or barter. They do not satisfy a number of criteria, such as: they are unregistered and small; have unregistered employees and/or they do not maintain a complete set of accounts (ILO, 2012; Chen & Raveendran, 2014). Similarly, a job is considered informal if it lacks basic social or legal protections or employment benefits and the employee may be engaged in the formal sector, informal sector or households. The informal sector or employees include but not limited to own-account workers employed in their own informal sector enterprises; employers employed in their own informal sector enterprises; contributing family workers-irrespective of whether they work in formal or informal sector enterprises; members of informal producers' cooperatives; employees holding informal jobs in formal sector enterprises, informal sector enterprises, or as paid domestic workers employed by households; own-account workers engaged in the production of goods exclusively for own final use by their household, if considered employed given that the production comprises an important contribution to total household consumption (ILO, 2012; Chen & Raveendran, 2014). Moreover, employees are considered to have informal jobs if their employment relationship is, in law or in practice, not subject to national labour

legislation, income taxation, social protection or entitlement to certain employment benefits (e.g., advance notice of dismissal, severance pay, paid annual or sick leave, etc.). The reasons may be the following: non-declaration of the jobs or the employees; casual jobs or jobs of a limited short duration; jobs with hours of work or wages below a specified threshold; employment by unincorporated enterprises or by persons in households; jobs where the employee's place of work is outside the premises of the employer's enterprise or jobs for which labour regulations are not applied or enforced, or not complied with for any other reason (ILO, 2012; Chen & Raveendran, 2014). In a large and populous country like India, where organised employment is limited, a majority of the employees in both urban and rural areas falls in this category of informal employment. The informal sector in cities and urban areas are observed to be significant. Despite about two thirds of people living in rural areas in India, cities are considered as engines of economic growth in India. Cities encompass multifarious economic activities both in formal (organised) and informal (unorganised) sector. However, the informal economy is observed to be critical to the urban economy in India (Chakrabarti & Kundu, 2009). From statistics of the year 2012, it is found that about 67.5% of people are engaged in the nonagricultural informal sector in India (ILO, 2012) and about 80% of the urban work force are somehow informally employed, of which about 49% belong to wage employment category and 51% belong to self-employment category (Chen & Raveendran, 2014). Thus, it offers significant employment opportunities to individuals and families and contributes proportionately to the economy-Gross Domestic Product (GDP) in India (Chakrabarti & Kundu, 2009; Mohapatra, 2012; Kalyani, 2016).

The reasons of this large scale informal employment in India are varied. According to (Chen & Raveendran, 2014), regular wage employment as a share of total employment had been declining in India for some time. Along with this casual wage, employment as a share of total employment is also declining. As a result, a very significant increase in self-employment in India is experienced (Chandrasekhar & Ghosh, 2007). This trend is prevalent not only in agriculture and rural areas but also reflected increasingly in non-agricultural activities, particularly in urban areas. For example, around 57% of the total workforce and 45% of the urban workforce were self-employed by the year 2005, although this trend is observed to slowly reversing over the last decade (Chen & Raveendran, 2014). Despite the reversal of trends because of several reasons, such as change in aspirations because of education (Choudhury, 2011; Chandrasekhar & Ghosh, 2011), fewer persons are willing to take low-paying jobs, preferring to study and improve their skills with the hope of getting better paying jobs, etc. (Rangarajan, 2011), it is observed that enough better-paying jobs in the organised sector are not being created. As a result, a large segment of active or employment seeking people resort to informal employment in urban areas of the country.

Consequently, as the informal sector has become an integral part of the urban economy of India, it influences the overall health of Indian urban economy. However, it is argued that in a predominantly informal economy oriented country, there is a need for appropriate policy to strengthen the sector appositely in order to enable it to contribute significantly to the economy. This calls for detailed and thorough performance appraisal of the influence of this sector. However, significant studies on the performance and influence of this sector on urban economy are scarce, particularly in the Indian context. Therefore, using the case study of Bhubaneswar city - a medium-sized, provincial capital city in Odisha state of India, this study explored (1) reasons of people resorting to the informal sector and how it contributes to the economy of the city; and (2) the various challenges, and attributes which influence sustainability of informal sector economy in the city. The study was conducted by use of a survey research method and discussion with stakeholders. A survey was conducted among the people engaged in informal sector economic activities at different commercial activity locations of the city by using a pretested questionnaire and following systematic and stratified random sampling process. Besides, discussions with various stakeholders that include policy makers, local leaders, people belonging to Chamber of Commerce and Confederation of Indian Industries (CII), urban economist, and academicians were done through semi-structured interviews. The data collected was analyzed both qualitatively and quantitatively. Quantitative analysis was conducted by use of descriptive statistics, and percentage analysis. Findings suggest that lack of availability of employment in organised sector, compulsion for self-employment in the absence of other opportunities, poor financial condition and

family tradition are the major reasons of employment in informal sector. However, lack of encouragement from government, lack of protection from competition lack of availability of finance, and lack of entrepreneurial knowledge are the major challenges which threaten the sector. Also, it is found that more than two in every three persons (69%) are employed in this sector, and it contributes between 27% and 100% to the families' income in the city. Furthermore, it is revealed that availability of financial support, supportive policy, development of entrepreneurial attitude and creation of interest and environment for self-employment would enhance sustainability of informal sector. Thus, the informal sector is contributing significantly to employment opportunities and economic earning opportunities despite the various challenges faced in the city. Thus, the informal sector is contributing significantly to employment opportunities and economic earning opportunities despite the various challenges faced in the city. As the informal economy is a significant component of many African cities, policy interventions based on similar studies could reinforce informal economy in such cities and benefit people engaged in it significantly.

2. CASE STUDY AREA: BHUBANESWAR

Bhubaneswar city of Odisha state of India was used as a case study for data collection. It is the capital of the province and is located close to the East coast of the country. From a very humble beginning as the capital city with a few thousand people in 1950s, the city has grown to become a city of about 1.0 million population performing multifarious activities. In recent times, it has become one of the major commercial and industrial hubs of the state. Additionally, in the last one and half decade, the city has attracted large-scale Information Communication Technology (ICT) oriented industries and educational institutions in the tertiary sector. As a result, there is a significant influx of young populations with high spending capacity. Because of the increase in various consumer demands, a significant growth in the service and commercial activities in informal sector has been experienced in the city, which has given rise to the informal sector economy in the city. A significant number of people are employed in the informal sector, which includes commercial activities such as informal retail shops, mobile food stalls, weekly or daily open markets, street paddling and service activities such as household services, daily labour works in houses and institutions, gardening, informal healthcare services and so on. However, despite their significant presence in the city and their contributions to the economy and employment generation, it is understood that no proper policy interventions are in place to improve their performance and contributions. Therefore, the city becomes ideal for this study.

3. METHODS

This study followed an exploratory methodology of research. A survey research method was used to collect data and discussion with stakeholders. A survey was conducted among the people engaged in informal sector economic activities at five different major urban activity locations such as Chandra sekharpur market area, Unit 1 market, Unit 2 market, Sahid Nagar and CRP square. The survey was conducted among 370 people (N=370) engaged in informal employment directly or indirectly. The survey samples were distributed proportionately over the five selected survey areas varying between 70 and 100 samples in each area. The areas were selected because of agglomeration of a large number of informal employees engaged in different activities that include commercial and service activities in these areas. The survey was conducted by using a pretested questionnaire and following systematic and stratified random sampling process. The various variables that are included in the questionnaire include reasons of taking up informal employment, income generation from the employment, number of people from a family engaged in the sector, major challenges and hindrances the employees face in this sector and possible attributes of success of this sector. The items and variables included in the survey questionnaire were premised upon literature review (Chandrasekhar & Ghosh, 2007; ILO, 2012; Chen & Raveendran, 2014), and dicussions with stakeholders. However, the questionnaire was finalised after discussions with the respondents during the pilot survey. Of the total 370 questionnaires, administered 348 returned questionnaires were found to be useful as 22 questionnaires contained irrelevant or no answers and therefore were discarded. Furthermore, discussions with various stakeholders that include policy makers, local leaders, people belonging to Chamber of Commerce and Confederation of Indian Industries (CII), urban economists, and academicians were done through semi-structured interviews. The data collected was analyzed both qualitatively and quantitatively. Quantitative analysis was conducted by use of descriptive statistics, and percentage distribution. Before the detailed analysis was

done, the data was checked for Cronbach α for different variables for reliability of the data set and the consistency was checked by standard deviation (SD). The qualitative analysis was conducted by using narrative analysis and interpretation of opinions manually.

4. RESULTS AND DISCUSSIONS

The assessment of sustainability of informal sector and its significance in the study area was done on four criteria, namely reasons for resorting to informal sector employment and success rate, contributions to family income, challenges that are plaguing the sector and attributes that assist in sustainability of the sector. A Cronbach α values ranging between 0.78 to 0.83 for different variables and small SD values between 6.3-11.2 (in percentage) indicated that the data was reliable and consistent and can be used for further analysis. Table 1 presents the reasons for resorting to informal sector and share of informal employment in the city. It is found that lack of availability of employment in organised sector (92.5%), compulsion for self-employment in the absence of other opportunities (79.9%), poor financial condition (76.7%) and family tradition (66.7%) are the major reasons for resorting to employment in informal sector, followed by lack of education (58.3%) and lack of skill (56.9%) that also force people for employment in informal sector to certain extent. However, support from Government for employment opportunities in the informal sector is least influential (35.15%). Of the total people surveyed 69.3% are found to be directly engaged in informal sectors, and 12.1% are engaged in formal sector although have indirect associations with informal sector, and about 18.7% are engaged in both sectors.

Table 1: Reasons of informal employment and share of informal employment

Reasons	Response (n)	%	Number employed	Number (n)	%
Lack of employment in organised sector	322	92.5	Engaged in Informal sector	241	69.3
Lack of education	203	58.3	Engaged in Formal sector but indirectly associate with informal sector	42	12.1
Lack of skill	198	56.9	Both	65	18.7
Poor financial condition	267	76.7	Total	348	100.0
Family tradition	232	66.7			
Compulsion for self-employment	278	79.9			
Government support	122	35.1			
N= 348					

Table 2 presents the share of informal employment and contributions to total family income in the city. It is found that more than 55% are either reasonably successful (41.1%) or highly successful (14.1%), whereas more than one third of them are marginally successful (36.2%) (Table 2). Only about one-ninth (11.8%) of them are totally unsuccessful. Furthermore, it is revealed that most of the informal employees (about 91.7%) contribute more than 27% to the total income of the families. Out of this, about 18.1% contributes 100% to the family income and 31.0% and 27.6% contribute to 75-99% and 50-74% of the family income respectively (Table 2). Thus, it indicates that informal sector has a significant presence and also contributes significantly to the employment and economy of people.

Table 2: Success Rate and Contributions to Total Family Income

Performance	Response (n)	%	Contributions*	Number (n)	%
Highly successful	49	14.1	Total contribution	63	18.1
Reasonably Successful	143	41.1	75-99%	108	31.0
Marginally successful	126	36.2	50-74%	96	27.6
Unsuccessful	41	11.8	27-49%	52	14.9
Total (N)	348	100.0	0-26%	29	8.3
			Total (N)	348	100.0

*SD range: 6.3-11.2

Table 3 presents the challenges plaguing the informal sector in the study area. According to the responses of the respondents, it is found that lack of encouragement from government (86.8%) and lack of protection from competition (79.3%) are the two most important challenges followed by lack of availability of finance (76.1%), lack of entrepreneurial knowledge (64.1%) and entrepreneurial attitude (53.7%). However, formal education and skill do not pose many challenges to the informal sector (29.6%). Such findings are also corroborated by the experts and stakeholders such as urban economists, local leaders and academicians. The experts are of the opinion that government do not provide enough support to this sector including supportive policies and incentives¹. Sometimes the Municipal corporation creates hurdles for these people with different regulations and penalties². Financial institutions such as banks do not provide any loans to these people to support or enlarge their commercial activities or services³; as a consequence, they resort to informal lending institutions with higher interest rates and other adverse terms and conditions for the return of loans. The urban economist and policy makers also agree that these people particularly who are in the skill based services and commercial activity sector face stiff competitions from the organised sectors and entrepreneurs, which put their business and services into jeopardy⁴. Besides, experts and policy makers also corroborated that lack of entrepreneurial knowledge and attitude do contribute to the failure of the people engaged in this sector⁵.

Table 3: Challenges Plaguing Informal Sector

Challenges of informal sector	Number	%	Rank
Lack of entrepreneurial attitude	187	53.7	5
Lack of entrepreneurial knowledge	223	64.1	4
Lack of availability of finance	265	76.1	3
Lack of protection from competition	276	79.3	2
Lack of encouragement from government	302	86.8	1
Lack of formal education and skill	103	29.6	6
N= 348			

Attributes of sustainability of informal sector in the study area are presented in Table 4. Findings suggest that availability of financial support (76.7%), supportive policy (76.1%) and entrepreneurial attitude (71.6%) would be the three most important factors, which would reinforce sustainability of this sector. This finding was also corroborated by policy makers and economists⁶. Similarly, creation of interest and environment for self-employment (59.5%) and making availability of skill (56.6%) can also assist in the sustainability of the informal sector. However, family tradition and education and knowledge

¹ Opinions of urban economist and local leaders

² Respondents opinions

³ Opinions of urban economist, people from financial institutions and local leaders

⁴ Opinions of urban economist and policy makers

⁵ Opinions of academicians and policy makers

⁶ Opinion of policy makers, urban economist and respondents

have lesser influence on the sustainability of the sector, although a significant portion of the people comes to this sector because of family traditions and family business.

Table 4: Attributes For Sustainability of Informal Sector

Attributes for sustainability	Number	%	Rank
Entrepreneurial attitude	249	71.6	3
Creation of interest and environment for self-employment	207	59.5	4
Family tradition	177	50.9	6
Particular Skill availability	197	56.6	5
Education and knowledge	149	42.8	7
Financial support	267	76.7	1
Supportive Policy	265	76.1	2
N= 348			

Thus, the analyses revealed that the informal sector has a significant presence in the study area in terms of providing employment and contributing to the family income. However, there are several challenges such as lack of encouragement from government, lack of protection from competition, lack of availability of finance, lack of entrepreneurial knowledge and entrepreneurial attitude, which act as major barriers against success of this sectors. Furthermore, it is found that availability of financial support, supportive policy, development of entrepreneurial attitude and creation of interest and environment for self-employment would able to make the informal sector sustainable.

5. CONCLUSION

The informal sector has been an integral part of urban areas in developing countries. Many of the active job seeking people are engaged in this sector. The sector is argued to be contributing to the employment and income of families and also contributes to the GDP of cities. Indian cities are no exceptions. However, literature suggests that sustainability challenges and significance of this sector in Indian cities have not been explicitly explored. Therefore, this study explored the reasons why people are resorting to the informal sector, how it contributes to the economy of the city, the various challenges and attributes which influence sustainability of informal economy in the cities. A survey research method to collect data and qualitative discussion with experts were followed to realize the aim of this study. Bhubaneswar city of India was used as a case study. Findings suggest that lack of availability of employment in organised sector, compulsion for self-employment in the absence of other opportunities, and poor financial condition and family tradition are the major reasons for resorting to employment in the informal sector. It is also found that more than two in every three persons are employed in this sector, and it contributes between 27% and 100% to the families' income in the city. However, lack of encouragement from government, lack of protection from competition, lack of availability of finance, lack of entrepreneurial knowledge and entrepreneurial attitude are the major challenges, that act as barriers against the growth of the sector. Availability of financial support, supportive policy, development of entrepreneurial attitude and creation of interest and environment for self-employment would reinforce success and sustainability of informal sector. Thus, the informal sector is contributing significantly to economic earning- and employment opportunities despite the various challenges faced in the city. Thus, policy interventions based on the challenges and sustainability attributes would make the informal sector sustainable and can contribute significantly to the economy of cities as well as to national economy. Since the informal sector is an integral part of the cities in Africa including certain cities of South Africa, policy interventions based on similar studies could reinforce informal economy in such cities and significantly benefit people engaged in it.

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