



**INFLUENCE OF DEMOGRAPHIC AND SOCIAL VARIABLES ON THE CREATION
OF TECHNOLOGY-ORIENTED VENTURES IN THE FREE STATE PROVINCE
BY**

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DECLARATION

I, Bridgette Kehelwe Mokgosi, student number -----, declare that this research paper submitted to the Central University of Technology, Free State for the MTECH: Business Administration is my own work and has not previously been submitted by me at another university. I moreover, acknowledge copyright of the dissertation in favour of the Central University of Technology, Free State.

A handwritten signature in black ink, appearing to read 'Bridgette', written over a horizontal line.

SIGNATURE OF STUDENT

9 June 2017

DATE

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I dedicate this thesis to my children, Retshiditsoe and Tlhonolofatso Mokgosi.

ABSTRACT

The study examines the influence of personal demographic (i.e. age and gender) institutional (i.e. family role models and family recognition of venture creation) and structural (i.e. small business owner/manager's participation in Science, Technology, Engineering and Mathematics [STEM] disciplines and social prejudice) variables on the creation of technology-oriented ventures in the Mangaung Metropolitan Area and Matjhabeng Local Municipality. The existence of selective approaches to determinants of venture creation gave rise to this study's focus on the joint effects of personal demographic and social variables (i.e. institutional and structural variables) on the creation of technology-oriented ventures. For instance, some technology studies emphasise personal demographic variables such as gender and age as micro level determinants of venture creation to the exclusion of social variables. Other studies, however, foreground social variables, especially the influence of institutional (e.g. family role models and family recognition of venture creation) and structural variables (e.g. participation in STEM and social prejudice) on venture creation while ignoring personal demographic factors. To the extent that the study examines the combined effects of personal demographic, institutional and structural variables on venture creation, it strives to close the gap created by the selective approaches adopted in the aforementioned studies. A discomfiting feature evident in the literature on venture creation is that age and gender symmetries and social prejudices continue to undermine the venture creation process. For instance, men and mature adults tend to dominate the venture creation process in South Africa more than their women and younger counterparts.

The study adopted a quantitative approach and involved the conduct of a survey on 91 internet cafés operating in the Mangaung Metropolitan Area and Mathjabeng Local Municipality. A total of 58 respondents successfully completed the structured questionnaire, representing a response rate of 63.7%. Descriptive statistics such as frequency tables and graphs as well as inferential statistics such as correlation and regression analysis were employed in the data analysis.

At the personal demographic level, the findings suggest that the owner/manager's gender is a significant factor affecting opportunity identification ($t=2.511$, $df=56$, $p\text{-value}=0.015$), itself a component of venture creation. Family role models B1

(Correlation=0.514, p-value=0.000), family recognition of venture creation (a) (Correlation=0.406, p-value=0.002) and family recognition of venture creation (b) (Correlation=0.368, p-value=0.004) most influenced the creation of ventures. The results also show that structural variables especially social prejudice in the marketing of SMMEs, are significantly correlated with opportunity identification (Correlation=0.305, p-value=0.020) and with risk taking (Correlation=0.260, p-value=0.049). Furthermore, the results show that the marketing of SMMEs (coefficient = 0.341, t=2.575, p-value=0.013) is the most significant factor affecting opportunity identification. Hence, it can be concluded that, collectively, the owner/managers' gender, family role models B1, family recognition of venture creation (a), family recognition of venture creation (b), social prejudice in the marketing of SMMEs all significantly influence venture creation. Finally, the study recommended that family members must give sufficient support to the identification of opportunities as entrepreneurs' ideas may not be readily supported by the entire family or parents of the entrepreneur. Such increased family support might reduce the failure of ventures in South Africa.



LIST OF ACRONYMS

AAUW	American Association of University Women
ANOVA	Analysis of Variance
BIS	Business Innovation and Skills
BRC	Business Research Committee
CCRED	Centre for Competition Regulations and Economic Development
CUT	Central University of Technology, Free State
DTI	Department of Trade and Industry
EC	European Commission
EU	European Union
FDC	Free State Development Corporation
FRIC	Faculty Research and Innovation Committee
GEM	Global Entrepreneurship Monitor
ICT	Information and Communication Technology
IDC	Industrial Development Corporation
JSE	Johannesburg Stock Exchange
NEF	National Empowerment Fund
NYDA	National Youth Development Agency
OECD	Organisation for Economic Co-operation and Development
SANFI	South African National Family Institute
SE	Science and Engineering
SEDA	Small Enterprise Development Agency
SMMEs	Small, micro and medium enterprises
SN	Subjective norms
SPSS	Statistical Package for the Social Sciences
StatsSA	Statistics South Africa
STEM	Science, Technology, Engineering and Mathematics
TEA	Total Entrepreneurial Activity
TPB	Theory of Planned Behaviour
USA	United States of America



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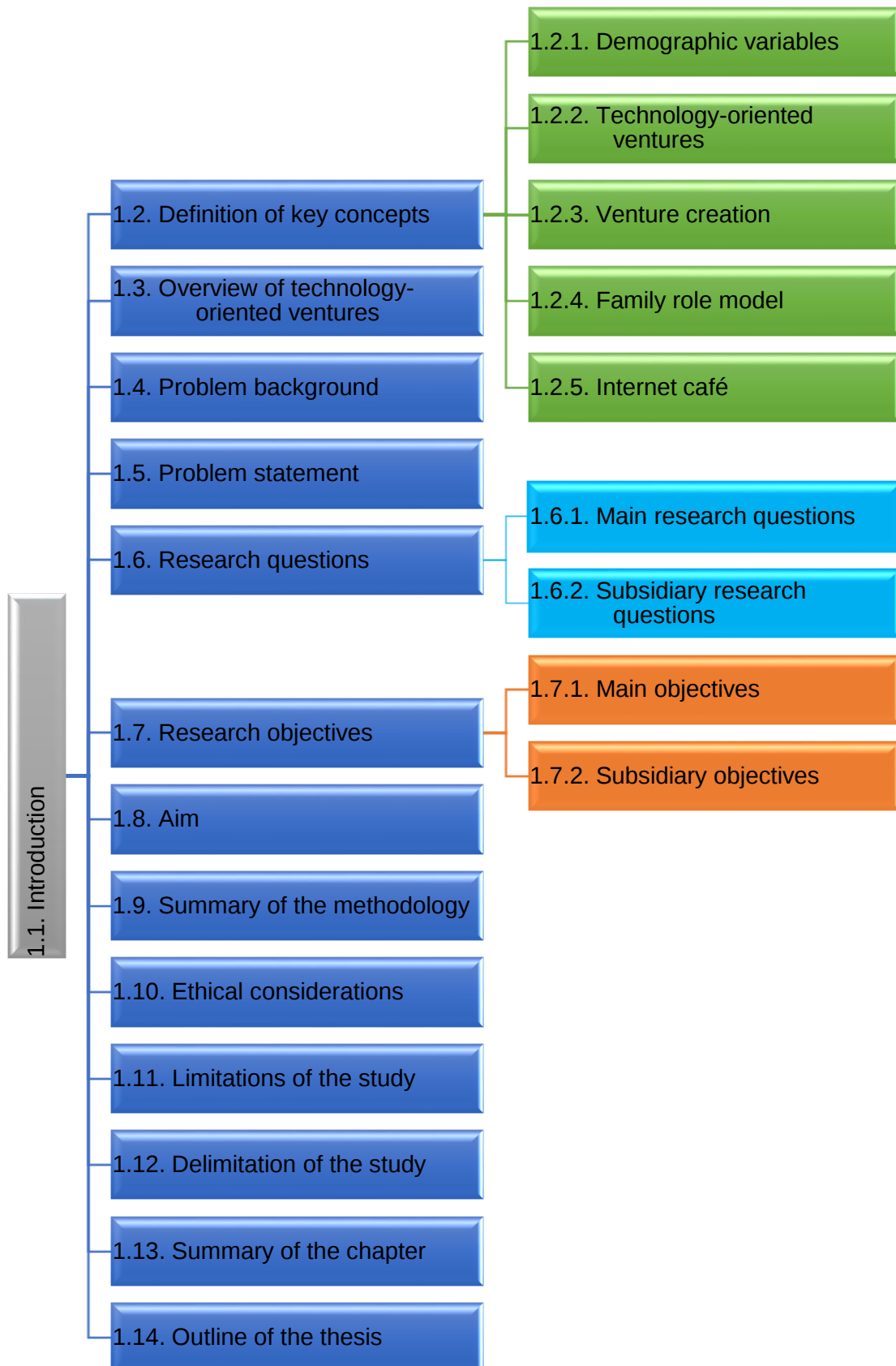
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CHAPTER ONE: ORIENTATION OF THE STUDY



1.1. Introduction

This introduction to the study explores the collective influence of personal demographic (especially age and gender) and social (i.e. institutional and structural) variables on the creation of technology-oriented ventures, especially internet cafés in the selected areas in the Free State Province of South Africa i.e. Mangaung Metropolitan Area (i.e. Bloemfontein, Botshabelo and Thaba Nchu) and Matjhabeng Local Municipality. This research was motivated by two overriding concerns, (1) the selective orientation of studies on determinants of venture creation and (2) the gender and age asymmetries and the broader social constraints that continue to influence venture creation. Many studies on the creation of small, micro and medium enterprises (SMMEs) have tended to emphasise the contribution of micro level determinants, such as personal demographic factors which include age, gender, and income levels (Pines, Lerner & Schwatz, 2010; Kaylyani & Kumar, 2011) to the exclusion of meso level determinants such as institutional factors¹ and macro level determinants such as structural factors. Nonetheless, the studies that foreground the influence of social factors, which include institutional variables such as family role models and structural influences such as social prejudices, in the creation of small ventures (Kirkword, 2012; Verheul, Thurik, Grilo & Van der Zwan, 2012) ignore the influence of micro level determinants. Therefore, the current study's focus on the collective influence of personal demographics, institutional and structural variables on venture creation seeks to close the research gap created by the aforementioned selective approaches to exploring the determinants of venture creation.

Another disconcerting feature of the entrepreneurship phenomenon in South Africa is that men and mature adults dominate the venture creation process (Herrington & Kew, 2014; Singer, Amorós & Moska, 2014) at the expense of women and the youth. Literature suggests that a majority of SMMEs including technology-oriented ones in South Africa are created and owned predominantly by men and mature adults (Neneh, Van Zyl & Van Noordwyk, 2016; Shava & Rungani, 2016) compared to women and

¹ Institutional variables relate specifically to family recognition of venture creation and family role models that is, the way in which family value systems and role models shape venture creation. These variables must not be confused with formal institutions such as Local Municipalities or Metropolitan Areas, which are the specific geographical areas in which this research was conducted. As such, each reference to institutional variables refers to these concepts (i.e. family role models and family recognition of venture creation) and not the selected areas in the Free State Province where the study was conducted (i.e. Mangaung Metropolitan Area and Matjhabeng Local Municipality).

youths. In addition, Nxopo (2013) outlines the problematic reality of the low percentage of women who actively take part in economic activities and own businesses in South Africa as compared to their male counterparts. Nevertheless, Singer et al. (2014) report that total entrepreneurial activity (TEA) tended to increase as age increased up to the 35 to 44 years range and then starts to decline.

The above-noted under-presentation of women and youth is worrying in view of the fact that women constitute about 51% of the national population in South Africa (Statistics South Africa [Stats SA], 2016) while the youth (i.e. those aged between 16-35) constitutes 55% of the national population (Stats SA, 2015). Therefore, the aforementioned gender and age discrepancies evident in entrepreneurial activity need attention owing to the fact that women and youth constitute a significant proportion of the national population and can contribute to job creation, income generation and poverty reduction (Abor & Quartey, 2010; Rwigema, Urban & Venter, 2010; Rambe & Moeti, in press).

It should be underscored that venture creation determinants seem to focus at the institutional and structural levels, that is, on social variables, which are considered critical to venture creation. These social variables, especially institutional variables, include the presence of family role models, subjective norms such as social pressure to carry out or not to engage in any entrepreneurial activities and parental role modelling, parental support as well as the opinions of the knowledgeable/important others. Tarling, Jones and Murphy (2016) assert that family support, strong social ties, internal motivation, information and communication technologies (ICT) are essential push factors for the creation of technology-oriented ventures. There is, nevertheless, a growing consensus among entrepreneurs with family members operating businesses that the choice to become an entrepreneur is associated with having parents who are or were entrepreneurs (Hatak, Harms & Fink, 2015; Welsh, Memili & Kaciak, 2016).

Similarly, broader structural variables such as small business owner/managers' participation in Science, Technology, Engineering and Mathematics (STEM) subjects and social prejudice are also deeply implicated in the practice and sustenance of new venture creation. In fact, women continue to be underrepresented in STEM disciplines and related occupations (Nimmesgern, 2016; Shauman, 2017). This implies that

chances of women's full participation in emerging markets' technological businesses is limited as they often lack the technical and procedural knowledge relevant to incubating technology-oriented business due to their limited participation in STEM subjects in higher education.

1.2. Definition of key concepts

This section defines the key terms that are used extensively in this study in order to develop a shared understanding of such terms. The definition of these terms also contributes to a reduction of misconceptions that may arise from the application of these terms in the current study. For the purpose of brevity, personal demographic variables, technology-oriented ventures, venture creation, family role model and internet cafés are defined in subsequent sections of this study.

1.2.1. Demographic variables

Demographic variables describe individual or group related factors such gender, age, education and ethnicity, which tend to determine who ventures into serious entrepreneurship (Mvela, 2016).

1.2.2. Technology-oriented ventures

Technology-oriented ventures are businesses that emphasise the exploitation of breakthrough advancements in Science and Engineering (S&E) and other technical fields to develop better products and services for customers. The proliferation of cell phones, personal computers and the internet in the past decade and their subsequent integration into everyday commerce and humans' personal lives is a consequence of the development of technology ventures (Onsare, 2013).

1.2.3. Venture creation

Venture creation is an entrepreneurial, technical and managerial process conceptualised as consisting of idea generation, planning, resource gathering and the implementation stages or phases of a business activity (Dzansi, Rambe & Coleman, 2015).

1.2.4. Family role model

A family role model is defined as “[an individual located within a family structure who serves as] a common reference point to individuals, sets an example to be emulated by others and may stimulate or inspire other individuals to make certain (career) decisions and achieve certain goals” (Bosma, Hessels, Schutjens, Van Praag & Verheul, 2012:4).

1.2.5. Internet cafés

Koc and Ferneding (2013) define internet cafés as social and material institutions combining several kinds of technological objects and social experiences, some of which are “cyber” or “virtual” (e.g. computers, tablet technology and internet services) in the provision of technological products and services. While Koc and Ferneding’s (2013) definition sounds too broad and potentially confusing, Wijaya and Polina (2014) use the term “public access avenues” to refer to the growing family of points of access to internet services. They define these as spaces that provide public access computing, ICT and internet access in public arenas such as internet cafés, public libraries, hospital waiting rooms, malls and airport terminals.

1.3. Overview of technology-oriented ventures

The idea of internet café phenomena was born in the early 1990s when the first internet café, Cyberia, opened in London (Koc & Ferneding, 2013). To the best of the researcher’s knowledge, there is no documentation on when the first internet café was established in South Africa. However, literature reports that the establishment of the first internet networking system in South Africa was in 1988 (Nyirenda-Jere & Biru, 2015). Although the adoption of mobile phones has affected the creation and survival of internet cafés in South Africa, internet cafés still offer some lower income groups access to the internet due to the affordability of their services (Wijaya & Polina, 2014). As a result, the owner/managers of internet cafés conceive the internet cafés as small technology firms, in particular technology-oriented ventures that provide internet access to individuals for a reasonable fee, generate income, create jobs, and contribute to poverty reduction (Mashaphu, 2011; Wijaya & Polina, 2014; Rambe & Makhalemele, 2015).

Most African countries consider technology-oriented ventures such as internet cafés as key to accessing information and establishing the knowledge economy on the continent (Rambe & Makhalemele, 2015). This means that people who do not have access to internet services, photo copying and printing facilities at their homes and work environments conceive internet cafés as essential access points for such technological networks and associated services. In fact, internet cafés provide a wide spectrum of digital services for users, such as typing, copying, emailing, internet browsing services and the uploading and downloading of documents. Therefore, internet cafés are techno-social spaces where users access digital media and interact with global cultural flows (Koc & Ferneding, 2013). These cultural flows include the social interactions, sharing of social messages, internet artefacts and social objects that are relevant to users.

Although technology-oriented ventures, such as internet cafés, are one of the most recognised ways of communication in South Africa, they have faced strong competition from low cost and pervasive computing devices such as mobile technologies and applications, which are mostly used by the young adult population. For instance, an estimated 34% of the South African internet users access the internet via their mobile phones (Pew Research Centre, 2015). In addition, by the end of 2016, about 7.9 million of the 13 million South African Facebook users accessed this platform via their mobile phones (South Africa Social Media Landscape, 2016). Chen, Paik and McCabe (2014) state that mobile devices and mobile connectivity have gained centre stage in communication and networked service provision in the digitalised world and are threatening to replace internet cafés in the developed world. However, the reality of the developing world is that internet cafés constitute a central place of low-socio-economic classes' (e.g. poor students, low paid government employees, those involved in menial work) communicative repertoires due to the high cost of mobile data plans. For instance, South Africa was reported to have the second highest data tariffs in the world after Brazil (Van Zyl, 2016; Nhundu & Chin'anga, 2017). The recent "DataMustFall" movement on social media and the social media black hole (i.e. the public attempts at boycotting social media networks) in South African major cities are not only manifestations of the high cost of data plans instantiated by the oligopoly nature of the mobile networks and internet service providers but also point to the continued relevance of internet cafés as cheaper alternatives to mobile connectivity.

1.4. Problem background

Studies on the determinants of technology-oriented ventures have often targeted individual variables separately or as independent of each other. The variables often considered are the personal demographic (e.g. age and gender) (Dautzenberg, 2012; Kaunda, 2012), institutional (e.g. family role models and family recognition of new venture creation) (Rametse & Huq, 2013; Welshe, Memili, Rosplock, Roure, & Segurado, 2013) and structural variables (e.g. prior participation in STEM subjects and social prejudice) (Botcherby & Buckner, 2012; Ceylan & Ozdilek, 2015). This selective approach to exploring determinants of venture creation has led to the paucity of knowledge on the combined effects of these aforementioned micro, meso and macro determinants on technology-oriented venture creation (i.e. internet cafés). These studies are elaborated in subsequent sections of this study.

Some studies reveal a relationship between personal demographic variables and the creation of technology-oriented ventures. For instance, Agbim, Oriarewo and Owocho (2013) and Singh (2014) found that triggering factors such as creativity and entrepreneurial behaviours among technology-oriented ventures tend to increase as the age of the entrepreneur rises. Islam, Khan, Obaidullah and Alam (2011) and Garba, Mansor and Djafar (2013) posit that high levels of ownership of technological-oriented ventures are concentrated in the 25 to 44 age group.

Gender also has an element that has sparked a particular interest in the micro level analysis of entrepreneurship (Mazonde & Carmichael, 2016). The fact that entrepreneurship has traditionally been conceived as a masculine activity has resulted in societal consideration of female entrepreneurship as an emerging phenomenon. Males are more predisposed than females to be early entrepreneurs especially in technology-oriented businesses such as internet cafés (Lim & Envick, 2013; Mueller & Conway Dato-on, 2013; Rambe & Ndofirepi, 2016). Instead, women tend to concentrate on businesses with low entrance requirements such as catering, retail and services (Klopper, 2015). The personal demographic perspective on entrepreneurship is a micro level or individual perspective that tends to ignore social (meso and macro levels) influences on new venture creation.

Another variant of entrepreneurial studies has emphasised social variables (i.e. meso and macro level determinants) almost to the exclusion of micro-level considerations. For entrepreneurs to start-up a venture, they often need a strong support structure from family. Family support encompasses the ways that family members use to encourage and help the potential entrepreneur in the development process of technology-oriented ventures (Sarbah & Xiao, 2015; Sahban, Ramalu & Syahputra, 2016). In addition, family role models form an important part of an entrepreneur's development. Sefiani (2013) argues that family role models play a significant role in legitimising and affirming the appeal and reliability of entrepreneurial activity for the entrepreneur. Finally, Wyrwich, Stuetzer and Sternberg (2016) assert that the presence of family role models is positively related to entrepreneurial intentions and to engaging in entrepreneurship.

Structural variables that tend to shape entrepreneurial behaviour include prejudice in society and participation in STEM subjects. A broader perspective on entrepreneurship, which tends to prize academic background as an expression of social structure, tend to elide considerations of micro level variables. Since the STEM discipline is an important source of economic growth, it is not surprising that promoting entrepreneurship within the sciences should be high on every government agenda (Business Innovation and Skills [BIS], 2011). The challenge, however, is that STEM majors have a disproportional potential to generate high-growth ventures, because high-growth ventures are concentrated in high-technology industries. Nevertheless, women continue to be underrepresented compared to their male counterparts.

1.5. Problem statement

The problem is that the subject of technology-oriented ventures is often treated from a layered perspective comprising micro and social (meso and macro) perspectives. Kirkwood (2012) and Gathungu and Mwangi (2014) posit in concurrence that, an individual perspective emphasises the personal demographics of the entrepreneurs such as their age, gender, experience, and income levels, at the cost of their immediate environmental influences. On the contrary, some studies premised on a societal perspective have emphasised the part played by institutional factors such as role models and family recognition of venture creation (Kazeem & Asimiran, 2016; Sahban et al., 2016) and structural variables such as participation in STEM subjects

and social prejudice (Ceylan & Ozdilek, 2015; Stamarski & Son Hing, 2015) in shaping venture creation. Those studies that place their emphasis on social variables tend to ignore personal demographic variables (Brijlal, Naicker & Peters, 2013; Yaghmaei & Ghasemi, 2015).

The problem statement, therefore, is the absence of an integrated perspective on selected factors that influence and shape the creation of technology-oriented ventures, in particular, studies that consider personal demographic, institutional (e.g. family factors) and structural variables. In other words, the problem is limited knowledge of collective determinants of venture creation due to selective and independent studies on influences of technology-oriented venture creation.

1.6. Research questions

The study seeks to examine the main research question and subsidiary research questions as indicated below.

1.6.1. Main research question

What role do personal demographic, institutional and structural variables play in the creation of technology-oriented ventures, particularly internet cafés in the Mangaung Metropolitan Area and Matjhabeng Local Municipality?

1.6.2. Subsidiary research questions

The subsidiary research questions of the study are:

1. What is the age and gender composition of owner/managers of internet cafés in the Mangaung Metropolitan Area and Matjhabeng Local Municipality? How do these personal demographic variables influence venture creation?
2. How do institutional variables influence the creation of technology-oriented ventures in the Mangaung Metropolitan Area and Matjhabeng Local Municipality?

3. How do structural variables influence the creation of technology-oriented ventures in the Mangaung Metropolitan Area and Matjhabeng Local Municipality?
4. Which variable has greater statistical significance on the creation of technology-oriented ventures?
5. Which combination(s) of selected personal demographic, institutional and structural variables most influence the development of an integrated perspective on venture creation?

1.7. Research objectives

The study's main research objective and subsidiary research objectives are indicated below.

1.7.1. Main objective

The main objective of this study is to investigate the influence of personal demographic institutional and structural variables on the creation of technology-oriented ventures particularly internet cafés in the Mangaung Metropolitan Area and Matjhabeng Local Municipality.

1.7.2. Subsidiary objectives

The subsidiary objectives of the study are:

1. To determine the age and gender composition of owner/managers of internet cafés, in the Mangaung Metropolitan Area and Matjhabeng Local Municipality. In addition to explore the influence of these personal demographic variables on venture creation.
2. To establish whether institutional variables influence the creation of technology-oriented ventures in the Mangaung Metropolitan Area and Matjhabeng Local Municipality.

3. To examine whether structural variables influence the creation of technology-oriented ventures in the Mangaung Metropolitan Area and Matjhabeng Local Municipality.
4. To determine which variable has greater statistical significance on the creation technology-oriented ventures.
5. To determine which combination(s) of selected personal demographic, institutional and structural variables most influence the development of an integrated perspective on venture creation.

1.8. Aim

The aim of the study is to contribute to the development of theoretical and practical knowledge on the integrated influence of personal demographic, institutional and structural variables on the creation of technology-oriented ventures, especially internet cafés in the Mangaung Metropolitan Area and Matjhabeng Local Municipality. The study also seeks to provide policy recommendations on venture creation founded on the understanding that personal demographic, institutional and structural variables do not work independently but rather work in sync in shaping venture creation.

1.9. Summary of the methodology

The study adopts a positivist epistemological position and draws on a quantitative approach to data collection and analysis. Bryman and Bell (2007:15) define positivism as an epistemological position that advocates the application of the methods of the natural sciences to the study of social reality. A positivist epistemology was conceived as ideal for the selection and quantification of variables that shape venture creation as well as the determination of those variables with higher statistical significance as far as venture creation is concerned.

A survey research design was employed in this study. The survey design was conceived appropriate given the researcher's intention to gather internet café owner/managers' perceptions towards the personal demographic, institutional and structural variables that shape venture creation. A survey is indeed ideal when the researcher seeks to assess the current status, opinion, belief and attitudes by means

of questionnaires or interviews from a known population. (Maree & Pietersen, 2016). As a result, a survey was conducted on a total of 91 internet cafés operating in the Mangaung Metropolitan Area and Mathjabeng Local Municipality. However, the internet café owner/managers' population was small, a situation which culminated in the researcher conducting a census. A total of 58 respondents voluntarily participated in the survey, representing a response rate of 63.7%.

Frequency tables and graphs were used to present and analyse the demographic composition of the respondents' data. Correlation analysis was used to analyse the relations of association between variables under study. Finally, regression analysis was employed to predict the relationships between variables and the effect size of these relations.

1.10. Ethical considerations

The researcher's study and ethical clearance application was first approved by the Business Research Committee (BRC) and Faculty Research and Innovation Committee (FRIC) in the Faculty of Management Sciences at the Central University of Technology Free State (CUT, Free State) before administering the questionnaire to participants. Upon receiving the authorisation to conduct the study, the researcher sought the permission from owner/managers of internet cafés who participated in this study. Informed consent was ensured by informing participants about the aims, objectives and intended benefits of the study. The participants of the study were also guaranteed of their anonymity and the protection of their privacy through the non-use of personal identification details such as name of respondents, their phone numbers and home addresses.

1.11. Limitations of the study

One of the limitations to this study was that there were not so many internet café operating in the study area investigated. A number of businesses had closed due to the tough economic environment characterised by high government regulation, high competition and high overhead costs in the areas within which these internet cafés operated. The other related issue was the difficulty of locating internet cafés due to their high mobility, a practice used as their main copying mechanism to reduce the costs of operation such as high government taxes. As such, the views expressed in

this study reflect those made by internet café owner/managers whose businesses the researcher located and who voluntarily participated in the study.

The low response rate is also another study limitation. Only 58 respondents participated in the study. Since the respondents are under no obligation to fill out the questionnaire, it was practically impossible to get completed questionnaires from all potential participants as some declined to participate due to pressing work commitments. However, since Baker (2012) considers 30 respondents as the standard for generating credible statistical analysis, the 58 respondents for this study may be considered as satisfactory for generating credible statistical analysis on internet café owner/managers' data. However, the small sample size could complicate the extent of generalisation to the population considered in this study.

Another limitation relates to the time and financial constraints faced by the researcher. As a full time employee of the university, the researcher had severe time constraints regarding balancing the conducting of research and her university work commitments. Hence, this research was only conducted in the Mangaung Metropolitan Area and Matjhabeng Local Municipality, which were more accessible to the researcher due to the apparent time and cost constraints.

1.12. Delimitation of the study

The study was conducted in the Mangaung Metropolitan Area and the Matjhabeng Local Municipality in. As such, the extent of generalisation to the entire population of Free State province is limited.

1.13. Summary of the chapter

The current chapter provided a context of the study, an overview of the technology-oriented ventures, research questions and objectives formulated for the study. It also outlined a summary of the research methodology, ethical considerations, study limitations, delimitations of the study and the structure of the thesis.

1.14. Outline of the thesis

Chapter One: This introductory chapter provides the orientation of the study. It covers inter alia the problem statement, research objectives and the significance of the study.

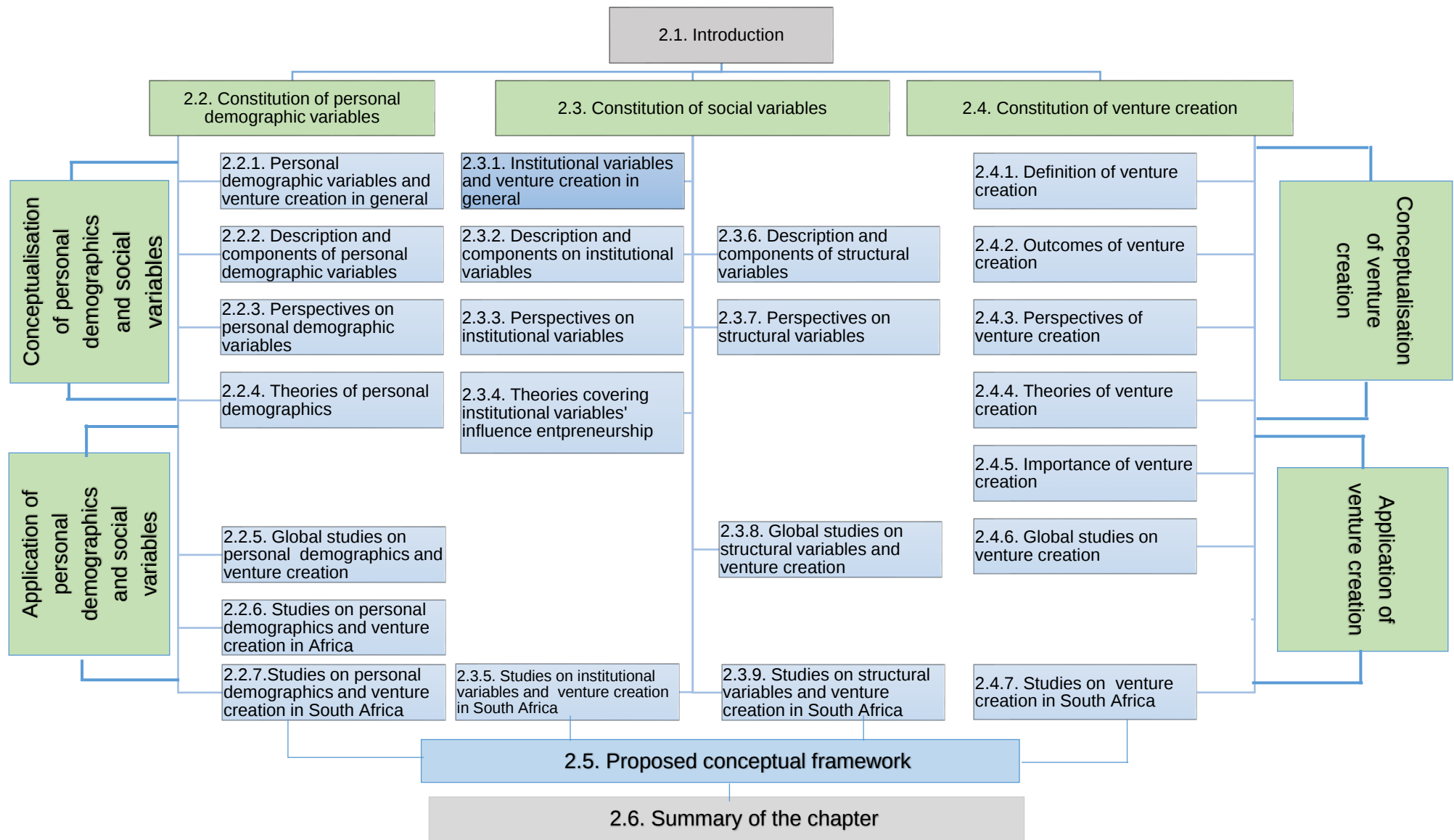
Chapter Two: Reviews the literature on micro, meso and macro level determinants of venture creation.

Chapter Three: This chapter outlines the research methodology adopted in the study.

Chapter Four: Presents, interprets and discusses the results.

Chapter Five: Presents the conclusion and recommendations.

CHAPTER TWO: MICRO, MESO AND MACRO LEVEL DETERMINANTS OF VENTURE CREATION



2.1. Introduction

This chapter reviews literature related to the study focus. There is an absence of a comprehensive and synthesised literature covering the diverse factors that influence the creation of ventures in emerging economies. As a result, this literature review draws on fragmented studies conducted globally in an attempt to provide an integrated perspective on determinants of venture creation. The subsequent sections provide a detailed narrative of each of these variables and their influence on venture creation.

2.2. Constitution of personal demographic variables

The personal demographic variables, which comprise the entrepreneur's age and gender, are discussed under various hierarchies covering the application of these variables in general, components, perspectives and theories. These are elaborated in subsequent sections.

2.2.1. Personal demographic variables and venture creation in general

Singh (2014) examined the influence of personal demographic variables on the dependent variable entrepreneurial intention in Mumbai and found out that demographic factors play an important role in the formation of entrepreneurial intention. Singh (2014) elaborates further that there exist a few studies that focus on age as a predictor of entrepreneurial intention. This is surprising given the acknowledged association between age and the creation of ventures, as highlighted in the section that discussed the relationship between age and entrepreneurship in this study. Perhaps, the confusion around the ideal age for entrepreneurship uptake and whether entrepreneurship is for the young or the mature older groups explains this allusion. Yaghmaei and Ghasemi's (2015) study into particular factors that are more influential on entrepreneurial intentions on postgraduate students in Malaysia, exposes this academic confusion in literature in their observation that, some scholars consider entrepreneurship to be a game for the young people while others argue that it rises with age.

The 2015 Global Entrepreneurship Monitor (GEM) showed that younger people are more active in the creation of new firms than are older people (Span, Van Stel & Van den Berg, 2015). In particular, early-stage entrepreneurial activity is most prevalent

among individuals within the 25-34 years' age group and is least prevalent among individuals within the 55-64 year range.

In spite of the aforementioned controversy around the ideal age for entrepreneurship pursuit, there is a general perception that a growth in age is positively related to venture creation (Korpunen & Nápravníková, 2008; Welmilla, Weerakkody & Ediriweera, 2011). Some scholars argue that there is general agreement that individuals' skills base might improve with the age (Welmilla et al., 2011) This is probably due to the increased exposure to different complex technical environments and sophisticated task execution scenarios, which require individuals to develop complex problem solving skills. Generally, maturity comes with age and allows entrepreneurs to set and manage the boundaries between work and non-work activities effectively. The creation of such boundaries could be more challenging for the younger generation unlike their older counterparts.

Gender, which describes a socially constructed identity that ascribes different roles and responsibilities to men and women in society, also appears to impact the growth of firms. Brijlal et al. (2013) observe, in their study on the operation of established small businesses that, women-owned businesses are particularly affected by clashes between work commitments and home/ family demands which may directly or inadvertently undermine the growth potential of the firms. Gender gaps persist in entrepreneurship activities in both the developed and developing world. Esnard-Flavius (2010) states that 21.65% of men are involved in early stage, nascent and new entrepreneurial activity in the Caribbean in comparison to the 15.69% of women from the same region. The gender differences evident in the case of established business owners are somewhat marginal, with 9.57% of men operating established businesses compared to 9.49% of women operating the same (Esnard-Flavius, 2010).

An overall examination of business ownership revealed a larger gender gap with 31.22% of men participating in entrepreneurship compared to 25.18% of women (Esnard-Flavius, 2010). These gender asymmetries in ownership and operation of businesses can attributed to the challenges women encounter when trying to access funding. It is also suggested that the primary obstacle that South African women aspiring to develop high-growth businesses face relates to the inability to obtain

financing (Fatoki, 2014d; Dzansi & Arko-Achemfuor, 2016). It can be inferred that, notwithstanding the financial inclusion and gender mainstreaming policies introduced by the South African government to close gender gaps in funding, the government has not sufficiently eliminated gender discrimination that is inherent in business financing. The fact that businesses such as retail and service businesses have been started by female entrepreneurs may very well influence the lack of or the slower growth of and determine the smallness of their businesses (Brijlal et al., 2013).

2.2.2. Description and components of personal demographic variables

From an entrepreneurial perspective, personal demographic variables are referred to as micro level determinants owing to the fact that they deal with individual level traits. They may include the entrepreneur's age, gender, income, level education, employment status, work experience and mastery of the English language (De Lanerolle, 2012). Chiliya and Roberts-Lombard (2012) and Da Costa and Mares (2016) state that these personal demographic factors have a considerable impact on entrepreneurial intention and venture success. Other scholars, such as Chowdhury, Alam and Arif (2013) and Fatoki, (2014e) point out that personal demographic characteristics such as age, gender, education and work experience have a strong influence on entrepreneurial success. For instance, it is generally believed that the young mature population (such as individuals between 25-55 years) are generally considered to be more entrepreneurially active compared to those above 55 years and those in retirement (Haltiwanger, Jarmin, Kulick & Miranda, 2016; Small Enterprise Development Agency [SEDA], 2016). While there are many personal demographic characteristics that impact venture creation generally, those which are commonly cited in mainstream entrepreneurial literature (i.e. the entrepreneur's age and gender) will be explored in subsequent sections of this study.

2.2.2.1. Age

In their study on entrepreneurial activity, Sajilan, Hadi and Tehseen (2015) highlight that the entrepreneur's age is widely considered as one of the key personal demographic characteristics in understanding his/her entrepreneurial behaviours and intentions. There appears to be some observable global patterns on the impact of age on entrepreneurial activity, especially the way entrepreneurship activity increases with

the entrepreneur's age, and South Africa is no exception. Islam et al. (2011) and Tweneboah-Koduah and Adusei (2016) state that older (i.e. those over 25 years) entrepreneurs tend to be more successful than their younger counterparts. Early-stage entrepreneurship is conceived to be moderately low in the 18-24 years group, peaks among the 25-34 year olds, and then declines as age increases with the sharpest decrease being witnessed after the age of 54 (Daniels, Herrington, & Kew, 2016). Chiliya and Roberts-Lombard (2012) and Sharma and Madan (2014) report that age has a significant effect on operating a business profitably.

Older entrepreneurs are considered to possess more business experience, having learnt more lessons about avoiding possible marketing and financial pitfalls in business start-ups or running businesses, and are thought to have harnessed more financial resources in their adult life than their younger counterparts. This explains the mature entrepreneurs' higher propensity of entrepreneurial success than in the case of younger entrepreneurs. Focusing on the researcher's area of study, internet cafés, an advancement in age is often conceived as contributing to business maturity as sufficient experience and advanced training in business development is integral to socialisation into technology businesses, innovation in web design and an impressive launch and sustained operation of web-based businesses. As such, there is a general recognition that opportunity entrepreneurs are older (35-44 years) than necessity entrepreneurs (18-24 years) (Olivier, Frank, Jean-luc & Olivier, 2011; Bijaoui, 2012; Ndofirepi, 2016; Rambe & Ndofirepi, 2016).

2.2.2.2. Gender

The gender of the entrepreneur is increasingly becoming a focus of attention for entrepreneurial studies (Fafaliou & Salamouris, 2014; Sarfaraz, Faghih & Majd, 2014; Seenivasan, 2014; Wasdani & Mathew, 2014). Stander (2015) insists that men are 75% more likely than women to become active entrepreneurs. Perhaps, the patriarchal nature of society, which imposes the responsibilities of providing for the families on men explains the male dominance in entrepreneurship and self-employment. In contrast, women are more likely than men to restrict their authoritative decisions in an entrepreneurship profession because of the lack of confidence and trust in their capacities (Vossenbergh, 2013). It can be argued that the lack of confidence in and

exposure to lucrative business opportunities as well as limited business awareness seem to undermine women's success in the entrepreneurship world.

Other studies have ignored the gender gap perspective in their approach to entrepreneurship and venture creation and chose to emphasise a different foci regarding the different genders. Fafaliou and Salamouris (2014) argue that males and females have diverse desires in their pursuit of entrepreneurial activities. It can be inferred that females are likely to be involved in low growth projects whilst men may consider growth and prosperity driven entrepreneurship. It has also been noted that males and females have diverse yearnings with regards to entrepreneurial attempts, with men preferring technological innovation entrepreneurship while women desire lower generating businesses (Brooks, Huang, Kearney & Murray, 2014; Fafaliou & Salamouris, 2014). It is clear that the gender-based socialisation of men and women explains their different occupational trajectories in their adult life. Wasdani and Mathew (2014) and Pounder (2016) state that early-stage entrepreneurs are usually males and they tend to dominate compared to their female counterparts. Furthermore, Wasdani and Mathew (2014:18) state that; "women in general are less motivated to choose an entrepreneurial venture because the lack of access to resources imposed by the systems makes it difficult for them to pursue entrepreneurship". As a result, there is general consensus that, despite the multiple public and private funding mechanisms availed to emergent entrepreneurs in South Africa, women are persistently marginalised by the existing borrowing and funding institutions (Mpiti, 2016; Rambe & Mpiti, 2017).

2.2.3. Perspectives on personal demographic variables

The personal demographic variables of nascent entrepreneurs, such as age, education and gender, are important in explaining the start-up and decision to engage in entrepreneurial ventures (Said, Halim, Yusuf & Smith, 2014). This view is shared by Sajilan et al. (2015) who underscore the role of personal demographic variables in shaping individuals' behaviours towards entrepreneurship.

There are two varying perspectives on the personal demographic-venture creation relationship and both emphasise the role of psychological faculties and personality

traits versus the influence of socio-economic circumstances in driving venture creation and entrepreneurship. The argument, from an entrepreneurship cognition perspective, is that young mature adults (e.g. the 25-45 age group) often display entrepreneurship efficacy compared to teenagers and those individuals who would be in their post-retirement phase. While teenagers may not have defined well or refined their professional destiny psychologically, their older counterparts in their post-retirement phase may not have the requisite personality traits, which include energy and persistence, to pursue venture creation and entrepreneurship. The convincing view is that the young adult owner/manager has the necessary motivation, energy and commitment to work and is more inclined to take risks compared to older people (Mwangi, 2014; Hagos, Gebremichael & Getie, 2014).

The other argument often advanced in relation to psychological faculties and personality traits focuses on the capacity of the entrepreneur to take risks. Awa, Emecheta and Ukoha (2015) state that the younger the individuals, the greater their tendency to take greater advantage of new opportunities and risks associated with venture creation and entrepreneurship. The age of the decision-makers influences corporate risk-taking and shapes strategic thrusts towards venture creation (Awa et al., 2015). Olugbola (2017) posits that an individual advanced in age is, in principle, less motivated to implement innovative behaviour or to follow through a new idea, whereas a younger owner/manager would be more persuaded to take risks. It can be inferred that risk taking behaviour, the strategic pursuit of ventures and innovation, which are all founded on experimentation, conscientiousness and daring behaviour, are easier to pursue when someone is a young adult than when they are at an advanced age.

The role of socio-economic circumstances in driving venture creation is also important. It is assumed that the dynamism (i.e. extent of stability or hostility) of the business environment shapes the capacity of different age groups to exploit entrepreneurship pursuits and create business ventures. Environmental conditions, such as the availability of finances to different age groups, the levels of corporate tax rates and the strictness of business operation by-laws, collectively shape different age groups' participation in venture creation in particular and entrepreneurship in general (Nieva, 2015; Rambe & Mosweunyane, 2017).

It is noted, with regard to the gender-venture creation relationship that, the availability of a stable income and financial resources is at the core of explaining this relationship. For instance, men are 1.4 times more likely to be self-employed than women (Botha, 2006), spend more hours working in their businesses than women due to men's lower family commitments. Therefore, men tend to be remunerated higher for the same job than their female counterparts. Vinesh (2014) outlines further discrepancies in the claim that the number of women involved in starting a business is significantly and systematically lower than that of men. In addition, women entrepreneurs have been found to set up their ventures with lower start-up capital than that of men, and the ventures have generally been smaller than those of men, owing to their possession of limited financial resources, (Urban 2011; Fatoki, 2014d; Mpiti, 2016). Therefore, financial resources availed to the internet café owner/managers are integral to explaining the greater size and success of male-owned ventures compared to female-owned ventures.

Finally, Urban (2011) states that women entrepreneurs are more likely than men to run lower turnover, lower growth potential businesses such as cleaning, healthcare and education services. Perhaps, the discriminatory practices that constrain female access to financial lending from banks and other public funding institutions (Stupnytska, Koch, MacBeath, Lawson & Matsui, 2014), which underpin the varied access to financial resources could be instrumental in explaining the variance in the creation and growth of male and female-owned businesses.

2.2.4. Theories of personal demographics

The existence of the gender symmetries that continue to structure women and men's participation in business creation calls for a theory that speaks to the causes of such gender gaps and proffers solutions to resolving such discrepancies. The Feminist Theory provides a useful point of departure to understanding this gender schism evident in venture creation and entrepreneurship.

2.2.4.1. *Feminist Theory*

The Feminist Theory's concern with women's rights and the analysis of gender relations makes it useful in providing perspectives regarding research on gender and

entrepreneurship (Nwankwo, Kanu, Marire, Balogun & Uhiara, 2012). Generally, gender relations within and outside the family shape entrepreneurship uptake as they define roles and responsibilities that individuals of different sexes can partake corporate wise, thus making the Feminist Theory again a useful entry point in the examination of the gender-venture creation relationship. The fact that Feminist Theories seek to explore different viewpoints on gendering environments (Welter, Brush & De Bruin, 2014), indicates that they provide a useful interpretive lens for mainstreaming gender in the corporate environment and in overcoming the complexities women often face in operating technology-oriented businesses such as internet cafés. While fully promising the need for understanding the established obstacles, challenges and difficulties that women entrepreneurs are facing, Feminist theory seeks to clarify the gender gap in entrepreneurship to fully understand chances and choices that entrepreneurs in developing countries possess (Vossenbergh, 2013). Thus, the Feminist Theory may, in view of the lack of gender parity in women participation in venture creation and entrepreneurship, shed light on the gender-venture creation relationship.

Feminist Theory research underscores that gender is not simply essential in the structuring of society, but it disadvantages women (Welter et al., 2014). The recurring theme in Feminist Theory literature is that it was created out of women's experiences over many decades and explains the intermingling of gender with the invisibility of women (Lång, 2010) in business leadership and venture creation. Thus, the existing complex connection between business financing and venture creation, home responsibilities and business ownership and patriarchy and entrepreneurship, renders Feminism's preoccupation with the social construction of gender relations critical in explaining how gender shapes venture creation in particular and entrepreneurship uptake in general.

Kikooma (2012) states that Feminist theorisation is premised on the reality that gender is important in the structuring of society, women have been traditionally disadvantaged, and that feminism strives to correct this condition. From a Feminist stance, Meulder, Plasman, Rigo and O'Dorchai (2010) outline the link between segregation and the marriage market. The idea that segregation is observed by women, who in response to it, expect to find employment primarily in low-skilled

occupations and thus underinvest, is critical to explaining the possible underrepresentation of women in technology-oriented businesses. The challenge is that Feminist perspectives are rarely appealed openly to and by avoiding the explicit discussion of gendered power structures, the apparent shortcomings of female entrepreneurs have tended to be attributed to individual women and not to social arrangements (Hughes, Jennings, Brush, Carter & Welter, 2012). Therefore, a gendered perspective to explaining women challenges in venture creation and entrepreneurship can bring a fresh perspective to understanding the role of women in business.

2.2.5. Global studies on personal demographics and venture creation

Around the world, there are more male entrepreneurs than female entrepreneurs, with total entrepreneurial activity being managed by men in the vast mainstream of countries (Kelley, Bruch, Greenne & Litorsky, 2013). Lower profits were noted in a sample of female-owned firms in European countries and this can be explained by scale differences, where the female-owned firms were smaller (in terms of sales) than their male-owned counterparts (Robb & Watson, 2012). This probably points to the various constraints that undermine women's capacity to create growth-oriented businesses on a larger scale. In fact, women have disadvantages compared to men regarding the acquisition of the right funding for their start-up (Luidinga, 2014). This constraint could be attributed to the reality that since entrepreneurship terrain is dominated by males, the public and private financial institutions tend to have more faith in male entrepreneurs than in female entrepreneurs (Luidinga, 2014). Furthermore, Luidinga (2014) elaborates that these constraints have spurred the European Commission (EC) to encourage women to engage in self-employment and create platforms that support entrepreneurship.

2.2.5.1. Age and venture creation in Europe

It is also vital to examine the age-venture creation relationship from a European perspective. The European Union (EU) is reported as having a relatively low Entrepreneurial Activity Index among the youthful population (European Commission, 2012). Perhaps, the high saturation of businesses in this region, due to the existence of high levels of industrialisation and the capacity of large established corporations to

crowd out smaller businesses, explains this low entrepreneurship activity. It is also possible that this limited European youth participation in technology-oriented businesses is driven more by entrepreneurial triggers such as loss of employment, and aesthetic desires such as life style and trendiness rather than the pursuit of business growth (European Commission, 2012). Furthermore, the European Commission (2012) states that young entrepreneurs generally operate smaller business than adults. Finally, the youth's limited scale of operation can be attributed to lack of income, lack of business experience and insufficient knowledge of the market for their businesses.

The EU youth entrepreneurs' employment statistics are also low. Only 12% of self-employed persons, within the EU countries, falling within the 15-24 age range had employees, which is less than half of the proportion of adult population (30%) (European Commission, 2012). This low representation of youth under 25 years of age in entrepreneurship is consistent with the experience of South Africa, where the youth have a low entrepreneurial activity compared to adults. Youth-operated businesses in the EU are also more likely to be concentrated in sectors that have low barriers to entry and low capital requirements such as construction (18.7% of youth businesses operate in this sector compared with 13.8% for adults), information and communication (4.9% of youth compared with 2.7% for adults) and other services firms (7.5% for youth compared with 4.9% for adults) within which they tend to focus on narrow product lines (European Commission, 2012). This demonstrates that the age-venture creation relation is mediated by financial constraints that continue to restrain business activity irrespective of any given region's depth of industrial activity.

2.2.5.2. Gender and venture creation in the United States of America (USA)

There is an interesting dynamic in the USA's gender-venture creation relationship. The amount of new business formed by women in the USA has significantly outperformed the rate of those formed by men in all of the country's national groups (Minnitia & Naude, 2010). Nonetheless, women still possess and manage considerably fewer businesses than men in this country as female entrepreneurs have less prospects for their businesses than male entrepreneurs. Perhaps, the role of patriarchy in sustaining gender variations in funding opportunities, persistent gender based income disparities and financial constraints for women could be integral to explaining women's weaker

business prospects than that of their male counterparts. These income disparities are affirmed by Fairlie and Marion (2012) in their report that, on average, male entrepreneurs invest practically double as much as female entrepreneurs in starting their new ventures. Furthermore, an earlier study conducted by Fairlie and Robb (2009) established that the female business ownership rate in the USA is 6.6%, which is only 60% of the male rate. Amongst high-growth-potential ventures, only 11% of US firms with venture-capital backing, have been founded or led by women (Brook et al., 2014). These startling statistics are indicative of the continued marginalisation of women business owners irrespective of the context of operation of their businesses. At best, these statistics reflect the reluctance of funding agencies, such as venture capitalists, to finance female-owned businesses and perhaps, gender stereotypes that persistently prejudice women with regard to accessing funding opportunities.

Inferring from the abovementioned narrative, female American entrepreneurs are expected to generate lower profits and employ fewer people than male entrepreneurs because of constrained funding opportunities and persistent income disparities between men and women in the country. American men engage in entrepreneurial activity at almost twice the rate of women (Fairlie & Marion, 2012), thus signifying the comparatively greater extent of male entrepreneurial activity in relation to that of women in the country. There are more male entrepreneurs than female entrepreneurs around the world, with the total entrepreneurial activity (TEA) managed by men in the vast mainstream of countries far much greater than that of women (Kelley et al., 2013). Perhaps the difficulties in reconciling the family responsibilities with work commitments explain women's limited involvement in business ventures. This is because self-employed women may find themselves spending significantly more time at home and with children compared to their male counterparts (Rambe & Mokgosi, 2016).

Literature suggests that self-employment growth was stronger for US women than for men, and that this growth was much faster in professional and business services than for health care, both high-tech sectors during the 2000-2006 period (Gurley-Calvez, Hammond & Thompson, 2010). It is surprising that although women are involved more in self-employment opportunities in the USA, men tend to thrive in growth-oriented businesses than the women.

2.2.6. Studies on personal demographics and venture creation in Africa

The age of 35 years is mostly considered in Africa as the ideal age for the expression of an individuals' entrepreneurial intent (Turton & Herrington, 2013; Nieuwenhuizen & Swanepoel, 2015). This seems to suggest that entrepreneurship activity is taken seriously on the African continent at a fairly late age than in other low income economies. In the African context, women have a less positive attitude toward entrepreneurship and lower desire to establish their own firms compared to their male counterparts (Gupta, Goktan, & Gunay, 2014). There are multiple reasons for this low drive, with the high risk of failure as one of the major reasons. Bekele and Worku (2008) in their report on a national survey conducted by the Ethiopian Welfare Monitoring Unit, show that women entrepreneurs in Ethiopia are not provided with adequate policy nor with strategic support by the national government regarding the starting of businesses. Their study also states further that the promotion of vibrant small, micro and medium enterprises (SMMEs) should be one of the most important priority strategies for empowering women and reducing abject poverty and unemployment in Ethiopia. Women entrepreneurs in Ethiopia face a lot of obstacles ranging from social prejudice, funding constraints and social deprivation (Getu, 2015). Wube (2010) points out that more than half of all women entrepreneurs in Ethiopia face gender-related prejudices due to the persistence of discriminatory traditions, cultures and religious customs. For instance, many women face difficulties in raising credit finance from banks as well as borrowing via informal networking (Wube, 2010). In view of these constraints, it is not surprising that more sustainable ventures are run by Ethiopian men compared to women (Getu, 2015). However, women's entrepreneurship activity has recently gained the attention of economic planners and policy makers in Ethiopia and other developing countries (Wube, 2010).

2.2.7. Studies on personal demographics and venture creation in South Africa

The national picture on the proportion of women participation in venture creation in comparison to that of men remains skewed and hence a grave concern. Men still constitute the majority of SMME owners in South Africa (Brijlal et al., 2013; Mpiti, 2016). In recent years, the rate of new business formation by women has been outpaced significantly by that of men and women entrepreneurs in South Africa remain

on the margin of the national economy. Women entrepreneurs in South Africa are mostly involved in the peripheral sectors as craft making, hawking, personal services and retail, which is a clear indication of their low participation in the value-adding business opportunities. A study by Awa et al. (2015) on gender and information and communications technologies (ICT) in South Africa observed the existence of a gap amongst women and men in all occupations, but particularly in technology-related fields. The differential level of participation between men and women in Science, Technology, Engineering and Mathematics (STEM) at South African tertiary institutions probably explains this apparent women businesses' under-presentation in technology-oriented companies. Simrie, Herrington, Kew, and Turton (2011) state that South Africa attained a 43.8% growth in female participation in business between 2006 and 2011, a growth which was considerably lower than that the 94.8% growth recorded among the nation's males. This indicates that although there has been an improvement in the gender participation, more can be done to include women in entrepreneurial development in South Africa (Simrie et al., 2011).

Venture creation can also be unpacked from a personal demographic perspective, especially by focusing on the entrepreneur's age. There is a general consensus on South Africa's low TEA, where for instance, the number of young people involved in business is significantly low at 8% in South Africa (Department of Trade and Industry [DTI], 2013). Furthermore, the DTI (2013) asserts that although the youth (14 to 35 years) constitute 41.2% of the South African population, the number of young people involved in entrepreneurial activity remains extremely low at 6% of the total youth population. The low entrepreneurial activity among the youth is attributed to various factors such as: lack of finance (Chebet, 2016; Dzansi & Arko-Achemfuor 2016), lack of management competences and business experience (Rambe & Makhalemele, 2015; Makhalemele, 2016), lack of innovation and poor marketing skills (Agbobli, 2013; Akaba, 2016); and lack of technological skills (Rambe & Mokgosi, 2016).

South Africa had the lowest youth entrepreneurial propensity of only 23.3% compared to countries such as Uganda with 55.4%, Malawi 52.3% and Namibia 44.1% and other middle income emerging economies in 2014 (Singer et al., 2014; Musie, 2015). The biggest increase in South Africa's entrepreneurial activity rates occurred in both the 35-44 years and 45-54 years' age brackets, where rates more than doubled in both

brackets (Herrington & Kew, 2017). These middle aged groups tend to thrive in entrepreneurship due to experience and capital accumulated during their professional lives (Makhalemele, 2016; Ramorena, 2016). At least 60% of the youth population in all countries, apart from South Africa, revealed entrepreneurial inclination or were currently actively pursuing an entrepreneurial opportunity (Singer et al., 2014). This bleak picture of the entrepreneurial intentions in South Africa raises doubt on the capacity of the nation to use its youth as agents for entrepreneurial change. This view confirms Kew, Namatovu, Aderinto and Chigunta's (2015) observation that although the South African youth are 1.3 times more likely than adults to believe that they have the skills and knowledge to start a business, South Africa has the lowest youth entrepreneurial propensity (23%) compared to other middle income economies (Kew et al., 2015). It is clear that perceptions of one's possession of managerial knowledge and skills does not always translate into entrepreneurial start-ups for various reasons such as: lack of financial support, lack of marketing information, lack of solid commitment to business ventures and limited entrepreneurial efficacy. For instance, Shah and Saurabh (2015) report that the survival and sustainability of the women's microenterprises depend overwhelmingly on external support, the generation of appropriate production technologies and skills, the existence of financial support and access to credit to marketing and enterprise management.

2.3. Constitution of social variables

The social variables, which comprise institutional and structural variables are discussed under various segments. These segments include the concept and its main components, perspectives, theorisation and its practical application in global and South African scenarios.

2.3.1. Institutional variables and venture creation in general

Family systems may influence the development and recognition of entrepreneurial opportunities and resources, and the final decision to create a business venture. Kibler (2012) highlights that the support of family networks (in)directly influences new venture creation by assisting individuals to become better prepared for entrepreneurial activities and how to implement their ideas on actually opening their new businesses.

Parental self-employment is more strongly associated with male entrepreneurial preferences than female preferences. Children of entrepreneurial parents who observe their role models as both positive and successful are likely to imitate those role models (Fellnhofer & Puumalainen, 2017). Therefore, having role models is a significant factor in generating a desire to start a business as self-employed parents may act as mentors and guides for children starting their own businesses. Tarling et al. (2016) point out that growing up in a family where parents are owners of a company represents an ideal context in which business career intentions are formed. The fact that parents serve as positive role models means that children from business-oriented families should be more inspired to start their own firms than those without such backgrounds.

2.3.2. Description of components of institutional variables

Although many factors can be covered under institutional variables, the presence of family role models, parental role models and family recognition of venture creation are of special interest to this study due to their direct effects on venture creation. These influences are given attention in the subsequent sections of this study.

2.3.2.1. *Family role models*

Childhood exposure to family entrepreneur role models is one of the most important predictors of entrepreneurial intention (Kassean, Vanevenhoven, Liguori, & Winkel, 2015). Family role models here include the entrepreneur's parents, a successful spouse, siblings and the extended family. Family members are an important part of the entrepreneur's reservoir for acquiring experience and support for venture creation. It is likely that an entrepreneur and his/her spouse's expectations about starting a venture have an impact on the entrepreneur's decision to start a venture (Liang & Dunn, 2009; Jekwu, 2016).

Shirokova, Osiyevskyy and Bogatyreva (2015) suggest that studies have shown that between 35-70% of entrepreneurs have entrepreneurial role models. The significance of role models for entrepreneurs is evident in the popular business press that is littered with stories of, and references to, entrepreneurial endeavours and successes that have been influenced by family models. Such examples include Herman Mashaba

case whose personal entrepreneurial pursuits combined with entrepreneurial parents to shape his successful business career. Previous studies indicate that role models matter in an individual's decision to become an entrepreneur and parental role models are considered significant in shaping entrepreneurship behaviour (Ozaralli & Rivenburgh, 2016). Perhaps, the positive relationship between having a family role model and entrepreneurship behaviour arises from the reality that the affirmation of an individual entrepreneur's behaviour by a family role model, including the advice, financial and moral support and energy, which such a role model provides to an entrepreneur assists in sustaining entrepreneurship activity. Caliendo and Kritikos (2011) and Miao, Qian and Ma (2016) argue that role models compensate for a lack of entrepreneurial experience. In fact, entrepreneurs with better education are more likely to use a family role model during the post start-up phase with a greater likelihood that these entrepreneurs view their role model as crucially important to their success.

Family role models are often conceived as part of the entrepreneurial environment. Chinyamurindi (2016) reports that environmental factors such as family role models have a bearing on an individual's entrepreneurial activities. Environmental factors refer to the attributes of an individual's social environment, such as role models and social identification, which play a role as an antecedent to one's intention to create a business (Tran & Von Korflesch, 2016). Previous research has shown that role models have an important impact on the career development of young adults (Wiese & Kruger, 2016) and young entrepreneurs are no exception. The decision to become an entrepreneur i.e. to start up a business, is interconnected clearly with having parents who are or were entrepreneurs, and this is often understood as the effect of parental role models (Chlosta, Patzelt, Klein & Dormann, 2012; Yaghmaei & Ghasemi, 2015). As such, family role models are at the centre of pre-start up, the start-up process and the management of the firm post start-up.

2.3.2.2. Parental role models

Researchers have found that early exposure to parental role models in the family business affects the children's attitude towards becoming self-employed. For instance, Bae, Qian, Miao and Fiet (2014) highlight that growing up in a family with self-employed family members may lead to a general pro-business attitude for the children. It means that children who grow in an entrepreneurial family can benefit from

entrepreneurial learning by observation and participation, mentoring by their parents and by accessing their parents' business networks. Parental role models may also impart, in their children, a sense of assertiveness towards becoming self-employed themselves; and growing up in a family with self-employed family members might lead to a pro-business attitude among the children (Chlosta et al., 2012). Entrepreneurial exposure and familiarity, therefore, are instrumental in shaping the entrepreneurial behaviour of individuals.

Hoffmann, Junge and Malchow-Møller (2015) point out that children who grow up in families where one or both of their parents practice entrepreneurship as a career choice are more likely to follow entrepreneurship as a career path, based on the example gleaned from the parental role model. Rahman (2014) found that role models exercise a positive influence on entrepreneurial motivation. Saeid, Harm, Thomas, Mohammad and Martin (2014) also point out that the influence of role models on entrepreneurs or potential entrepreneurs goes beyond just role models like parents and teachers as it includes friends and other persons of authority who shape the development of the entrepreneur. It is clear from these aforementioned studies that role models in entrepreneurial families are mostly significant to the motivation of their children to become self-employed. Parental role models indeed inspire individuals to become entrepreneurs, even though it may not be guaranteed that entrepreneurial families' children may take over the businesses of their parents upon their parent's retirement. Thus, there appears to be considerable variance in the effect of parental role models on individuals' decisions to enter self-employment.

2.3.2.3. Family recognition of venture creation

It is important to understand that the presence of family role models does not work in a vacuum but works in tandem with the entrepreneurial family's strong recognition of entrepreneurship. Kirkwood (2012) highlight that the family embeddedness perspective provides one of the best ways to understanding the influence of family on venture creation. The author notes that "norms, attitudes and values within the family may impact on the venture creation decision, influencing founding strategies and processes" (Kirkwood, 2012:142). Hence, the values of creativity, innovation, goal orientation and hard work established in the family may be instrumental in business incubation and serve as an important inspiration on entrepreneurs' future decisions to

start their own ventures. Family, therefore, is an important source of value creation, value recognition, encouragement and support to entrepreneurs. Family plays a critical supporting role in aspiring entrepreneurs not only at the venture preparation stage but also at the business creation stage (Morgenroth, Ryan & Peters, 2015; Tarling et al., 2016). Family involvement in family firms affects entrepreneurial behaviour at various levels such as value propagation, the provision of finance and moral support, training in strategic development and keeping an entrepreneur grounded in entrepreneurial behaviour in ways that affect organisational growth.

Gathungu and Mwangi (2014) argue that family members act as important resource holders to potential entrepreneurs who lack access to other social support networks during the firm formation process. This is particularly the case when family members have an entrepreneurial background that could shape the prospective entrepreneur's immediate or future entrepreneurial exploits. Kibler (2012) discovered that family networks impact the development and recognition of entrepreneurial opportunities and resources, and the final decision regarding the creation of ventures. In particular, family-to-business enrichment and support may be especially beneficial to female entrepreneurs' businesses due to such entrepreneurs' limited access to human, social and financial resources in comparison to male entrepreneurs. Therefore, the provision of lucrative resources, business knowledge, guidance and support systems is integral to both the start-up and success of entrepreneurial businesses.

2.3.3. Perspectives on institutional variables

A gendered perspective is often drawn upon to explain why females and males may take up entrepreneurial opportunities in the family and in society differently. Men who live in an entrepreneurial family are, unlike their female counterparts, more likely to take up entrepreneurship decisions to start their own ventures (Kirkwood, 2012) due to family recognition of and family support for male entrepreneurs. Men with self-employed fathers and higher parental incomes are more likely to be self-employed than their female counterparts, with the impact of paternal self-employment being leveraged by higher family income (Joona, 2014). The argument is that male self-employment is more likely, when the father worked in an occupation with task requirements similar to those of an independent business, to allow the free transfer of

skills across different spaces. There is a general perception that men are more influenced, than women, to become entrepreneurs, by factors that relate to the family. Men take entrepreneurship from parents more easily than females (Sivarajah & Achchuthan, 2013) due to family support systems and value orientations that are in sync with masculine pursuit of entrepreneurship.

2.3.4. Theories covering institutional variables' influence on entrepreneurship

The Theory of Planned Behaviour (TPB) is often considered as the first port of call in the theorisation focusing on venture creation, entrepreneurship behaviour and intentions (Fishbein & Ajzen, 1975). TPB has been applied to a wide range of behaviours in order to better understand which individuals behave in entrepreneurially productive ways (Topa & Karyda, 2015). TPB connects the influence of significant others, especially family and friends, and family members' business exposure as critical in shaping entrepreneurial intent. The TPB employs the term, subjective norms to explain the willingness to pursue or reluctance to pursue entrepreneurship behaviour instigated by significant others. Therefore, subjective norms (SN) describe the pressure from peers or friends compelling individuals to comply with specific norms. That is, if parents and friends perceive entrepreneurship as too risky, then the individual is less likely to engage in entrepreneurial behaviour (Kavuli, 2014) in conformity to such perceptions of risk.

TPB predicts that planned behaviour is determined by behavioural intentions, which are largely influenced by an individual's attitude towards a behaviour, the subjective norms relating to the execution of the behaviour and the individual's perception of their control over the behaviour (Cameron, 2010; Yean, Johari & Sukery, 2015). In addition, TPB appeared as the main theory-driver model (Sánchez, 2011) and has been widely implemented in entrepreneurial intention research to investigate venture creation.

The theory postulates that the intention to perform a behaviour depends on the subject's attitude towards that behaviour (Ajzen, 1991; Fen, & Sabaruddin, 2008; Mushtaq, Hunjra, Niazi, Rehman & Azam, 2011; Huang & Chen, 2015). It seems reasonable that if a manager has a favourable attitude toward performing a certain behaviour, he/she is more likely to effect this behaviour. Thus, this approach based on

individuals' attitudes is superior to other approaches that are based on their traits or demographic aspects (Sánchez-Medina, Romero-Quintero & Sosa-Cabrera, 2014).

2.3.5. Studies on institutional variables and venture creation in South Africa

Family role models are conceived, within the South African contexts, as playing a key role in influencing children in the family to become entrepreneurs (Herrington & Kew, 2014). For instance, children born of entrepreneurial mothers who recognise their parents as positive and successful role models are likely to imitate those role models (Bignotti & Le Roux, 2016). This clearly indicates the influence of parents on children's entrepreneurial pursuits. Gwija, Eresia-Eke and Iwu (2014) concur that as much as there are many elements that can encourage an individual to start a business, the influence of exposure to entrepreneurship from immediate families and role models in entrepreneurial behaviour cannot be ruled out in explaining successful entrepreneurial activity.

It is estimated that more than 80% of all South African businesses have a family ownership involvement, and more than 60% of all listed companies in South Africa had elements of family involvement during their start-up phase (Gomba & Kele, 2016). If the listing of companies on the Johannesburg Stock Exchange (JSE) points in the direction of sustainability and the survival of these previously family owned/managed firms, then it can be argued that family role models such as family networks, relatives, parents and even family entrepreneurs could have been instrumental in shaping the long term success of these firms. Farrington (2016) found out that that family involvement in South Africa is more important in the start-up phase of a business than in later phases. Therefore, a majority of business individuals can count on role models for inspiration, advice and contacts as mentorship for experience, sound business practices and entrepreneurial morale are instrumental in business start-up and survival.

2.3.6. Description and components of structural variables

While there are many structural variables, participation in STEM and social prejudice are often highlighted as some of the main determinants in explaining and hindering

individuals' participation in venture creation. These two structural variables are elaborated in subsequent sections.

2.3.6.1. Participation in Science, Technology, Engineering and Mathematics (STEM)

The fields of STEM have been traditionally dominated by males worldwide. In the USA as well as in other countries, women continue to be underrepresented compared to men in the STEM fields (Liu, Lou & Shih, 2014). Liu et al. (2014) elaborate further that the amount of bachelor's degrees in engineering awarded to American women between 1995 and 2010, increased from 17.3% to 20.1%, but only 11% of the working engineers are women. Perhaps the teaching of science unrelated to reality including the high intellectual engagement demands on students who enrol in these courses explain the differential participation in such courses (Tremblay, Lalancette & Roseveare, 2014). Previous studies show that the percentage of young men interested in a STEM career remained stable during the high school years, while that of young women with similar interest declined (Richardson, 2016). To further compound this challenge, young women tend to believe that Science and Technology are not relevant to their future career goals and prefer to learn in a more realistic social context where they see connections between school assignments and the real world. This perhaps, explains women's underrepresentation in STEM fields, and even though more women are completing science degrees such as biological and agricultural sciences than before, they continue to be dramatically underrepresented in computing and engineering -subjects that are in greater demand in the labour market (Saville, 2014).

2.3.6.2. Social prejudice

Social prejudices are also at the centre of women's discrimination in both STEM subjects and with regards to participation in entrepreneurship. Most people associate both the Science and Mathematics fields with males and the humanities and arts fields with females. Implicit bias is even common among individuals who reject these stereotypes and this bias affects individuals' attitudes towards female involvement in STEM and technically oriented entrepreneurship. It can be assumed that the traditional dominance of patriarchy, which entrenches the reproductive role of women and questions their role as breadwinners and creator of ventures (Rambe & Mokgosi, 2016; Rambe & Moeti, 2017) contributes to such stereotyping and prejudicing of women in business. The over-burdening of women with multiple family and household

roles also explains their limited participation levels in both STEM and entrepreneurship. Raidimi (2014) and Husselmann (2016) argue that women performed the three traditional roles in society: reproductive, productive and community management roles. This triple burden forecloses opportunities for women engagement in important disciplines such as STEM and by extension participation in technically oriented entrepreneurship.

2.3.7. Perspectives on structural variables

Bureaucratic, cultural and meritocratic perspectives are often advanced to explain women's limited participation in STEM and in entrepreneurship. The bureaucratic perspective identifies national governments' limited commitment to providing large budgetary allocations as the reason behind the inadequacy of gender mainstreaming of STEM disciplines as well as limited funding for female participation in entrepreneurship. The cultural perspective underlines the role of social prejudices in undermining female involvement in both STEM subjects at tertiary institutions and in businesses start-ups. Social prejudices define women as not innovative, unable to run technological ventures due to their limited exposure to STEM subjects in high school and at universities, and ultimately incapable of participating in entrepreneurial activities (Botcherby & Buckner, 2012). Hechavarria and Ingram (2016) have emphasised the fact that women are less motivated to pursue entrepreneurship than men because of the discrimination they usually encounter within the society at large. This is evident in the ethnic entrepreneurship as noted in the way some African cultures deny women the space to work independently and limit the possibility of the women becoming entrepreneurs. Hence, where patriarchy reigns supreme, men may be more predisposed to getting family and structural support than their female counterparts if they aspire to become entrepreneurs.

2.3.8. Global studies on structural variables and venture creation

It seems as if social prejudices available globally shape male and female students' perceptions towards their capacity to participate fully in STEM disciplines as evidenced in the observations from the US and Japanese contexts outlined below. These attitudes tend to permeate prospects of science achievement for US students. The

alternative view is that pedagogical strategies shape and inform students' interest in STEM disciplines. Research has found that students often begin school with a strong interest in science but that interest progressively dissipates owing to the way science is taught in US schools and universities (Cheryan, Siy, Vichayapai, Drury & Kim, 2011). The argument is that science is often taught in a decontextualised, impersonal and theorised manner, which distances its essence from the natural reality. Men are reported to outnumber women (73% vs. 27% overall) in all sectors of employment of Science and Engineering (S&E) in the United States (De Welde, Laursen & Thiry, 2007). Although women fill close to half of all jobs in the USA's economy, they hold less than 25% of STEM jobs (American Association of University Women [AAUW], 2013). The same gender disparities persist when it comes to graduations in STEM in Japan (Lindemann, 2015) The gender gap in engineering, manufacturing and construction degrees is particularly large in Japan where only 11% of the graduates are female (Organisation for Economic Co-operation and Development [OECD], 2013).

2.3.9. Studies on structural variables and venture creation in South Africa

As already noted, social prejudice and skewed participation in STEM are considered as some of the structural variables that shape the uptake of entrepreneurship in South Africa and the rest of the world. Historically, women have been underrepresented in S&E occupations in South Africa (Price, 2010) and this has implications for their limited visibility in Science and Technology-oriented occupations and STEM-based entrepreneurship. Attempts have been made to increase the number of women in these occupations as noted in the introduction of various recent policies that focused on increasing the number of females who enter college in STEM fields (Price, 2010). These interventions include increasing female enrolment in STEM disciplines and gender mainstreaming programmes aimed at increasing female effective participation in these disciplines. Yet despite these programmes, women continue to be under-represented at both the levels of enrolment at tertiary levels and creation of new technology-oriented ventures. For instance, only 31% of those taking a first Computer Science course are women compared to Psychology, in which 61% of first-takers are women (Rask, 2010). Furthermore, women have also remained under-represented with regards to participation in Science and Technology-oriented ventures.

2.4. Constitution of venture creation

The concept venture creation is discussed under various segments. These include definition of venture creation, venture creation outcomes, perspectives, theories, importance of venture creation and the practical application of such concepts in global and South African scenarios.

2.4.1. Definition of venture creation

Eroğlu and Piçak (2011:146) define entrepreneurship as “the practice of starting new organisations or revitalising mature organisations, particularly new businesses generally in response to identified opportunities.” Entrepreneurship is the factor that creates wealth by combining existing production factors in new ways. Broad definitions of entrepreneurship do not only emphasise the creation of new business ventures, but also emphasise attitudes and behaviours that are valuable in various contexts (Rauch & Hulsink, 2015). Finally, a narrower definition of entrepreneurship emphasises the creation of new organisations (Rauch & Hulsink, 2015).

2.4.2. Outcomes of venture creation

The products of venture creation include, SMMEs, large corporations and partnerships. However, the focus of this study is on technology-oriented SMMEs, especially internet cafés. This is elaborated in the subsequent section of this study.

2.4.2.1 SMMEs

The creation of SMMEs cannot be dissociated from the high rate of unemployment in South Africa. This high unemployment rate compelled the South African government and other policy making bodies, such as the Department of Trade and Industry (DTI), to place SMME development at the centre of unemployment and poverty alleviation programmes. The persistent argument is that the incubation of new businesses and the expansion of existing ones is instrumental to the creation of employment, generating income and eliminating income inequalities. Amra, Hlatshwayo and McMillan (2013) highlight that one of the best ways of addressing unemployment is to influence the employment creation potential of SMMEs and to endorse SMME development. SMMEs are indeed of great significance to the economy as they

encourage economic activity, growth and creation of job opportunities in all sectors of the economy. Mbuyisa and Leonard (2015) assert that SMME development is a poverty alleviation mechanism that better the living standards of South African citizens. Hence, the focus on SMMEs growth is central to employment and economic growth as clearly stated by Amra et al. (2013) and Nkwinika and Munzhedzi (2016) in their observation that South Africa has prioritised the promotion and development of SMMEs since the beginning of democracy to boost economic growth, absorb the labour force and create powerful as well as functional markets.

2.4.3. Perspectives on venture creation

Alvesson and Billing (2009) provide two interesting perspectives with regards to the relationship between gender and venture creation and these are equal opportunities and meritocracy perspectives.

- *Equal opportunities perspective*: The equal opportunity perspective considers 'legitimate' explanations for a lower degree of female involvement in venture creation, entrepreneurship and in senior jobs, such as lower investment in a managerially relevant education and other priorities than an entrepreneurship or managerial career (Alvesson & Billing, 2009).
- *Meritocracy perspective*: While the equal opportunities argument looks at obstacles and possibilities from an ethical political point of view, a meritocratic argument is interested in combating the irrational social forces that prevent the full utilisation of the qualified human resources [especially women] and thus strive for an increase in effectiveness. (Alvesson & Billing, 2009).

Meritocratic perspectives on entrepreneurship focus on the reality that while the numbers of women entrepreneurs have risen rapidly in recent years, their businesses tend to be located in specific sectors, especially those with lower entrance requirements, such as retail and services. Women are only beginning to have a growing presence in traditionally-male dominated sectors, such as the technology sector. Smit and Watkins (2012) agree that there is still a need for more women to enter the technology business market as male owned businesses outnumber the

female owned businesses. The meritocratic perspective, therefore, seeks to develop gender inclusive policy strategies and other interventions that increase the presence and inclusion of women in previously male dominated business at all levels: pre-start up, post start-up and further development stages of business incubation.

2.4.4. Theories of venture creation

The theorisation of venture creation has been conducted from the entrepreneurship perspective and the associated process giving rise to venture creation. Much of the focus has been given to the work of prominent theorists such as Richard Cantillon and Joseph Schumpeter, whose ideas are discussed in the sections that follow.

2.4.4.1. Cantillon Theory 1755

In 1755, Richard Cantillon defined the entrepreneur as someone who engages in exchanges for profit and exercises business judgment in the face of uncertainty. The Cantillon theory does not view the entrepreneur as a production factor but as an agent that takes on risk and in the process equilibrates supply and demand in the economy. In a neo-classical framework, this function resembles that of the optimising residual claimant, in which the business owner, who for example, rents labour and capital from workers and land owners in a world of uncertain demand or production (Bula, 2012). Brown and Thornton (2013) state that Richard Cantillon is credited with the innovation of economic theory and was the first to fully contemplate the critical role of entrepreneurship in the economy. They also note that Cantillon described entrepreneurship as pervasive and assigned the entrepreneur with an essential role in the economy. Cantillon indeed viewed the entrepreneur as responsible for all exchanges and circulations in the economy. Hence, Cantillon's entrepreneur is an individual that equilibrates supply and demand in the economy and at the same time deal with the risks associated with the entrepreneurial ventures.

2.4.4.2. Schumpeter Theory 1934

Schumpeter considers entrepreneurship as innovation and not an artificial engagement (Bula, 2012). Bula (2012) further posits that the Schumpeterian theory presents the entrepreneur as someone who changes the economy out of static equilibrium. Schumpeter's influential contribution to entrepreneurship thought is

illustrated in the theory of economic development that portrays entrepreneurial activity as critical to economic development through the creative and innovation it unleashes in markets (Schumpeter, 1934). In Schumpeterian terms, innovation and the entrepreneurship, are the twin engines of creative destruction. According to Schumpeter (1934) and Marinova and Borza (2013), entrepreneurs bring about improvements and consequently imbalance through effecting new combinations, such as new goods, new production methods, new markets, new supply chain and re-organising business activity. This also indicates that entrepreneurship involves creativity that is shown in generating and implementing new ideas appropriate to venture creation. Nonetheless, the process of creativity does not begin or end with entrepreneurship. Instead, it predates and outlives the new venture (Ndofirepi, 2016).

2.4.5. Importance of venture creation

Venture creation is conceived as a significant driver of the economy. Statistics South Africa [Stats SA] (2016) reports that business creation is the main job generator; a condition that is very critical for South Africa owing to the high rates of youth unemployment. Venture creation is also viewed as a rock bed for national economic growth. The growth is realised through the higher market competition and increased productivity that is realised through the appearance of new entrepreneurs (Guerrero & Peña-Legazkue, 2013). Furthermore, Guerrero and Peña-Legazkue (2013) assert that new ventures can bring greater productivity into the market and a sophisticated amount of innovation through the growth of new technologies. Hence, just as entrepreneurs, are creators of ventures who take risks, they also capture opportunities, and transform social, economic, and physical resources into investment.

2.4.6. Global studies on venture creation

The venture creation debate is deemed incomplete without reference to the USA, the largest economy in the world. Between 1993 and 2011 small firms, defined in the United States as having fewer than 500 employees, created 64% (or 11.8 million of 18.5 million) of the net new jobs in that country. The USA has long been viewed as possessing the world's most entrepreneurial, dynamic, and flexible economy (Decker, Haltiwanger, Jarmin & Miranda, 2014). It is often argued that this dynamism and

flexibility has enabled the American economy to adapt to changing economic circumstances and recover from recessions in a robust manner (Decker et al., 2014) and it SMMEs have an integral role to play in such dynamism. Small firms are also the most important source of job creation in the European economy. The conventional wisdom is that small businesses and start-ups are the primary net creators of jobs in Europe just like in developing countries (Haltiwanger, 2012).

2.4.7. Studies on venture creation in South Africa

South Africa's venture creation rate is disturbingly low. Unproductive management during start-up has been identified as one of the critical factors that lead to a low venture creation rate (Dzansi, Rambe & Coleman, 2015). This low venture creation frequency has impacted negatively on the entrepreneurial intention rate in South Africa as evidenced in the 2013 decrease from 15.4% to 10.9%. While subsequent years may have posted some positive gains, venture creation generally remains a grave concern for both academics and policymakers in South Africa (Dzansi et al., 2015). One can, therefore, conclude that South Africa is not making much progress with regards to venture creation. Evidence confirms the untapped potential of the sectors and affirms the projection that the South African economy can grow by 5% over the next five years if government and the private sector invest 12 billion in 3 000 small businesses (South African Government, 2016). Nonetheless, Herrington and Kew (2014) suggest that the existence of limited government resourcefulness undermines entrepreneurship.

2.5. Proposed conceptual framework

The subsequent section postulates the relationship among personal demographics, institutional and structural determinants and venture creation.

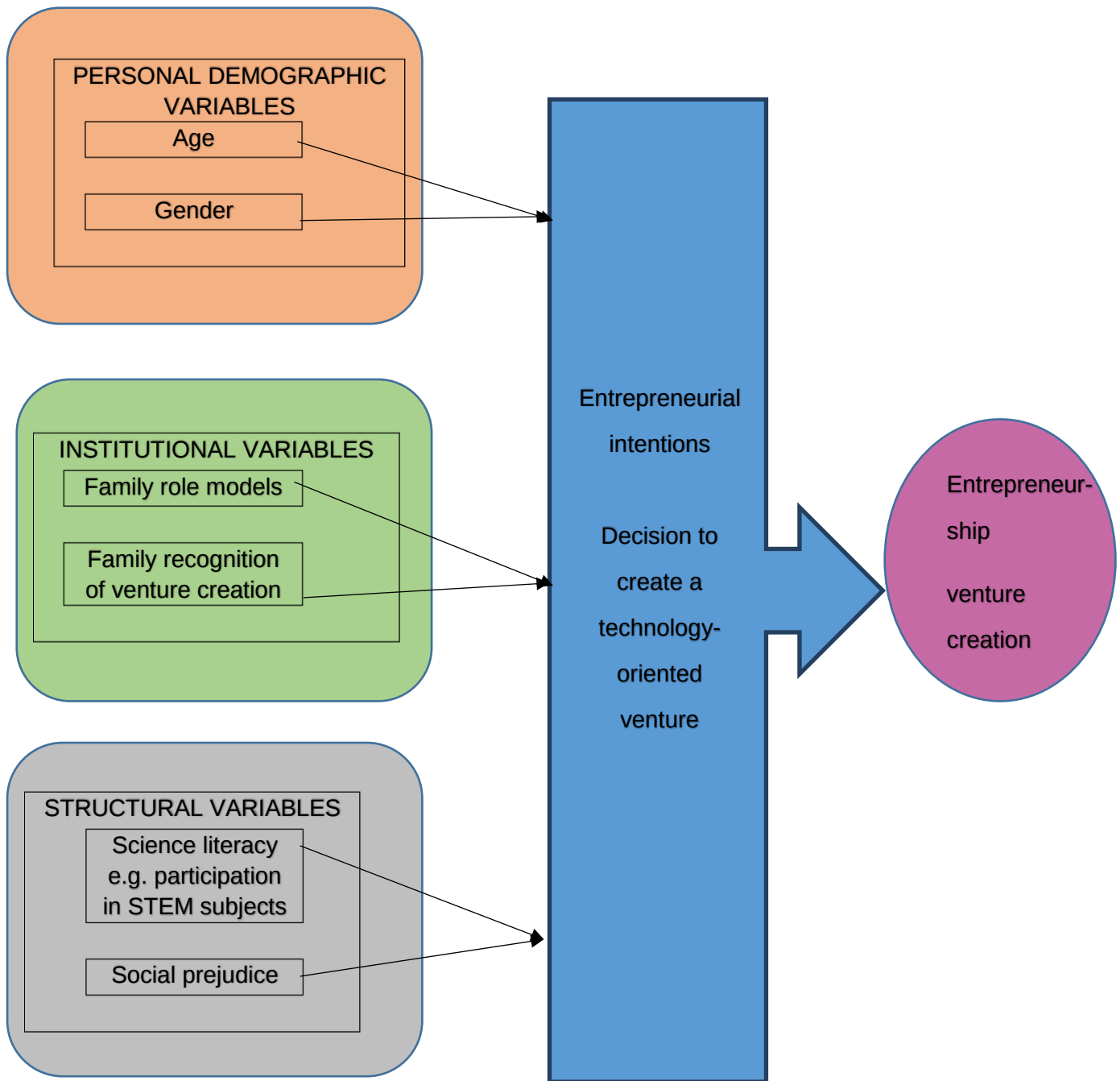


Figure 2.1. Proposed Model: Relationships among variables and venture creation

The conceptual model adopted in this study draws on the personal demographic (such as age and gender), institutional and structural variables already identified in the literature review, which are considered to shape and influence venture creation. From a gender perspective, Sánchez (2011) and Rambe and Mokgosi (2016) report that men feel more capacitated and disposed to create a venture than women due to institutional and financial support systems that tend to favour them at the expense of women.

Family support system is also central to enhancing the creation of ventures. Family businesses can assist in the establishment and funding of new businesses and the growth of existing ones, thus showing their critical role in spurring economic development and growth (Saeid et al., 2014). There is a great likelihood that people who benefit from family support in their business start-up stage will excel at creating and sustaining their businesses than those that are left to fend for themselves. Growing up in an entrepreneurial family offers the opportunity to learn from the self-employed parents who may serve as role models and assist in getting a realistic preview of self-employment. Furthermore, Chlosta et al. (2012) assert that the decision to become an entrepreneur is correlated positively with having parents who are or were entrepreneurs, and is often interpreted as the effect of parental role models. However, family role models may not pervade the entrepreneurial space. Bosma et al. (2012) state that only 25% of all role models mentioned by entrepreneurs with entrepreneurial parents come from within the family.

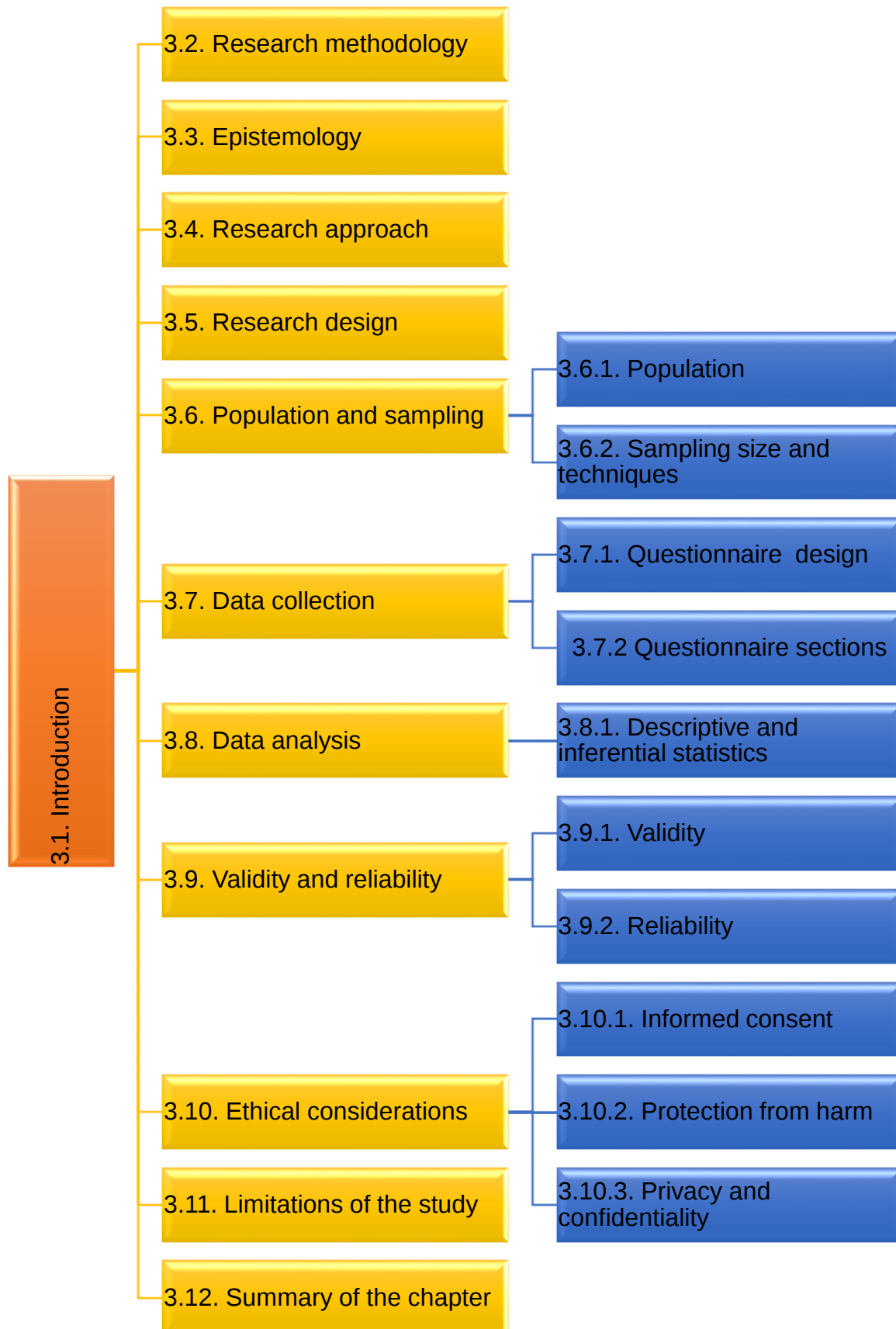
The full participation of females in technology-oriented business depends on their exposure to and prior experience in such businesses. Rambe and Mokgosi (2016) argue that there is still a need for more women to enter the technology business market as male owned businesses continue to outnumber the female owned businesses due to social prejudices and patriarchy. Full participation of women in technological businesses in particular markets can be problematic as women often lack STEM subjects in higher education to prepare them for technology-oriented businesses. Therefore, personal demographics, institutional and structural variables collectively combine to shape the intentions to create intentions to create ventures and ultimately entrepreneurship.

2.6. Summary of the chapter

This chapter provided an integrated perspective on determinants of venture creation. It has been noted that a clear picture of the integrated perspective to venture creation can never be logically created, owing to the fragmented focus available in current literature on determinants of venture creation that either covers micro, meso or macro factors independently.

These factors were organised around micro variables (covering personal demographic factors such as age and gender), meso variables (covering institutional factors such as family role models and family recognition venture creation) and macro variables (covering structural factors encapsulating social prejudice and SMME owner/manager participation in STEM subjects) in an attempt to develop a comprehensive narrative of these determinants. The chapter also drew on empirical studies in order to provide a more complex analysis of each factor by unpacking the components of each variable, its theorisation and the perspectives that underlie it and its practical operation in relation to venture creation. The detailed studies also considered global, continental and national studies as they relate to each of these variables. The next chapter will provide a detailed discussion of the methodology adopted in this study.

CHAPTER THREE: RESEARCH METHODOLOGY



3.1. Introduction

The preceding chapter reviewed the literature on the influence of personal demographics, institutional and structural variables on the creation of technology-oriented ventures (i.e. internet cafés) in the Mangaung Metropolitan Area and Matjhabeng local Municipality in the Free State Province of South Africa. This chapter, however, outlines the research methodology adopted in this empirical study. The chapter outlines the epistemological stance, research approach, research design, target population, sampling strategy, research instruments and procedures adopted in the data collection process. It also describes the data analysis and the ethical considerations applied to the study.

3.2. Research methodology

A research methodology describes the comprehensive approaches, procedures and methods used in a given study to collect, analyse and report on research data. Singh and Nath (2010) note that a research methodology involves general activities such as identifying the research problem, reviewing literature, formulating research hypotheses, the procedures for testing hypotheses, data collection, analysing data, interpreting results and drawing conclusions. For the purpose of this study, the research methodology provided an overarching perspective on all the research processes, procedures and techniques that the research employed in the collection, analysis, reporting and interpretation of research data.

It should be noted, as stated by Leedy and Ormrod (2010), that the prevalence of various research methodologies necessitates the researcher to consider both the nature of the research problem and that of the data to be collected before selecting a methodology. Nonetheless, if a methodology is viewed as a strategy, plan, or a process of adopting a particular method and linking the choice of methods to the preferred outcome (Tight, 2013), then there is scope to align the detailed process of data collection to the phenomenon under investigation and the constitution of the research results.

3.3. Epistemology

Neuman (2011:93) defines epistemology as “an area of philosophy concerned with the creation of knowledge, which focuses on how we know what we now and what are the

most valid ways to reach the truth". Positivism affirms the significance of replicating the natural sciences methods and techniques and the use of deductive reasoning to generate knowledge and arrive at the truth. Epistemology is often used interchangeably with the term paradigm, even though epistemology emphasises how knowledge is produced in relation to the knower, while the latter has more to do with the assumptions and perspectives that drive and inform research. A paradigm is a general organising structure for the theory and research that embraces basic assumptions, key issues, models of quality research, and methods for seeking answers (Neuman, 2011; Nieuwenhuis, 2016). This means that all research needs a foundation for its investigation and researchers need to be aware of the implicit world views they bring to their studies. Furthermore, Nieuwenhuis (2016) states that a paradigm addresses essential assumptions such as beliefs about the nature of reality (ontology), the relationship between knower and known (epistemology) and assumptions about methodologies.

Although, the classifications of research epistemologies is widely contested, there is a general consensus that there are three ways of conceptualising research paradigms which are positivism, pragmatism and interpretivism. The interpretivism is referred to as constructivism for the reason that it emphasises the capability of the individual to construct meaning at the philosophical level. The interpretivist paradigm is greatly influenced by hermeneutic and phenomenology (Nieuwenhuis, 2016). Furthermore, the interpretivist paradigm seeks to study people in their social context or natural environment, giving them greater opportunity to understand the perceptions they have of their own activities (Nieuwenhuis, 2016).

Straddling between interpretivism and positivist epistemologies is pragmatism. Ivankova, Creswell & Plano Clark (2007) affirms that pragmatism has been considered the best philosophical foundation for justifying the combination of different methods within one study. Following a pragmatic approach broadens the meta-perspective within the pragmatic viewpoint, permitting the researcher to address the predetermined research questions by applying methods that yield both quantitative and qualitative data, as long as these yield meaningful data (Ivankova et al., 2007).

Positivism is an epistemological position that advocates the application of the methods of the natural sciences to the study of social reality (De Vos, Strydom, Schulze & Patel, 2011; Bryman, 2012). The paradigm suggests that scientific knowledge is arrived at through the accumulation of verifiable facts, which emerge in controlled settings. Furthermore, De Vos et al. (2011) state that positivism maintains that it is possible and essential for the researcher to adopt a distant, detached, neutral and non-interactive position to research elements to ensure the reliability and validity of results. This study adopts a positivist approach in order to explore the relationships between personal demographic, institutional, and structural variables and the creation of technology-oriented ventures. The positivist epistemology uses a scientific approach to determine the particular nature of cause and effect of relationships (Collins, 2010; Bryman & Bell, 2011). This study is not concerned with the cause and effect of relationships per se but rather the relationships of association between the aforementioned predictor (i.e. personal demographics, institutional, and structural variables) and outcome variables (venture creation) and their effect size thereof.

3.4. Research approach

Research approaches are plans and the procedures for research that extent the phases of research from extensive assumptions to detailed methods of data collection, analysis and interpretation (Creswell, 2014; Maree, 2016). There are three approaches for conducting research: qualitative, quantitative and mixed methods. According to Creswell (2014), qualitative research is used to understand and explore the meaning which individuals or groups assign to social or human problems. It is a method of inquiry employed traditionally in the social sciences but also in market research and other contexts. Mixed method approach is a research design that builds on both qualitative and quantitative strands to overcome the fundamental weakness of both approaches (Teddlie & Tashakkori, 2009; Creswell & Plano Clark, 2011). Quantitative research is a procedure that is systematic and objective in its ways of using numerical data from only a designated subgroup of a universe (or population) to generalise the findings to the universe that is being studied (Maree, 2016). Furthermore, Muijs (2011) and Sulaiman and Kura (2012) posit that quantitative research involves the numerical representation and manipulation of observations for the purpose of describing and explaining the phenomena that those observations reflect. Given the study's preoccupation with understanding determinants of venture

creation and the relations of association between these determinants and venture creation, the quantitative approach was used to enable the exploration of the relational aspects of variables.

3.5. Research design

Babbie (2013), Sreejesh, Mohapatra, and Anusree (2014) and Pandey and Pandey (2015) describe a research design as a plan or blueprint that outlines how one plans to conduct the research within an appropriate mode of inquiry and with a view to generate the most valid and accurate answers to a given set of research questions. This means that a research design is the exact method that a researcher adopts to collect, analyse and interpret data. In addition, Creswell (2014) describes a research design as an investigation within the approach that provides specific directions to the procedures used in the research. As such, a research design focuses on the research process, tools and processes used and the specific tasks required for data collection. In line with the quantitative research approach, a survey design was adopted for the study. According to Curtis and Curtis (2011), survey research is effective in identifying and examining general patterns on respondents' perspectives and opinions about a particular subject without having to deal with the entire population. This approach was relevant to this study because it allowed for the generation of quantitative information on internet café owner/managers' perspectives and views on the personal demographic, institutional and structural influences on venture creation. The same approach also allowed for the generation of information which was used in making some statistical interpretations and inferences about the Free State Province based on the targeted sample of internet cafés owner/managers (i.e. those operating in the Mangaung Metropolitan Area and Matjhabeng Local Municipality).

In addition, the survey design was deemed appropriate for this study as it accommodates the quantitative base line data on the personal demographic composition of owner/managers of technology-oriented ventures.

3.6. Population and sampling

A study population should be established after the choosing of an appropriate research design and a sample must be selected out of this population. It is indeed usually impossible to include the whole population in a study due to time and cost constraints.

In view of the difficulty of studying each of the population elements, a sample that is representative of the population studied should be selected. The subsequent sections of the study discuss the study population and sample.

3.6.1. Population

Babbie (2013) and Skott and Ward (2013) state that the population of a study contains the entire set of individuals or objects from whom the researcher wants to draw a conclusion. This group is also referred to as a target population and as such it is very important for a researcher to carefully and completely define this target population. In addition, Babbie (2013; 2014) states that a population is a group of elements or cases, whether individuals, objects or events that conform to specific criterion and to which a researcher intends to generalise the results of the study.

With regards to this study, the general population consists of owner/managers of internet cafés in the Mangaung Metropolitan Area and the Matjhabeng Local Municipality. The personnel of Free State Development Corporation (FDC), a funding agency that provides financial and technical support to SMMEs, indicated that there was no database for the internet cafés as these businesses tend to fold within the first three years of their existence or continually shift their locations in search of cheaper premises and a larger customer base. The FDC personnel also indicated that most of the internet café businesses are not registered with them, hence the difficulty of establishing an official data base for these businesses. However, the FDC estimated that there might be 95 internet cafés within the chosen study area. The researcher managed, during the field research, to locate 91 internet cafés and then distributed the structured questionnaires to the owner/managers of all these internet cafés.

3.6.2. Sampling size and techniques

The study population cannot be comprehended fully without reference to the sampling. Tischler (2014) states that sampling is a research technique that enables investigators to study a manageable number of people, known as the sample, who would have been selected from a larger population or group. This means that a group/subjects (i.e. objects or individuals who participate in the study) are usually referred to as a sample.

There are two major sampling categories, which are probability sampling and non-probability sampling (Leedy & Ormrod, 2014). In accordance with the quantitative methods approach, the original intention of the study was to use probability sampling. Procedures are used in probability sampling to ensure that each person in the population has a known chance of being selected to be part of the sample (Stangor, 2015). As a result, probability samples fulfil the requirements for the use of the probability theory to accurately generalise sample results to the population.

The researcher identified and considered a small population for the study. As a result, a census was adopted for this study and all the 91 internet cafés owner/managers were considered. A census is considered suitable when the entire population is very small and making it rational to include the entire population in the study. Check and Schutt (2012) posit that a census is a research in which information is obtained from the responses of all available members of an entire population. Of the 91 questionnaires distributed, 58 questionnaires were completed and returned, thus representing a response rate of 63.7%. Baker (2012) reports that a response rate of 50% is considered as sufficient to allow for detailed analysis. Therefore, a response rate of 63.7% was conceived as adequate for the conducting of a detailed analysis.

3.7. Data collection

Quantitative data collection methods were employed in consistency with the positivist epistemology. A structured questionnaire, which consists of closed-ended questions, whose purpose were to gain internet café owner/manager's perspectives and views on the influence of personal demographic and social variables on venture creation, (Delpont & Roestenburg, 2011) was used. Stangor (2015) states that quantitative data is collected using systematic methods and the data are analysed using statistical techniques.

Five point Likert scale questions, which are the widely used for asking respondents about the extent of agreement with statements (Maree & Pietersen, 2016) were employed in this study. A Likert scale is an ordinal measure of a person's attitude or perception towards a subject of interest (Maree & Pietersen, 2016).

3.7.1. Questionnaire design

A brief description of what a questionnaire is and its appropriateness for this investigation is needed since a questionnaire was employed in this study. Stangor (2015:108) defines “a questionnaire as a set of fixed-format, self-report items that is completed by respondents at their own pace, often without supervision”. Questionnaires commonly comprise of a number of measurement scales, closed questions that provide valuable quantitative data on demographic and other variables. McMillian and Schumacher (2010) also view the use of a questionnaire as relatively economical because it has the same questions for all subjects and can ensure anonymity.

3.7.2. Questionnaire sections

The questionnaire was designed using structured questions. It consisted of 64 items on a Likert scale format. In addition, the questionnaire was developed basing on the research questions extracted from the proposal. It also drew on concepts noted in the outlining of the study’s literature review. The questions were divided into four sections as presented below.

Section A: This section sought to collect personal demographic data. As a result, the questions requested information about the SMME owner/managers’ gender, age, race, nationality, highest academic education, roles in their businesses and the nature of business ownership.

Section B: This section collected data on family role models and family recognition of venture creation.

Section C: This section collected data on STEM and social prejudice variables, which are the other determinants of venture creation.

Section D: This section collected data on venture creation.

3.8. Data analysis

Data analysis is the process through which large, complicated collections of scientific data are organised so that comparisons can be made and conclusions drawn (Tischler, 2014). The data obtained from the structured questionnaires were numerically coded. Numerical coding here involves entering and sorting data using the software, Statistical Package for the Social Sciences (SPSS). Once numerically coding was done, descriptive statistics were presented. Fouché and Bartley (2011) state that the purpose of analysis is to reduce data to an understandable and interpretable form so that research problems can be studied, research questions addressed, research hypotheses tested and conclusions drawn. A significant characteristic of the data analysis is the decision on how to present the data. For this study, the descriptive statistics such as frequency tables and graphs. The study also employed inferential statistics such as correlation and regression analysis for detailed data analysis. These analyses are elaborated on in subsequent sections.

3.8.1. Descriptive and inferential statistics

Descriptive statistics do exactly what they purport to do; they convert a set of numbers or observations into directories that describe or characterise and present data (Cohen, Manion & Morrison, 2010; McMillan & Schumacher, 2010). Descriptive statistics are used to summarise, or organise and reduce large numbers of observations into interpretable summaries (Jackson, 2012). In addition, descriptive statistics provide descriptions of the characteristics of data collected (Leedy & Ormrod, 2014) by examining the frequency and patterns of responses. Nonetheless, for purposes of this study, an experienced statistician was employed to develop the descriptive analysis of the coded data. Descriptive statistics such as frequency tables and graphs were also used to summarise and present descriptive data.

Inferential statistics, namely correlation and regression analysis, were also conducted as part of the detailed analysis. Inferential statistics seek to use the sample data to generalise or draw conclusion about the population (Stangor, 2015; Pietersen & Maree, 2016). Correlation analysis is employed to explore the relations of association between the variables under investigation, while a regression analysis is vital for predicting the relationships between variables and their associated effect sizes. Therefore, a correlation analysis was adopted to describe the relationships between personal demographic, institutional, and structural variables and venture creation. Regression analysis was, nevertheless, used to predict the relationship between opportunity identification on institutional and structural variables, risk taking on institutional and structural variables, resource mobilisation on institutional and structural variables and implementation of business decisions on institutional and structural variables.

3.9. Validity and reliability

To obtain valid and reliable data, one must make sure that the measurement procedures and instruments of measurement to be used have adequate levels of reliability and validity (Delpont & Roestenburg, 2011). Furthermore, Delpont and Roestenburg (2011) and Pietersen and Maree (2016) describe measures of validity and reliability as dealing with designing measures and instruments that will allow generalisability of results and an internal consistency of measures.

3.9.1. Validity

Jackson (2012) and Babbie (2014) refer to validity as an extent to which an empirical measure adequately reflects the meaning of the concept under consideration. For this study, the researcher set up a questionnaire that was mainly informed by relevant literature relating to each of the concepts that formed the basis for this study. The researcher ensured content validity by sending the research instrument to the supervisor and statistician to cross check the completeness of the constructs and the scales applied to it. The supervisor and statistician commented on the instrument and their comments were incorporated into the design of the final research instrument.

3.9.2. Reliability

Reliability is a matter of whether a particular technique, applied repeatedly to the same object yields the same result each time (Babbie, 2013). It means that a reliable measurement procedure will produce the identical (or nearly identical) measurements if the same objects or programmes or participants are measured repeatedly under similar conditions. The measures of reliability of each of the Likert scaled constructs were calculated to determine their level of internal consistency. The Cronbach's alpha coefficient was also used as an indicator of how the questions that form a construct measure the same variable. A Cronbach's alpha coefficient of at least 0.700 indicates adequate internal consistency and hence reliability. The reliability statistics are presented in Table 4.1 of Chapter 4.

3.10. Ethical considerations

Ethics are generally concerned with beliefs about what is right or wrong, good, or bad or proper or improper (McMillian & Schumacher, 2010; Babbie, 2013). Furthermore, Navran (2010) and Maree (2016) state that the essential ethical aspects are issues relating to informed consent, protection from harm, protection of privacy and the maintenance of the confidentiality of the results of the study. These issues and how they were applied in this study are elaborated in subsequent sections.

3.10.1. Informed consent

As stated by Jackson (2012), informed consent is attained by providing the participants with an explanation of the research, an opportunity to terminate their participation at any time with no consequence and full disclosure of any risks related to the study.

In the case of the current study, the researcher first sought clearance of the research from the Business Research Committee (BRC) and the Faculty Research and Innovation Committee (FRC) before the conduct of this study. Thereafter, the researcher developed an informed consent form, which served as the cover page of the questionnaire, which clearly specified the rights of respondents, their anonymity and the purpose of the research. Informed consent may be the most important requirement and an informed consent form or letter might be one tool that guarantees the informed consent of participants (Salkind, 2009). Furthermore, Stangor (2015)

state that gaining informed consent implies that adequate information on the goals of the investigation including the procedures which will be followed during the investigation is availed to respondents. Thus, the researcher requested written consent from all the internet cafés owner/managers who participated in this study. The informed consent form appraised participants of the objectives of the study and expected academic benefits of respondents' participation in the study.

The researcher also explained to participants that participation in this study was voluntary. Internet cafés owner/managers were given the freedom to withdraw from the study at any time without any sanctions. Anonymity of respondents was guaranteed by ensuring that information obtained from questionnaires was treated confidentially and reported anonymously and in aggregate form to protect the individual identities of participants.

3.10.2. Protection from harm

One of the research ethics requirements is that research should never result in physical or mental discomfort, harm or injury to the participants (McMillian & Schumacher, 2010; Babbie, 2013). One may accept that harm to respondents in the social science will be mostly of an emotional nature, although physical injury cannot be ruled out completely. Furthermore, McMillan and Schumacher (2010) state that protection from harm involves the revelation of information that may result in embarrassment or danger to home life, academic performance, friendships of respondents and other direct negative consequences. The questionnaires were administered by the researcher in the presence of the research respondents and this ensured that questionnaires were duly completed and any clarifications required by the respondents given by the researcher.

3.10.3. Privacy and confidentiality

Any research study should respect the involved participants' right to privacy. Under no circumstances should a research report, whether oral or written, be presented in such a way that others become aware of how a particular respondent has responded or behaved (Leedy & Ormrod, 2014). In view of this, the results were reported in

aggregate form to protect the respondents' individual identities. Furthermore, McMillian and Schumacher (2010) and Jackson (2012) state that the protection of the privacy of research respondents means that access to respondents' demographic characteristics, responses, behaviour and other information is restricted to the researcher. The researcher, therefore, made sure that the respondents' responses to the questionnaire stayed with the researcher and no one knew what the individual responses were about. This was done by ensuring that any identity-related information, such as phone numbers, name of their organisation and its geographical location, was removed during data entry, to make the data entry report completely anonymous. Both the data entry report and the detailed analysis report were also kept secured on the researcher's personal password protected laptop. Hard copies of the completed questionnaires were kept in a secure place and later shredded after the detailed analysis.

3.11. Limitations of the study

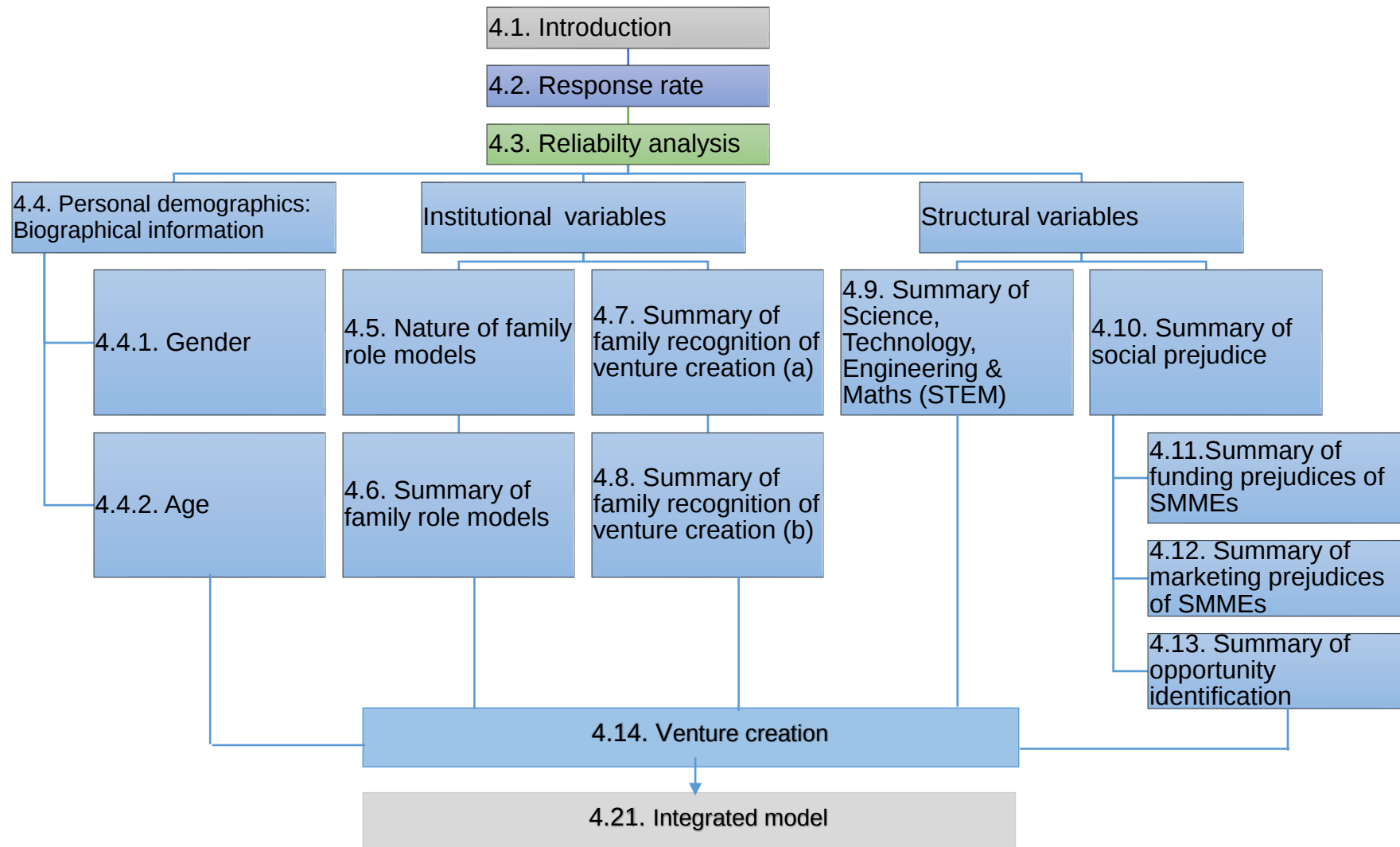
The researcher was compelled by time and financial constraints to conduct the research only in the Mangaung Metropolitan Area and Matjhabeng Local Municipality. Therefore, the extent of generalisation of the study's findings is limited as the research employed a census involving a small sample size. Since voluntary participation was ensured at all times, there is nothing the researcher could do when respondents refused to participate in the study. A sizable number of respondents cited pressing work commitments and the need to be compensated for lost time as their main reasons for non-participation in this study. This contributed directly to the low response rate to this study as respondents/participants were under no obligation to fill out the questionnaire.

3.12. Summary of the chapter

This chapter discussed the research methodology used in this study. The research methodology followed a positivist epistemology. The chapter also outlined the research approach and design, population, sample size, techniques, data collection, data analysis and ethical considerations. Issues relating to the validity and reliability of the questionnaire were also discussed.

The next chapter discusses the empirical findings of the study.

CHAPTER FOUR: OWNER/MANAGERS' PERSPECTIVES ON THE INFLUENCE OF MICRO, MESO AND MACRO VARIABLES ON VENTURE CREATION



4.1. Introduction

The preceding chapter provided an outline of the methodology and research design employed in this study of the relationships among personal demographic, institutional and structural variables on the creation of small technology-oriented ventures, such as internet cafés. The previous chapter also underscored that the location of the study was within the Mangaung Metropolitan Area and Matjhabeng Local Municipality. This Chapter, however, presents and discusses the results of the empirical study drawing on mainstream literature. The response rate and sample personal demographics are presented first, followed by the owner/managers' perceptions on the influence of micro and macro variables on venture creation.

4.2. Response rate

The Free State Development Corporation (FDC), the funding agency that supports small, micro and medium enterprises (SMMEs), estimated the number of internet cafés in the Mangaung Metropolitan Area and the Matjhabeng Local Municipality to be 95 entities. The absence of an exact record on the number of internet cafés in these areas could be attributed to the low survival rates of such small businesses due to financial constraints, managerial incapacity, lack of entrepreneurial competence, their small market base and lack of market research. Collectively, these factors undermine the profitability and growth prospects of these businesses, which result in high closure rates and disappearance of such businesses.

In view of the foregoing discussion, the researcher distributed a total of 91 questionnaires to owner/managers of internet cafés, which she located in the Mangaung Metropolitan Area and Matjhabeng Local Municipality. The choice of these research areas was informed by previous research that reported a high concentration of internet cafés in these areas (Makhalemele, 2016) and the limited research budget of the researcher. Of the 91 questionnaires distributed, 58 were correctly completed and returned. This represented a response rate of 63.7%. Bryman and Bell (2011) state that a response rate of 50% is acceptable for data analysis. Therefore, the 63.7% response rate adopted in this study was deemed adequate for statistical analysis.

4.3. Reliability analysis

This section focuses on the measures of reliability of each of the Likert scaled constructs as they were calculated to determine the level of internal consistency of the data. The Cronbach's alpha coefficient is used as an indicator of how the questions that form a construct measure the same variable. A Cronbach's alpha coefficient of at least 0.700 is an indication of adequate internal consistency and reliability. The reliability statistics are presented in Table 4.1.

Table 4.1: Reliability statistics

Construct	Number of items	Cronbach's Alpha	Comment
Family role models Questions 12, 13, 14, 15, 16, 17, 18	7	0.917	High internal consistency
Family recognition of venture creation (a) Questions 19, 20, 21, 22, 23, 24	6	0.860	High internal consistency
Family recognition of venture creation (b) Questions 25, 26, 27, 28	4	0.914	High internal consistency
Science, Technology, Engineering and Mathematics (STEM) Questions 29, 30, 31, 32, 33, 34, 35	7	0.819	High internal consistency
Social prejudice. Questions 36, 37, 38, 39, 40	5	0.847	High internal consistency
Funding of SMMEs Questions 41, 42, 43	3	0.738	High internal consistency
Marketing of SMMEs Questions 44, 45	2	0.852	High internal consistency
Venture creation: Opportunity identification Questions 46, 47, 48, 49, 50, 51	6	0.913	High internal consistency
Venture creation: Risk taking Questions 52, 53, 54, 55	4	0.845	High internal consistency
Venture creation: Resource mobilisation Questions 56, 57, 58, 59, 60	5	0.902	High internal consistency
Venture creation: Implementation of business decisions Questions 61, 62, 63, 64	4	0.782	High internal consistency
Overall questionnaire All Likert Scaled Questions	53	0.938	High internal consistency

The reliability statistics presented in Table 4.1 above illustrate that all constructs in the questionnaire had a very high internal consistency. Hence, the items were in mutual agreement on what they intended to measure. The overall questionnaire also had a

very high internal consistency (Cronbach's alpha statistic=0.938) and hence, it was deemed to be very reliable.

4.4. Biographical profile of the study sample

This section employs a frequency table to summarise the demographic characteristics of the sample of internet café owner/managers. The demographic data ranges from these owner/managers' gender, age, race, nationality, level of education, roles in their businesses and the nature of business ownership

Table 4.2: Biographical information of the respondents

Personal details	Category	Frequency	Percentage
Q1. Gender	Male	31	53.4%
	Female	27	46.6%
Q2. Age in years	<20 years	3	5.2%
	21-30 years	36	62.1%
	31-40 years	16	27.6%
	41-50 years	1	1.7%
	51-65 years	2	3.4%
Q3. Race	White	9	15.5%
	Black	43	74.1%
	Coloured	5	8.6%
	Asian	1	1.7%
Q4. Nationality	South African	50	86.2%
	Non South African	8	13.8%
Q5. Highest academic qualification	No formal Education	2	3.4%
	Primary	2	3.4%
	Middle School	1	1.7%
	High School	28	48.3%
	Tertiary	22	37.9%
	Postgraduate	3	5.2%
Q6. Role in the business	Owner	10	17.2%
	Manager	20	34.5%
	Owner/Managers	3	5.2%
	Other	25	43.1%
Q7. Do you own a business?	Yes	14	24.1%
	No	44	75.9%

4.4.1. Gender

Table 4.2 illustrates a moderate representation of male internet café owner/managers (53.4%) compared to female internet café owner/managers, who constituted 46.6% of the respondents. The sizable number of females who are involved in small technology-oriented ventures seems to suggest females' increasing penetration in traditionally male-dominated businesses such as Science and Technology-oriented domains. According to Vinesh (2014), technology-oriented entrepreneurship has been a male-dominated phenomenon even though the change of economic circumstances has increasingly enticed women to become entrepreneurs in various sectors. Furthermore, Chinomona and Maziriri (2015) state that women have come to the realisation that they are equally competent and sufficiently empowered to participate in various occupational categories that were originally dominated by men and can even perform better than them in business endeavours. This observation, however, contradicts Rambe and Ndofirepi's (2016) finding that men tend to be more entrepreneurially oriented than females. Feminist theory claims that structural factors such as culture and gender are intricately intertwined in their undermining of women's full realisation of their entrepreneurial potential. This finding mirrors Ajadi, Oladele, Ikegami and Tsuruta's (2015) claim that the interplay of gender, ownership and decision making and culture work to exert a significant influence on women's access and to control the resources of production among the Nupe and Yoruba women in Nigeria, thus ultimately impacting on entrepreneurship patterns.

4.4.2. Age

About 89.7% of the respondents were young and middle aged individuals in the 21-30 and 31-40 age groups. These statistics suggest that a youthful population is more involved in the creation of technology-oriented ventures such as internet cafés compared to the ageing population (i.e. those above 50). This finding coheres with Kalane's (2015) finding that the most active business owners are generally aged between 20 and 44 years old, even though entrepreneurial activity is envisaged to decline after 44 years of age. In consistency with this finding, Kautonen, Hatak, Kibler and Wainwright (2015) affirm that the ideal entrepreneurially active age group ranges from 35-44 years, after which it declines with each additional year.

4.4.3. Race

In terms of racial representation, blacks were the most represented racial group (74.1%), followed by whites (15.5%), with white coloureds at 8.6% and Asians 1.7% of the respondents. The dominance of the black respondents could be attributed to the reality that the study was conducted in the Free State Province, where this racial group constitutes the majority. The Small Enterprise Development Authority [SEDA] (2016) highlights that the majority of the Free State population are black, which possibly explains their higher representation in this study.

4.4.4. Nationality

Most (86.2%) of the respondents were South African citizens with only 13.8% being non-South African citizens. Since the geographical location of the study sample is South Africa, it is not surprising that the majority of respondents were South African. The high representation of South African citizens in internet café businesses somewhat contradicts Rambe and Mokgosi's (2016) claim that the advent of mobile phones has significantly undermined the income generating capacity of locally owned internet café businesses in the Free State.

4.4.5. Highest qualification

About 48.3% of the internet café owner/managers had a matric qualification. However, 37.9% of the respondents held a tertiary education qualification whereas 5.2% had post school qualification. These demographic trends reflect that a sizeable number (56.8%) of internet café owner/managers had lower educational achievements (had either a matric qualification or a lower qualification). Perhaps, self-employment through venture creation is increasingly becoming a popular alternative to the pursuit of further qualifications, especially for those who do not qualify for higher education. This interpretation resonates with the South African government's call for high school leavers to venture into self-employment instead of looking for employment, in a country where the youth unemployment hovers around 35% (Stats SA, 2016). The current finding on the dominance of venture creation among individuals with lower educational attainments is inconsistent with Civelek, Rahman and Kozubíková's (2016) claim that

entrepreneurs with higher levels of education are more predisposed to conduct their business more successfully than those with secondary educational qualifications or lower. Furthermore, Civelek et al. (2016) note that education has the potential to improve entrepreneurs' creativity, flexibility, self-direction and copy mechanisms that make positive contributions to the innovativeness of their firms.

4.4.6. Role in the business

The majority (56.9%) of respondents were either owners or managers of small technology-oriented ventures. This could be interpreted to mean that internet café owner/managers prefer to operate their businesses themselves than to devolve their authority and decision making processes to lower structures or employees. The concentration of managerial and ownership roles in owner/managers is consistent with the limited resource endowments of small firms, which compel owner/managers to diversify their roles to cut costs on excess labour required in running the business. This understanding seems to cohere with SEDA's (2016) observation on acute resource constraints faced by SMMEs and how these constraints undermine the owners' willingness to hire additional staff. The SEDA (2016) reports also attributed these businesses' stunted growth prospects and associated low survival rates to the afore-mentioned constraints.

4.4.7. Business ownership

The majority (75.9 %) of respondents indicated that they did not own a business while 24.1% of them noted that they were business owners. These findings are surprising since 51.7% of the respondents professed to be owner/managers of internet cafés. This most likely demonstrates that although a small proportion of the respondents had managerial roles designated to them, the ad hoc and informal organisational structure of such businesses often resulted in the conflation of ownership and managerial roles.

4.5. Nature of family role models

This section presents a summary of the statistics on the role model questions. These questions are summarised in Table 4.3 and 4.4.

Table 4.3: Nature of family role models

Nature of family role models	Category	Frequency	Percentage
Q8. Which type of business does your role model own?	Spaza shop	2	3.4%
	Fabric shop	3	5.2%
	Hair Salon	1	1.7%
	Internet café	21	36.2%
	None	22	37.9%
	Other (specify)	9	15.5%
Q9. Do any one of your parents own a business?	Yes	12	20.7%
	No	46	79.3%
Q10. Do any of your extended family members have a business?	Yes	32	55.2%
	No	26	44.8%
Q11. Do you regard any of your family members as your business role models?	Yes	27	46.6%
	No	31	53.4%

4.5.1. Parents and extended family's ownership of businesses

Most (79.3%) of the respondents' parents did not own businesses whereas 55.2% indicated that their extended family members owned businesses. The first finding on parents' lack of ownership of businesses does not seem to cohere with Lindquist, Sol and Van Praag's (2015) claim that self-employed parents have a positive and significant effect on their children's transition into entrepreneurship, hence their children's willingness to start their own ventures. The same view is made by Sahban et al. (2016) who found out that children who have parents operating some businesses are inclined to demonstrate a higher propensity to participate in entrepreneurship. Nonetheless, the aforementioned finding on business owners who do not have parents that operate businesses seems to contradict Boz and Ergeneli's (2014) revelation on the capacity of entrepreneurial socialisation by family members and role modelling to positively influence children's perceptions of creating businesses.

The first finding on the absence of family role models perhaps coheres with Uygun and Kasimoglu's (2013) claim that an individual's entrepreneurial self-efficacy affects the progress of entrepreneurial intentions and improves the relationship between entrepreneurial intentions and entrepreneurial behaviours. This finding also buttresses Sadeghi, Mohammadi, Nosrati and Malekian (2013) who posit that strong

entrepreneurial self-efficacy escalates the probability of entrepreneurship intentions and actions more than institutional and structural influences.

4.5.2. Family members as business role models

Slightly more than half (53.4%) of the respondents did not regard family members as their role models in businesses. This shows that a sizable number of the respondents located their business role models outside their immediate family circles. This finding contradicts Kazeem and Asimiran's (2016) findings that previous participation in family owned business exerted a positive, strong influence on entrepreneurial intentions of business owner/managers. The same findings are inconsistent with Radipere and Ladzani's (2014) claim that children who grow up in family businesses or who were members of entrepreneurial families are more inclined to start their own businesses or may be involved in family businesses.

4.5.3. Type of businesses owned by respondents' role models

The prominent form of business owned by role models of the respondents was internet cafés (36.2%). It seems as if the line of businesses of roles models generally shaped the choice of business of some entrepreneurs even though this does not apply to all entrepreneurs.

4.6. Summary of family role models

The Likert scaled construct of family role models is presented in Table 4.4.

Table 4.4: Summary of family role models

SECTION B2: FAMILY ROLE MODELS		Frequency Distribution							Descriptive		Latent Factor (Principal component) Coefficient
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	% Agree/Strongly Agree	Mean	Std Dev		
Q12. My early exposure to parents who run businesses has influenced my attitudes towards being self-employed.	Count %	8 13.8%	12 20.7%	8 13.8%	14 24.1%	16 27.6%	51.7%	3.31	1.43	0.783	
Q13. My parents have mentored my plans to establish a new business.	Count %	6 10.3%	19 32.8%	18 31.0%	6 10.3%	9 15.5%	25.9%	2.88	1.22	0.806	
Q14. My entrepreneurial intentions have been significantly influenced by having a business role model in our family.	Count %	6 10.3%	18 31.0%	15 25.9%	10 17.2%	9 15.5%	32.8%	2.97	1.24	0.825	
Q15. My decision to create my own business has been influenced largely by having a business role model in the family.	Count %	11 19.0%	15 25.9%	10 17.2%	14 24.1%	8 13.8%	37.9%	2.88	1.35	0.839	
Q16. My social identification with a family role model's business values has been critical to the success of my business.	Count %	6 10.3%	19 32.8%	17 29.3%	8 13.8%	8 13.8%	27.6%	2.88	1.20	0.881	
Q17. The encouragement of my parents/guardians has significantly shaped my ability to operate my business successfully.	Count %	5 8.6%	14 24.1%	11 19.0%	19 32.8%	9 15.5%	48.3%	3.22	1.23	0.761	
Q18. Growing up in a family where parents own their business inspired me start my own business.	Count %	13 22.4%	16 27.6%	7 12.1%	11 19.0%	11 19.0%	37.9%	2.84	1.46	0.846	
		Cronbach's Alpha							0.917		
		% of total variation accounted for by latent factor							67.38%		

4.6.1. Exposure to parents who ran businesses

The Likert based construct of family role models is presented in Table 4.4. The results show that 51.7% of the respondents agreed/strongly to the view that their exposure to parents who ran businesses influenced their attitude to being self-employed. This finding seems to support Kazeem and Asimiran's (2016) finding that children whose parents are self-employed are likely to either start their own ventures or consider running the family business as a career.

4.6.2. Encouragement by parents/guardians to operate businesses successfully

Almost half (48.3%) of the respondents professed that encouragements by parents/guardians shaped their ability to run businesses successfully as compared to 32.7% who disagreed/strongly disagreed with this view. The sizable percentage of internet café owner/managers who affirmed the influence of encouragement from parents on their ability to own/manage their business successfully seems to cohere with findings from mainstream literature. Parents, mentors and role models are considered as playing a pivotal role in shaping the development of entrepreneurs (Botha & Bignotti, 2016). In the same vein, Laukhuf and Malone (2015) state that entrepreneurs often used family members and close friends as business mentors and perceived this system of support as fundamental to the success of their business. The sizable percentage of respondents that contested this position contradicts Lindquist et al. (2015) who consider parental self-employment as a predictor of self-employment of the offspring (that is, a child of self-employed parents).

4.6.3. Family role models' influence on business start-up decisions

The results to the question on whether the respondents' decision to create their own businesses had been influenced by having a business role model in the family show that only 37.9% of the respondents agreed/strongly agreed with 44.9% disagreeing/strongly disagreeing. Those respondents who concurred cohere with Singh and Prasad's (2016) finding that being raised in entrepreneurial family influences one's intention to engage in entrepreneurship and significantly raises the desire of starting his/her own business. Those respondents who disagreed with the

position that family role models influenced their entrepreneurial pursuit contradicted Foo, Knockaert, Chan and Erikson's (2016) view that individuals are more likely to start businesses when their parents have owned businesses. The same opposing views do not resonate with Foo, et al. (2016) and Ozaralli and Rivenburgh's (2016) argument that children who grew up in entrepreneurial families are likely to possess positive attitudes towards entrepreneurial activities.

4.6.4. Inspiration from parents who own businesses

Only 37.9% of the respondents agreed/strongly agreed that growing up in a family where parents own their business inspired them to start their own business. About 50% of the respondents disagree/strongly disagree that growing up in a family with business inspired them to own/manage businesses. The sizable number of owner/managers who agreed or strongly agreed with this position support Gwija et al. (2014) findings that an individual's inspiration acquired through his/her involvement in a family business provides a good entrepreneurial foundation for his/her intention to set up a business. The significant number of internet cafés owner/managers who disagreed with this position, however, contradict the popular claim that parental role models who own or manage their own business are likely to inspire the child to follow in their footsteps (Yousafzai, Saeed & Muffatto, 2015; Shmailan, 2016).

4.7. Summary of family recognition of venture creation

The results for family recognition of venture creation are presented in Tables 4.5 and 4.5b.

Table 4.5a: Summary of family recognition of venture creation

SECTION 3B: FAMILY RECOGNITION OF VENTURE CREATION (a)		Frequency Distribution						Descriptive		Latent Factor (Principal component) Coefficient
		Not at all	To a least extent	Somewhat	To a moderate extent	To a great extent	% moderate extent/ great extent	Mean	Std Dev	
Q19. To what extent has your family influenced your decision to start a new business?	Count %	14 24.1%	5 8.6%	15 25.9%	12 20.7%	12 20.7%	41.4%	3.05	1.46	0.716
Q20. To what extent have the social norms and attitudes of your family influenced your creation of a business?	Count %	13 22.4%	8 13.8%	19 32.8%	12 20.7%	6 10.3%	31.0%	2.83	1.29	0.776
Q21. To what extent has your family been a source of moral encouragement and support to the start-up of your business?	Count %	14 24.1%	7 12.1%	14 24.1%	9 15.5%	14 24.1%	39.7%	3.03	1.50	0.858
Q22. To what extent has your family provided financial support in the starting of your business?	Count %	24 41.4%	13 22.4%	12 20.7%	7 12.1%	2 3.4%	15.5%	2.14	1.19	0.750
Q23. To what extent was your family directly involved in the development stages of creating your business?	Count %	23 39.7%	10 17.2%	12 20.7%	8 13.8%	5 8.6%	22.4%	2.34	1.36	0.761
Q24. To what extent was your family directly involved in the final decision to create your business venture?	Count %	24 41.4%	11 19.0%	13 22.4%	6 10.3%	4 6.9%	17.2%	2.22	1.28	0.747
		Cronbach's Alpha						0.860		
		% of total variation accounted for by latent factor						59.18%		

4.7.1. Family provided financial support for starting up the business

A significant percentage (41.4%) of the respondents indicated that their families did not provide any financial support in the start-up of their business, while 22.4% pointed out that they received limited financial support as they did so to a lesser extent. The sizable number of respondents that was not supported by their families cohere with Bird's (2014) claim that families do not usually provide financial support for their members to start a business. The few who received such support demonstrate that

although not very significant, financial support from family may be influential in the long term sustenance of the business. This view is corroborated by Sieger and Minola (2015) who highlight that financial support, especially that which comes from the family, is always better than borrowing from private funders. Mpiti (2016) supports this view further in the argument that borrowing from family and friends does not involve exorbitant interest rates and at times involves interest free loans, which immensely benefit the new start-ups.

4.7.2. Family involvement in the final stage of creating the business

Most (41.4%) of the respondents indicated that their families were not directly involved in the final decision to create their businesses and a minor 19.0% claimed that their families were only involved to a least extent. The sizable percentage that indicated the non-involvement of their families in their venture start up cohere with Welter's (2011) observation that the involvement of families in their members' business ventures is tied to these family members' perceptions on the prospective success of such businesses.

4.7.3. Family involvement in the development stage of the business

The response to the question about the level of family involvement in the development stage of creating their businesses shows that 39.7% claimed that their families were not involved at all while 22.4% indicated that their families where involved to a moderate and greater extent. The first finding that emphasises lack of support contradicts the claim that families play a crucial part in the venture creation process (Sahban et al., 2016). In addition, the second finding on the provision of family support mirrors with Sahban et al.'s (2016) observation that a business takes more benefits from family members in its start-up phases.

4.7.4. Family as a source of moral encouragement and support for the starting of businesses

Only 39.7% of the respondents were of the view that family members are a source of moral encouragement and support during the start-up of their businesses, while 24.1%

stated they were supportive to some extent. The first finding seems to give credence to the role of family in providing the background experience and motivation that lead to entrepreneurial activities (Mustapha & Selvaraju, 2015), while the second finding contradicts this view. In fact, the sizable percentage (36.2%) of respondents that oppose this view suggest that the family is not an important variable in instilling entrepreneurial support. This contradicts Pant's (2015) view that the inspiration from family members plays a critical role in shaping individuals' decisions to become entrepreneurs.

4.8. Summary of family recognition of venture creation

The second batch of results on family recognition of venture creation are presented in Table 4.5b below. The results in Table 4.5b show that there was very little influence of families in the internet café owner/managers' recognition of venture creation.

Table 4.5b: Summary of family recognition of venture creation

SECTION 3B: FAMILY RECOGNITION OF VENTURE CREATION (b)		Frequency Distribution						Descriptive		Latent Factor (Principal component) Coefficient
		Never	Rarely	Sometimes	Frequently	Always	Frequently/ always	Mean	Std Dev	
Q25. How often did your family give you prior exposure to operating a business before starting up your own business?	Count	23	12	10	8	5				
	%	39.7%	20.7%	17.2%	13.8%	8.6%	22.4%	2.31	1.35	0.805
Q26. How often was your family involved in the preparation stage of setting up your business?	Count	26	12	8	8	4				
	%	44.8%	20.7%	13.8%	13.8%	6.9%	20.7%	2.17	1.33	0.916
Q27. How often was your family involved in the business creation stage?	Count	24	15	6	6	7				
	%	41.4%	25.9%	10.3%	10.3%	12.1%	22.4%	2.26	1.41	0.943
Q28. How often was your family involved in the final decision stage of setting up your business?	Count	21	17	10	2	8				
	%	36.2%	29.3%	17.2%	3.4%	13.8%	17.2%	2.29	1.36	0.902
Cronbach's Alpha								0.914		
% of total variation accounted for by latent factor								79.71%		

4.8.1. Family's provision of prior exposure to operate a business

While only 22.4% of internet owner/managers frequently or always received prior exposure to operating a business before starting their own businesses, a considerable percentage (60.4%) had never or rarely had prior exposure to business operations. The findings on the dominance of respondents who had not been exposed to business operations before establishing their own businesses is clearly inconsistent with Sahban et al.'s (2016) claim that prior exposure to business activities has a positive effect on individuals' attitude towards entrepreneurship. The same findings seem to contradict the view that family members' businesses tend to influence individuals' (i.e. these members) aspirations to start their businesses (Rametse & Huq, 2015).

4.8.2. Family involvement in preparation, creation and final decision stage of setting up the internet café owner/managers' businesses

About 65.5% of the respondents affirmed that their families were never or were rarely involved in the preparation stage of setting up their businesses while 20.7% claimed that their families were involved in the preparation stages of setting up their businesses. In the same vein, the 67.3% of respondents who claimed that their families were not involved in the business creation stages of their businesses could be contrasted with the 22.4% of them who professed the involvement of their families in the same businesses. About 65.5 of the respondents acknowledged that their families were never or were rarely involved while only 17.2% had their family involved in the final decision stage of setting up their businesses.

The picture painted by these three aforementioned sets of findings is one of limited or no support from families during the business conception, development and final start-ups. These findings appear to contradict the claims that families are typically positive influences and a source of robust values for emerging entrepreneurs (Tarling et al., 2016). The same findings are inconsistent with Tarling et al.'s (2016) elaboration that growing up in a family with self-employed family members may lead to the development of a pro-business attitude among the children. The low involvement of family members at different levels of business incubation and development seems to cohere with Van der Gaag's (2010) observation that cultural barriers, racial prejudices

and financial constraints may deter some families from rendering support to their fellow members during the business development stages. The aforementioned findings on the lack of family support, nonetheless, resonate with Van der Gaag's (2010) point that the background statuses of families may undermine their venture start-ups.

4.9. Summary of Science, Technology, Engineering and Mathematics (STEM)

It is important to highlight that other questions (29, 30, 31 as well as 32, 33 and 34), were combined due to their line of questioning and responses which highlighted the same view point/reasons. The results for participation in STEM are presented in Table 4.6 below.

Table 4.6: Summary of internet café owner/managers' participation in Science, Technology, Engineering and Mathematics (STEM)

SECTION C1: SCIENCE, TECHNOLOGY, ENGINEERING AND MATHS (STEM)		Frequency Distribution							Descriptive		Latent Factor (Principal component) Coefficient
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	% Agree/ Strongly Agree	Mean	Std Dev		
Q29. Did you do any of these subjects in your high school or university education Science, Technology, Engineering and Mathematics (STEM)?	Count	0	28	0	30	0					
	%	0.0%	48.3%	0.0%	51.7%	0.0%	51.7%	1.48	0.50		-0.201
Q30. In my high school/university education both male and females were doing STEM subjects.	Count	5	5	16	13	19					
	%	8.6%	8.6%	27.6%	22.4%	32.8%	55.2%	3.62	1.27		0.804
Q31. In my high school/university education there was no preference of any particular gender in STEM subjects.	Count	3	6	14	12	23					
	%	5.2%	10.3%	24.1%	20.7%	39.7%	60.3%	3.79	1.22		0.760
Q32. In my high school/university education, both males and females were retained in the education system.	Count	3	2	16	16	21					
	%	5.2%	3.4%	27.6%	27.6%	36.2%	63.8%	3.86	1.12		0.872
Q33. In my high school/university education, both males and females had a high throughput rate (effective and meaningful academic participation).	Count	5	6	16	12	19					
	%	8.6%	10.3%	27.6%	20.7%	32.8%	53.4%	3.59	1.28		0.799
Q34. In terms of the graduation rates, both males and females had a high completion rate.	Count	8	6	15	16	13					
	%	13.8%	10.3%	25.9%	27.6%	22.4%	50.0%	3.34	1.32		0.747
Q35. My partner/guardian/parents preferred me to do STEM in my high school or university education.	Count	14	9	11	11	13					
	%	24.1%	15.5%	19.0%	19.0%	22.4%	41.4%	3.00	1.50		0.648
Cronbach's Alpha									0.819		
% of total variation accounted for by latent factor									51.99%		

4.9.1. The gender demographics on retention, throughput rates, graduation rates, and high completion rates

About 63.8% of the respondents were of the view that the education system retained both males and females. The study also revealed that 53.4% agreed that both males and females had a high throughput rate. Although not very impressive reflections of

gender parity with regard to STEM enrolments and participation in high school and university, the above findings resonate with Beyene's (2015) acknowledgement of the strides made at primary and secondary schools levels, areas where women tend to be under-represented, needed to improve gender parity. However, the findings are inconsistent with her claims that women are marginalised in the area of research and development of STEM. The same aforementioned findings on the retention of male and female students resonate with Castillo, Grazzi and Tacsir's (2014) recognition that women's participation at higher institution has increased even through their enrolment numbers in STEM is not yet satisfactory.

4.9.2. The level of preference for males and females in enrolling for STEM subjects

The results for STEM are presented in Table 4.6. These show that the majority (60.3%) indicated that no gender preferences were noticed at high school/university. Moreover, 55.2% agreed/strongly agreed that both males and females did STEM subjects. About 51.7% affirmed that they did STEM subjects at high school or university while 48.3 disagreed. The collective of the above findings seems to contradict Roberts' (2014) findings that girls are not given enough support to ensure that they study STEM subjects at the university level. These findings also somewhat contradict Dasgupta and Stout's (2014) findings that once a girl shows curiosity in studying STEM at the university level, they are given signals which illustrate that they do not belong in STEM disciplines.

4.10. Summary of social prejudice

The results about social prejudice are presented in Table 4.7. The opinion of the majority of the participants was that the South African society generally believes that technology business creation is suited for both genders.

Table 4.7: Summary of social prejudice

SECTION C2: SOCIAL PREJUDICE		Frequency Distribution						Descriptive		Latent Factor (Principal component) Coefficient
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	% Agree/ Strongly Agree	Mean	Std Dev	
Q36. The South African society generally believes that technological business creation is suited for both men and women.	Count	3	7	13	17	18				
	%	5.2%	12.1%	22.4%	29.3%	31.0%	60.3%	3.69	1.19	0.767
Q37. The South African society generally believes that the running of technological business is well handled by both men and women.	Count	3	10	21	14	10				
	%	5.2%	17.2%	36.2%	24.1%	17.2%	41.3%	3.31	1.11	0.812
Q38. Communities generally believe that both men and women understand the impact of the technological developments on technological businesses.	Count	2	14	16	18	8				
	%	3.4%	24.1%	27.6%	31.0%	13.8%	44.8%	3.28	1.09	0.878
Q39. The South African society generally holds both male and female-oriented technological businesses in higher regard.	Count	2	14	22	16	4				
	%	3.4%	24.1%	37.9%	27.6%	6.9%	34.5%	3.10	0.97	0.880
Q40. The South African society generally believes that both male and female owned technology-oriented businesses tend to survive longer.	Count	1	12	27	11	7				
	%	1.7%	20.7%	46.6%	19.0%	12.1%	31.0%	3.19	0.96	0.596
		Cronbach's Alpha						0.847		
		% of total variation accounted for by latent factor						62.99%		

4.10.1. Technological business creation and survival is suited for both men and women

The majority (60.3%) of the participants believe that the South African society generally believes that the creation of technology businesses is suited for both genders. The results indicate that both genders are ideal for operating technology-oriented businesses such as internet cafés. However, Motilewa, Onakoya and Oke (2015) contradict this finding in their claim that the risk averseness of women tends to undermine their involvement in ventures while the widely held societal view is that

entrepreneurial activities are deemed fit for men exclusively. The finding on the dominant view that both genders are ideal for technology-oriented ventures corroborates the 11% rise in the number of women owned businesses and women entrepreneurs over the past two years (Van Der Merwe, 2015).

Only 31% of respondents believed that the South African society generally believes that both male and female-owned technology-oriented businesses tend to survive longer. This perhaps affirms evidence from literature, with regards to the differences in the performance of male owned and female owned businesses in South Africa. Neneh, Van Zyl and Van Noordwyk (2016) have found that male owned businesses tended to outperform female owned businesses.

4.10.2. Survival of male and female-owned technology-oriented businesses

As shown in Table 4.7, 46.6% were neutral to the question on whether the South African society generally believes that both male and females owned technology-oriented businesses tend to survive longer, while 31% agreed/strongly agreed. The significance of the neutral view stems from the numerous barriers women often encounter in the incubation, development and sustenance of their businesses, experiences which are different to those encountered by their male counterparts. While both men and women face obstacles in creating an enterprise, Mandipaka (2014) highlights that women are faced with more challenges that hamper their business growth and survival compared to men. Apart from marginalisation that South African women still encounter in relation to the funding, lack of socio-economic and moral support for their technological orientated business, social prejudices and negative perceptions still reign supreme when it comes to female-owned businesses.

4.10.3. Gender perceptions on the impact of technology developments on technological businesses

About 44.8% of the surveyed internet owner/managers claimed that communities generally believe that both men and women understand the impact of technological developments within the technological businesses whilst 27.6% disagreed/strongly disagreed. Evidence from literature contradicts the first finding. For instance, Awa et

al. (2015) insist that new technological innovations tend to be understood by and are often introduced mainly by male managers than their female counterparts. Consistent with this mind set, Rambe and Mokgosi (2016) posit that innovation implementation of a technological nature diffuse faster amongst male oriented businesses than female owned businesses as men are generally more into complex, technological businesses than women.

4.10.4. Technological business is well handled by both men and women

Only 41.3% of respondents were of the opinion that society generally believes that the running of a technology business is well handled by both men and women, while 36.2% of the respondents were neutral. Therefore, a sizable number of the respondents believed that both genders have the capacity to establish and run technology-oriented businesses. Since these figures were not in the majority, the findings seem to be congruent with Brijlal et al. (2013) evidence that men still constitute the majority of SMME owners in South Africa. Perhaps, the prevalence of the neutral view (36.2%) is a consequence of the growing consensus among both genders that entrepreneurship remains a male-dominated domain (Welsh, Memili & Kaciak, 2016). The 22.4% that disagreed with the view that both genders can handle technology oriented businesses also cohere with Rambe and Ndofirepi's (2016) observation on the low levels of female representation in technology-oriented start-ups. Perhaps the 41.3% that believed both men and women can run successful technology businesses were oblivious of the sectors women tend thrive in. South African women entrepreneurs are conceived to engage in survivalist activities such as sewing co-operatives, chicken farming, candle-making, gardening, and arts and crafts and are least represented in value-adding business opportunities (Mandipaka, 2014) such as high technology sectors.

4.11. Summary of funding of SMMEs

Table 4.8 shows the results of questionnaire items on funding of SMMEs

Table 4.8: Summary of funding of SMMEs

FUNDING of SMMEs	Frequency Distribution						Descriptive		Latent Factor (Principal component) Coefficient
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	% Agree/ Strongly Agree	Mean	Std Dev	
Q41. The South African society generally tends to believe that both male and female run technology businesses tend to find it easy to obtain financial support from private financial institutions.	Count 3	18	18	13	6	32.8%	3.02	0.8	0.810
Q42. The South African society generally tends to believe that both male and female run technology businesses tend to find it easy to obtain financial support from public lending.	Count 7	15	16	14	6	34.5%	2.95	1.19	0.844
Q43. The South African society generally tends to believe that both male and female owned technology oriented businesses tends to have strong financial management systems.	Count 6	11	19	14	8	37.9%	3.12	1.19	0.776
Cronbach's Alpha							0.738		
% of total variation accounted for by latent factor							65.72%		

4.11.1. Prevalence of strong financial management systems among male and female owned technology-oriented businesses

The results revealed that only 37.9% of the respondents affirmed that both male and female-owned technology-oriented ventures have strong financial management systems. This finding seem to support Zondo's (2016) finding that most small South African businesses lack financial management skills, as well as the capability to comprehend market dynamics and trends. These findings also resonate with Adisa, Abdulraheem and Mordi's (2014) view that financial management remains one of the biggest problems confronting small businesses in developing countries.

4.11.2. Financial support from public lending institutions

Only 34.5% of the respondents claimed that the South African society believes that both male and female run technology businesses find it easy to obtain funds from public lenders. This finding does not correspond with Osano and Languitane's (2016) claims about the easy accessibility of public funding in South Africa, due to the diversity of public financial schemes and programmes that support the female and male owned SMMEs. However, the aforementioned finding corroborates the observation that despite the availability of these funding programmes, there is a low level of awareness of these funding programmes especially that of government support schemes (Osano & Languitane, 2016). Moreover, the poor performance and unstable income generation capacity of these SMMEs also make securing internal financing challenging (Ogubazghi & Muturi, 2014).

4.11.3. Financial support from private lending institutions

The results indicate that 32.8% of the respondents were of the view that the South African society generally believes that both male and female owned technology businesses find it easy to obtain financial assistance from private funding institutions, while 36.2% disagreed/strongly disagreed, and 31% were neutral. Perhaps the polarity of views signifies the variations of experiences by the different owner/managers even through the negative view was relatively higher among these views. The comparatively higher percentage on the dissenting view seem to support Fatoki's (2014a) findings

that access to finance is a main problem for the South African entrepreneurs. Furthermore, there is some growing consensus that one of the crucial causes of SMME failure in South Africa is the non-availability of finance (Fatoki, 2014a; Makina, Fanta, Mutsonziwa, Khumalo & Maposa, 2015). Only 5% of the SMMEs are financed through banking institutions which suggests that the rest resort to other financing options for both investment and working capital (Osano & Languitane, 2016). Thus there is no compelling evidence on the willingness of private institutions to offer financial support to both male and female run small technology businesses. The reasons for this include the risk of business closure due viability challenges, a lack of credit worthiness and a credible financial management history.

4.12. Summary of marketing of SMMEs

The construct of marketing of SMMEs had only two questionnaire items whose results are presented in Table 4.9 below.

Table 4.9: Summary of marketing of SMMEs

Marketing of SMMEs		Frequency Distribution					Descriptive		Latent Factor (Principal component) Coefficient
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	% Agree/ Strongly Agree	Mean Std Dev	
Q44. The South African society generally tends to believe that both male and female oriented technology businesses tend to have effective marketing strategies.	Count	2	11	24	16	5			
	%	3.4%	19.0%	41.4%	27.6%	8.6%	36.2%	3.19 0.96	0.935
Q45. The South African society generally tends to believe that both male and female oriented technology businesses tend to have durable social networks.	Count	3	13	18	17	7			
	%	5.2%	22.4%	31.0%	29.3%	12.1%	41.4%	3.21 1.09	0.935
Cronbach's Alpha							0.852		
% of total variation accounted for by latent factor							87.41%		

4.12.1. Effective marketing strategies and social networks of male and female-owned technology-oriented businesses

About 41.4% of the South African society tends to believe that both male and female owned technology-oriented businesses have durable social networks. As far as the South African society's views on the effectiveness of marketing strategies of male and female owned technology-oriented SMMEs are concerned, only 36.2% of the respondents agreed/strongly agreed that the society generally tends to believe that both businesses have effective marketing strategies, while 23.4% disagreed/strongly disagreed. The ambivalence surrounding this matter seems to suggest the wide variations among male and female owned businesses with regards to their marketing strategies. It can be inferred that the wide uptake of a wide range of emerging technologies such as social media platforms, content repositories and web-based technologies for marketing in addition to traditional print and electronic media has resulted in owner/managers of small businesses being spoiled of choice with regard to the tools to market their activities. However, variations in their usage could be a consequence of the internet café owner/mangers' different levels of digital competences and technological abilities (Makhalemele, 2016). Nonetheless, male and female entrepreneurs employ different marketing strategies and this perhaps explains the aforementioned polarity of views. Neneh et al. (2016) state that women entrepreneurs have a greater propensity to innovate when marketing their products regardless of getting less growth prospects, while male entrepreneurs are more likely to focus on the development of new markets that can enhance the growth of their businesses. The small proportion that disagreed with the persistence of gender parity with regard to effective marketing strategies cohere with Mandipaka's (2014) findings that women are unable to market goods and services tactically due to their limited access to training and experience on how to partake in business activities.

4.13. Summary of opportunity identification

Question 46, 47, 48 49, and 50 were joined together under the ambit of addressing the results related to the market venture identification.

Table 4.10: Summary of opportunity identification

SECTION D: VENTURE: Opportunity Identification		Frequency Distribution							Descriptive		Latent Factor (Principal component) Coefficient
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	% Agree/Strongly	Mean	Std Dev		
Q46. I have the ability to identify a market gap and take financial advantage of this gap.	Count %	4 6.9%	2 3.4%	12 20.7%	31 53.4%	9 15.5%	69.0%	3.67	1.02	0.740	
Q47. I consider myself as having the capability to track some market trends and see what sells well in my businesses.	Count %	3 5.2%	2 3.4%	12 20.7%	25 43.1%	16 27.6%	70.7%	3.84	1.04	0.895	
Q48. I have the ability to evaluate opportunities in the market.	Count %	2 3.4%	1 1.7%	13 22.4%	26 44.8%	16 27.6%	72.4%	3.91	0.94	0.909	
Q49. I have the ability to recognise opportunities in the market.	Count %	1 1.7%	2 3.4%	9 15.5%	28 48.3%	18 31.0%	79.3%	4.03	0.88	0.854	
Q50 I have the ability to discover new opportunities	Count %	1 1.7%	2 3.4%	11 19.0%	24 41.4%	20 34.5%	75.9%	4.03	0.92	0.828	
Q51. I believe I can identify financing opportunities for a new business venture.	Count %	2 3.4%	2 3.4%	14 24.1%	26 44.8%	14 24.1%	69.0%	3.83	0.96	0.790	
		Cronbach's Alpha							0.913		
		% of total variation accounted for by latent factor							70.23%		

4.13.1. Market gap, market trends, market opportunities and new opportunities

Table 4.10 shows that most (79.3%) respondents claimed to possess the ability to recognise opportunities, discover opportunities (75.9%) and evaluate opportunities in the market (72.4%). Although there are many explanations for the SMMEs' ability to assess market opportunities, the excellent marketing research defines the right direction the SMMEs should take to ensure their sustainability (Rochet, 2016). These findings mirror Rauch, Van Doorn and Hulsink (2014) findings on entrepreneurs' capability to assess prospects of the market to some extent notwithstanding the

complexities of such predictions due to swift changes in technology and innovation marketing as well as their weak financial muscle.

Furthermore, 69% of the participants indicated that they have the ability to identify a market gap and take advantage of it. Another 70.7% of owner/managers considered themselves as having the capability to track market trends and discern what sells well in their businesses. Rauch et al. (2014) highlight that most small business entrepreneurs have knowledge of their market and are able to ascertain gaps in the market. Rauch et al. (2014) explain further that the ability of entrepreneurs to identify openings in the market enables them to operate their businesses like well-oiled machines.

4.13.2. Identification of financial opportunities

While many (69%) respondents reported that they can identify financing opportunities for a new business venture, the reality is that their challenges lie in the finance-oriented state-owned enterprises. Entrepreneurs often complain that finance-oriented state-owned enterprises request business plans from them but later realise upon submission that their ideas were expropriated by another entrepreneur who is close to the employee of the finance-oriented state-owned enterprises (Choto, Tengeh & Iwu, 2014). Nonetheless, none of the respondents have complained about this alleged fraudulent use of their ideas by a finance-oriented state-owned enterprise staff member's business networks. As such, the claim by Choto et al. (2014) could not be verified. What was observed, however, is the great potential in opportunity identification held by the respondents even though such potential was not always matched by commensurate financial support from financial institutions.

4.14. Summary of venture creation: Risk taking

The results in Table 4.11 indicate that, apart from being capable of identifying opportunities as shown above, most of the participants were also risk takers. It is important to highlight that questions 52 and 53 were merged because of the similarities of the responses.

Table 4.11: Summary of risk taking

SECTION D: VENTURE: Risk taking		Frequency Distribution						Descriptive		Latent Factor (Principal component) Coefficient
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Agree/Strongly	Mean	Std Dev	
Q52. I consider myself as a person who seeks to achieve profit through bearing calculated market risks.	Count	2	2	12	27	15				
	%	3.4%	3.4%	20.7%	46.6%	25.9%	72.4%	3.88	0.96	0.852
Q53. I consider myself as a risk-taking individual who takes actions to pursue opportunities.	Count	2	0	15	25	16				
	%	3.4%	0.0%	25.9%	43.1%	27.6%	70.7%	3.91	0.92	0.879
Q54. I am willing to take significant risks if the rewards are high enough.	Count	1	1	12	25	19				
	%	1.7%	1.7%	20.7%	43.1%	32.8%	75.9%	4.03	0.88	0.870
Q55. I enjoy the excitement of risk and uncertainty.	Count	2	7	19	17	13				
	%	3.4%	12.1%	32.8%	29.3%	22.4%	51.7%	3.55	1.08	0.724
		Cronbach's Alpha						0.845		
		% of total variation accounted for by latent factor						69.49%		

4.14.1. Taking risks when rewards are high and entertaining uncertainty

Most of the respondents (75.9%) claimed that they were willing to take risks if the rewards were high enough. It is common knowledge that any person who is willing to start any business will risk financially to ensure a successful start-up. This finding supports the view that entrepreneurs will put up all the resources they have to ensure they achieve the desired results (Neneh & Van Zyl, 2014).

Only 51.7% of the participants enjoyed the excitement of risk and uncertainty. This means that these participants view risk as a necessary but unpleasant attribute. This view coheres with Janet and Ngugi's (2014) argument that taking business risks often comes natural to entrepreneurs as it keeps them exploring more opportunities and that

taking market risks is fundamental to the success of their businesses. Conversely, Fatoki (2014d) contests this position by arguing that there is nothing exhilarating about risk taking as it often involves experimenting with money borrowed from financial institutions at high interest rates. Fatoki (2014c) warns that the business should transition through start-up, growth and maturity in a manner that will not jeopardise the prospects of the SMME owner/managers becoming much-admired business entrepreneurs.

4.14.2. Bearing calculated market risk and pursuing opportunities

The results presented in Table 4.11 show that the majority (72.4%) of the respondents consider themselves as individuals who seek to achieve profits through taking calculated market risks. In addition, a total of 70.7% of the respondents reported that they took actions to pursue opportunities. The findings seem to resonate with Shirokova, Osiyevskyy and Bogatyreva's (2015) observation that most business people take initiatives which put their well-being at risk to ensure the success of their business ventures when they see significant business prospects. However, the motivations for taking those risks differ. For example, Janet and Ngugi (2014) argue that entrepreneurs take calculated market risk for two reasons, which are (1) they have nothing to lose since they are entrepreneurs and (2) they consider whatever happens in the market as a learning experience rather than failure. Entrepreneurs may even rationalise their challenges as something which had happened to other businesses that came before them.

4.15. Summary of venture creation: Resource mobilisation

Table 4.12 presents results from the questions that dealt with respondents' views with regard to resource mobilisation.

Table 4.12: Summary of resource mobilisation

SECTION D: VENTURE mobilisation		Resource	Frequency Distribution								Descriptive		Latent Factor (Principal component) Coefficient
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Agree/Strongly	%	Mean	Std Dev		
Q56. I possess the capacity to recruit the best human resources in pursuit of a business venture.	Count		2	6	16	26	8						
	%		3.4%	10.3%	27.6%	44.8%	13.8%		58.6%	3.55	0.98		0.724
Q57. I possess the capacity to convince others to work for my new business.	Count		2	4	18	21	13						
	%		3.4%	6.9%	31.0%	36.2%	22.4%		58.6%	3.67	1.02		0.909
Q58. I possess the capacity to convince others to invest in my new business.	Count		3	7	16	17	15						
	%		5.2%	12.1%	27.6%	29.3%	25.9%		55.2%	3.59	1.16		0.935
Q59. I possess the capacity to convince a bank to lend me money.	Count		4	6	24	17	7						
	%		6.9%	10.3%	41.4%	29.3%	12.1%		41.4%	3.29	1.04		0.807
Q60. I consider myself as having the capacity to organise and control resources in pursuit of a venture.	Count		3	3	19	20	13						
	%		5.2%	5.2%	32.8%	34.5%	22.4%		56.9%	3.64	1.05		0.855
		Cronbach's Alpha									0.902		
		% of total variation accounted for by latent factor									72.15%		

4.15.1. Capacity to recruit

As shown in Table 4.12, 58.6% of the respondents were of the view that they possess the capacity to recruit the best human resources in pursuit of their business ventures. This finding supports the claim that most entrepreneurs need to be educated or capacitated in order for them to recruit best human resources for their businesses (Tinuoye, Olalekan & Adenike, 2015). Over and above a good education, entrepreneurs need to have sufficient training in human resource management for them to effectively execute human resource processes and acquire suitable personnel for their business ventures.

4.15.2. Convincing new employees to work for the business

The results showed that 58.6% of internet café owner/managers considered that they had the capacity to convince other individuals to work for their businesses. This partially supports Davidsson's (2016) argument that the capacity of the entrepreneur to persuade prospective employees to work for him/her depends on his/her ability to demonstrate great business acumen especially his/her level of determination or nature of business strategies he/she employs. Davidsson (2016) also notes that an entrepreneur can influence others to join his/her adventure only if he/she illustrates some maturity in doing business and articulate high moral ground in business related matters (e.g. when he/she negotiates, he/she sticks to what he/she wants and does not need inducement in doing business). The current researcher's view is that an entrepreneur can convince others to work with him or her if he/she can articulate his/her vision and demonstrate some level of maturity in doing business.

4.15.3. Organising and controlling of resources

The majority (56.9%) of the participants consider themselves as possessing the capacity to organise and control resources in pursuit of their business ventures. Although Drucker (2015) admires entrepreneurs for the important role they play in the development of communities and countries, entrepreneurs may be confronted with managerial control challenges and demonstrate an inability to raise capital. In view of the high failure rate of SMMEs, including internet cafés in South Africa, it is

inconceivable to assume that nation's entrepreneurs have sufficient capacity to manage and control resources in their businesses.

4.15.4. Convincing investors to invest in the business

Whilst 55.2% of the respondents thought that they had the capacity to convince investors to invest in their new businesses, 41.4% assumed that they had the capacity to convince banks to lend them money. The multiplicity of national public institutions that provide funding, business mentorship and support, such as the National Youth Development Agency (NYDA), National Empowerment Fund (NEF) and Small Enterprise Development Agency (SEDA), means that internet cafés have a wide choice regarding sources of access to funding opportunities. In spite of these prospective funding opportunities, Ammons (2015) highlight that most ventures cease to exist before they are incubated due to the lack of support from government, financial lending institutions or proper mentorship for running business. The researcher argues that even with financial support from investors, the survival of the business depends on sufficient business mentoring in the early stages of the business venture.

4.16. Implementation of business decisions

Table 4.13 presents results from the questions that dealt with respondents' opinions on the implementation of business decisions. It is important to highlight that questions 62 and 63 were amalgamated because of the way they were lined up.

Table 4.13: Summary of implementation of business decisions

SECTION D: VENTURE Implementation of business decisions		Frequency Distribution					Descriptive		Latent Factor (Principal component) Coefficient
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	% Agree/Strongly Agree	Mean Std Dev	
Q61. I have the capacity to develop a business plan that is marketable financially.	Count	2	3	19	25	9			
	%	3.4%	5.2%	32.8%	43.1%	15.5%	58.6%	3.62 0.93	0.660
Q62. I have the capability to manage my business.	Count	1	1	11	18	27			
	%	1.7%	1.7%	19.0%	31.0%	46.6%	77.6%	4.19 0.93	0.845
Q63. I have the capability to grow a successful business.	Count	1	0	12	19	26			
	%	1.7%	0.0%	20.7%	32.8%	44.8%	77.6%	4.19 0.89	0.906
Q64. My business has sufficiently adapted to changes brought to bear on it by some government regulations.	Count	1	4	22	23	8			
	%	1.7%	6.9%	37.9%	39.7%	13.8%	53.4%	3.57 0.88	0.695
		Cronbach's Alpha							
		% of total variation accounted for by latent factor							61.36%

4.16.1. Developing a business plan that is financially marketable

The results show that 58.6% of the participants agreed/strongly agreed that they had the capacity to develop business plans that are marketable financially. This finding resonates with Kanchana, Divya and Beegom's (2013) argument that it is easy for entrepreneurs to come up with attractive business proposals which can convince financial institutions to invest in them even though maintaining an entrepreneurship culture is hard to sustain.

4.16.2. Business management and successful growth

A total of 76.6% of the respondents were of the view that they had the capability to manage their own businesses and grow them successfully. This finding cohere with Nchu's (2015) finding that entrepreneurs can grow their businesses when given proper education and if they are well capacitated to do so. The finding contradicts Smith and Lewis' (2011) claim that despite of entrepreneurs' intentions to manage their businesses successfully, the social tension among entrepreneurs is a recipe for conflict that is catastrophic to both the manager and business. In the current study, however, no entrepreneur reported any conflict or social tensions with their other entrepreneurs.

Furthermore, 53.4% of the respondents reported that their businesses have sufficiently adapted to changes brought to bear on them by some government regulations. Since slightly half of the respondents affirmed this position, while the rest were either neutral or disagreed, it can be assumed that there is credence in Gonin, Besharov, Smith and Gachet's (2013) view that entrepreneurship is not always smooth riding for entrepreneurs, especially when government legislation or policy is continually amended and imposing some risks that may lead to the collapsing of small businesses. In view of the split of opinion with regard to the finding, the researcher can only consider the positive affirmations on adaptation to government regulations as that was the dominant view.

4.17. Effects of personal demographic variables on venture creation (Objective 1)

This section seeks to address the research question:

How do these personal demographic variables influence venture creation?

4.17.1. Effects of age on venture variables

To test for the effect of age on venture creation variables, analysis of variance tests (ANOVA) were conducted.

Table.4.14: ANOVA tests for the effects of age on venture creation

VENTURE variables			N	Mean	Std. Deviation	ANOVA Tests			
						F	df1, df2	p-value	Comment
Opportunity Identification	<20 years	3	3.389	0.536	0.646	3, 54	0.589	Not significant	
	21-30 years	36	3.852	0.776					
	31-40 years	16	4.010	0.940					
	41-65 years	3	4.167	0.441					
Risk taking	<20 years	3	3.583	0.520	0.290	3, 54	0.833	Not significant	
	21-30 years	36	3.951	0.763					
	31-40 years	16	4.047	1.005					
	41-65 years	3	4.083	0.629					
Resource mobilization	<20 years	3	3.200	0.200	0.173	3, 54	0.914	Not significant	
	21-30 years	36	3.550	0.942					
	31-40 years	16	3.613	0.937					
	41-65 years	3	3.533	0.503					
Implementation of business decisions	<20 years	3	3.167	0.289	1.213	3, 54	0.314	Not significant	
	21-30 years	36	3.944	0.663					
	31-40 years	16	3.875	0.856					
	41-65 years	3	4.083	0.144					

There were five age groups in the study sample, namely, <20 years, 21-30 years, 31-40 years, 41-50 years and 51-65 years. However, there was only one research respondent in the 41-50 age group, therefore the groups 41-50 years and 51-65 years were combined for the sake of conducting ANOVA with the results presented in the Table 4.14 above. The results in Table 4.14 show that age does not significantly affect any of the venture variables (all p-values are greater than 0.05). This interpretation is supported by Hosseinia and Ramezani (2016) who reported that it has been noted that age does not exert any significant influence on entrepreneurship.

In the subsequent section, the means plots are presented in Figures 4.1 to 4.4.

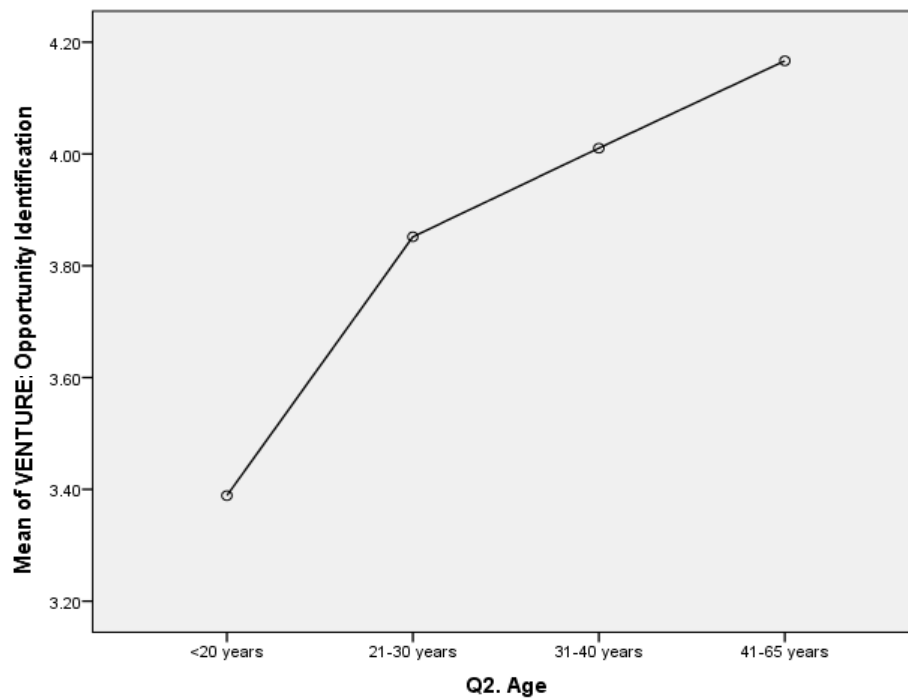


Figure 4.1. Trajectory of opportunity identification by age.

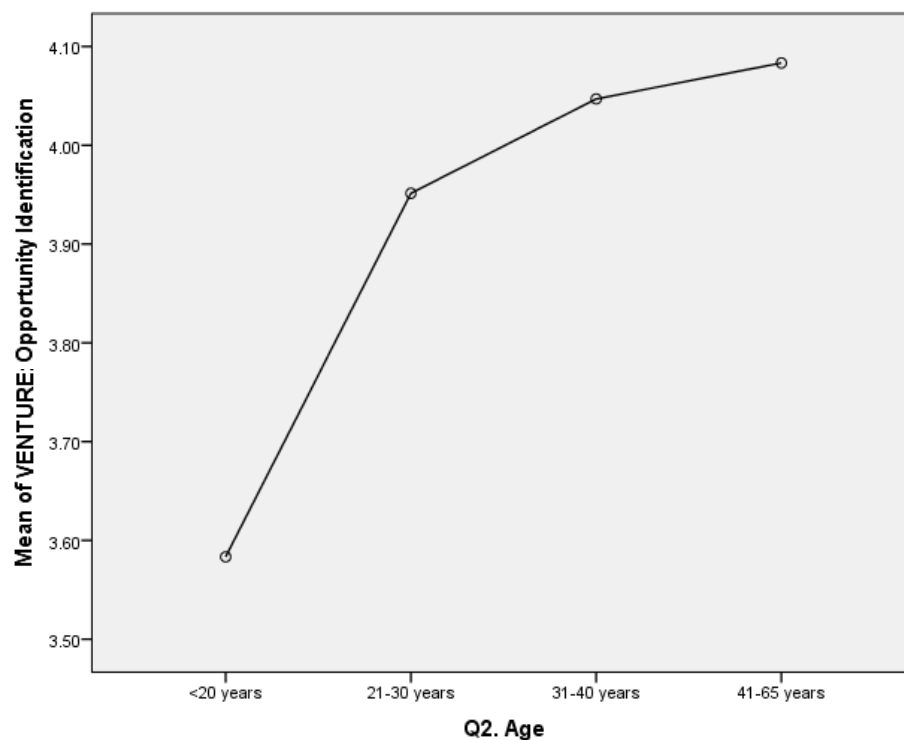


Figure 4.2. Trajectory of risk taking by age.

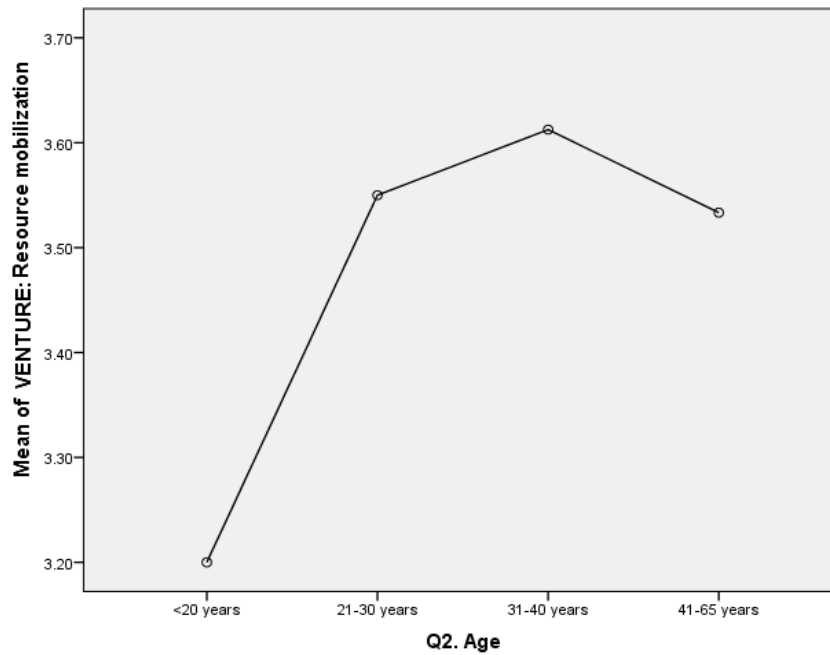


Figure 4.3. Trajectory of resource mobilisation by age.

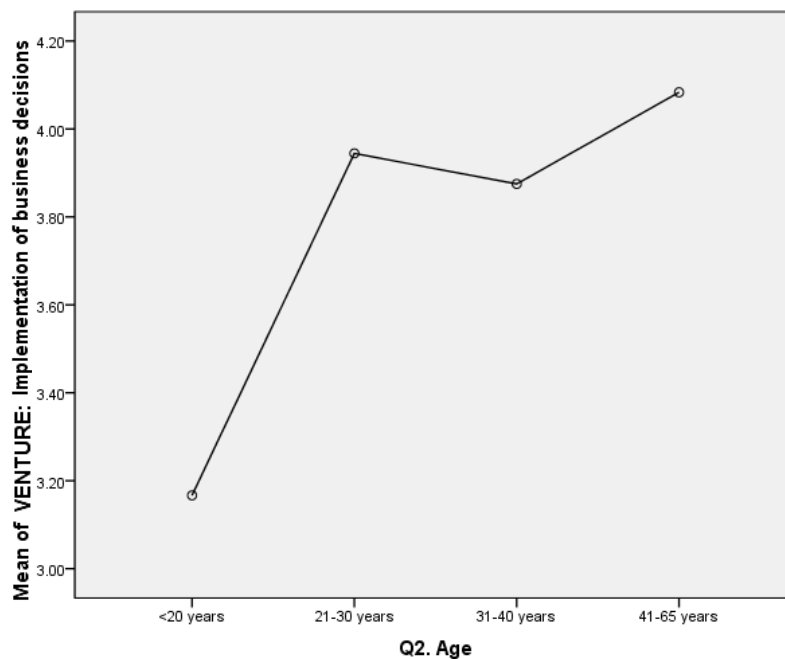


Figure 4.4. Trajectory of implementation of business decisions by age.

It can be seen that venture creation tends to rise with age although not significantly as concluded by the ANOVA results. The finding on age not influencing venture creation significantly seems to gel with Rusteberg (2013) observation that age has no significant influence on entrepreneurial intention. However, the same finding seems to support Zhang (2015) and Halvorsen and Morrow-Howell (2016) finding that self-

employment rates rise with age, and older age groups are more likely to be self-employed than younger counterparts.

4.17.2. Effects of gender on venture variables

Since there are only two categories of gender (i.e. males and females), t-tests will be used to test for the difference between the two groups on all four venture creation variables.

Table 4.15: Tests for the effects of gender on venture creation variables.

VENTURE variables		N	Mean	Std. Dev.	t-Tests			
					t	df	p-value	Comment
Opportunity Identification	Male	31	4.124	0.655	2.511	56	0.015	Significant
	Female	27	3.617	0.877				
Risk taking	Male	31	4.202	0.693	2.483	56	0.016	Significant
	Female	27	3.694	0.861				
Resource mobilization	Male	31	3.645	0.744	0.886	56	0.380	Not Significant
	Female	27	3.437	1.038				
Implementation of business decisions	Male	31	4.113	0.487	2.687	56	0.009	Significant

The results in Table 4.15 show that gender is a significant factor affecting opportunity identification ($t=2.511$, $df=56$, $p\text{-value}=0.015$). The finding resonates with Camelo-Ordaz, Diáñez-González and Ruiz-Navarro's (2016) finding that gender impacts positively on the ability of firms to recognise business opportunities. The results show that males (mean=4.124) score higher than females (3.617) as far as opportunity identification is concerned. This finding supports Camelo-Ordaz et al.'s (2016) evidence that the ability to recognise opportunities is positively interrelated to the entrepreneurial intention of men and women, with the effect being stronger in the case of men compared to women.

The results also revealed that gender is a significant factor affecting risk taking ($t=2.483$, $df=56$, $p\text{-value}=0.016$). The results show that males (mean=4.202) scored higher than females (3.694) as far as risk taking is concerned. For risk-taking, the results showed that male entrepreneurs have a significantly higher risk-taking

behaviour than female entrepreneurs. This is consistent with prior studies such as Ayub, Razzaq, Aslam and Iftekhar (2013) and Neneh et al. (2016) which established that women are more risk averse than men.

The results also show that gender significantly affect the implementation of business decisions ($t=2.687$, $df=56$, $p\text{-value}=0.009$) with males once again scoring higher than the females. Deakins and Freel (2012); Koellinger, Minniti and Schade (2013) and Cilliers and Strydom (2016) concur that less women than men are running their own businesses effectively, and that it is generally claimed that business opportunity and success are less available to and less experienced by women compare to men.

However, gender does not significantly affect resource mobilisation ($t=0.886$, $df=56$, $p\text{-value}=0.380$) which means that males and females fare equally as far as resource mobilisation is concerned. The means that both male and female have equal capacity to mobilise resources for successful business start-up. The finding appears to contradict the claim that there is different access to opportunities and resources which manifest in women being disadvantaged on the grounds of lack of previous managerial experience and training and consequently, creating the feeling among women that they do not have the necessary abilities for entrepreneurship (Yordanova & Tarrazon, 2010; Camelo-Ordaz et al., 2016).

4.18. Effects of institutional variables on venture creation (Objective 2)

This section seeks to address the research question:

How do institutional variables influence the creation of technology-oriented ventures in the Mangaung Metropolitan Area and Matjhabeng Local Municipality?

Issues around venture creation were addressed in Sections D of the questionnaire and have been summarised in Sections 9 to 12 above. Overall measures of the constructs presented in these sections were calculated using the principal component coefficients presented in the summary tables for each construct. These new variables are latent variables derived from the original questions which were shown to have very high internal consistency (see section on reliability analysis). The subsequent section discusses the influence of family role models on venture creation.

4.18.1. Effects of family role models on venture creation

The questions about family role models were:

- Do any of your parents own a business? (Y/N).
- Do any of your extended family members (e.g. cousins, niece, uncle, aunt, and granny) have a business? (Y/N).
- Do you regard any of your family members (including extended family members) as your business role model(s)? (Y/N).

The effects these questions have on the venture creation questions are analysed using t-tests since the family variables have only two categories of responses (Yes/No). Tests were done to determine if those with family role models (yes) and those without (no) differ.

Table 4.16: T-test for the effects of parents' ownership of business on entrepreneurs' venture creation

Venture creation	Q9. Do any of your parents own a business?	Summary statistics			t-tests		
		N	Mean	Std. Dev	t-statistic	degrees of freedom	p-value
Opportunity identification	Yes	12	3.99	0.54	0.473	56	0.638
	No	46	3.86	0.86			
Risk taking	Yes	12	3.88	0.54	0.146	56	0.884
	No	46	3.84	0.85			
Resource mobilisation	Yes	12	3.42	1.03	-0.571	56	0.570
	No	46	3.58	0.86			
Implementation of business decisions	Yes	12	4.13	0.55	1.290	56	0.202
	No	46	3.83	0.73			

4.18.1.1. T-test for the effects of ownership of business by parents on venture creation

The results in Table 4.16 show that none of the venture creation constructs is significantly influenced by whether any of one's parents owned a business or not (all p-values are greater than 5% or 0.05). There is no statistically significant relationship between parents' ownership of a business and the respondents' creation of ventures.

This finding seem to support Yaghmaei and Ghasemi's (2015) finding that there is no statistically significant relationship between having entrepreneurial parents and becoming an entrepreneur. This finding is also strengthened by Sahinidis, Vassiliou, and Hyz's (2014) affirmation that there is no significant relationship between having parents who are self-employed and the entrepreneurial intention of the children. However, the aforementioned finding on the lack of a statistically significant relationship between having parents who own businesses and venture creation contradicts the revelation by Lindquist et al. (2015) that self-employed parents may transfer self-employment specific skills to their offspring and these skills will assist the offspring as they incubate their own businesses.

Table 4.17: T-test for the effects of extended family's ownership of business on the entrepreneur's venture creation

Venture creation	Q10. Do any of your extended family members own a business?	Summary statistics			t-tests		
		N	Mean	Std. Dev	t-statistic	degrees of freedom	p-value
Opportunity identification	Yes	32	3.91	0.83	0.192	56	0.849
	No	26	3.87	0.78			
Risk taking	Yes	32	3.90	0.83	0.567	56	0.573
	No	26	3.78	0.77			
Resource mobilisation	Yes	32	3.69	0.96	1.391	56	0.170
	No	26	3.37	0.77			
Implementation of business decisions	Yes	32	4.01	0.76	1.395	56	0.169
	No	26	3.75	0.62			

4.18.1.2. T-test for the effects of extended families' ownership of business on entrepreneurs' venture creation

The results in Table 4.17 show that none of the venture creation constructs is significantly influenced by the entrepreneurs' extended families' ownership of businesses (all p-values are greater than 5%). Therefore, there is no statistically significant relationship between the extended family members' ownership of a business and the entrepreneurs' creation of ventures. This finding concurs with Parker and Van Praag's (2012) observation that having an extended family member who owns a business has no significant effect on an entrepreneur's creation of a business.

By proxy, the same finding seems to support the claim that entrepreneurial intention does not have a significant correlation with having an entrepreneurial family background (Malebana, 2014). These findings seem to contradict the popular view that the experience of working in a parent's business venture enables the transfer of performance-enhancing informal human capital critical for incubating new businesses (Parker & Van Praag, 2012).

Table 4.18: T-test for the effects of family role models on venture creation

Venture creation	Q11. Do you regard any of your family members as your business role models?	Summary statistics			t-tests		
		N	Mean	Std. Dev	t-statistic	degrees of freedom	p-value
Opportunity identification	Yes	27	3.98	0.86	0.828	56	0.411
	No	31	3.81	0.75			
Risk taking	Yes	27	3.94	0.87	0.806	56	0.424
	No	31	3.77	0.73			
Resource mobilisation	Yes	27	3.70	1.04	1.185	56	0.241
	No	31	3.42	0.74			
Implementation of business decisions	Yes	27	4.03	0.81	1.376	56	0.174
	No	31	3.77	0.59			

4.18.1.3. T-test for the effects of regarding family members as role models on venture creation

The results in Table 4.18 show that none of the venture creation constructs is significantly influenced by one's perceptions of the family members as role models (all p-values are greater than 5%). There is no statistically significant relationship between having a family member who is regarded as role model and creating a venture. Welsh, Memili and Kaciak (2016) concurred with this finding and argue that family moral support has no statistically significant effect on venture creation. This finding somewhat contradicts Bird (2014) and Pant's (2015) finding that the significant entrepreneurial potential found within entrepreneurial families can be rubbed on to children of such entrepreneurs. The other two role model constructs are analysed using correlation analysis since they are on Likert scales and can be computed into single latent variables.

4.19. Correlations between Likert scaled role models and venture creation variables

The other family variables were measured by three constructs based on Likert scaled questions. These variables are summarised in Sections 4.3 and 4.4. The effects of these constructs on venture creation are assessed using correlation analysis as presented in Table 4.19.

Table 4.19: Correlations between Likert scaled role model and venture creation variables

Pearson Correlations			Family Role Models			Venture creation			
			Family role models (B1)	Family recognition of venture creation (a)	Family recognition of venture creation (b)	Opportunity identification	Risk taking	Resource mobilisation	Implementation of business decisions
Family Role Models	Family role models (B1)	Correlation p-value N	-						
	Family recognition of venture creation (a)	Correlation p-value N	0.616** 0.000 58	-					
	Family recognition of venture creation (b)	Correlation p-value N	0.622** 0.000 58	0.727** 0.000 58	-				
Venture creation	Opportunity identification	Correlation p-value N	0.389** 0.003 58	0.200 0.133 58	0.224 0.091 58	-			
	Risk taking	Correlation p-value N	0.469** 0.000 58	0.253 0.056 58	0.241 0.068 58	0.791** 0.000 58	-		
	Resource mobilisation	Correlation p-value N	0.367** 0.005 58	0.329* 0.012 58	0.153 0.253 58	0.632** 0.000 58	0.647** 0.000 58	-	
	Implementation of business decisions	Correlation p-value N	0.514** 0.000 58	0.406** 0.002 58	0.368** 0.004 58	0.680** 0.000 58	0.762** 0.000 58	0.673** 0.000 58	-
** . Correlation is significant at the 0.01 level (2-tailed). * . Correlation is significant at the 0.05 level (2-tailed).									

The results show that the implementation of business decisions is positively and significantly correlated with all three family role models and these are family role models B1 (Correlation=0.514, p-value=0.000), family recognition of venture creation (a) (Correlation=0.406, p-value=0.002) and family recognition of venture creation (b) (Correlation=0.368, p-value=0.004). This means that families play a critical role in assisting the siblings to create ventures. Milani, Dumas, Ahmed and Matulevicius (2015) in support of this finding emphasise the significance of the role played by families in creating and successfully running a new business venture. This findings corroborate the Theory of Planned Behaviour's (TPB) postulation that subject norms play an important role in shaping entrepreneurial intentions (influence of significant entrepreneurship such as family members' siblings, friends coaches and colleagues) as well the determination to pursue venture creation.

Resource mobilisation is positively and significantly correlated with family role models B1 (Correlation=0.367, p-value=0.005) and family recognition of venture creation (a) (Correlation=0.329, p-value=0.012) but not significantly correlated to family recognition of venture creation (b) (Correlation=0.153, p-value=0.253). The study reveals that resource mobilisation, is necessary for the advancement of a venture, even though this does not mean that families will be supportive of such venture creation. Placing it in a fairly understandable manner, Gwija, et al. (2014) argue that while there is relation between resource mobilisations and people which the business owner may be looking up to for support (e.g. his/her siblings), such support will never be guaranteed as these siblings know the challenges brought upon the start-up of such business. Nonetheless, the first finding on the statistically significant relationship between family role models and family recognition of venture creation supports TPB which suggest that an entrepreneur's significant others are instrumental in activating positive entrepreneurship behaviour, especially the mobilisation of resources.

Risk taking is positively and significantly correlated with family role models B1 (Correlation=0.469, p-value=0.000) but not significantly correlated with family recognition of venture creation (a) (Correlation=0.259, p-value=0.056) and family recognition of venture creation (b) (Correlation=0.241, p-value=0.068). The correlation of risk taking to family role model implies that role models can be supportive of entrepreneurs' risky business pursuits even though their whole family or extended

families may be not necessarily support or may be sceptical of the business pursuits due to the uncertainties and stress involved in such ventures. This interpretation is supported by Moulson (2015) who reports that an entrepreneur's risk taking can be propelled by family role models even though other risk averse family members may try to protect the entrepreneur against the expected negative consequences of risk business venturing.

Opportunity identification is positively and significantly correlated with family role models B1 (Correlation=0.389, p-value=0.003) but not significantly correlated with family recognition of venture creation (a) (Correlation=0.200, p-value=0.133) and family recognition of venture creation (b) (Correlation=0.224, p-value=0.091). While the entrepreneur's identification of opportunities may be affirmed by family role models, these ideas may not be readily supported by the entire family or parents of the entrepreneur because of the existence of various examples of failed new ventures in South Africa. This finding resonates with Meyer's (2015) finding that, while society and stakeholders may readily affirm the recognition of certain opportunities by an entrepreneur, family members may not always give sufficient support and legitimacy to such ideas.

The venture variables are positively and significantly correlated amongst themselves with large effect sizes. The family role models variables are also positively and significantly correlated amongst themselves with large effect sizes.

4.20. Effects of structural variables on venture creation (Objective 3)

This section addresses the research question:

How do structural variables influence the creation of technology-oriented ventures in the Mangaung Metropolitan Area and Matjhabeng Local Municipality?

Since all structural variables were measured on a Likert scale, this research question is addressed using a correlation analysis. Table 4.20 below presents the correlations between structural variables and venture creation variables.

Table 4.20: Correlations between structural and venture creation variables

Correlations		Structural Variables				Venture creation			
		Science, Technology, Engineering and Maths (STEM)	Social prejudice: Venture creation and operation	Social prejudice: Funding of SMMEs	Social prejudice: Marketing of SMMEs	Opportunity Identification	Risk taking	Resource mobilisation	Implementation of business decisions
Structural Variables	Science, Technology, Engineering and Maths (STEM)	Correlation p-value N	- - 58	- - 58	- - 58	- - 58	- - 58	- - 58	- - 58
	Social prejudice: Venture creation and operation	Correlation p-value N	0.333* 0.011 58	- - 58	- - 58	- - 58	- - 58	- - 58	- - 58
	Social prejudice: Funding of SMMEs	Correlation p-value N	0.146 0.275 58	0.460** 0.000 58	- - 58	- - 58	- - 58	- - 58	- - 58
	Social prejudice: Marketing of SMMEs	Correlation p-value N	0.102 0.448 58	.463** 0.000 58	0.486** 0.000 58	- - 58	- - 58	- - 58	- - 58
	Opportunity identification	Correlation p-value N	0.119 0.374 58	0.217 0.101 58	0.120 0.369 58	0.305* 0.020 58	- - 58	- - 58	- - 58
	Risk taking	Correlation p-value N	0.063 0.639 58	0.241 0.068 58	0.195 0.142 58	0.260* 0.049 58	0.791** 0.000 58	- - 58	- - 58
	Resource mobilisation	Correlation p-value N	0.172 0.198 58	0.121 0.364 58	0.155 0.246 58	0.172 0.196 58	0.632** 0.000 58	0.647** 0.000 58	- - 58
	Implementation of business decisions	Correlation p-value N	-0.001 0.995 58	0.173 0.193 58	0.138 0.303 58	0.068 0.613 58	0.680** 0.000 58	0.762** 0.000 58	0.673** - 58
Venture creation									
		*. Correlation is significant at the 0.05 level (2-tailed).							
		**. Correlation is significant at the 0.01 level (2-tailed).							

Table 4.20 reveals that most structural variables do not affect venture creation (most p-values>0.05) except for social prejudice in marketing of SMMEs which is significantly correlated with opportunity identification (Correlation=0.305, p-

value=0.020) and with risk taking (Correlation=0.260, p-value=0.049). The effect size of these significant correlations are minor, which leaves the general picture that structural variables are not as correlated to venture creation as structural variables that had higher and more significant correlations. The significant correlation between social prejudice in marketing, opportunity recognition and risk taking can be attributed to the prevalence of gender-based prejudices that marginalise women when it comes to opportunity recognition and taking risks in business. The social prejudice, especially on women (e.g. claims that females do not make great entrepreneurs) may undermine their capacity to identify opportunities and take risks that are critical to business success.

4.21. Level of influence of institutional and structural variables on venture creation (Objective 4)

This section seeks to address the research question:

Which variable has greater statistical significance on the creation of technology-oriented ventures?

Regression analysis was used to conduct a comparative analysis of the impact of institutional and structural variables on venture creation. The predictor variables are fitted together in four regression models with the four venture creation variables as response variables. The variables with higher regression coefficient will be considered as having greater influence on venture creation than those with lower regression coefficients.

4.21.1. Level of influence of institutional and structural variables on opportunity identification

The results as indicated in Table 4.21 presents the questions that dealt with respondents' views with regard to venture creation component namely opportunity identification.

Table 4.21: Regression of opportunity identification on institutional and structural variables

Rank	Dependent Variable: Venture Creation: Opportunity Identification	Unstandardised Coefficients		T	p-value
		B	Std. Error		
1	(Constant)	2.230	0.564		
2	Social prejudice: Funding of SMMEs	-0.237	0.135	-1.760	0.085
3	Family role models: Family recognition of venture creation (b)	0.007	0.122	0.058	0.954
4	Social prejudice: Venture creation and operation Science, Technology, Engineering and Mathematics (STEM)	0.028	0.144	0.194	0.847
5	Family role models: Family recognition of venture creation (a)	0.037	0.123	0.299	0.766
6	Family role models: Likert scales	0.074	0.151	0.492	0.625
7	Social prejudice: Marketing of SMMEs	0.288	0.130	2.215	0.031
		0.341	0.132	2.575	0.013

The results in Table 4.21 show that a holistic consideration of the predictor variables shows that the most important determinants of opportunity identification are family role models (coefficient = 0.288, $t=2.215$, $p=0.031$) and marketing of SMMEs (coefficient = 0.341, $t=2.575$, $p\text{-value}=0.013$) with the marketing of SMMEs as the most important factor affecting opportunity identification. A surprising result is that the funding of SMMEs has a negative coefficient (coefficient=-0.237) and thus the more funding increases the less the level of opportunity identification.

The factors affecting opportunity identification are also shown in the ranking of importance with the most important having the highest rank of 7. It is important to note that since marketing of SMMEs' $p\text{-value}$ is less than 0.05; it gives a significant value to our hypothesis that there is a correlation between opportunity identification and the marketing of SMMEs. Finally, the negativity on the level of funding suggests that entrepreneurs tend to relax and cease to be imaginative after receiving the funding compared to when they were starting their business ventures.

4.21.2. Level of influence of institutional and structural variables on venture creation

The results from Table 4.22 presents the determinants of risk taking as they relate to broader institutional and structural variables.

Table 4.22: Regression of risk taking on institutional and structural variables

Rank	Dependent Variable: Venture: Risk Taking	Unstandardised Coefficients		T	Sig.
		B	Std. Error		
1	(Constant)	2.265	0.553	4.097	0.000
2	Social prejudice: Funding of SMMEs	-0.147	0.132	-1.110	0.272
3	Family role models: Family recognition of venture creation (b)	-0.048	0.120	-0.398	0.693
4	Science, Technology, Engineering and Mathematics (STEM)	-0.042	0.121	-0.346	0.731
5	Social prejudice: Venture creation and operation	0.070	0.141	0.492	0.625
6	Family role models: Family recognition of venture creation (a)	0.081	0.148	0.551	0.584
7	Social prejudice: Marketing of SMMEs	0.236	0.130	1.819	0.075
	Family role models: Likert scales	0.356	0.128	2.792	0.007

The results in Table 4.22, which are based on a consideration of all the predictor variables collectively, show the most important determinants of risk taking as the marketing of SMMEs (coefficient = 0.236, $t=1.819$, $p\text{-value}=0.075$) and family role models (coefficient = 0.356, $t=2.792$, $p\text{-value}=0.007$) with family role models being the most important factor affecting risk taking. This finding supports Tefula's (2017) revelation that family support can make an entrepreneur take risks and seek improvements to the marketing of their business.

Again, the funding of SMMEs has a negative coefficient (coefficient=-0.147) which means that increases in funding are associated with reductions in the levels of risk taking. The factors affecting risk taking are also shown in the ranking of importance, with the most important having the highest rank of 7. Family role models has the highest impact on risk taking.

4.21.3. Level of influence of institutional and structural variables on resource mobilisation

The results from Table 4.23 show the regression of resource mobilisation on institutional and structural variables

Table 4.23: Regression of resource mobilisation on institutional and structural variables

Rank	Dependent Variable: Venture: Resource Mobilisation	Unstandardised Coefficients		T	Sig.
		B	Std. Error		
	(Constant)	1.665	0.635	2.624	0.011
1	Family role models: Family recognition of venture creation (b)	-0.225	0.138	-1.634	0.109
2	Social prejudice: Funding of SMMEs	-0.117	0.152	-0.769	0.445
3	Social prejudice: Venture creation and operation	-0.098	0.162	-0.607	0.547
4	Science, Technology, Engineering and Mathematics (STEM)	0.125	0.138	0.900	0.372
5	Family role models: Likert scales	0.258	0.146	1.764	0.084
6	Social prejudice: Marketing of SMMEs	0.278	0.149	1.861	0.069
7	Family role models: Family recognition of venture creation (a)	0.386	0.170	2.276	0.027

The results in Table 4.23, which draw on a consideration of all the predictor variables, show that the most important determinants of resource mobilisation are the marketing of SMMEs (coefficient = 0.278, $t=1.861$, $p\text{-value}=0.069$) and family recognition of venture creation (a) (coefficient = 0.386, $t=2.276$, $p\text{-value}=0.027$) with family recognition of venture creation (a) being the most important factor affecting resource mobilisation. It is important to take into account the fact that family dynamics (culture and beliefs) have the potential to either build or destroy the business (Gallagher & Buckeye, 2014). However, a few variables have negative coefficients, thus indicating that they negatively impact on resource mobilisation.

4.21.4. Level of influence of institutional and structural variables on implementation of business decisions

The regression on implementation of business decisions on institutional and structural variables are presented in Table 4.24.

Table 4.24: Regression of implementation of business decisions on institutional and structural variables

Model Rank	Dependent Variable: Venture: Implementation of business decisions	Unstandardised Coefficients		T	Sig.
		B	Std. Error		
1	(Constant)	2.806	0.484	5.792	0.000
2	Social prejudice: Funding of SMMEs	-0.129	0.116	-1.117	0.269
3	Science, Technology, Engineering and Mathematics (STEM)	-0.091	0.106	-0.865	0.391
4	Family role models: Family recognition of venture creation (b)	-0.006	0.105	-0.057	0.954
5	Social prejudice: Venture creation and operation	0.079	0.124	0.641	0.524
6	Social prejudice: Marketing of SMMEs	0.088	0.114	0.776	0.441
7	Family role models: Family recognition of venture creation (a)	0.140	0.129	1.078	0.286
8	Family role models: Likert scales	0.293	0.112	2.623	0.012

The results in Table 4.24 show that, the most important determinants of the implementation of business decisions, after a consideration of all the predictor variables, are: family recognition of venture creation (a) (coefficient = 0.140, $t=1.078$, $p\text{-value}=0.286$) and family role models (Likert scales) (coefficient = 0.293, $t=2.623$, $p\text{-value}=0.012$) with family role models (Likert Scales) being the most important factor affecting the implementation of business decisions. Families indeed play a significant role in the implementation of business decisions because they may have to approve certain decisions of the small business owner/managers before they can be effectively implemented. However, the decision to proceed with a venture can be the outcome of the decision of the senior member of the family's, although to some extent other entrepreneurs will have to venture into the business without family blessings because of their contradicting remarks to their venture (Arregle, Batjargal, Hitt, Webb, Miller &

Tsui, 2015). It is important to note that those coefficients with p-values less than 0.05 do significantly affect the response variable.

4.22. The integrated perspective of personal demographic, institutional and structural variables on venture creation (Objective 5)

This section seeks to address the research question:

Which combination(s) of selected personal demographic, institutional and structural variables most influence the development of an integrated perspective on venture creation?

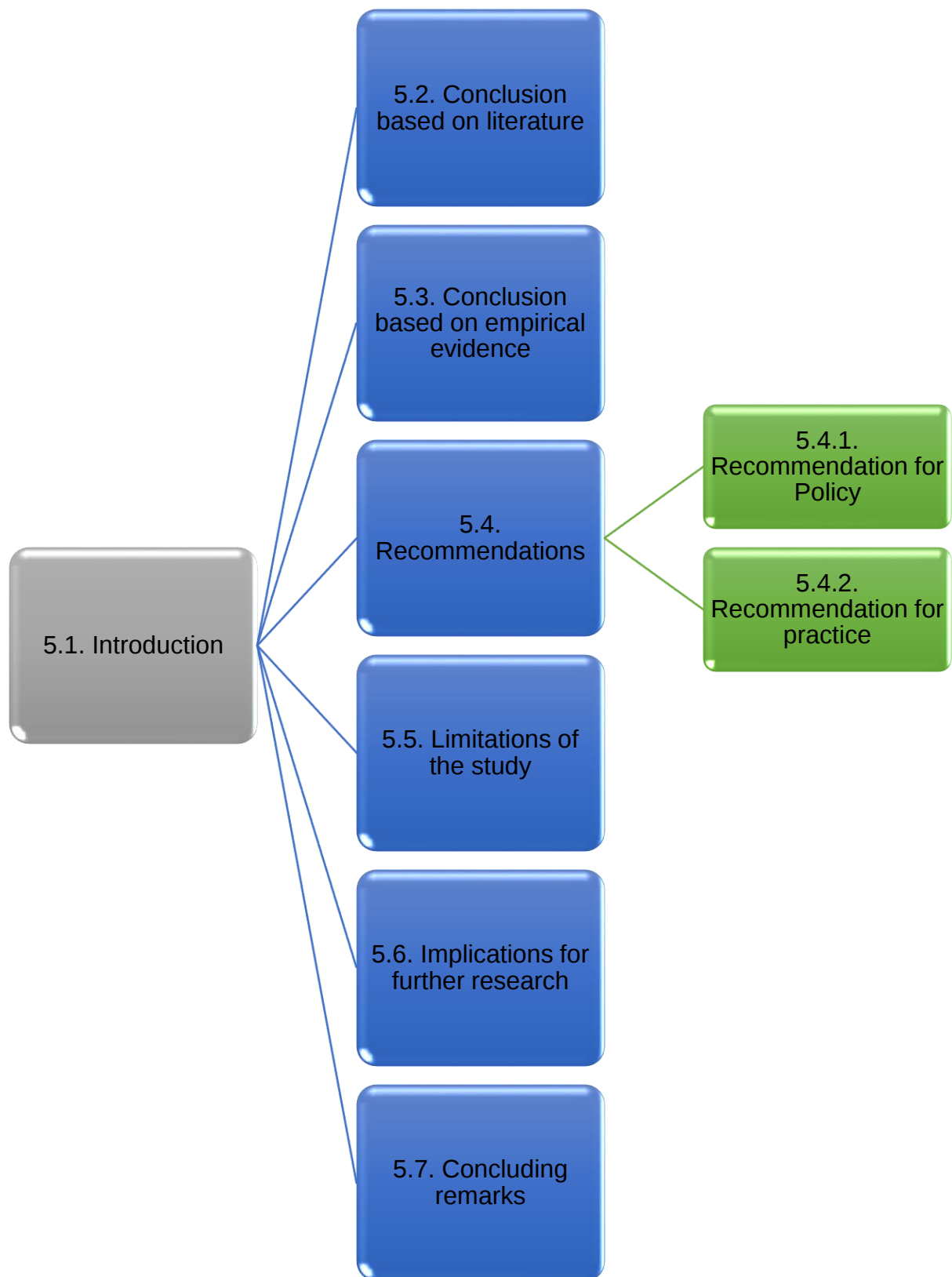
This question is addressed by gathering answers to the questions on the factors that generally influence venture creation at personal demographic, institutional and structural variables. It can be inferred that at the personal demographic level, gender has a significant influence on opportunity identification ($t=2.511$, $df=56$, $p\text{-value}=0.015$), itself an aspect of venture creation. The results also showed that family role models, that is, family role models B1 (Correlation=0.514, $p\text{-value}=0.000$), family recognition of venture creation (a) (Correlation=0.406, $p\text{-value}=0.002$) and family recognition of venture creation (b) (Correlation=0.368, $p\text{-value}=0.004$) influence the creation of ventures. In the same way, structural variables especially social prejudice in the marketing of SMMEs, is significantly correlated with opportunity identification (Correlation=0.305, $p\text{-value}=0.020$) and with risk taking (Correlation=0.260, $p\text{-value}=0.049$). Furthermore, the marketing of SMMEs (coefficient = 0.341, $t=2.575$, $p\text{-value}=0.013$) is the most significant factor affecting opportunity identification.

4.23. Summary of the chapter

The chapter presented and discussed the results obtained from the data analysis. The results were presented in the form of tables and percentages. Both a correlation and regression analyses were employed to establish relations of association and predict the nature of the relationships between variables.

The next chapter provides a conclusion and recommendations based on the results outlined in this chapter.

CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS



5.1. Introduction

The previous chapter presented, interpreted and discussed the research findings on the relationship among personal demographic, institutional and structural variables and the creation of technology-oriented business ventures, particularly internet cafés in the Mangaung Metropolitan Area and Matjhabeng Local Municipality. The major findings reported in the previous chapter were that institutional and structural variables have higher statistically significant influences on venture creation compared to personal demographic variables. This conclusion chapter concludes the study by recapping the objectives of this study and their responses based on the presentation and discussion of findings, presenting the theoretical and practical contribution of the study, highlighting the recommendations for policy, practice and further research and presenting the final conclusion. The subsequent section revisits the aim and objective of the study.

5.2. Conclusion based on literature

A comprehensive literature review was conducted to form the conceptual basis for this study. The review explored current literature on the influence of personal demographic, institutional and structural variables on venture creation. The findings from literature that discussed the impact of personal demographic variables on the incubation of ventures are summarised in the subsequent sections.

5.2.1. Personal demographic variables

While there are a host of personal demographic variables, such as race, nationality, highest academic education, roles in the business and the nature of business ownership, which have potential to shape venture creation the most prominent ones emphasised in literature are the entrepreneur's gender and age. As a result, the subsequent sections discussed the conclusions on gender and age as determinants of venture creation.

5.2.1.1. Gender and venture creation

The following sections discuss gender and small, micro and medium enterprises (SMMEs) growth, gender, firm size and operational sector, gender and quantity of SMMEs and age and venture creation.

5.2.1.1.1. Gender and SMME growth

There is a growing recognition, with regard to gender that, although women entrepreneurs play a key role in economic activity, the growth of their SMMEs, especially those located on the technology sector, has remained significantly subdued (Mauchi, Mutengezanwa & Damiyano, 2014). This marginal participation arises from the heavy representation of males in technology-oriented ventures i.e. internet cafés compared to women. Fatoki (2014b) concurs that regardless of the increase in the number and share of women entrepreneurs, entrepreneurship is still a male dominated domain. Furthermore, women's entrepreneurship is still significantly lower than that of men (Fatoki, 2014b). Sahban et al. (2016) found out that the number of women entrepreneurs in Indonesia is less than that of men. The lower representation of women in business could be attributed to a host of factors such as cultural barriers to women participation and women's heavy involvement in unpaid labour in the home. Literature suggests that gender-based discrimination is still a predicament for female entrepreneurs. The common stereotypes of women are that they are care givers, should be obedient, responsible for all housework and are over-burdened with domestic responsibilities and care of all family members (Hora, 2014; Mutanana & Bukaliya, 2015).

5.2.1.1.2. Gender, firm size and operational sector

With regard to size, women-owned businesses tend to be smaller than those of their male counterparts. Woman-owned businesses also tend to operate in the informal sector with lower economic value and tend to grow at a much slower rate than those of men. While a host of factors explain the stunted growth of female-owned businesses, the most common reasons include constraints in access to funding from financial institutions and the pressure on women to attend to their households while simultaneously running their businesses. For instance, Lalhunthara (2015) suggests that banks and financial institutions historically viewed women entrepreneurs as having more doubtful propositions than men thus sustaining discrimination subtly or overtly in lending practices (Vinay & Singh, 2015). As a result, women are often forced to depend on their personal savings rather than external borrowing.

There also exist is a clear differentiation, at an operational level, between male-run and female-run businesses. Chinomona and Maziriri (2015) posit that women tend to dominate micro enterprise businesses and tend to be concentrated in specific sectors especially those with lower entrance requirements such as retail and service sectors. To the contrary, men tend to participate in technological-oriented ventures such as internet cafés (Rambe, & Mokgosi, 2016; Rambe & Ndofirepi, 2016).

5.1.1.1.3. Gender and quantity of SMMEs

The conclusion from the literature is that South African female-owned businesses are fewer and operate on a smaller scale than those owned by men (Neneh et al., 2016). In addition, male business owners often dominate business ventures in sectors they operate in. This previously gained the required skills and related experience (Shava & Rungani, 2016). Perhaps, the prevalence of male dominated businesses is a consequence of the reality that women-owned firms are less likely to survive than male owned firms (Shava & Rungani, 2016). According to Mauchi et al. (2014) studies have indicated that women are well represented in areas seen as traditionally female, such as retail, but are still significantly underrepresented in others perceived as male dominated such as science, engineering and technology. Mauchi et al. (2014) found out that 75% of women entrepreneurs were in the service industry, 19% in retailing and only 6% in manufacturing.

5.2.1.2. Age and venture creation

Apart from gender, age is another key demographic factor implicated in venture creation in South Africa. Although the interest in age as a variable impacting on entrepreneurial intention has increased (Khuong & Huu An, 2016), the actual impact of age on venture creation remains a grey area. It was also noted that although there is a general lack of consensus on the exact age that is entrepreneurially active, the general expectation is that older mature individuals tend to be more entrepreneurial compared to their younger counterparts. For instance, Peter and Munyithya (2015) argue that older entrepreneurs tend to be more successful entrepreneurs than their less mature counterparts. Similarly, Herrington and Kew (2017) and Sajilan et al. (2015) found out that mature adults aged between 25 and 44 years are the most

entrepreneurially active and account for between 50% and 60% of all early-stage activity.

However, there is no clear consensus in mainstream entrepreneurship literature about the actual age range that lends itself to entrepreneurship. For example, Span, Van Stel and Van den Berg (2015) and Mbinda (2015) insist that the early-stage entrepreneurial activity is most dominant among individuals 25-34 years of age and slightly dominant between individuals in the 55-64 age range. While Gathungu and Mwangi (2014) may not necessarily proscribe to these age variations, they content that older entrepreneurs find it difficult to conform to a younger, dominant enterprising culture. In the same vein, Sajilan et al. (2015) also observe that entrepreneurs are more successful in their younger age than in their older age. Perhaps, the amount of energy and focus that mature entrepreneurs have for the successful accomplishment of entrepreneurship activities explains the thriving of entrepreneurs in their youthful to mature ages.

5.2.2. Institutional variables

While there is a range of institutional variables that influence the creation of emerging technology ventures such as internet cafés, those most reported in extant literature are family role models, parental support and family recognition of venture creation. The key conclusion on these variables are discussed in detail in subsequent sections.

5.2.2.1. *Family role models*

The literature shows the extent of the contribution of family role models to a cultural shift towards higher entrepreneurial intentions as a contested terrain (Birkner & Aderemi, 2015). In fact, the exact effect of having a family member as a business role model on entrepreneurial intention remains unclear. Some authors claim that coming from entrepreneurial family backgrounds and assigning an entrepreneurial mentor slightly increases the entrepreneurs' likelihood of forming/joining start-up firms (Memon, Rozan, Ismail, Uddin & Daud, 2015; Ali, 2016). Other studies insist that family role models play a central role in driving venture creation. Chinyamurindi (2016) revealed that family members play an important role in decision making situations and in developing an entrepreneurial spirit among emergent entrepreneurs. Furthermore,

Mustapha and Selvaraju (2015) posit that family members' involvement in business influences children to become entrepreneurs. This view is also shared by Boz and Ergeneli (2013) and Ozaralli and Rivenburgh (2016) who observe a strong connection between the presence of role models and the development of entrepreneurs in families.

5.2.2.2. Parental role model and support

Apart from family role models, such as blood line mentors and coaches, parents also play a pivotal role in prospective entrepreneurs' uptake of entrepreneurship. Kamel (2015) is of the view that parents play an important role in children's entrepreneurial career. Their role could be in the form of family emotional, moral and financial support. Parents' experiences in running business ventures may influence their support for children to choose a career as entrepreneurs (Marhaini, Ritha & Inneke, 2014). Entrepreneurial parents can also serve as very effective role models for their offsprings. The extensive socialisation in business that the children receive from the family suggests that, major decisions in their lives, such as starting a new venture, are likely to be affected by other family members and especially the father (Sahinidis et al., 2014). Therefore, parents tend to become role models for their children in choosing their future career (Rahman, 2014). It is clear from such literature that parents serve as the most influential figures in encouraging the entrepreneurship pursuits of their children. Thiranagama (2016) argues that parents act as initial role models and those playing an active role in a family business can influence the future entrepreneurial intentions of their offspring by changing their approaches and beliefs.

5.2.2.3. Family recognition of venture creation

Families play a crucial part in the venture creation process. Rambe and Mokgosi (2016) contend that family support systems are also central to enhancing the creation of ventures. Sahban et al. (2016) note that family support is a primary driving force for fostering students' mind-sets and motivation. Family support could enhance the possibility of the survival of offsprings' future businesses. The 'family embeddedness' perspective describes the impact and the importance of family in the entrepreneurial career of their offspring (Thiranagama, 2016). For entrepreneurs to be successful, they need a strong support and advisory structure in every phase of the venture creation. Hence, living in an entrepreneurial family creates a favourable climate for the provision

of support and may be an important influence on entrepreneurs' later decisions to start their own ventures (Rambe & Mokgosi, 2016). Family background can also become a source of success for an entrepreneur, especially if there is encouragement and support from the family members for the prospective entrepreneur (Tanveer, Akbar, Gill & Ahmed, 2013; Singh, 2014).

5.2.3. Structural variables

While a wide range of structural variables are considered in mainstream literature as explaining individuals' engagement in ventures, this study was preoccupied with gender, Science, Technology, Engineering, and Mathematics STEM and venture creation, and gender and flexible employment.

5.2.3.1. Gender, STEM and venture creation

The engineering component of STEM education does not just provide clarification on vague concepts but give prominence to techniques and designs of business solutions (Capraro, Capraro & Morgan, 2013; Ceylan & Ozdilek, 2015). Dasgupta and Stout (2014) state that women's representation at all levels of the STEM pipeline is low due to females' low interest in STEM from elementary, middle school up to taking up careers in STEM as adults. Studies note that women, underrepresented minorities, first-generation students, and those from low-income backgrounds leave STEM fields at higher rates than their counterparts (Chen & Soldner, 2013). This could be attributed to several factors such as lack of exposure to STEM concepts during their teenage years, lack of access to STEM materials in their homes, institutionalised prejudices and subtle systemic marginalisation from institutions. A study on American female uptake of STEM shows that girls and women might perform better than their male peers in STEM tests but would eventually lose interest and do not pursue advanced courses, majors, and careers in STEM, thus representing an exodus of talent among girls and women who could otherwise become the next generation of scientists, engineers, and creators of technology (Dasgupta & Stout, 2014).

The limited presence of women in STEM disciplines has enormous effects. It may undermine female future participation in technological professions such as operating technology-oriented ventures. As such, it is unsurprising that the underrepresentation

of women in STEM has resulted in their continued marginalisation in the STEM-based professions than in other professions such catering, fabrics and pottery that have limited barriers to entry and allow for effective involvement (Martin & Barnard, 2013; Maloiy, Jonck & Goujon, 2016).

5.2.3.2. Gender and flexible employment

Studies suggest that a significant percentage of self-employed women ‘may be working very few hours – as little as an hour per week’ and thus fitting flexible self-employment around family commitments (Carter, Mwaura, Ram, Trehan & Trevor, 2015). The need to balance entrepreneurship pursuits with competing family commitments, which is compounded by the socio-cultural expectations on women’s roles and responsibilities in the home, explains this condition in which self-employment comes in to cohere with family commitments. As such, it is unsurprising that the rates of female business ownership have been persistently lower (Xavier, Kelley, Kew & Vorderwülbecke, 2013; Carter et al., 2015) than male-typed (i.e., male dominated, believed-to-be-for-men) entrepreneurial pursuits. Female candidates tend to be negatively evaluated and negatively recommended for employment by study participants than is the case with male candidates (Stamarski & Son Hing, 2015).

5.3. Conclusion based on empirical evidence

This investigation also sought to render a solid conclusion based on the empirical findings. This was effected by recapping the research questions, providing the response to each question and rendering a conclusion informed by empirical findings. Consequently, the following section draws on the research questions, their responses and the conclusion for each response.

Research question 1

The first research question was: What is the age and gender composition of owner/managers internet cafés in the Mangaung Metropolitan Area and Matjhabeng Local Municipality? How do these personal demographic variables influence venture creation?

The results, as indicated in Table 4.2, show that there are more males than females who are operating technological ventures. The results of the study showed that 53.4%

of owner/managers were males while the remainder were females. This finding mirrors Brooks et al.'s (2014) claim that there are more male entrepreneurs than female entrepreneurs who are operating technological ventures.

The results of the study also revealed that 89.7% of the internet café owner/managers were young and middle aged entrepreneurs. It is clear that these business ventures are mostly created and operated by a youthful and middle aged population. This finding supports Herrington and Kew's (2017) claim that a highest prevalence of entrepreneurial activity is evident among the 25-34 and 35-44 year olds.

The results in Table 4.14 showed that age does not significantly affect any of the venture variables (all p-values are greater than 0.05). That said, venture creation tends to rise with age although not significantly as concluded by the ANOVA results. The results in Table 4.15 showed that gender is a significant factor affecting opportunity identification ($t=2.511$, $df=56$, $p\text{-value}=0.015$). The finding resonates with Camelo-Ordaz, Diáñez-González and Ruiz-Navarro's (2016) finding that gender impacts positively on the ability of firms to recognise business opportunities. The results also revealed that gender is a significant factor affecting risk taking ($t=2.483$, $df=56$, $p\text{-value}=0.016$).

Therefore, it is concluded that the technological oriented ventures are male dominated with the young and mature age groups being mostly involved in these businesses. It is also clear from the finding that gender positively and statistically significantly influences venture creation but age does not significantly affect venture creation.

Research question 2

The second research question was: How do institutional variables influence the creation of technology-oriented ventures in the Mangaung Metropolitan Area and Matjhabeng Local Municipality?

The results, as indicated in Table 4.19, show that the implementation of technology-oriented business decisions is positively and significantly correlated with all three family role models. These are, family role models B1 (Correlation=0.514, $p\text{-value}=0.001$), B2 (Correlation=0.412, $p\text{-value}=0.001$) and B3 (Correlation=0.312, $p\text{-value}=0.001$).

value=0.000), family recognition of venture creation (a) (Correlation=0.406, p-value=0.002) and family recognition of venture creation (b) (Correlation=0.368, p-value=0.004). This means that families play a critical role in assisting their children and siblings in creating new technology-oriented ventures, especially internet cafés. These findings have some resonance with the report by Holienka, Holienková, and Gál (2015) that entrepreneurs exposed to family entrepreneurial role models who possessed positive business experience showed significantly higher intention to become entrepreneurs.

Therefore, it is concluded that the presence of role models and family involvement is required to facilitate, promote and sustain an entrepreneurs' establishment of their new ventures.

Research question 3

The third research question was: How do structural variables influence the creation of technology-oriented ventures in the Mangaung Metropolitan Area and Matjhabeng Local Municipality?

The results, as indicated in Table 4.20, reveal that most structural variables do not affect venture creation (most p-values>0.05) except for social prejudice in the marketing of SMMEs which is significantly correlated with opportunity identification (Correlation=0.305, p-value=0.020) and risk taking (Correlation=0.260, p-value=0.049). However, the effect size of these significant correlations are small. As a result, the general picture created here is that **structural variables are not as necessarily correlated to venture creation as family variables which have higher and more significant correlations**. This finding is surprising in view of the general claim that structural variables such as STEM and social prejudice may influence venture creation (Dimitriadi, 2013; Madzivhandila & Dlamini, 2015).

Research question 4

The fourth research question was: Which variable has greater statistical significance on the creation of technology-oriented ventures?

Results in Table 4.21 show that a consideration of all the predictor variables shows that the most important determinants of opportunity identification are family role models (coefficient = 0.288, $t=2.215$, $p=0.031$) and the marketing of SMMEs (coefficient = 0.341, $t=2.575$, $p\text{-value}=0.013$), with the marketing of SMMEs as the most important factor affecting opportunity identification. A surprising result is that the funding of SMMEs has a negative coefficient (coefficient=-0.237) which means that increases in funding yield less levels of opportunity identification. Perhaps, the negativity on the level of funding suggests that entrepreneurs tend to relax and cease to be imaginative after receiving the funding compared to when they were starting their business ventures.

The above-noted result contradicts evidence from literature on the perceived positive relationship between funding opportunities and opportunity recognition in particular and entrepreneurship in general (Wang Ellinger & Wu, 2013; Vinay & Singh, 2015). It is also important to note that since the marketing of SMMEs' $p\text{-value}$ is less than 0.05, henceforth, there is a correlation between opportunity identification and the marketing of SMMEs.

It can, therefore, be concluded that the most important determinants of opportunity identification are family role models and the marketing of SMMEs, with marketing of SMMEs being the most important factor affecting opportunity identification.

Research question 5

The question was: Which combination(s) of selected personal demographic, institutional and structural variables most influence the development of an integrated perspective on venture creation?

This question is addressed by inferring from answers to the questions on the factors that mostly influence venture creation at individual, institutional and social levels. It can be inferred that gender has statistically significant relationship with opportunity identification ($t=2.511$, $df=56$, $p\text{-value}=0.015$) itself a component of venture creation. The findings also revealed that family role models, that is, family role models B1 (Correlation=0.514, $p\text{-value}=0.000$), family recognition of venture creation (a)

(Correlation=0.406, p-value=0.002) and family recognition of venture creation (b) (Correlation=0.368, p-value=0.004) influence the creation of ventures. In the same way, structural variables, particularly social prejudice in the marketing of SMMEs, are significantly correlated with opportunity identification (Correlation=0.305, p-value=0.020) and with risk taking (Correlation=0.260, p-value=0.049). In addition, the marketing of SMMEs (coefficient = 0.341, t=2.575, p-value=0.013) is the most important factor affecting opportunity identification.

It can therefore, be concluded that, collectively, gender, family role models B1, family recognition of venture creation (a), family recognition of venture creation (b), social prejudice in marketing of SMMEs and marketing of SMMEs all positively and significantly influence venture creation.

5.4. Recommendations

This section outlines the key recommendations of the study. The recommendations, which are based on the research objectives, the findings and scores of the questionnaire responses, are proposed for policy and practice.

5.4.1. Recommendations for policy

The following aspects can be regarded as recommendations for policy: gender sensitive financial, marketing and skills support systems; creation of a national social cohesion institution; local and regional marketing forums, and strengthening gender-based participation in STEM disciplines.

5.4.1.1. Gender sensitive financial, marketing and skills support systems

To the extent that there were more males (53.4%) in technological ventures as compared to females (46.6%), it can be recommended that more gender sensitive policies need to be established by the South African Government institutions to specifically target more women involvement in technology-oriented ventures. Public funding and training institutions such as the Industrial Development Corporation (IDC), Small Enterprise Development Agency (SEDA) and National Youth Development Agency (NYDA) should develop policies that specifically target women financial support, marketing skills and other skills enhancement to ensure that more women are

involved in technology-oriented businesses. This is critical because marketing and social prejudices in marketing were conceived as positively and significantly associated with venture creation, which perhaps explains the domination of male-oriented businesses.

5.4.1.2. Creation of a national social cohesion institution

The execution of technology-oriented business decisions is positively and significantly correlated with all three family role models, that is, family role models B1, family recognition of venture creation (a) and family recognition of venture creation (b). Since family role models and family recognition of venture creation were reportedly integral to the creation of new businesses, a national social cohesion institution called the South African National Family Institute (SANFI) needs be created to provide more policy and empirically driven national research into the contribution of family norms and values including family role models to venture creation. The institution may also provide policy advice on how family prejudices and stereotypes undermine the creation and growth of new and existing businesses.

5.4.1.3. Local and Regional Marketing Forums

Since social prejudices in the marketing of SMMEs are significantly correlated with opportunity identification and risk taking, local and regional marketing forums should be strengthened by government policy and gender-inclusive regulation to ensure that social prejudices and insensitive marketing strategies that marginalise women creation and growth of SMMEs are removed. Existing marketing platforms for SMMEs, such as the FDC and NYDA, need to mainstream gender sensitivity, women involvement and denounce gender based prejudices in marketing to ensure increased female participation in the creation and sustenance of technology-oriented ventures.

5.4.1.4. Strengthening Gender-based participation in STEM disciplines

The fact that structural variables such as participation in STEM disciplines was conceived as not statistically significantly related to venture creation, means that irrespective of the discipline that students were enrolled in all or most of them were pre-disposed to create their ventures if they wanted to. Alternatively, its means that the institutional policies on participation in STEM were coherent enough and provided equal opportunities for both genders to engage in entrepreneurship if they desired. As

such, high schools and universities may just need to continue strengthening the existing gender based participation in STEM even though it may not significantly impact venture creation. This is important as women are conceived to be at greater risk of marginalisation in STEM compared to men.

5.4.2. Recommendations for practice

The following aspects can be regarded as recommendations for practice: business coaching on versatility and agility, market oriented growth and making the family role models integral to business operations.

5.4.2.1. Business coaching on versatility and agility

One disturbing result was that the funding of SMMEs has a negative coefficient, which means that the more funding increases the less the level of opportunity identification. The researcher interpreted this to suggest the constitution of a lethargy and complacency among new entrepreneurs that come with having accessed their first funding. It is therefore, recommended that the funding institutions that fund SMMEs need to expand their business funding portfolio to cover business coaching for the successfully funded SMMEs to ensure business related conscientiousness towards versatility, agility and promote the overall growth of SMMEs. This would ensure that SMMEs continually identify opportunities for growth and capitalise on them.

5.4.2.2. Market oriented growth

It was noted that there is a statistically significant relationship between marketing and opportunity identification. It is therefore, recommended that the internet cafés should continually develop new marketing strategies and exploit existing opportunities in the market to ensure the market-related growth of their businesses.

5.4.2.3. Making the family role models integral to business operations

Since the most important determinants of opportunity identification are family role models and marketing of SMMEs, it is recommended that family members must give sufficient support in the identification of opportunities as entrepreneurs' ideas may not be readily supported by the entire family or parents of the entrepreneur. Such increased family support might reduce the failure of ventures in South Africa.

5.5. Limitations of the study

The study was constrained by the following:

- It was impossible for all respondents to complete the questionnaires due to the work commitments within their internet businesses. A high response rate might have furnished more revelatory results even though all efforts were made by the researcher to elicit the voluntary participation of respondents.
- Due to time (as the researcher is a full time employee of the university) and financial constraints, it was impossible for the researcher to cover the whole of the Free State Province. Hence, the research was conducted only in the two areas of the Mangaung Metropolitan Area and Matjhabeng Local Municipality in the Lejweleputswa District Municipality.
- Given the relatively small sample size of study, it was impossible for the researcher to generalise the results to the entire country as the study was limited to certain areas. However, since a representative sample was considered for the Free State Province, there results of the study can be generalised to this population.
- The researcher found it difficult and failed to conduct interviews even though they could have complemented the survey data. This is because many SMME owner/managers declined to participate due to their business commitments. The researcher had no choice but rely on questionnaires administration on those who voluntarily participated in the study.
- The findings of this study can only be generalised to South African businesses in the Free State because some foreign nationals were not willing to partake in the study, as they suspected that the researcher was an undercover government official seeking to expose their activities or intended to steal their business ideas and use them elsewhere. This is notwithstanding, the fact that the researcher had given a letter of introduction to these entrepreneurs explaining the academic objectives of this study.

5.6. Implications for further research

- Firstly, this study was not extensive in scope due to the fact that it covered two municipalities in the Free State and had small sampled size. Therefore, future studies could cover all districts in the Free State so that the findings can be generalised to the entire country.
- Lastly, future studies can also focus on the pragmatic epistemological approaches so that qualitative and quantitative perspectives, data collection and analysis methods can unearth more revelatory information on why certain respondents answered the way they did to some questions.

5.7. Concluding remarks

This chapter first provided a conclusion based on the literature review and demonstrated the major constraints that complicate female participation in technology-oriented businesses. At the core, of these variables was how personal demographic, institutional and societal variables shaped participation in technology-oriented ventures. The study demonstrated that while literature emphasized the collective impact of these variables on venture creation, the empirical findings pointed to the contrary. At best, the empirical findings demonstrated that of all these variables, only family role models B1, family recognition of venture creation (a), family recognition of venture creation (b), social prejudice in marketing of SMMEs and marketing of SMMEs significantly influence venture creation. The study provide some recommendations based on these findings and some limitations for this study.

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APPENDIX B

Demographic and social variable questionnaire

Good day Sir/Madam.

I am collecting data for Ms BK Mokgosi, a Masters student of Business Administration at Central University of Technology, Free State. Her study which is entitled Influence of demographic and social variables on the creation of technology-oriented ventures in the Mangaung Metropolitan Area and Matjhabeng Local Municipality is supervised by Dr P Rambe and can be contacted on the following contact details:

Dr Patient Rambe (Main Supervisor): 051 504 4064 / 073 380 1687 or prambe@cut.ac.za

The aim of the research project is to collect data on the personal demographic variables, institutional variables and structural variables that shape the creation of technology-oriented ventures (internet cafés).

Responses to these questionnaires will be treated in the strictest confidence. The questionnaire will be filled anonymously and responses will not be attributed to a particular respondent. The responses for this study will be used for the purpose of this research only.

She will be grateful if you can take a few minutes of your time to answer the questions. The questionnaire will take 30 minutes to complete on average.

Thanking you in advance for your positive response.

BRIDGETTE MOKGOSI

STUDENT

SECTION A1: PARTICIPANTS PROFILE											
Question	Please mark the appropriate answer with X								use only	Office	
1	Please state you gender	1 Male			2 Female						
2	Please state your current age	1 <20	2 21-30	3 31-40	4 41-50	5 51-65					
3	Racial group	1 White	2 Black	3 Coloured	4 Asian	5 Others (specify)					
4	Nationality	1 South African			2 Non South African						
5	Highest academic qualification	1 No formal education	2 Primary	3 Middle school	4 High school	5 Tertiary	6 Postgraduate				
6	Please indicate your role in the business	1 Owner		2 Manager		3 Owner/Manager		4 Others (specify)			
SECTION B1: FAMILY ROLE MODELS											

Questions	Please mark the appropriate answer with X							Office use only
7	Do you own a business?	1 Yes			2 No			
8	Which type of business does your role model own?	1 Spaza shop	2 Fabric shop	3 Hair salon	4 Internet cafe	5 Does not own a business	6 Others (specify)	
9	Do any one of your parents own a business?	1 Yes			2 No			
10	Do any of your extended family members (e.g. cousins, niece, uncle, aunt, and granny) who has a business?	1 Yes			2 No			
11	Do you regard any of your family members (including extended family members) as your business role models?	1 Yes			2 No			

SECTION B2: FAMILY ROLE MODELS							
Questions	Please indicate the extent to which you agree or disagree with the following statements regarding your business	1 Strongly disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly agree	Office use only

12	My early exposure to parents who run businesses has influenced my attitudes towards being self employed	1	2	3	4	5		
13	My parents have mentored my plans to establish a new business?	1	2	3	4	5		
14	My entrepreneurial intentions have been significantly influenced by having a business role model in our family	1	2	3	4	5		
15	My decision to create my own business has been influenced largely by having a business role model in the family	1	2	3	4	5		
16	My social identification with a family role model's business values has been critical to the success of my business	1	2	3	4	5		
17	The encouragement of my parents/guardians has significantly shaped my ability to operate my business successfully.	1	2	3	4	5		
18	Growing up in a family where parents own their business inspired me start my own business.	1	2	3	4	5		

SECTION B3: FAMILY RECOGNITION OF VENTURE CREATION

Question	Please mark the appropriate answer with X						Office use only	
19	To what extent has your family influenced your decision to start a new business?	1 Not at all	2 To a least extent	3 Some what	4 To a moderate extent	5 To a great extent		
20	To what extent have the social norms and attitudes of your family (e.g. holding the creation of a new business in high esteem) influenced your creation of a business	1 Not at all	2 To a least extent	3 Some what	4 To a moderate extent	5 To a great extent		
21	To what extent has your family been a source of moral encouragement and supporting the starting of your business	1 Not at all	2 To a least extent	3 Some what	4 To a moderate extent	5 To a great extent		

22	To what extent has your family provided financial support in the starting of your business?	1 Not at all	2 To a least extent	3 Some what	4 To a moderate extent	5 To a great extent		
23	To what extent was your family (e.g. husband, wife, father, mother, siblings) directly involved in the development stage (e.g. draft of business plan, marketing plan, financial plans) of creating your business	1 Not at all	2 To a least extent	3 Some what	4 To a moderate extent	5 To a great extent		
24	To what extent was your family been directly involved in the final decision (e.g. registration of business, securing start up finance from a financier) to create your business venture	1 Not at all	2 To a least extent	3 Some what	4 To a moderate extent	5 To a great extent		

25	How often did your family give you prior exposure to operating a business before starting up your own business?	1 Never	2 Rarely	3 Sometimes	4 Frequently	5 Always		
26	How often was your family involved in the preparation stage of setting up your business?	1 Never	2 Rarely	3 Sometimes	4 Frequently	5 Always		
27	How often was your family involved in the business creation stage?	1 Never	2 Rarely	3 Sometimes	4 Frequently	5 Always		
28	How often was your family involved in the final decision stage of setting up your business?	1 Never	2 Rarely	3 Sometimes	4 Frequently	5 Always		

SECTION C1: SCIENCE TECHNOLOGY ENGINEERING AND MATHS (STEM)

SECTION C1: SCIENCE TECHNOLOGY ENGINEERING AND MATHS (STEM)									
Question	Please mark the appropriate answer with X								Office use only

29	Did you do any of these subjects in your high school or university education Science, Technology, Engineering Mathematics (STEM)	1 Yes			2 No			
	Please indicate the extent to which you agree or disagree with the following statements:	1 Strongly disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly agree		
30	In my high school/university education both male and females were doing STEM subjects.	1	2	3	4	5		
31	In my high school/university education there was no preference of any particular gender.	1	2	3	4	5		
32	In my high school/university education, both males and female were retained in the education system.	1	2	3	4	5		
33	In my high school/university education, both males and females had a high throughput rate (effective and meaningful academic participation).	1	2	3	4	5		
34	In terms of the graduation rates, both males and females had a high completion rate	1	2	3	4	5		
35	My partner/guardian/parents preferred me to do STEM in my high school or university education.	1	2	3	4	5		

SECTION C2: SOCIAL PREJUDICE								
Questions	Please mark the appropriate answer with X						Office use	
	Venture creation and operation							
	To what extent do you agree with the following statements:	1 Strongly disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly agree		

36	The South African society generally believes that technological business creation is suited for both men and women.	1	2	3	4	5		
37	The South African society generally believes the running of technological business is well handled by both men and women.	1	2	3	4	5		
38	Communities generally believe that both men and women understand the impact of the technological developments on technological businesses.	1	2	3	4	5		
39	The South African society generally holds both male and female oriented technological businesses in higher regard.	1	2	3	4	5		
40	The South African society generally believes that both male and female owned technology oriented businesses tend to survive longer.	1	2	3	4	5		

	Funding of SMME's							
	To what extent do you agree with the following statements:	1 Strongly disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly agree		
41	The South African society generally tends to believe that both male and female run technology businesses tend to find it easy to obtain financial support from private financial institutions (e.g. banks, private lending institutions).	1	2	3	4	5		
42	The South African society generally tends to believe that both male and female run technology businesses tend to find it easy to obtain financial support from public lending (e.g. government institutions such NYDA, IDC etc.).	1	2	3	4	5		

43	The South African society generally tends to believe that both male and female oriented technology oriented businesses tends to have strong financial management systems.	1	2	3	4	5		
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	Marketing of SMME's							
	To what extent do you agree with the following statements:	1 Strongly disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly agree		
44	The South African society generally tend to believe that both male and female oriented technology businesses tends to have effective marketing strategies.	1	2	3	4	5		
45	The South African society generally tend to believe that both male and female oriented technology businesses tends to have durable social networks.	1	2	3	4	5		

SECTION D: NEW VENTURE									
Question	Please mark the appropriate answer with X						Office use only		
	Opportunity identification								
	To what extent do you agree with the following statements:	1 Strongly disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly agree			
46	I have the ability to identify a market gap and take financial advantage of this gap.	1	2	3	4	5			
47	I consider myself as having the capability to track some market trends and see what sells well in my businesses.	1	2	3	4	5			
48	I have the ability to evaluate opportunities in the market.	1	2	3	4	5			
49	I have the ability to recognise opportunities in the market.	1	2	3	4	5			
50	I have the ability to discover new opportunities.	1	2	3	4	5			
51	I believe I can identify financing opportunities for a new business venture.	1	2	3	4	5			
	Risk taking								
	To what extent do you agree with the following statements:	1 Strongly disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly agree			
52	I consider myself as a person who seeks to achieve profit through bearing calculated market risks.	1	2	3	4	5			
53	I consider myself as a risk-taking individual who take actions to pursue opportunities.	1	2	3	4	5			
54	I am willing to take significant risks if the rewards are high enough.	1	2	3	4	5			

55	I enjoy the excitement of risk and uncertainty.	1	2	3	4	5		
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	Resource mobilization							
	To what extent do you agree with the following statements:	1 Strongly disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly agree		
56	I possess the capacity to recruit the best human resources in pursuit of a business venture.	1	2	3	4	5		
57	I possess the capacity to convince other to work for my new business.	1	2	3	4	5		
58	I possess the capacity to convince other to invest in my new business.	1	2	3	4	5		
59	I possess the capacity to convince a bank to lend me money.	1	2	3	4	5		
60	I consider myself as having the capacity to organise and control resources in pursuit of a venture.	1	2	3	4	5		

	Implementation of business decisions							
	To what extent do you agree with the following statements:	1 Strongly disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly agree		
61	I have the capacity to develop a business plan that is marketable financially.	1	2	3	4	5		
62	I have the capability of manage my business.	1	2	3	4	5		
63	I have the capability to grow a successful business.	1	2	3	4	5		
64	My business has sufficiently adapted to changes brought to bear on it by some government regulations.	1	2	3	4	5		

Thank you for your time!!!

