Gordon Institute of Business Science
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The Impact of Funding and Innovation on the Performance of Women Entrepreneurs

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A research project submitted to the Gordon Institute of Business Science, University of Pretoria, in fulfilment of the requirements for the degree of Master of Business Administration.

11 November 2019

ABSTRACT

The purpose of this study is to draw from the theory of Entrepreneurship to test the factors influencing the performance of women entrepreneurs. In the past decade the level of entrepreneurial activity among women has increased, however studies suggest that the performance of women entrepreneurs is low as compared to their male counterparts. Women continue to face a wide variety of challenges such as limited access to resources such as funding and low levels of innovation. This study seeks to examine the experience of women in South Africa and measure the extent to which funding and innovation influence the performance of women entrepreneurs.

A descriptive quantitative study was conducted to collect primary information from South African women entrepreneurs through an online questionnaire. The sample that was achieved comprised 112 respondents and was deemed satisfactory to complete the statistical analysis to test three hypotheses. Validity and Reliability of the data collection instrument was performed the Spearman's rank order correlation test was used to test each hypothesis.

Majority of the respondents indicated that access to funding is a challenge, however this study found that access to funding was statistically significant in influencing the performance of women entrepreneurs. Furthermore, results for hypothesis 2 indicated innovation was positively correlated to the performance of women entrepreneurs. A further positive relationship was established between funding and innovation.

The findings suggest that institutions within South Africa are required to re-assess policies associated with the supply of funding to women and its relevance. It is further recommended that women increase their human and social capital to access alternate sources of funding and stimulate innovation.

KEYWORDS

Innovation, Funding, Women Entrepreneur, Business Performance

DECLARATION

I declare that this research is my own work. It is submitted in partial fulfilment of the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other university. I further declare that I have obtained the necessary authorisation and consent to conduct this research.

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1. INTRODUCTION TO THE RESEARCH PROBLEM

Entrepreneurship is one of the vital components that aid economical sustainability through alleviating poverty (Sutter, Bruton, & Chen, 2019) the creation of jobs (Economidou, Grilli, Henrekson, & Sanders, 2018), innovation and opening windows of market opportunities (Kamberidou, 2013). Entrepreneurs drive innovation by introducing new technologies, products and services and thus play a vital role in contributing to the competitiveness of the entrepreneurial ecosystem (Nicoletti, 2018). In recent years women have accelerated their involvement within the entrepreneurial ecosystem (Bosma & Kelley, 2019; Drori, Manos, Santacreu-Vasut, Shenkar, & Shoham, 2018; Kimbu & Ngoasong, 2016; Strohmeyer, Tonoyan, & Jennings, 2017). Women have made a substantial contribution through their wealth of talent, leadership and creation of employment for both themselves and others (Lortie, Castrogiovanni, & Cox, 2017). Women owned businesses are therefore essential in creating competitive growth and diversity within the global market (Strohmeyer et al., 2017).

Literature has highlighted a number of factors influencing women to become entrepreneurs, however women face many challenges in the growth and sustainability of their business (Hameed, Hussin, Azeem, Arif, & Basheer, 2017; Karakire Guma, 2015). Funding and innovation have been identified as critical drivers in entrepreneurial success and development of the economy(Rainey, Terjesen, Bosma, & Stam, 2015). There is a need to understand the performance of women entrepreneurs. Therefore, this study aims to identify the influence of funding and innovation on the performance of women entrepreneurs.

1.1 Background: Women in Entrepreneurship

According to the Global Entrepreneurship Monitor (GEM) report, women's involvement in business has advanced throughout the world ((Bosma & Kelley, 2018-2019); Chowdhury, Yeasmin, & Ahmed, 2018). The overall total entrepreneurial activity (TEA) rate among women has increased in the last decade (Bosma & Kelley, 2019). However, despite positive growth trends, a gender gap is still apparent. There are only 7 women entrepreneurs for every 10 men entrepreneurs globally (Bosma & Kelley, 2019) and according to the GEM 2018-2019 report, only 6 out of 49 economies have equal total entrepreneurial

activity (TEA) rates between male and female. While many women have the intent to embark on an entrepreneurial career, very few of these intentions materialise. This may be attributed to a number of factors such as complexities surrounding family, society, financial access and support services (Chowdhury *et al*., 2018).

Women have experienced challenges climbing the corporate ladder and obtaining their seat in the c-suit, hence this has meant that more women have turned to entrepreneurship as a career to establish their rights in society (Chowdhury *et al.*, 2018). According to the Master Index of Women Entrepreneurs (MIWE) report carried out in 2018, women-owned businesses in South Africa accounted for 18.8% of the total business owners, which is low when compared to other African countries such as Uganda (33.8%) and Ghana (46.4%). Out of 57 economies, South Africa is ranked 42nd globally in terms of percentage of women owned businesses and are ranked 33rd in terms of entrepreneurial conditions that support women entrepreneurs. Despite the global total entrepreneurial activity (TEA) rate of women entrepreneurs has increased, TEA rate among women in South Africa remains low, which attribute to resource constraints such as capital according to the findings of the MIWE. In South Africa, women make up approximately 51% of the total population, hence there is a growing concern to enable and encourage more women to participate in entrepreneurial activities to improve poverty and unemployment, which remain critical challenges.

1.1.1 Funding of women entrepreneurs

Funding is crucial at various stages of business creation and development (Desiree & Kengne, 2016; Holmquist & Carter, 2009). Becker-Blease and Sohl (2017) indicate that access to funding or venture capital is critical in the early stages of starting a business, owing to the resources required to run the new operation (Chowdhury *et al*., 2018). Leitch, Welter and Henry (2018) concurs and indicate that funding is crucial in the growth stages of the business. However there are demand and supply factors that influence whether women access funding or not. Despite the progress made in terms of starting a business, women still lag in their ability to attract early stage venture capital (Leitch, Welter, & Henry, 2018). Access to business funding has been and continues to be a great

concern for women entrepreneurs in their ability to grow and sustain a business (Yacus, Esposito, & Yang, 2019). Literature suggests that future research is required to understand the supply side of funding and its impact on the ability for women entrepreneurs to gain access to funding.

Female entrepreneurs are recognized as being more risk averse, hence are more financially constrained in terms of utilizing or acquiring resources such as bank loans and credit, to assist business performance in the long run (Ekpe, 2013). This leads to women's reluctance in exploiting new entrepreneurial opportunities and not utilizing advantages of accessing capital to improve performance. The limited resources available to women thus forces them to pursue less lucrative ventures thus resulting in poor business performance. In contrast, Desiree and Kengne (2016) contends that poor performance of female entrepreneurs are due to their different growth strategies, which are dependent on their non-financial and personal priorities.

Lim and Suh (2019) suggest that the limited access to finance contributes to underperforming, unsuccessful female owned businesses (Lim & Suh, 2019).
In contrast Atmadja (2015) proposes that there is a negative relationship between performance and financial capital and that there are underlying factors influencing the performance such as social and human capital. However, the study only focussed on microfinance in aiding entrepreneurs for business start-up and not necessarily sustaining the business. From the various arguments made by the authors above, funding has a significant role to play in the performance of the business.
Ekpe, Razak and Mat (2013) suggests that women do not have sufficient credit to pursue business profits due to the low demand of credit from women.

1.1.2 Women entrepreneurs innovation

In addition to the non-financial priorities, research by Fuentes-Fuentes *et al.* (2015) indicates that innovativeness of women entrepreneurs has a positive relationship on the organizations performance. In line with this argument, prior literature by suggests that a business undertaking innovative activities create market opportunities and gain a competitive advantage through the introduction of new products and services (Fuentes-Fuentes, Bojica, & Ruiz-Arroyo, 2015).

The performance of women owned businesses is thus dependent on both financial and non-financial factors which needs to be further explored.

Preceding research has recognised innovation as a fundamental element in the entrepreneurial process required by businesses to achieve a competitive advantage (Farinha, Ferreira, & Nunes, 2018; Ruiz-arroyo, 2012). Innovative thinking is regarded as a basic skill required by entrepreneurs to achieve business success. In addition, Desiree and Kengne (2016) indicate that the amount of time devoted to innovation is dependent on the managerial style of the entrepreneur, which in turn directs the businesses strategic orientation. Businesses participating in innovation have a greater propensity to succeed, since innovation is a continuous process that gives businesses new opportunities to gain a competitive advantage (Kahn, 2018).

Innovation has a positive influence on the business (Dobni, Klassen & Nelson, 2015), however there are significant costs involved in the process. This indicates that women require substantial funds to engage in innovative activities (Dai, Maksimov, Gilbert & Fernhaber, 2014), which further suggests that the lack of innovation among women entrepreneurs may be attributed to the limited access to finance.

Researchers have acknowledged the positive impact of innovation among entrepreneurs on global competitiveness and economic growth (Farinha et al., 2018) and have indicated the importance of self-confidence and greater self-esteem required by women entrepreneurs to pursue more innovative processes (Coleman & Robb, 2012). Though Ekpe, Razak and Mat (2013) measured attitude towards risk taking; however their study related to the relationship between credit and training, and women entrepreneurs' performance; not between funding and performance.

Prior literature focuses on performance of women entrepreneurs in comparison to men however little research has provided insight into the impact of innovation on the performance of women entrepreneurs. Hence, there is the need for more research in this area, and this study provides such a research. Therefore, the objective of this study is to examine the impact of funding and innovation on the performance of women entrepreneurs.

1.1.3 Performance of women entrepreneurs

Business Performance across various theories viewed in terms of financial success such as measuring profit, sales growth, earnings per share, and return on investment. Studies indicate that women owned businesses have not performed to their full potential as compared to their male counterparts (Demiralp, Morrison, & Zayed, 2018). The poor entrepreneurial performance of women can be attributed to personal characteristics and preferences, women management strategies and institutional constraints. There are other indicators that suggest that performance perceived by women differ as compared to men, hence men and women concentrate or focus their efforts accordingly. Men measure performance through financial indicators such as profits, sales, turnover and growth, whereas women may perceive performance as building relationships with clients, business processes and achieving goals and aspirations.

1.2 Research Problem

The Research problem is concerned with the performance of women owned businesses. Research on the unique characteristics influencing the business making decisions of women exists. These characteristics results in different financial performance outcomes as compared to men. Funding and innovation have been proven essential drivers in the success of entrepreneurial ventures in general, but the impact these two elements have on the performance of women owned businesses in particular is lacking. Furthermore, research has highlighted the need to understand the role of funding on the ability of women owned businesses to compete through innovation.

In order to address this research need, this study aimed at obtaining a comprehensive understanding on the impact that access to funding and product innovation has on the financial performance of women entrepreneurs. Furthermore, the study aimed at understanding the relationship between funding and innovation in the attempt to add to the body of knowledge. Firstly, the study aimed at understanding women entrepreneurs' access to various sources of funding. Secondly, the level of innovation was determined

Despite the important role of women entrepreneurs in economic development of their families and their countries; it is, however, discovered from the literature that women entrepreneurs do not have adequate finance (Becker-Blease & Sohl, 2007; Chowdhury, Yeasmin, & Ahmed, 2018; Cini, Cucllari, & Gushi, 2014; Leitch et al., 2018). Women entrepreneurs face many difficulties in gaining access to start-up capital (Chaudhuri, Sasidharan & Raj, 2018) as well as finance to invest in growth opportunities (Economidou et al., 2018) .

In line with the argument above, studies suggests that female entrepreneurs are less likely to receive external funding from venture capital because of the gendered labels associated with entrepreneurship (Lim & Suh, 2019).

Studies indicate that women owned businesses have low growth and performance when compared to their male counterparts. This may be attributed to the lack of innovation among women entrepreneurs (Coleman & Robb, 2012). Women owned businesses have also remained relatively small with little change to its product or service offerings(Coleman & Robb, 2012).

Women entrepreneurs often find innovation a challenge, due to the specialised resources that may be required as well the potential risk involved by introducing a new product or service(Kahn, 2018). In addition, innovation may also influence business model performance through various disruptions, through either technology or processes (Karimi & Walter, 2016).These disruptions may pose serious concerns for those smaller companies in their ability to compete in the market and sustain a positive bottom line.

1.3 Research Purpose

The study aims to bring an in-depth understanding of the performance of women entrepreneurs, and the influence of the two key factors of entrepreneurship, funding and innovation. Funding and innovation have been highlighted as key drivers in entrepreneurial success, and this study shall investigate the impact of these variables on women owned businesses. The purpose of the study is to investigate the influence of funding and innovation on women entrepreneurs performance.

1.4 Motivation for the Research

The research aims to understand the impact that funding and innovation have on the performance of women entrepreneurs. Research suggests that institutions play a crucial role in the financial inclusion of female entrepreneurship (Patrick, Stephens, & Weinstein, 2016). The study will allow regulatory authorities and government to adjust polices and become more inclusive of women, including institutions that provide access to credit and finance for women aspiring to start a business. Women will therefore be reassured and gain more confidence in both themselves and institutions, thus gaining the courage to incur more risks and explore more creative business opportunities. The insights acquired will be used to better enable female support groups in encouraging women to choose entrepreneurship as a career choice. Insights regarding the impact of innovation will be obtained with the aim of providing institutions with knowledge to design skills and development programmes for entrepreneurship and create more opportunities for women to participate in innovative activities. In addition, the study will highlight the impact of innovation on business performance to unpack the uncertainties of past literature that highlight the negative relationship between the two constructs.

Studies have focussed on the importance of funding and the various gender biases surrounding access to funding. However, there is still a gap in understanding how funding impacts performance of women entrepreneurs specifically. Literature on innovation has focussed on firm level innovation and gender based innovation as well as the innovative process. This study also seeks to understand how funding impacts innovation among women entrepreneurs. Based on a review of literature, it is evident that clarity on this topic is required for understanding the building blocks for optimistic entrepreneurship among women with specific focus on access to funding and innovation.

1.5 Business relevance

Entrepreneurship is a key driver in job creation and generates wealth for the country (Powell & Eddleston, 2013). Research and empirical studies display the importance of women entrepreneurs. This is owed to the significant contribution women make toward sustainability of the economy and fast-tracking the

development of the country in which they operate (Chowdhury *et al*., 2018). Women incorporate unique characteristics and behavioural patterns in the way they direct and strategically lead businesses. It is vital to encourage more women to engage in entrepreneurship.

The findings from the study will assist entrepreneurs in directing and mobilsing their resources to more sustainable and efficient operations, thus utilising the limited capital to generate profits and encourage growth initiatives. The study is also aimed at encouraging more women to open businesses and contribute to the development of the economy. Innovation is necessary to differentiate, grow and create competition in companies (Strohmeyer, Tonoyan, & Jennings, 2017). This is supported by Dobni, Klassen and Nelson (2015), which indicate that companies that expedite an innovative strategy, tend to have higher profit margins than their competitors. In future, it is essential to identify the role of innovation in women owned businesses to maximise its value and foster economic growth and performance.

It is vital to understand the progress and challenges of business women in a developing country compare to other OECD countries. Majority of the studies have focussed on developed countries, hence this study draws attention to South Africa. The findings shall provide key insights into the economic climate of a developing country, to assist both existing businesses and new ventures in better decision making and strategic entrepreneurial orientation. This study shall highlight the impact of funding and innovation on the performance of women entrepreneurs.

1.6 Research Scope

An exploratory study was carried out to identify and understand the influence of funding and innovation has on the performance of women entrepreneurs. While many studies have identified the challenges hindering the performance of women entrepreneurs (Giotopoulos, Kontolaimou, & Tsakanikas, 2017; Lim & Suh, 2019); this study explored the relationship between access to various sources of funding and product innovation and women entrepreneurs performance.

Various researchers show that women entrepreneurs do not place enough interest into their growth and performance objectives. The performance of women owned business has been regarded as poor in comparison to male owned businesses

(Chaudhuri, Sasidharan, & Raj, 2018; Powell & Eddleston, 2013). Researchers have suggested through empirical evidence access to funding was identified as a challenge to women, and further indicated women exhibit low levels of innovation. The scope of this research is limited to South African women entrepreneurs, but it has been designed with broader applicability and replication in mind.

1.6 Structure of the Research Report

The report structure is made up of seven chapters that will detail the problem, purpose, study method, results of the tests carried out and discussions on the statistical findings. The first chapter was dedicated to describing the research problem and the relevance of the study, with its aim to fill a gap in literature. Chapter 2 elaborately outlines the academic literature review, drawing references to various authors and past studies that were conducted on the main constructs researched in this study, namely, innovation, funding and performance of women entrepreneurs. Chapter 3 includes the details of the research questions, highlighting the three hypotheses that have been formulated based on the literature review. Chapter 4 outlines the research methodology highlighting the population studied, unit of analysis, sample size, and design of the measurement instrument as well as choice of reliability and validity tests conducted. Chapter 5 was organised to display all the data and results from the statistical tests that were done such as demographic data, descriptive statistics, and statistical analysis. The chapter illustrates the results and findings in the form of tables, graphs and models. Chapter 6 presents a discussion on the findings yielded in chapter 5 with comparisons made to prior literature highlighted in chapter 2. Chapter 7 concludes the research by consolidating the findings of the study and the theoretical and business implications involved as well as suggests recommendations for future studies.

2. Literature Review

2.1 Introduction

The concept of entrepreneurship amongst women has become a popular topic discussed in business and in academic literature. The increased involvement of women in entrepreneurship has sparked much interest in recent research because it has become the career of choice for many women. The world's population of women stands at 3.73 Billion (World Bank, 2017) of which 224 million women are breaking boundaries and running their own business (GEM, 2018-2019). Many factors contribute to the increased number of women engaging in entrepreneurial activity, such as increased networks, aptitude and self-motivation (Wolfe & Patel, 2016). Women have identified the need to uplift society and support their families. It is evident that women play a vital role in sustaining the economy (Kamberidou, 2013)

A vast number of studies have highlighted the challenges women face in accessing funding such as credit, subsidies or venture capital. Funding was highlighted as a vital component in enabling entrepreneurs to successfully operate a business. In addition, it is the view of many researchers, suggesting innovation increases the competitive advantage of businesses. The purpose of the study is to fill a gap in the literature focussing on the role that access to funding and the implementation of innovation influence the performance of women entrepreneurs.

2.2 Theoretical framework

Two theories were explored to underpin this study. Entrepreneurship Theory and the Theory of Innovation by Schumpeter (1934). These theories were used as a foundation to build a present analysis of innovation and social and human capital on entrepreneurship.

2.2.1 Entrepreneurship Theory

The conceptual framework of Entrepreneurship theory focuses on human and social capital which is required of entrepreneurs as they seek to develop and thrive in the entrepreneurial ecosystem. The study highlights the importance of social capital which is Lim and Suh (2019) define as "the robust social

relationships of people or groups that serve as the glue and goodwill among actors" (Lim & Suh, 2019). Research suggests that social capital aids in facilitating job promotions, and appropriate external financial resources and in building financial ties (Leitch et al., 2018) to extend the networks necessary for entrepreneurship (Shahriar, 2018). The relationships acquired are essential in partnering with investors to enable sharing of resources. Furthermore, the extension of networks also generates associated advantages such as transfer of creative ideas and expertise that are necessary for the growth and performance of businesses (Yacus, Esposito &Yang, 2019).

Human capital can be defined as the education and experience that people accrue (Coleman & Robb, 2012). Khalife and Chalouhi (2013) further define human capital as stocks of skills, knowledge, intelligence and health that could be utilised to produce resources (Khalife & Chalouhi, 2013). The work experience, skills and knowledge gained by the entrepreneur assumes a level of cognitive alertness thus provides an extended level of expertise and confidence to identify and exploit opportunities (Estrin, Mickiewicz, & Stephan, 2016). Human capital incorporates a multiplicity of benefits to both the individual and the business enabling the entrepreneur with valuable knowledge and skill to seek new business opportunities and solve problems (Nhon, Thong, & Phuong, 2018). It is the view of many researchers that human capital contributes in the formation of innovation.

Gender studies on entrepreneurship have highlighted that human and social capital acquired by men and women differ(Coleman & Robb, 2012). Lim and Suh (2019) supported this view indicating the social capital of women entrepreneurs are smaller, less varied, and more family-oriented than that of males. Female entrepreneurs encounter challenges in accessing human and social capital (Simmons, Wiklund, Levie, Bradley, & Sunny, 2018), owing to gender biases and limited exposure to business and management opportunities resulting in lower levels of work and career experience (Coleman & Robb, 2012; Guerrero & Richards, 2015). It has been argued that for successful entrepreneurship (Orwa, Tiagha & Waiguchu, 2017; Powell & Eddleston, 2013) women require human and social capital to extend their networks and relationships to gain more resources

to external financing (Coleman & Robb, 2012). In addition encouraging women to participate in creative innovative opportunities (Giotopoulos et al., 2017).

2.2.2 Theory of Innovation by Schumpeter (1934)

The theory of innovation according to Schumpeter (1934), described innovation as “a process of industrial mutation that incessantly revolutionizes the economic structure from within, incessantly destroying the old one, incessantly creating a new one”. Schumpeter divided innovation into five types; the first being the launch of a new product, a new method of production, the opening of a new market, a new source of supply of material and lastly a new industry structure (Śledzik, 2013). Schumpeter argued that in order to gain profits, an entrepreneur was required to innovate (Fritsch, 2017). Schumpeter asserted that innovation afforded a business unusual profits, which in turn gave the entrepreneur leverage over other businesses in the same industry (Śledzik, 2013). This competitive advantage gained leads to improved business performance and sustainability.

2.3 Women in Entrepreneurship

In recent years, Entrepreneurship has been viewed as a potent instrument for economic development (Audretsch, Belitski, & Desai, 2015) in that it has the potential to generate jobs, increase competition and stimulate innovation (Arafat & Saleem, 2017; Giotopoulos et al., 2017). Definitions of entrepreneurship vary, but generally include elements of creativity, innovation, risk taking, opportunities and project management and business creation (Imhonopi, Urim, Kasumu, & Onwumah, 2016). Entrepreneurship has been defined as a process through which individuals establish new businesses creating wealth through knowledge and opportunity (Ascher, 2012). Alternatively, Fairlie and Fossen (2018) divide entrepreneurship into two types as opportunity and necessity entrepreneurship. They argue that there are operational distinctions between the two types of entrepreneurship with necessity entrepreneurship arising from individuals who have been unemployed, and opportunity entrepreneurship stemming from employed individuals seeking alternate sources of income, drawing on the conclusion that opportunity entrepreneurship creates more growth-oriented businesses as compared to necessity entrepreneurship (Fairlie & Fossen, 2018).

Imhonopi et al. (2016) further defined an entrepreneur as “an owner, part-owner and/or the principal manager responsible for the expansion and strategic development of a business” (Imhonopi et al., 2016). Entrepreneurship was often perceived as a masculine endeavour (Yacus et al., 2019), however studies suggest that entrepreneurship has had a positive influence on the economic growth, emancipation and empowerment of women (Kimbu & Ngoasong, 2016). Bamiatzi, Jones, Mitchelmore and Nikolopoulos (2015) refer to the female entrepreneur as “the leader of a business that is wholly or majority female-owned and managed”. Similarly, women entrepreneurs may be defined as “the women or group of women, who initiate, organize and operate a business enterprise” (Pandian and Jesurajan, 2011, p. 918). A further description of women entrepreneurs by Agarwal and Lenka (2014) suggests women entrepreneurs as those individuals who identify market opportunities and willing to take risks providing products to serve customers and society. The above mentioned definitions arguably highlight the role entrepreneurship has played in economically including women and providing opportunities of leadership (Chaudhuri et al., 2018).

2.3.1 The Progress of Women Entrepreneurs

Previously entrepreneurship was characterized as a man's domain (Shahriar, 2018), however in recent years there has been a rise in the number of women owned businesses across the board (GEM, 2017). There has been increased participation in entrepreneurial activities among women (Lim & Suh, 2019) across all economic sectors (Coleman & Robb, 2012), in both rural and urban communities (Chowdhury *et al*., 2018). Women from rural communities have turned to entrepreneurship out of necessity to gain an income to provide for their families whereas urban women have engaged in entrepreneurship as a career and for professional development (Chowdhury *et al*., 2018). In both cases, it is clear that women are making a significant contribution to the sustainability of the economy and fast-tracking the development of the country in which they operate (Byrne, Fattoum, & Diaz Garcia, 2019; Chowdhury et al., 2018; Guerrero & Richards, 2015; Hechavarria, Bullough, Brush, & Edelman, 2019; Imhonopi et al., 2016; SBP, 2013).

Researchers point to the growing number of women who are launching new businesses (Coleman & Robb, 2012). The latest Women's Report by the Global Entrepreneurship Monitor noted that there are now 274 million women-owned businesses in 74 economies (Bosma & Kelley, 2019) as compared to 163 million in year 2016 (Brush & Greene, 2015). The total entrepreneurial activity rates of women increased reducing the gender gap with a ratio 7 women to every 10 men participating in entrepreneurship (Bosma & Kelley, 2019). These results give a clear view of the progress of women entrepreneurs globally, increasing the wealth and wellbeing of women (Arafat & Saleem, 2017).

The growth and success of female owned enterprises owed to the increased level of education among women (Brush & Greene, 2015; Giotopoulos et al., 2017). Women have further engaged in entrepreneurial activity to gain flexibility due to family related lifestyle reasons, independence, recognition, professional development and the need to sustain and provide for their families (Chowdhury et al., 2018; SBP, 2013). Further reasons for increased entrepreneurial intent among women entrepreneurs in South Africa reported, exploiting a market opportunity; seeking avenues of personal interest or fulfilment; escaping an unfavourable working environment (SBP, 2013).

2.3.2 The Challenges experience by Women Entrepreneurs

Despite the increased entrepreneurial activity among women, gender disparity still exists. Extensive literature has indicated that one reason for gender disparity may be that men have larger networks, higher social capital than women (Neumeyer, Santos, Caetano, & Kalbfleisch, 2018), and literature suggests that smaller networks lead to the lack of both social and cultural capital necessary for entrepreneurship (Lim & Suh, 2019). Lim and Suh (2019) suggest smaller networks of women entrepreneurs are attributed to a lack of industry experience and professional training , which Shahriar (2018) indicates is owed to the lack of access to vital resources, such as education and finance (Shahriar, 2018).

Highly educated individuals have a high chance of obtaining managerial jobs (Estrin et al., 2016), which is evident among male entrepreneurs who have been proven to gain greater financial inclusion as a result of their education and income (Chowdhury *et al*., 2018), thus owing to higher levels of management/business

experience. This further suggests that if women were given greater access to education and finance, increasing their human and social capital, entrepreneurial intentions among women would increase (Giotopoulos et al., 2017; Santos, Roomi, & Liñán, 2016).

According to entrepreneurship theory, social capital is necessary in gaining greater access to resources and information through networking, however studies indicate a lack of education perpetually limit social networks for women entrepreneurs (Ekpe, 2013; Simmons et al., 2018). This argument draws an association to Albert Bandura Social Cognitive Theory (Grusec, 1992), which shows the social environment around people influences their cognition and behaviour (Santos et al., 2016). This theory directs attention to self-efficacy which is the belief of one's ability to persevere and achieve success through ones task or action (Guerrero & Richards, 2015). Self-efficacy has been viewed by many researchers as a type of social capital required by entrepreneurs to raise interest (Santos et al., 2016), gain confidence to persevere or perform (Babalola, 2009) thus increasing the entrepreneurial intention and success of women owned businesses (Guerrero & Richards, 2015).

In their race for success, women face a wide range of challenges throughout their entrepreneurship journey, which include both gender-related and non gender-related discriminations. Despite the progress made in the empowerment of women globally, women continue to experience challenges to education and training as mentioned earlier (Chowdhury et al., 2018; Imhonopi et al., 2016). The socioeconomic context of women further suggests additional domestic responsibilities and focus on raising and supporting their families hinders the growth of women owned venture (Welsh, Kaciak, & Thongpapanl, 2016).

In addition to limited education and training (Barba Aragón, Jiménez Jiménez, & Sanz Valle, 2014; Mehta, 2013), women face challenges in accessing funding to either start a new venture or grow and sustain their business (Chinomona & Maziriri, 2015). In spite of the advancement made by women entrepreneurs, access to early stage equity investments, especially in relation to venture capital is insufficient or limited (Leitch et al., 2018). These funds may consist of credit, savings, capital from investors or capital from family and friends. The limited

access to funds inherently forces women entrepreneurs into less lucrative ventures (Ekpe, 2013), and reduces their ability to carry out innovation (Cecere, Corrocher, & Mancusi, 2018), potentially resulting in poor performance. Many factors contribute to the lack of funding experienced by women entrepreneurs and studies indicate that these factors range from gender stereotypes (Gupta, Wieland, & Turban, 2019) to poor socioeconomic conditions, including demand and supply side factors (Yacus et al., 2019).

Studies carried out through a number of theoretical lenses, indicate that women are risk-averse (Burke, van Stel, Hartog, & Ichou, 2014; Desiree & Kengne, 2016; Hasan & Almubarak, 2016; Kamberidou, 2013; Leitch et al., 2018; Rosa & Sylla, 2018; Yacus et al., 2019). According to entrepreneurship theory, an entrepreneur's attitude toward risk-taking determines the amount of entrepreneurial activity and opportunities explored (Ekpe, Mat, & Razak, 2010). Women entrepreneurs risk aversion forces them to rely on informal sources of funding such as personal savings and family funds rather than more formal funding such as credit and bank loans (Robb & Robinson, 2014). This in turn limits their ability to gain funding from alternate sources when personal savings have depleted. The limited access to funding may affect women entrepreneurs performance and this research aimed at understanding how funding influenced the performance of women entrepreneurs.

2.4 Business Funding of Entrepreneurs

Researchers have highlighted the importance of funding amongst entrepreneurs(Becker-Blease & Sohl, 2007; Luisa, 2016), to grow and sustain innovative ventures (Desiree & Kengne, 2016; Lucia harpa, Marian, Moica, & Elena apavaloaie, 1990; Rosa & Sylla, 2018; Velmurugan, 2018). Literature has revealed some of the traditional, more common sources of funding acquired by entrepreneurs such as venture capital, angel financing, government subsidies, business loans and personal savings (Becker-Blease & Sohl, 2017). However, in recent years, many new sources of funding have emerged, such as crowd funding, seed funding and funding raised through incubator and accelerator projects (Bellavitis, Filatotchev, Kamuriwo, & Vanacker, 2017).

Funding is acutely important for entrepreneurial economic performance, both at early stage and growth stages of the business (Adomdza, Åstebro, & Yong, 2016; Saks & Burke-Smalley, 2014). Yong et al. (2016) provide empirical evidence suggesting increased funds increase business performance. in support of this view, studies indicate that funding is crucial at the early stages (Becker-Blease & Sohl, 2007) to ensure there is sufficient cash flow to operate the business until profits are available. Further evidence draws insight into the necessity of accessibility to funding at the development stages of the business required for innovation and R&D initiatives (Kamberidou, 2013). Entrepreneurs invest capital into research and development initiatives by innovating and developing new products and services which aid in the growth and survival of the business (Cecere et al., 2018).

From the above mentioned arguments, there is strong evidence suggesting accessibility to various sources of funding improves the performance of the business, reducing reliance on personal finance, however Liaqat, Bagh, Khan and Naseer (2018) has indicated through empirical evidence that capital structure comprising of debt and equity negatively impacts the financial performance of the business (Liaqat, Bagh, Khan, & Naseer, 2018). They argue that increasing leverage increases the risk of the business thus negatively impacting the financial performance. Increasing debt is often viewed as having a positive effect on profits due to the reduced tax implications (Kuria & Omboi, 2015), hence suggesting that businesses should rather utilise internal financing and minimise the reliance on external means of funding.

2.4.1 Funding of Women Entrepreneurs

The views by Chaudhuri *et al.* (2018) proposes that demand and supply factors influence the ability of women to receive finance, which may account for the difference in study findings. Over recent years, studies have focussed on the demand side of women entrepreneurs access to finance, either at the start of a venture or during the growth phase of the business (Cecere et al., 2018). Women seek funding such as microfinance (Atmadja, 2015; Drori et al., 2018; Ekpe et al., 2010; Hameed et al., 2017), funding from family (Powell & Eddleston, 2013; Robb & Robinson, 2014; Welsh, Kaciak, Memili, Carolina, & Minialai, 2017), government subsidies and business loans from commercial banks (Chinomona & Maziriri,

2015; Desiree & Kengne, 2016). Yong *et al*. (2016) suggest that most women utilise their own funds to finance their businesses. Robinson and Robb (2014) shared this view, who through their findings, noted higher personal equity as compared to other finance in businesses. However, these funds may be minimal and insufficient to sustain their businesses or limit their ability to invest in future growth objectives such as innovation.

Many women entrepreneurs experience challenges in accessing funding (Asare, Akuffobea, Quaye, & Atta-antwi, 2015; Mehta, 2013; Simmons et al., 2018) either at either the early stage or latter stages of the business journey (Holmquist & Carter, 2009). Owing to the gender stereotypes regarding entrepreneurship, women appear to have limited access to finance and these arguments are supported by Lim and Suh (2019), which suggest that female entrepreneurs have a lower chance of receiving external finance from venture capital. Gender discriminations reduce the chances of women gaining access to financial resources (Desiree & Kengne, 2016)

2.4.2 Supply and Demand factors of Funding

In terms of supply, women entrepreneurs continue to face challenges in accessing funding. The lack of finance available externally through commercial banks and social networks may be attributed to the discriminatory factors surrounding culture and institutional policies. Institutional biases view the personal characteristics of women as less favourable suggesting that women require more masculine attributes (Imhonopi et al., 2016); hence, loan applications by women are not approved (Chaudhuri *et al*., 2018). False categorisation of women disadvantages and impedes the options and resources available.

Women entrepreneurs experience other challenges in accessing funding. Some of these challenges include low human and social capital, restricted access to networks and sponsors (Kabir et al., 2014; Yacus et al., 2019). Networking has been found to increase an entrepreneurs access to financial resources (Leitch et al., 2018). However, researchers suggest women entrepreneurs have low human and social capital (Coleman & Robb, 2012; Santos et al., 2016), owing to limited education and work experience. Women entrepreneurs' accrue limited formal

business networks and partnerships, thus reduces the supply pool of resources and information through which funds are made accessible.

In terms of demand, Coleman and Robb (2012) suggest that women who seek out angel capital, have an equal chance of obtaining it when compared to their male counterparts (Coleman & Robb, 2012) . Studies by Becker-Blease and Sohl (2017) indicated that women receive a smaller portion of finance from the angel capital market as compared to men because women entrepreneurs seek finance at a low rate. This suggests that the demand for external finance is low.

The low demand for finance from women entrepreneurs attribute to many factors such as, women fear refusal, and lack the self-confidence to apply for finance (Chaudhuri *et al*., 2018). In addition, literature provides empirical evidence indicating that women are more risk-averse (Burke et al., 2014; Desiree & Kengne, 2016; Hasan & Almubarak, 2016; Kamberidou, 2013; Leitch et al., 2018; Rosa & Sylla, 2018; Yacus et al., 2019) , thus collaborating with external business investors may involve added risks to the business and possible loss of control (Imhonopi et al., 2016). Therefore, women entrepreneurs avoid funding through external investors , which to them is deemed a less favourable source of income (Yacus et al., 2019). Furthermore external financing may threaten the cash flow of the business through the associated costs such as interest and required deposits for collateral (Gurley-Calvez & Lugovskyy, 2018), thus resulting in the low demand for external finance from either credit or external investors. Women entrepreneurs inherently rely on safer business funds such as personal savings or funds from family (Robb & Robinson, 2014).

Various studies have focussed on gender in entrepreneurship (Gupta et al., 2019; Strohmeyer et al., 2017; Vivakaran & Maraimalai, 2017) and the various financing patterns and difference in business acumen possessed by men and women (Barba Aragón et al., 2014; Guerrero & Richards, 2015). While a growing number of studies have focussed on women entrepreneurs' behaviour towards funding and sourcing capital to start new venture as well as invest in growth opportunities, literature has not provided clear insights into the relationship between the access of various sources of funding and financial performance of women entrepreneurs in particular. This study aimed at investigating this relationship to better

understand the supply of funding through government subsidies, credit, personal and business loans, family funds, and investor funding through foreign investors and venture capital.

2.5 Innovation of women Entrepreneurs

Khan describes Inovation as “(1) the introduction of something new, or (2) a new idea, method, or device” (Khan, 2018, p.454). The element of newness is shared among other researchers such as Dobni, Klassen and Nelson (2015) who define innovation as “the creation, development and implementation of a new product, service, process or business model, with the aim of improving efficiency, effectiveness or competitive advantage” (Dobni, Klassen & Nelson, 2015, p.5-6). This definition draws attention to the value innovation creates toward business performance, by making specific relevance to products, services and processes, which are congruent with Schumpeter’s theory on entrepreneurship and its relationship with innovation (Śledzik, 2013). Schumpeter, a German economist, defined an entrepreneur as, “a person who is willing and able to convert an original idea and invention into a successful innovation” (Chowdhury *et al*., 2018, p.1), and the inclusion of innovation in the definition supports the significance of innovation in entrepreneurship. Schumpeter further defined innovation as “the driving force for development” (Atalay, Anafarta, & Sarvan, 2013) and had proposed five dimensions to innovation.

In addition to the above-mentioned definition are three characteristics identified during a study carried out by the United Nations Conference Trade and Development (UNCTAD) in 2013. One of the outcomes of that report illustrated three characteristics which were defined as; firstly, introducing or developing new products or services, secondly, exploiting opportunities provided by new knowledge or ideas, and lastly, the investigation of new technology or processes (UNCTAD, 2013). Both the findings from the UNCTAD and literature have shared common ground in terms of defining innovation, which has been highlighted as a driving power behind business performance (Uddin, Bose, & Yousuf, 2014).

Strohmeyer *et al.* (2017) conceptualise business innovation as having two dimensions, breadth and depth. Innovation breadth draws attention to the outputs

of the innovation process, focussing on, for example, products and processes, whereas innovation depth concerns the frequency of a firm's new offerings (Strohmeyer, Tonoyan, & Jennings, 2017). There are unique skills and experiences associated with certain types of innovation, especially in more technology-driven industries (Welter, Baker, Audretsch, & Gartner, 2017). Innovation is thus a progressive endeavour requiring continuous experimentation viewed as intense and as having significant costs associated with it (Cecere et al., 2018; Strohmeyer et al., 2017). In the current technological era, it is of the view that the benefits of innovation supersede the costs involved in the process. These benefits include, the value added to customers, improved effectiveness of business processes, elimination of waste, and assist in reducing operating costs (Nicoletti, 2018).

According to Schumpeter's theory, economic growth is based on innovations, hence innovation is a valuable contributor to the ability of a firm to engage in creativity thus resulting in new products, services, or processes (Brettel, Chomik & Flatten, 2015). Innovation is one of the fundamental dimensions of entrepreneurial orientation, which research suggests is a key factor in the success of a business (Brettel, Chomik, & Flatten, 2015; Nicoletti, 2018). In recent years, innovation has become of paramount importance, Giotopoulos, Kontolaimou and Tsakanikas (2017) regard innovativeness as a key factor for sustainable competitive advantage (Powell & Eddleston, 2013).

An empirical study carried out by Carlos Poblete has pointed out that individuals involved in innovative entrepreneurship are more likely to have growth expectations (Poblete, 2018). However, studies by Giotopoulos *et al.* (2017) indicate that women entrepreneurs do not place enough emphasis on their business potential with regard to innovativeness (Giotopoulos *et al*., 2017). Researchers suggest, owing to the generalisation that women are more risk-averse, business performance or high growth is not a primary focus of women-owned businesses. Women entrepreneurs rather aim at basic goals such as flexibility to accommodate family and independence (Giotopoulos *et al*., 2017), with low expectations of growth (Yacus et al., 2019).

Studies by Marvel, Lee and Wolfe (2015) suggest that attitude towards innovative behaviour of men and women differs (Marvel, Lee & Wolfe, 2015); however, Strohmeyer, Tonoyan and Jennings (2017) study seems to suggests that these findings are inconclusive and inconsistent among researchers. The influences of gender on innovation and entrepreneurship constitutes continuous debate and is not clear. If funding or entrepreneurial finance made manifest in the equation between gender and innovation, then one may elude to men investing more capital into innovation as compared to women (Bendell, Sullivan, & Marvel, 2019; Hechavarria et al., 2019). However, more research is required to understand the impact that gender has on innovation. This may indicate that both men and women have equal opportunities toward innovative behaviour and practices.

Literature provided insight into the innovative behaviour of women entrepreneurs, suggesting that women participate at low levels of innovation (Strohmeyer et al., 2017). A number of factors attribute to these low levels of innovation and studies carried out by Marvel *et al.* (2015), indicate that women are less likely to enrol for engineering and science degrees, hence suggesting women lack the skills and experience necessary for technological innovations. Other findings point out that women are less likely to invest their time and capital in innovative initiatives, due to low expectations of business growth (Strohmeyer et al., 2017). An alternate view suggested by Chaudhuri *et al.* (2018) provide insight into the obstacles or biases women face in accessing funds to invest in innovative growth initiatives. This view was shared by Cecere, Corrocher and Mancusi (2018), which further suggested that women entrepreneurs commit their scarce resources elsewhere thus underutilising their innovative competencies (Cecere et al., 2018).

Innovativeness is a behaviour that an individual possesses which has a direct impact on the performance of ventures (Dai, Maksimov, Gilbert & Fernhaber, 2014), in addition, Khan (2018) suggests that innovation is not just a process but a mindset that an individual possesses and requires the support of the organisations culture in order to thrive and reap the benefits. The innovative process is associated with potential business risks (Cecere et al., 2018), and as mentioned earlier in the chapter, women are risk-averse and may account for the lower levels of innovation carried out by women entrepreneurs. The product-market matrix in figure 1, below illustrates the increased risk involved as the

entrepreneur moves from market penetration strategy to the diversification quadrant (Kahn, 2018).

Figure 1: Product-Market Matrix (Khan, 2018)

In response to the fourth industrial revolution and disruption that has commenced, it is more crucial in the coming years that women participate in innovative processes and technology. Innovative disruption surrounding the internet and digitisation continue to evolve and women entrepreneurs are required to create a strategy to adopt disruptive innovation (Karimi & Walter, 2016), to explore market opportunities for business success.

The research results on product innovativeness have been ambiguous. More than two thirds of the empirical studies have found a positive relationship between product innovation and firm performance, whereas the remaining studies have found a negative relationship or none at all (Capon, Farley, and Hoenig, 1990; Li and Atuahene-Gima, 2001). The inconsistent and often contradictory results can stem from methodological problems, different study design, different measurements, omitted variables in the regression models, and noncomparable samples.

Literature has indicated that innovation is crucial for the growth and success of a business; however, studies have indicated that women entrepreneurs carry out low levels of innovation in practice. This argument fuels the opinion that limited innovation may result in poor performance of women owned businesses, or innovative practices improves the performance of women entrepreneurs, however little research has focussed on this dimension. There are no clear findings eluding

to this belief, since there are questions on the advantages of innovation in entrepreneurship in order to support the economic development of women, hence this study aimed at understanding the relationship between innovation and the performance of women entrepreneurs.

2.6 Women Entrepreneurs Business Performance

2.6.1 Overall Business Performance

Recently, the performance of women entrepreneurs has received increasing theoretical and empirical attention. Hasan, Mohhamed and Almubarak (2015) define entrepreneurial performance as the output of the entrepreneur (Hasan & Almubarak, 2016), which refers to the level of success the entrepreneur has achieved in operating the business.

Business performance of women entrepreneurs can be measured in terms of traditional accounting measures such as profits, market share, sales growth, and business size (Hasan & Almubarak, 2016; Lumpkin & Dess, 1996). Alternative measures of performance include the goals and objectives of the business (Lumpkin & Dess, 1996). Lumpkin and Dess (1996) further suggests that both financial and non-financial measures are relevant in determining the performance of a business, however, these factors change and evolve at various stages of the business venture.

Naturally, all ventures start with the intention to succeed and strive to grow. The study of entrepreneurship has revealed various drivers that influence the success and performance of a business. Earlier literatures have provided insight into a concept of entrepreneurial orientation (Dai, Maksimov, Gilbert, & Fernhaber, 2014; Uddin et al., 2014) influencing business performance (Ruiz-arroyo, 2012; Uddin et al., 2014). Lumpkin and Dess (1996) define entrepreneurial orientation as a business strategic orientation which captures entrepreneurial aspects of decision making styles, approaches and practices. Innovativeness, proactiveness and risk-taking are the three dimensions that describe strategic orientation and are regarded as necessary to achieve business performance (Fuentes-Fuentes et al., 2015; Uddin et al., 2014). Despite significant research highlighting the positive

correlation between entrepreneurial orientation and business performance (Dai et al., 2014; Lumpkin & Dess, 1996) existing empirical evidence does not support this and has rendered these findings as inconclusive (Fuentes-Fuentes et al., 2015; Simmons et al., 2018; Uddin et al., 2014).

Further research draws attention to psychological and personality traits of the entrepreneur (Hasan & Almubarak, 2016) in the ability of the entrepreneur to manage risks and volatility in the attempt to improve the performance of a business. It has been agreed that women entrepreneurs are risk-averse (Burke et al., 2014; Desiree & Kengne, 2016; Hasan & Almubarak, 2016; Kamberidou, 2013; Leitch et al., 2018; Rosa & Sylla, 2018; Yacus et al., 2019), hence there exists a belief that women entrepreneurs are less inclined to run high risk (Hmieleski & Sheppard, 2019), high growth entrepreneurial ventures. In relation to this argument is the suggestion that women entrepreneurs have conservative growth expectations (Cansiz & Tekneci, 2018) and value work-family synergies, personal fulfilment, support of others (Cansiz & Tekneci, 2018), and relational ties with stakeholders higher than the need to expand and grow their businesses (Powell & Eddleston, 2013). These findings are supported through expectancy theory, which investigates the relationship between expectancy, effort and performance.

In recent years, more attention has been paid to factors such as finance and innovation in improving the success and growth of a business. Literature by Schumpeter's theory (1934) has focussed on commitment to innovative processes and products (Atalay et al., 2013; Uddin et al., 2014), as the key source to business performance. Empirical research suggest that the success of a venture relies on the ability of a business to innovate and diversify their products and services (Farinha et al., 2018). However, the level of innovation carried out by women entrepreneurs is unknown and the impact this has on the performance of women owned businesses.

Finance is viewed as a crucial ingredient to the success of a business (Adomdza et al., 2016; Atmadja, 2015; Welsh et al., 2017). Studies indicate that women face challenges in accessing funding at both start-up and growth phases of the business (Cansiz & Tekneci, 2018; Chaudhuri, Sasidharan, & Raj, 2018;

Giotopoulos, Kontolaimou, & Tsakanikas, 2017; Hasan & Almubarak, 2016), which in turn may hinder the growth and progress of women entrepreneurs performance.

2.6.2 Performance of Women Owned Businesses

It is the view of many scholars, that women-owned businesses perform poorly (Hechavarria et al., 2019), with slower growth and lower sales (Patrick et al., 2016), and profits when compared to men-owned businesses (Beattie & Bishop, 1998; Chaudhuri et al., 2018; Powell & Eddleston, 2013). Studies have highlighted a number of factors contributing to the poor performance of women entrepreneurs, such as, bureaucracy, instable environment, overregulation and contractual obligation (Hasan & Almubarak, 2016), and financial constraints (Cansiz & Tekneci, 2018; Chaudhuri et al., 2018; Giotopoulos et al., 2017; Hasan & Almubarak, 2016). A mere comparison of female-owned businesses to male-owned businesses is inadequate measure to determine performance, since women may have different measurements of success (Patrick et al., 2016). Researchers have further indicated the high concentration of women entrepreneurs operating in more competitive sectors such as retail (Chaudhuri et al., 2018; Ekpe, 2013; SBP, 2013), greatly impact the future growth of the business.

It has been the view of numerous authors suggesting that women owned businesses underperform (Chaudhuri et al., 2018; Jha & Makkad, 2018),
In addition, Gupta et al. (2019), suggest that women entrepreneurs are more inclined to running low growth businesses. Furthermore literature has through empirical evidence supported this view indicating women owned businesses perform poorly as compared to their male counterparts (Demiralp et al., 2018).

The underperformance and failure of female-owned businesses attribute to limited access to finance from either credit or external venture investors (Chaudhuri *et al*., 2018). Studies by Giotopoulos *et al*. (2017) share similar findings to Chaudhuri *et al*. 2018 in that they suggest that constraints in accessing debt and equity capital are the source of low growth in female owned businesses.

Furthermore, businesses are consistently faced with the challenge of sustaining positive bottom line and reducing costs (Liaqat et al., 2018).
Scholars have widely researched the reliance on institutions to provide financial assistance (Drori et al., 2018) to women and how this has resulted in depriving the entrepreneurial ecosystem of the contribution from women owned businesses (Giotopoulos *et al*., 2017).

Over and above the limited access to finance, researchers have even argued the performance of women entrepreneurs in particular, is determined by the level of training and education of the individual (Aliyu, Salha, Ahmad, & Nordin, 2019). Training was regarded as an important factor enabling women entrepreneurs with practical experience to operate a business successfully (Aliyu et al., 2019; Hameed et al., 2017) and has been confirmed through various studies indicating the positive and significant impact training had on business performance (Aliyu et al., 2019; Barba Aragón et al., 2014; Saks & Burke-Smalley, 2014).

Strohmeyer *et al.* (2017) was of the view that innovativeness was enabled when the creator possessed greater knowledge diversity. Despite the progress made by researchers on understanding the relationship between training and business performance, women entrepreneurs continue to face challenges in terms of becoming upskilled and equipped with business knowledge and experience (Aliyu et al., 2019). This in turn may negatively impact women entrepreneurs ability to participate in innovative activities (Strohmeyer et al., 2017) as well as financially operate the business, thus resulting in poor performance.

2.7 Conclusion

Literature has indicated that both funding and innovation are crucial for the success of a business. More empirical research presenting data-based evidence is necessary to understand their influence on women entrepreneurs in particular. The focus has been on larger companies that are predominantly male owned. This has left significant gaps in understanding the many challenges women entrepreneurs face, with access to funding and the potential consequences and risks associated with it. This may be seen as a limitation or a barrier thus creating less favourable conditions for successful business performance among women. From an innovative perspective, there is ambiguity in identifying the ultimate

challenges experienced among women entrepreneurs. It was therefore essential to unpack and test its impact on women entrepreneurs, because of their potential to add value to the sustainability and growth of the economy.

In this study, all the fragmented theories and studies surrounding funding and innovation of women owned businesses have been analysed, in an endeavour to ascertain how these two constructs impact the performance of women entrepreneurs.

3. RESEARCH HYPOTHESES

This research investigated the relationship between funding and innovation and their impact on the performance of women entrepreneurs. Entrepreneurship theories recognise funding and innovation as fundamental drivers. Studies suggests that innovation has a direct influence on the success of a start-up or business venture. An alternative perspective gives attention to funding on enabling and propelling women to become successful in the entrepreneurial ecosystem. There exists many views and theories contradicting these suggestions.

Women entrepreneurs face challenges in accessing funding. Literature suggests that women are risk averse and in addition lack self-confidence to apply for funding. Women entrepreneurs rely on safer business funds such as personal savings or funds from family. These funds may be minimal and insufficient to sustain their businesses or limit their ability to invest in future growth objectives such as innovation, which in turn could potentially lead to low business performance.

Studies by Giotopoulos *et al.* (2017) indicated that women entrepreneurs did not place enough emphasis on innovation. Innovation carried out by companies is a process that requires dedicated resources, capital and time (Strohmeyer et al., 2017), and recognised as challenging to women entrepreneurs owed to its intense nature. Majority of past studies have suggested that innovation is necessary for entrepreneurial success (Powell & Eddleston, 2013) and is a key driver in the business performance. Literature further suggests that innovation and performance among male and female owned businesses differ (Marvel, Lee & Wolfe, 2015). Greater insight was required to understand how innovation influenced women owned businesses.

Funding and innovation play a crucial role in the development and sustainability of a business. For this reason, the study intended to understand the impact of these two constructs. The research aimed to answer the following questions:
How does funding impact on women entrepreneurs' performance?

How does innovation influence performance of women entrepreneurs?
Does access to funding influence innovation among women entrepreneurs?

3.1 Hypothesis 1

The first hypotheses constructed for the research tested the relationship between funding and performance of women entrepreneurs. Studies indicate that most women owned enterprises lag male owned enterprises based on sales, profits and growth. One of the reasons for the lag in performance attributed to the financial constraints experienced by women entrepreneurs (Becker-Blease & Sohl, 2007; Chowdhury et al., 2018; Cini et al., 2014; Leitch et al., 2018). Yacus, Esposito and Yang (2019) suggest that high-growth women entrepreneurs are more likely to finance their growth with personal and business equity funding, however Adomdza, Astebro and Yong (2016) further indicate that external funding is also critical, because it contributes to higher venture performance. This study thus aimed to test the relationship between funding and performance on women entrepreneurs to determine which of the above theories hold true for women in South Africa.

H_0: There is no significant relationship between Funding and the performance of woman entrepreneurs
H_1: There is a significant positive relationship between Funding and the performance of woman entrepreneur

3.2 Hypothesis 2

The second hypotheses constructed for the research tested the relationship between innovation and performance of women entrepreneurs. Schumpeter's theory (1934) suggested that the introduction of innovative new products affords a business a competitive advantage, thus results in greater sales, which in turn achieves high profits (Śledzik, 2013). Likely studies by Varis and Littunen (2010) revealed that businesses that engaged in innovative activities, improved their performance and success. However a study conducted by Cansiz and Tekneci (2018) on women entrepreneurs in Turkey, indicated that innovation in terms of R&D were negatively associated with performance. In addition empirical studies provided evidence that innovation had a negative impact on income (Bloodgood,

Sapienza, & Almeida, 1986). These contradictory findings have been further explored in this study to clear any ambiguity by testing the relationship between innovation among women entrepreneurs and its impact on their performance.

H_0: There is no significant relationship between Innovation and the performance of woman entrepreneurs

H_2: There is a significant positive relationship between Innovation and the performance of woman entrepreneurs

3.3 Hypothesis 3

The third hypotheses constructed for the research tested the relationship between innovation and funding of women entrepreneurs. Literature suggests that innovation is a continuous process that requires dedicated resources and funding (Cecere et al., 2018; Strohmeyer et al., 2017). Investment is required for research and development initiatives to develop new products or services. Studies indicate that women entrepreneurs do not carry out sufficient innovative activities as well as face challenges in receiving funding (Giotopoulos et al., 2017;Marvel, Lee & Wolfe, 2015; Yacus et al., 2019). This study thus aimed to test the relationship between funding and innovation to determine its impact on women entrepreneurs.

H_0: There is no significant relationship between Funding and the innovation of woman entrepreneurs

H_3: There is a significant positive relationship between Funding and the innovation of woman entrepreneurs.

3.4 Hypothesised Conceptual Framework

Figure 2 below represents the conceptual framework used to conduct the study on the presented hypotheses that form the basis to understand the role of funding and innovation on the performance of women entrepreneurs. The model further investigates the relationship between funding and innovation.

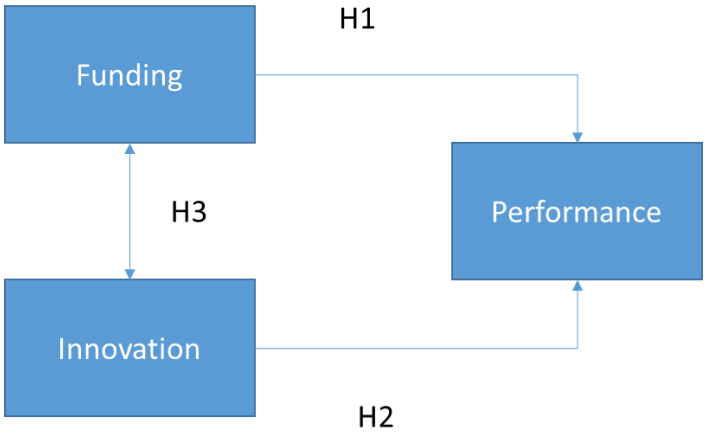

Figure 2: Conceptual framework for the study

3.5 Conclusion

Women entrepreneurs are key enablers in driving economic growth. The inclusion of women entrepreneurs in society improves diversity and aids systemic challenges faced by women globally. Women require funding to sustain and operate their businesses. Innovation is a key element in gaining a competitive advantage and creating opportunities for market share. The above-stated hypotheses were intended to determine whether funding and innovation play a significant role on women entrepreneurs' performance.

4. RESEARCH METHODOLOGY AND DESIGN

4.1 Introduction

Thornhill, Saunders and Lewis (2009), define the research philosophy of a study as understanding the purpose of the study in answering a problem, hence adding to the development of new knowledge. The topic of the research has been chosen with the aim at answering or aiding the solution to a business problem, where more women-owned businesses are required to contribute to the sustainability of the global economy. The research was aimed at understanding the factors that impact women entrepreneurs' performance with specific focus on the influence of innovation and funding. The research philosophy adopted was pragmatism, in which, for the purposes of this study, the most important determinants of the research philosophy were to test the three hypothesis below:

Hypothesis 1

H_0: There is no significant relationship between Funding and the performance of woman entrepreneurs

H_2: There is a significant positive relationship between Funding and the performance of woman entrepreneurs

Hypothesis 2

H_0: There is no significant relationship between Innovation and the performance of woman entrepreneurs

H_1: There is a significant positive relationship between Innovation and the performance of woman entrepreneurs

Hypothesis 3

H_0: There is no significant relationship between Funding and the innovation of woman entrepreneurs

H_3: There is a significant positive relationship between Funding and the innovation of woman entrepreneurs

The research method, data gathering and analysis was conducted in accordance with a quantitative approach. It utilised a survey strategy to gather data from

women entrepreneurs in South Africa. A confirmatory test was first performed to prove that funding and innovation are positively correlated to performance of women entrepreneurs, as indicated in the literature. A regression analysis was then performed to determine how much variances existed between the independent (funding and innovation) and dependent variables (performance).

4.2 Research Methodology and Design

The study followed the mono method and deployed the five-step approach outlined by Saunders and Lewis (2012). The research was quantitative in nature and made use of a survey to acquire data, hence the mono method best suited the nature of the study.

The research followed a deductive method as the main hypotheses, which were tested, based on the literature on the impact of funding and innovation on the performance of women entrepreneurs (Saunders & Lewis, 2012). The deductive approach was advantageous in that it offered the researcher the possibility to generalise the findings and measure the concepts quantitatively. Despite previous research conducted with respect to women in entrepreneurship, there was a need to provide insight on the two factors, innovation and funding and its influence on the performance of women entrepreneurs as highlighted in chapter 1. The intention was to extend and contribute to theory by understanding the relationship between innovation and funding, and explored the underlying mechanism by which these two factors influence women entrepreneurs' performance.

The study adopted an explanatory research design. The quantitative research methodology was the most applicable method for this research and therefore applied. The quantitative method was chosen to assess the influence of existing theories and to statistically quantify the relationships between the variables being tested. The research strategy best suited for gathering data in this study made use of a survey designed and adapted by the researcher with the aim of reaching more participants and make best use of the collection of data. The researcher found the use of a survey advantageous in that the same set of questions were asked to various individuals across all sectors of industry, which allowed the feedback from the respondents to be standardised.

The findings generated from the survey data would be representative of the whole population (Saunders & Lewis, 2012). The survey produced quantitative data that was analysed statistically to explain the relationships between the three variables under study. A five-point Likert scale (1-Strongly disagree, 2=disagree, 3=not sure, 4=agree, 5= Strongly agree) was used in the design of the survey to measure the response to the questions presented in the survey. The questions presented in the survey were standardised across the chosen sample for consistency and reliability of the data collected. The questions in the survey were reverse coded to prevent patterned responses.

4.3 Population

Saunders and Lewis (2012) defines a population as “the complete set of group members”. Studies by Strohmeyer et al. (2017) suggests that gender influences the level of innovation in a business thus impacting the business performance. Financial performance has been recognised as the measure of a successful business and women entrepreneurs have been identified as economic agents who create value. Researchers have highlighted the need to gain more insights into the lag in performance of women-owned businesses as compared to male-owned businesses (Strohmeyer et al., 2017).

The main aim of the research was to gain insight into the performance of women owned businesses in relation to the factors funding and innovation; hence, the population for the research comprised of women entrepreneurs only. Women entrepreneurs were described as women who organise and operate a business enterprise ((Pandian and Jesurajan, 2011, p. 918). Women entrepreneurs were targeted across all age groups, business sizes and sectors.

4.4 Unit of analysis

The unit of analysis for this research study comprised of women whom own a business. The survey, focussed on participants above the age of 18. The study aimed at women entrepreneurs in the corporate environment who own a business across all sectors of industry.

4.5 Sampling method and size

Saunders and Lewis (2012) define a sample as “a subgroup of the whole population”. The sampling technique considered the most suitable for this study was a combination of non-probability convenience and snowball sampling. These two types of sampling were utilised owing to the population being very small in nature as well as the study deliverables were limited to a short space of time. Sampling allowed this study to collect data on the women represented in the MBA groups and women entrepreneur support groups. It was impractical to conduct a consensus on the entire population due to the limited access to all women entrepreneurs in South Africa. The sampling process involved selecting women that own a business within South Africa and therefore the results or outcomes were generalised back to the population. The networks gained from the MBA groups were leveraged to gain access to women entrepreneurs. The female networks and women in business support groups were used to reach a larger population.

The exact population of women own businesses in South Africa are unknown, hence the population of women entrepreneurs targeted was aimed at 200 participants. The sample size of 200 was chosen based on the guideline by Saunders et al. (2009). The survey was administered to women who owned businesses across all sectors of industry. The samples were believed to be heterogeneous, as individuals have different history and life experiences on the innovative practises carried out by each venture as well as the different financing approaches.

4.6 Measurement Instrument

A self-administered questionnaire was utilised in this study by adapting existing questions from past questionnaires. The participants were able to answer the questions without the influence of the researcher. The participant's were provided with a consent articulating the content of the survey, the purpose of the research, the time required to answer the questions as well as assurance of anonymity. Anonymity was necessary to ensure the participant provided responses to the survey with limited bias.

The questionnaire was administered electronically and designed using Google Forms. The questionnaire was e-mailed to all participants over a period of three weeks. Participants had three weeks to respond. Electronic administration of the survey was carried out to reach as many women as possible. Women entrepreneurs are spread throughout the country, hence electronic administration deemed most viable. The questions focussed on the three main constructs under study to determine the level of innovation carried out by women entrepreneurs, access to funding and to measure the performance of their businesses. All questions were mandatory and weighed equally. A five-point Likert scale was utilised to answer each of the questions.

4.7 Survey Design

The survey was designed using Google Forms. The survey was made up of 5 parts:

- The participant consent;
- Demographics;
- Measures of innovation;
- Measures of performance;
- Measures of funding.

4.7.1 Participant consent statement

You are invited to participate in this Integrated Research project. The purpose of this research project is to understand how funding and innovation impact women entrepreneurs and the performance of the business. This is a research project being conducted by Krystle Annamalai, an MBA student at The Gordon Institute of Business Science (GIBS). Your participation in this research study is voluntary. You may choose not to participate. If you decide to participate in this research survey, you may withdraw at any time. If you decide not to participate in this study or if you withdraw from participating at any time, you will not be penalized. The survey involves answering questions on Innovation, Funding and Performance of the business and will take approximately 5 minutes. Your responses will be confidential and we do not collect identifying information such as your name, email address or IP address.The results of this study will be used for scholarly purposes only and may be shared with The Gordon Institute of Business Science representatives.

4.7.2 Demographics

The demographics required by the participant was designed to identify the participants age group, education qualification, size of the business and the source of initial capital used to start the business. The questions contained predefined categories for the participant to select. All fields of the demographic section was compulsory since no personal information that could identify the individual was required.

4.7.3 Measures of Innovation

Marvel and Lumpkin's (2007) measurement scale (see Appendix A) was adapted and used to measure the level of innovation carried out by women entrepreneurs. The survey made use of a five point Likert scale (strongly disagree=1, disagree=2, not sure=3, agree=4, strongly agree=5). The questions were aimed to ascertain whether the entrepreneur carried out innovative activities in terms of the products and services offered. The questions were focussed on determining if the products and services changed over time or whether new products and services were developed. The table below represents the list of items administered in the survey.

There is a large group of customers that already uses a very similar product/service.

The product/service offered represents an entirely new type of product/service.

The product/service offered may be described as a new technology/invention.

The product/service offered has developed/progressed since the last generation/model/version.

The product/service offered could be described as a product line extension.

The product/service offered meets a want or a need that has not been addressed by other products/services.

The product/service offered is a new twist on an old theme.

4.7.4 Measures of Business Performance

A measurement scale designed by Gupta and Govindarajan (1984), was adapted and used to measure the current performance of women owned firms. The women were asked to rate their performance from a given set of questions. A five-point Likert scale was used (strongly disagree=1, disagree=2, not sure=3, agree=4, strongly agree=5) and the following items on performance were measured; growth in sales, growth in profitability, return on equity, return on assets, profit margin on sales, and

the ability to fund growth from profit. The six items of the questionnaire were averaged to yield a business performance score (where strongly disagree=1 is low and strongly agree=5 is high), with higher values denoting better performance.

4.7.5 Measures of Funding

For the purpose of the study, section D of the survey measured financial support from financial institutions such as government subsidies, commercial banks, venture capital as well as other credit institutions. The researcher adapted a measurement scale (see Appendix A) designed by Amsi Ngare, Imo and Gachie (2017). A 5-point response scale was used (strongly disagree=1, disagree=2, not sure=3, agree=4, strongly agree=5) to ascertain the financial support received by women entrepreneurs. This section comprised of 10 questions. The participants of the survey were required to select the value that was most relevant to their business and experience.

4.8 Pre-testing the Survey

In line with (Saunders & Lewis, 2012), ensuring the research is meaningful required the questionnaire to be tested. Testing the questions enabled the researcher to ensure the constructs measured limited biases and were clear before the survey was administered. The survey was pilot tested on five individuals. Feedback from the individuals were considered as well as an average time taken to complete the survey was determined and the survey was edited accordingly. Testing the survey afforded the researcher the opportunity to ensure the constructs were valid and checked against literature. The survey was submitted to the Gordon Institute of Business Science research team for ethical clearance.

4.9 Data gathering Process

The study was designed to follow a structured method of data collection. A survey was deployed and the data collected via an online internet tool, called Google Form. The self-administered tool was used to assist in conducting the survey with a link distributed to all participants. A consent letter was used to explain the purpose of the study and included a confidentiality agreement as mentioned in 4.7.1. The survey option was chosen as best suited for the research since the study aimed at targeting a sample of women entrepreneurs within a specific time period.

4.10 Data analysis Approach

Following the process prescribed by Zikmund et al. (2012), the researcher first exported the survey results from Google Forms. The data was then coded to ensure all measures were of a quantitative nature based on the Likert scale adopted for the adopted measures for each of the research constructs described in Chapter 3. The data was then evaluated for completeness by evaluating if any respondents reported a completion rate less than 50%, if so these respondents were excluded from further analysis (Zikmund et al., 2012). Thereafter, descriptive statistics were reported for the demographic questions in the research survey by evaluating a frequency table. Inferential statistics were then conducted by first confirming the reliability, validity and factor analysis as previously described. Thereafter, the mean, standard deviation, skewness and kurtosis measures were reported for each latent variable.

As the researcher sought to test for association through the hypotheses developed in Chapter 3, a Pearson's correlation test was initially sought for as the statistical technique (Field, 2013). Hair et al (2010) states that five assumption need to hold true to adopt the Pearson's correlation technique: 1) The data needs to be quantitative and measured on a continuous scale, 2) within each test there needs to be paired observation of the variables, 3) there needs to be a linear association between the independent and dependent variable, 4) the data should not have any significant outliers and 5) the data needs to be approximately normally distributed.

After evaluating the Shapiro-Wilk test for normality it was found that the data was not approximately normally distributed and therefore the non-parametric method known as the Spearman's correlation test was adopted by the researcher to test the strength of each of the variables within each research hypothesis. Following the guidelines by Cohen (1988) and Myers, Well and Lorch (2010), the strength of the relationship was categorized as small ($0.1 < r < 0.3$), medium ($0.3 < r < 0.5$) and strong ($r > 0.5$).

4.10.1 Reliability

Reliability within this research was measured by evaluating the internal consistency reliability for all the latent variables. The measurement instrument utilised a five-point Likert scale. Internal consistency reliability is an evaluation of all measured variables with each other that theoretically compose a construct to provide consistent and

appropriate results (Heale & Twycross, 2015; Zikmund et al., 2012). As previously described, the research adopted a survey design using scales from previous studies conducted by Gupta and Govindarajan (1984), Amsi Ngare, Imo and Gachie (2017) and Marvel and Lumpkin (2007). Internal consistency reliability is concerned with determining how well a set of measured variables are grouped together to measure a single dimension (Bland & Altman, 1997). Vacha-Haase, Henson and Caruso (2002) further posits that internal consistency is an estimation technique related to a measured variables homogeneity or the joint measure of measured variables on the same construct. Hair et al (2010) and Zikmund et al (2012) state that the Cronbachs alpha score can be used to evaluate a latent variables level of internal consistency reliability. Heale and Twycross (2015) further postulates that the Cronbach's alpha score is the most widely used estimator of a latent variable's internal reliability consistency. Hair et al. (2010) further states that a Cronbachs alpha score between 0.60 and 0.70 is an acceptable representation of a latent variable's internal reliability consistency, whilst Tavakol and Dennick (2011) state that the Cronbach's alpha score should range between 0.70 and 0.95. The researcher therefore adopted a lower limit Cronbach score of 0.70 as discussed in Gupta and Govindarajan (1984), to evaluate if the items reported an acceptable level of internal reliability consistency in this research .

4.10.2 Validity

Heale and Twycross (2015, p.66) define validity as the "extent to which a concept is accurately measured in a quantitative study". The researcher evaluated for criterion validity in this research through the evaluation of convergent and discriminant validity. Convergent validity refers to measured variables that display a high correlation with other measured variables that are measuring the same latent variable, whilst discriminant validity is a measure of poor or low correlations of measured variables not representing the same latent variable (Heale & Twycross, 2015). A Pearson's correlation was used to evaluate convergent and discriminant validity in this research.

4.10.3 Factor analysis

The one flaw in measuring internal consistency reliability alone is that it does not evaluate of a set of measured variables are unidimensional or multidimensional (Pett, Lackey & Sullivan, 2003). Another statistical technique is required to measure if

measured variables compose a unidimensional or multidimensional construct. A Principal Component Analysis was evaluated as a variable reduction technique as well as to evaluate if a latent variable was unidimensional or multidimensional (DeVellis, 2003). Three pre-requisites are required to ensure that the data was suitable for factor analysis: 1) The measured variables need to report at least one correlation coefficient > 0.3 with other measure variables measuring the same latent variable, 2) the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy needs to be greater than 0.5 and 3) the Bartlett's test for sphericity needs to report a significance less than 0.05 (Hair et al., 2010). Once this was confirmed the researcher verified the factor structure using the eigenvalue one rule whereby components were only considered if they reported an eigenvalue greater than 1. If more than one component was extracted it meant that the measured variables were multidimensional and if only one component was extracted, it meant that the measured variables were unidimensional (Hair et al., 2010).

Furthermore, the researcher conducted a Confirmatory Factor Analysis (CFA) to measure model fit as well as evaluate if the measured variables measure the latent variable that they were meant to measure. A one factor CFA technique was adopted by the researcher which measured the CFA model fit indices on each latent variable independent from each other. Four measures were evaluated: 1) the standardized root mean square (SRMR) which is a measure of goodness of model fit (SRMR < 0.08), 2) the root mean square of approximation which is also a goodness of model fit index (RMSEA < 0.08), 3) the Chi-square probability significance which measures the relationship between latent variables and the measured variables ($p > 0.05$) and 4) the comparative fit index (CFI) which is also a model fit index (CFI > 0.90) (Hu & Bentler, 1999; Rigdon, 1996).

4.11 Research limitations

The targeted sample size may not accurately represent the population and may require an extension of the number of sectors surveyed, due to some sectors carrying out more innovation than others, for example, the engineering and technology intensive industries. The study only focusses on women within South Africa and may not be an accurate representative of the entire population of women globally, since entrepreneurial activity rates vary across countries according to the 2018-2019 GEM report. The targeted sample size of 200 is large and may not be

achieved due to the sample only focussing on women within the MBA groups and two social media platforms.

4.12 Conclusion

The research method and design was conducted to ensure the study followed a structured systematic process in soliciting sufficient information and data to test existing theories on the performance of women entrepreneurs. A quantitave study was carried out, which made use of a pre-tested online survey to collect data. The method incorporated a series of statistical tests to validate and interpret the data collected. The next chapter will present the statistical results obtained from the tests conducted.

5. RESEARCH RESULTS

5.1 Introduction

This chapter explores the details of the findings from the responses that were obtained from the electronic survey instrument. The primary aim of the research was to evaluate the relationship between funding and innovation and their impact on the performance of woman entrepreneurs. The data collected was analysed through several tests to assist the researcher in proving the three research hypotheses discussed in Chapter 3. This chapter is structured to methodically present the results that have been conducted from the data captured as discussed in the previous chapter. One hundred and twelve (112) responses were received and all responses have been used in the tests as there were no missing data.

This Chapter begins by describing the demographic results reported by the sample population. The samples demographic characteristics have been captured from the questionnaire to highlight the age, education, business size and source of funding of the sample. Thereafter, the results for the reliability, validity and factor analysis is presented. Finally, the results for the hypothesis testing is presented which include the descriptives and assumption results for the statistical technique adopted.

5.2 Demographics of Women Entrepreneurs

5.2.1 Age of Women Entrepreneurs

Table 2 below illustrates the age category of the survey respondents. Majority of the women whom participated in the survey were of the 41 – 50 range. The age category 18 – 30 received the leased percentage of women respondents.

Table 1: Age Group of Women Entrepreneurs

Age	*18-30*	*31-40*	*41-50*	*above 50*
No of respondents	16	32	41	23
Percentage %	**14,29%**	**28,57%**	**36,61%**	**20,54%**

5.2.2 Education of Women Entrepreneurs

Table 3 below illustrates the education category of the survey respondents. Thirty nine percent (39%) of the women whom participated in the survey had a bachelors

degree. The results had also revealed that 80% of the sample response had a tertiary level education, either a diploma, bachelors or masters degree.

Table 2: Education

Education	*Primary*	*Secondary*	*Diploma*	*Bachelors*	*Masters*
No of respondents	8	14	27	44	19
Percentage %	**7%**	**13%**	**24%**	**39%**	**17%**

5.2.3 Business Size of Women Entrepreneurs

Table 4 below shows the business size of each women entrepreneur whom participated in the survey. Majority (77%) of the businesses were made up of 1-9 employees, with only 1% of the sample respondents having a business size of 50-99 and 100 or more employees.

Table 3: Business Size

Business Size	*1 to 9*	*10 to 20*	*21-30*	*31-50*	*50-99*	*100 and above*
No of respondents	86	5	17	2	1	1
Percentage %	**77%**	**4%**	**15%**	**2%**	**1%**	**1%**

5.2.4 Source of funding of Women Entrepreneurs

Table 5 below illustrates the source of funding category of the survey respondents. Majority of the sample whom participated in the survey had used their own finance to fund their business, which amounted to 69% of the 112 women entrepreneurs. The second highest method of funding was through family funds, which amounted to 15% with the lowest source of funding being a business loan of only 1% of the respondents.

Table 4: Source of Funding

Source of Funding	*Own funds*	*Personal loan*	*Business loan*	*Family funds*	*Both self-funds and bank loan*	*Finance from other institution*
No of respondents	77	3	1	17	12	2
Percentage %	**69%**	**3%**	**1%**	**15%**	**11%**	**2%**

5.3 Descriptive Statistics

The constructs tested were funding, innovation and performance of women entrepreneurs. Each of the constructs comprised a range of questions that represented a number of variables to test each construct. Appendix A displays the questions designed per construct which utilised a five-point Likert scale. Appendix B shows the descriptive statistics calculated for each question and construct. The mean, standard deviation, median, skewness and Kurtosis are represented in Appendix B for each construct.

Performance reported the highest mean of 2.15±0.69, this was followed by Innovation which reported a mean of 3.04±0.63 and the lowest mean was reported for the Funding construct (2.41±1.04). In addition, the researcher evaluated the Shapiro-Wilk test for normality to understand if the data was approximately normally distributed. The Shapiro-Wilk test reported a significance $p < 0.05$, indicating that the data was approximately not normally distributed as shown in the table 6 below.

Table 5: Summary of Descriptive statistics

Construct	N	Mean	Std. Deviation	Shapiro-Wilk		
				Statistic	df	Sig.
Innovation Part A	112	2.76	0.56	0.93	112	0.00
Innovation Part B	112	3.31	0.92	0.91	112	0.00
Innovation	112	3.04	0.63	0.94	112	0.00
Funding	112	2.41	1.04	0.93	112	0.00
Performance	112	2.15	0.69	0.96	112	0.00

5.3.1 Descriptive statistics for Funding

The descriptive statistics for funding were measured and are represented in Appendix B. The descriptive statistics were calculated based on the responses received for the 10 questions designed for the construct funding and are shown in table 5 below. The results indicate question 10 received the highest mean value of 3.08 and question 2 obtained the lowest mean value of 2.04. Question 1 had the highest level of dispersion with a standard deviation value of 1.46 (Mean= 2.44) and question 4 results revealed the lowest level of dispersion with a value of 1.16 (Mean= 2.42). Question one and question 10 were removed from the analysis testing thus resulting in an overall the mean value of 2.41 with a moderate standard deviation of 1.04. The frequency tables show that majority of responses selected option 2 (Disagree), indicating that they disagree with the statements posted around funding of women entrepreneurs.

The histogram below graphically displays the responses of the participants.

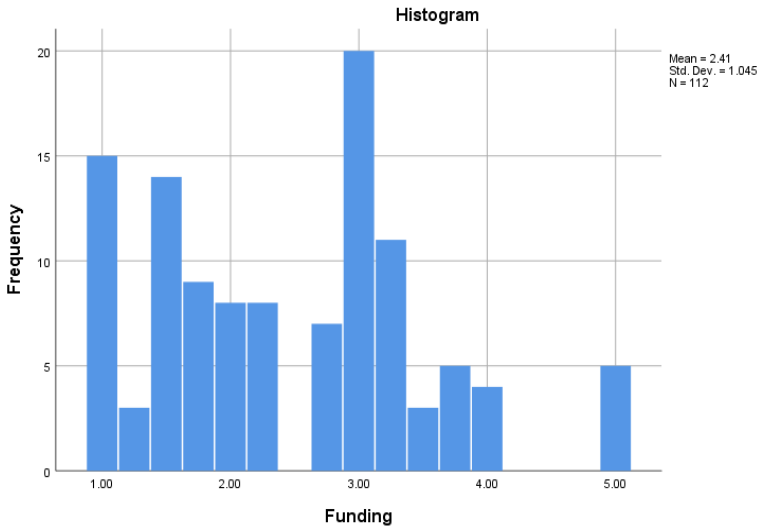

Figure 3: Sample responses of Funding

5.3.2 Descriptive statistics for Innovation

The descriptive statistics for funding were measured and are represented in Appendix B. The descriptive statistics were calculated based on the responses received for the 7 questions designed for the construct innovation and are shown in table 6 below. The results indicate question 1 received the highest mean value of 3.88 and question and question 2 obtained the lowest mean value of 2.14. Question 1 had the highest level of dispersion with a standard deviation value of 1.367 (Mean= 3.88) and question 5 results revealed the lowest level of dispersion with a value of 1.214 (Mean= 3.04). Most responses were closer to the mean value of 3.04 with a relatively low overall standard deviation of 0.63.

The histogram below graphically displays the responses of the participants.

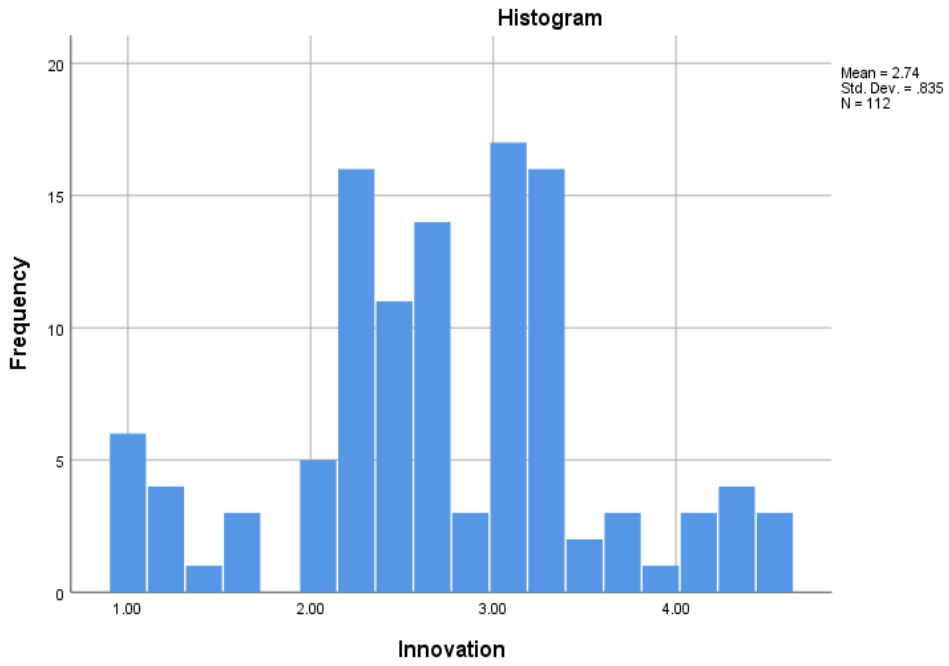

Figure 4: Sample responses of Innovation

5.3.3 Descriptive statistics for Performance

The descriptive statistics for performance were measured and are presented in Appendix B. The descriptive statistics were calculated based on the responses received for the six questions designed for the construct performance as shown in table 7 below. The results indicate question 1 received the lowest mean value of 1.90 and question and question 3 obtained the highest mean value of 2.42. The overall mean value = 2.15 with responses leaning towards “disagree” of the measurement scale.

The histogram below graphically displays the responses of the participants. Shows the general distribution of the responses received.

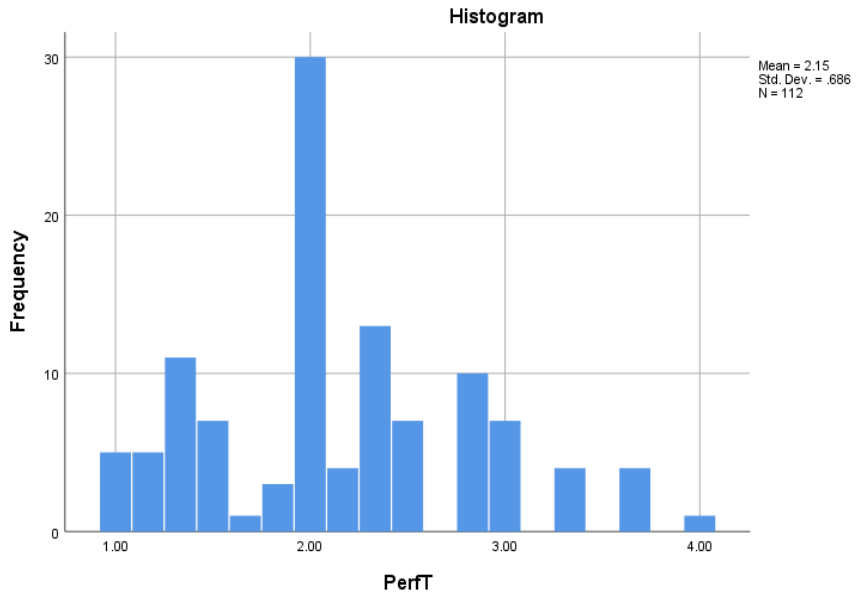

Figure 5: Sample responses of Performance

5.4 Construct Validity Test

Construct validity tests were conducted to measure the degree of validity of the questions asked in the survey for each construct. The relationship between the variables and the constructs are tested to confirm the legitimacy and soundness of the measurement instrument. The Pearson's bivariate correlation test was conducted using SPSS statistical analyser tool to evaluate convergent and discriminant validity. All measured variables for their respective latent variables reported higher correlations between each other versus measured variables belonging to other latent variables (See Appendix F). As discussed in Chapter 4, this therefore confirmed convergent and discriminant validity of the data.

5.5 Reliability Test

Internal consistency reliability for the study was assessed by evaluating the Cronbach alpha score as discussed in Chapter 4 (see Appendix D). All research latent variables returned Cronbach alpha scores > 0.70 with the exception of Funding part A, which reported a score of 0.50 as summarised in Table 8. Funding part A reported the highest alpha score of 0.93, followed by Performance with 0.81 and Innovation part A and Innovation part B with alpha scores of 0.77 and 0.76 respectively. Funding part A was removed from the study based on the poor reliability score.

Table 6: Cronbach alpha scores

Scale	Number of items after to Cronbach alpha	Number of items prior to Cronbach alpha	Cronbach Alpha
Innovation Part A	3	3	0.77
Innovation Part B	4	4	0.76
Performance	6	6	0.81
Funding Part A (Q1 and 10)	2	2	0.50
Funding Part B (Q2 to Q9)	8	8	0.93

5.5.1 Funding reliability test

The reliability test for the construct of funding yielded a Cronbach's alpha value of 0.933 shown in table 8 below, which is above the acceptable Cronbach's alpha value of 0.7. The results for questions 1 and 10 are shown in the table below. Therefore, reliability for the construct with eight of the questions was acceptable Question one and ten were removed since it yielded a value of 0.499 below the 0.7 threshold.

Table 7: Cronbach's Alpha for funding question 1 and 10

Reliability Statistics				
Cronbach's Alpha	N of Items			
0,499	2			
Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Funding1	3,0804	1,714	0,334	
Funding10	2,4375	2,140	0,334	

Table 8: Funding Cronbach's Alpha result

Reliability Statistics				
Cronbach's Alpha	N of Items			
0,933	8			
Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Funding2	17,2411	54,761	0,684	0,931
Funding3	16,8214	52,671	0,842	0,919
Funding4	16,8661	54,658	0,807	0,922
Funding5	16,8393	52,911	0,863	0,917
Funding6	16,5268	53,387	0,715	0,929
Funding7	16,8839	53,040	0,805	0,921
Funding8	17,0536	53,511	0,836	0,919
Funding9	16,7679	56,955	0,608	0,935

5.5.2 Innovation reliability test

The reliability test for the construct of innovation yielded a Cronbach's alpha value of 0.765 shown in table 9 below, which is above the acceptable Cronbach's alpha value of 0.7. Therefore, reliability for the construct with seven questions is acceptable and above the 0.7 threshold. The table below illustrates the results obtained.

5.5.2.1 Innovation Part A

Table 9: Innovation Part A Cronbach's Alpha result

Reliability Statistics	
Cronbach's Alpha	N of Items
0,765	3

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Innovation1rc	4,4018	4,477	0,616	0,667
Innovation2	4,3750	5,083	0,612	0,671
Innovation3	4,2589	5,203	0,571	0,714

5.5.2.2 Innovation Part B

The table below illustrates the results obtained.

Table 10: Innovation Part B Cronbach's Alpha

Reliability Statistics	
Cronbach's Alpha	N of Items
0,763	4

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Innovation4	9,6964	8,880	0,517	0,730
Innovation5	10,1964	9,078	0,485	0,745
Innovation6	10,2143	7,485	0,653	0,654
Innovation7	9,6161	7,770	0,597	0,687

5.5.3 Performance

The reliability test for the construct of performance yielded a Cronbach's alpha value of 0.808 shown in table 11 below, which is above the acceptable Cronbach's alpha value of 0.7. The table below illustrates the results obtained.

Table 11: Reliability Statistics for Performance

Reliability Statistics	
Cronbach's Alpha	N of Items
0,808	6

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Performance1	18,9911	12,369	0,548	0,782
Performance2	19,0982	11,567	0,633	0,763
Performance3	19,5089	12,468	0,534	0,785
Performance4	19,4821	12,360	0,516	0,790
Performance5	19,2232	11,779	0,605	0,769
Performance6	19,1429	12,700	0,571	0,778

5.6 Exploratory Factor Analysis

The researcher then conducted an EFA as discussed in Section 4. The EFA was performed on all constructs for the purpose of variable reduction and confirming sampling adequacy. The Kaiser-Meyer-Olkin (KMO) and the Bartlett's tests for Sphericity measures were tested to measure the number of components the constructs are loaded on as well as confirming if a PCA was suitable. All measured variables for each construct reported at least one correlation coefficient > 0.3 (see Appendix C). The KMO measure of sampling adequacy (KMO>0.5) and the Bartlett's Test of Sphericity ($p < 0.05$) was acceptable for all constructs thereby deeming them appropriate for factor analysis. Two components were extracted for the innovation construct and funding and performance of women entrepreneurs' yielded one component each.

The table 12 below illustrates the summary of the results obtained.

Table 12: EFA summary results

Construct	**KMO**	**Bartlett's test of Sphericity**	**Number of Components extracted**	**Cumulative %**
Innovation	0.67	0.00	2	48.74
Performance	0.72	0.00	1	51.22
Funding	0.86	0.00	1	68.95

5.6.1 Innovation

The KMO measure of sampling adequacy (KMO>0.5) and the Bartlett's Test of Sphericity ($p < 0.05$) was acceptable with a KMO value of 0.672 and p value < 0.05. Two components were etracted for innovation and the variance on component one was then calculated to be 71.64% and 68.04% on component two.

Table 13: KMO and Bartlett's test for Innovation

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of		0,672
Bartlett's Test of Sphericity	Approx. Chi-Square	207,609
	df	15
	Sig.	0,000

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2,925	48,743	48,743	2,925	48,743	48,743
2	0,919	16,985	65,728			
3	0,749	12,488	78,217			
4	0,668	11,135	89,352			
5	0,380	6,341	95,693			
6	0,258	4,307	100,000			
Extraction Method: Principal Component Analysis.						

The rotated component matrix for Innovation yielded the factor structure as detailed in table 14 below.

Table 14: Innovation Rotated Component Matrix

Rotated Component Matrix[a]		
	Component	
	1	2
Innovation1rc		0,867
Innovation2		0,740
Innovation3		0,789
Innovation4	0,641	
Innovation5	0,776	
Innovation6	0,776	
Innovation7	0,756	
Extraction Method: Principal Component Analysis.		

5.6.2 Funding

The KMO measure of sampling adequacy (KMO>0.5) and the Bartlett's Test of Sphericity ($p < 0.05$) was acceptable with a KMO value of 0.857 and p value < 0.05.

The variance on component one was calculated to be 68.95% on component one. The test were conducted on questions two to nine of the funding construct after questions one and ten were removed. The table below illustrates the results obtained.

Table 15: KMO and Bartlett's test for Funding

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of		0,857
Bartlett's Test of Sphericity	Approx. Chi-Square	814,873
	df	28
	Sig.	0,000

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5,516	68,951	68,951	5,516	68,951	68,951
2	0,806	10,069	79,021			
3	0,563	7,040	86,061			
4	0,418	5,225	91,286			
5	0,320	3,994	95,280			
6	0,199	2,482	97,762			
7	0,108	1,344	99,106			
8	0,072	0,894	100,000			
Extraction Method: Principal Component Analysis.						

5.6.3 Performance

The KMO measure of sampling adequacy (KMO>0.5) and the Bartlett's Test of Sphericity ($p < 0.05$) was acceptable with a KMO value of 0.717 and p value < 0.05. The variance on component one was calculated to be 51.22% on component one.

Table 16: KMO and Bartlett's test for Performance

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of		0,717
Bartlett's Test of Sphericity	Approx. Chi-Square	227,299
	df	15
	Sig.	0,000

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3,073	51,217	51,217	3,073	51,217	51,217
2	0,966	16,108	67,325			
3	0,829	13,817	81,142			
4	0,461	7,686	88,828			
5	0,403	6,721	95,549			
6	0,267	4,451	100,000			

Extraction Method: Principal Component Analysis.

5.7 Confirmatory Factor Analysis

As discussed in Chapter 4, the researcher conducted a CFA as a data reduction and model fit technique. Table 17 provides a summary for the CFA results. With the exception of the SRMR scores, all other CFA indices reported poor fit values. All latent variables reported an RMSEA score > 0.10, a CFI score < 0.90 and a Chi-Square significance < 0.05. The poor model fit indices can be attributed to the small sample size achieved for this study as well as the violation of normality assumption. The table 17 below illustrates the summary of the results obtained.

Table 17: CFA summary results

Scale	SRMR	RMSEA	CFI	Chi-Square
Innovation	0.08	0.18	0.82	0.00
Performance	0.07	0.26	0.81	0.00
Funding	0.07	0.26	0.81	0.00

Figure 5 illustrates the estimated loading for construct validity for the variables (performance1 to performance 6) at 0.65, 0.72, 0.58, 0.57, 0.67 and 0.66 respectively. These are above the recommended loading of 0.5 suggesting adequate construct validity (Hair et al., 2010).

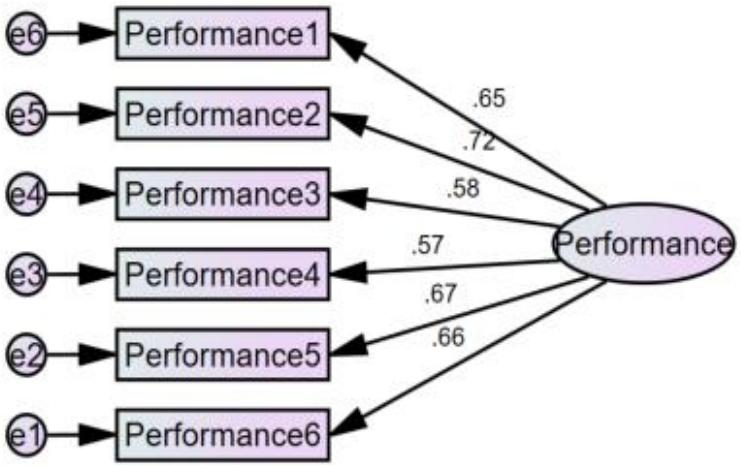

Figure 6: Confirmatory Factor Analysis - Performance of Women Entrepreneurs

Figure 6 illustrates the estimated loading for construct validity for the variables (innovation 1 to innovation 7) at 0.69, 0.80, 0.67, 0.57, 0.52, 0.83 and 0.75 respectively. These are above the recommended loading of 0.5 suggesting adequate construct validity (Hair et al., 2010).

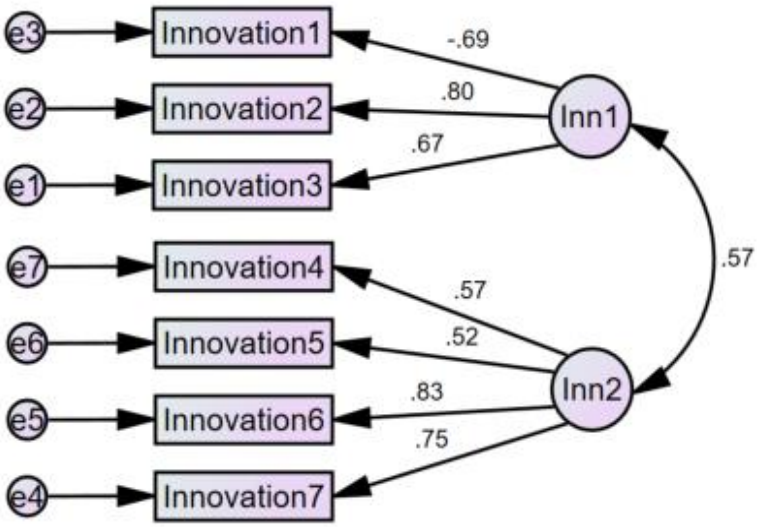

Figure 7: Confirmatory Factor Analysis - Innovation of Women Entrepreneurs

Figure 7 illustrates the estimated loading for construct validity for the variables (funding 2 to funding 9) at 0.71, 0.87, 0.86, 0.91, 0.78, 0.81, 0.84 and 0.61 respectively. These are above the recommended loading of 0.5 suggesting adequate construct validity (Hair et al., 2010). Question 1 and 10 were removed during the EFA, however no further questions were removed.

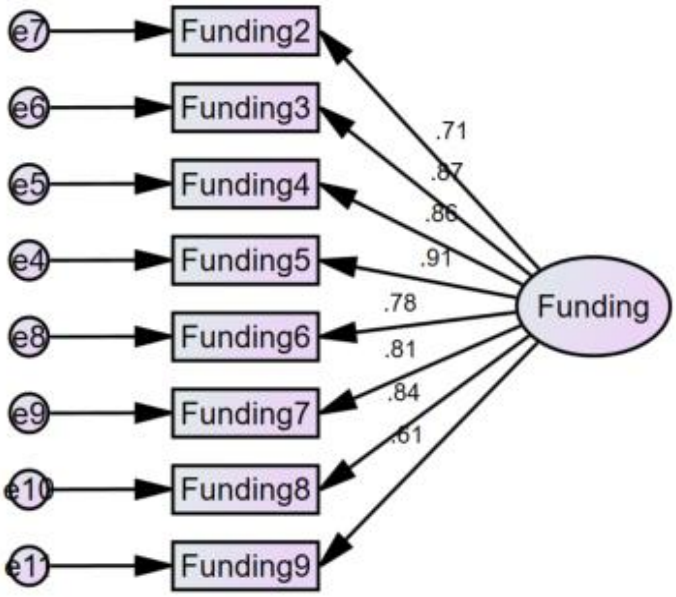

Figure 8: Confirmatory Factor Analysis - Funding of Women Entrepreneurs

5.8 Analysis of research hypotheses

The following section provides the analysis of the research questions outlined in Chapter 3. Prior to conducting the research analysis and confirming validity, reliability and factor analysis, the researcher evaluated the assumptions of the statistical technique adopted for this research. As discussed in chapter 4, the researcher initially sought to test each research hypotheses using the Pearson correlation test. As presented in Section 5.3, the assumption of normality was violated, the Shapiro-Wilk test reported a significance $p < 0.05$ and therefore parametric tests could not be conducted. The Spearman's rank order test was then adopted. Three assumptions are required for the Spearman's rank order test. Assumption one states that the independent and dependent variables need to be continuous or ordinal, these were confirmed as the data was based on a 5-point Likert scale. Assumption 2 states that there needs to be paired observations, this was also confirmed as there were no missing data in the dataset. Assumption 3 states that there needs to be a monotonic relationship between the dependent and independent variables for each of the hypothesis tests. Assumption 3 was evaluated by analysing a scatter plot for each of the hypotheses. All table results of the tests are presented in Appendix E.

5.8.1 Research question one

H_0: There is no significant relationship between Funding and the performance of woman entrepreneurs

H_1: There is a significant negative relationship between Funding and the performance of woman entrepreneurs

Research question one sought to establish if there was a significant relationship between Funding and performance of woman entrepreneurs. Furthermore, the researcher postulated that this relationship will be positive, meaning that there is a direct relationship between Funding and performance of woman entrepreneurs. The results of the Spearman rank order test is summarised in table 18 below.

A Spearman's rank-order correlation test was run to evaluate the relationship between Funding and the performance of woman entrepreneurs. 112 female respondents were reported for as the sample size. A preliminary analysis reported the relationship to be monotonic, as assessed through a visual inspection of the scatterplot (see figure 9). There was not a statistically significant, small positive correlation ($0.1 < r_s < 0.30$) between Funding and the performance of woman entrepreneurs, $r_s = 0.11$, $p > 0.05$.

Table 18: Spearman's rank-order correlation test between Funding and Performance

Hypothesis 2		**Performance**	**Funding**
Performance	Correlation Coefficient	1	0.11
	Sig. (2-tailed)		0.24
	N	112	112

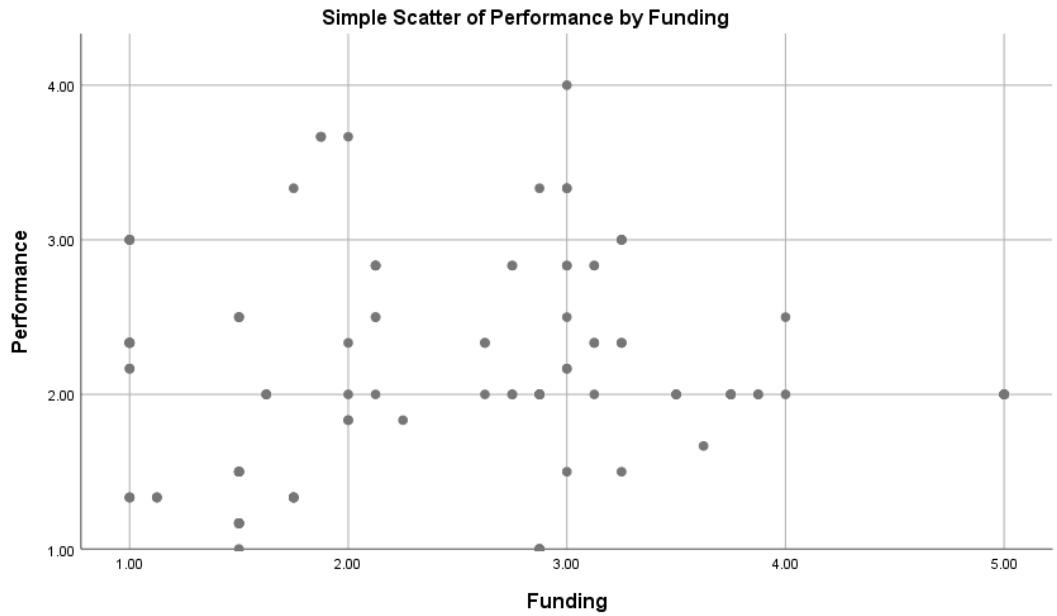

Figure 9: Scatter plot of Performance by Funding

Based on the results of the Spearman rank order test, the researcher rejected the null hypothesis for research question one as there was no significant positive relationship between funding and the performance of woman entrepreneurs at the 95% confidence level.

5.8.2 Research question two

H_0: There is no significant relationship between Innovation and the performance of woman entrepreneurs

H_2: There is a significant negative relationship between Innovation and the performance of woman entrepreneurs

Research question two sought to establish if there was a significant relationship between innovation and performance of woman entrepreneurs. Furthermore, the researcher postulated that this relationship will be positive, meaning that there is a positive relationship between innovation and performance of woman entrepreneurs. The results of the Spearman rank order test is summarised in table 19 below.

A Spearman's rank-order correlation test was run to evaluate the relationship between Innovation and the performance of woman entrepreneurs. 112 female respondents were reported for as the sample size. A preliminary analysis reported the relationship to be monotonic, as assessed through a visual inspection of the scatterplot (see figure 10). There was a statistically significant, small positive

correlation (0.1 < *rs* < 0.30) between Innovation and the performance of woman entrepreneurs, *rs* = 0.27, *p* < 0.05. Furthermore, it was found that the relationship between Innovation part A and performance in woman entrepreneurs was also significant and reported a correlation coefficient of 0.30 whilst Innovation part B did not report a significant relationship (*p* > 0.05).

Table 19: Spearman's rank-order correlation test Between Performance and Innovation

Hypothesis 1		**Performance**	**Innovation**	**Innovation Part A**	**Innovation Part B**
Performance	Correlation Coefficient	1	0.27*	0.30*	0.17
	Sig. (2-tailed)		0.00	0.00	0.08
	N	112	112	112	112

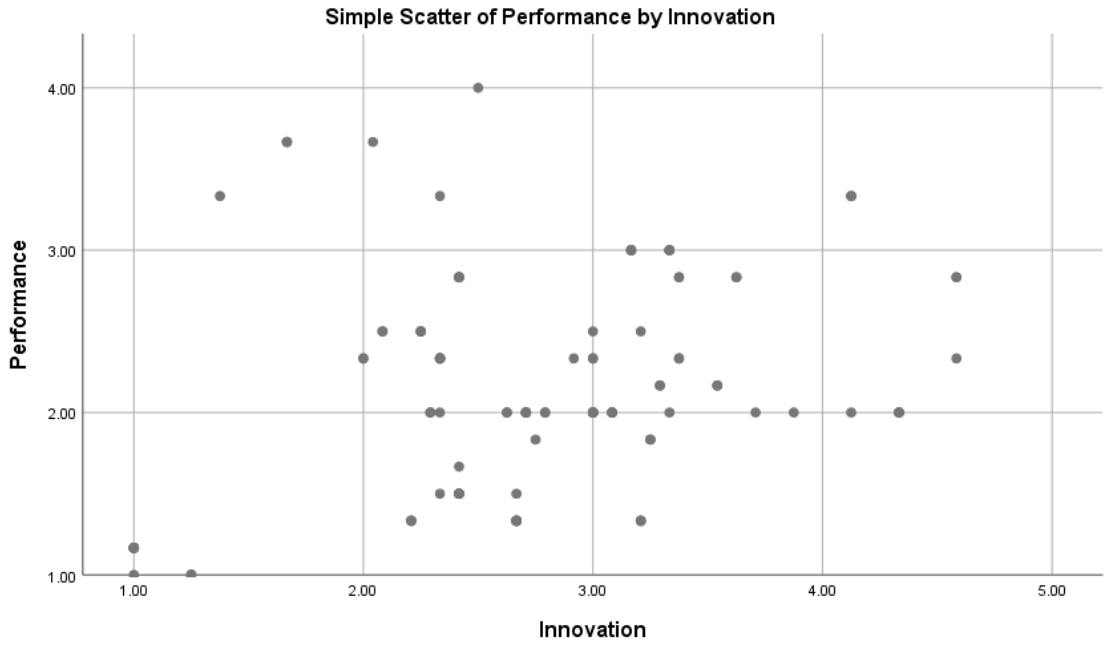

Figure 10: Scatter plot of Performance by Innovation

Based on the results of the Spearman rank order test, the researcher rejected the null hypothesis for research question one and accepted the alternative hypothesis as there was a significant negative relationship between Innovation and the performance of woman entrepreneurs at the 95% confidence level.

5.8.3 Research question three

H_0: There is no significant relationship between Funding and the innovation of woman entrepreneurs

H_3: There is a significant positive relationship between Funding and the innovation of woman entrepreneurs

Research question three sought to establish if there was a significant relationship between Funding and the innovation of woman entrepreneurs. Furthermore, the researcher postulated that this relationship will positive, meaning that there is a direct relationship between funding and innovation of woman entrepreneurs. The results of the Spearman rank order test are summarised in table 20 below.

A Spearman's rank-order correlation test was run to evaluate the relationship between funding and the innovation of woman entrepreneurs. 112 female respondents were reported for as the sample size. A preliminary analysis reported the relationship to be monotonic, as assessed through a visual inspection of the scatterplot (see figure 11). There was a statistically significant, small positive correlation ($0.1 < rs < 0.30$) between funding and the innovation of woman entrepreneurs, $rs = 0.20$, $p < 0.05$. Furthermore, it was found that the relationship between Funding and Innovation part A was also significant and reported a correlation coefficient of 0.27 whilst Innovation part B did not report a significant relationship ($p > 0.05$).

Table 20: Spearman's rank-order correlation test between Funding and Innovation

Hypothesis 3		**Funding**	**Innovation**	**Innovation Part A**	**Innovation Part B**
Funding	Correlation Coefficient	1	0.20*	0.27*	0.16
	Sig. (2-tailed)		0.03	0.00	0.08
	N	112	112	112	112

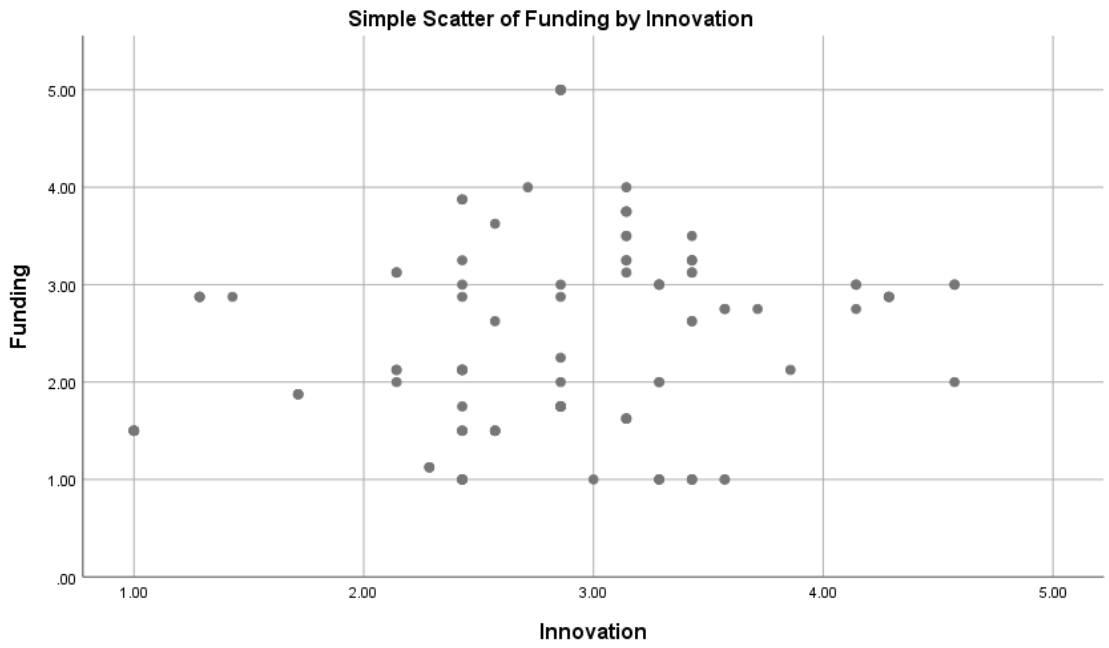

Figure 11: Scatter plot of Funding by Innovation

Based on the results of the Spearman rank order test, the researcher rejected the null hypothesis for research question three and accepted the alternative hypothesis as there was a significant positive relationship between Funding and the innovativeness of woman entrepreneurs at the 95% confidence level.

5.9 Conclusion

The primary aim of this research was to investigate the relationships hypothesis in Chapter 3, by which the research postulated that there are relationships between Funding, Innovation and Performance of woman entrepreneurs. After confirming the reliability, validity and factor structure of the latent variables the researcher tested each of the research hypotheses by analysing the Spearman's rank order test as the data was found to be not normally distributed based on the results of the Shapiro-Wilk test for normality. The null for research question one was accepted as there was no significant ($p \geq 0.05$) small positive relationship between Funding and performance of woman entrepreneurs ($r_s = 0.11$). The null for research question two was rejected as there was a significant ($p \leq 0.05$) small positive relationship between Innovation and performance of woman entrepreneurs ($r_s = 0.27$). The null for research question three was rejected as there was a significant ($p \leq 0.05$) small positive relationship between Funding and innovation of woman entrepreneurs ($r_s =$

0.20). Furthermore, it was reported that Innovation part A had a significant small negative relationship with performance of woman entrepreneurs and a significant positive relationship with funding. Whilst Innovation part B did not report any significant relationships.

6. DISCUSSION OF RESULTS

6.1 Introduction

This chapter will discuss the research findings summarized in Chapter 5 and will focus on the hypotheses that were tested for the purpose of this research study. The data collected were statistically analysed based on the 112 responses of women entrepreneurs, which comprised the sample of this study. The statistical analyses were conducted with the intention to determine and prove the relationships between the constructs as hypothesized in chapter 3. Women entrepreneurs make a substantial contribution in driving the economy, hence analysing the results from the previous chapter will create a foundation and insight into understanding whether innovation and funding have a significant influence on the performance of women entrepreneurs.

The demographical data collected from the sample data will first be analysed to provide a broad context into the type of women entrepreneurs surveyed. The statistical tests shall then be discussed in conjunction with the findings outlined in the literature review presented in chapter 2. This chapter is finally concluded with a summary of the research findings to afford the researcher the ability to establish the set research outcome.

6.2 Sample discussion and Demographics

The results from chapter 5 were based on 112 of the responses received. The demographic data collected were not used in the statistical tests when proving the hypotheses, however the information provided the researcher with a broader understanding and context to interpret the results obtained. The demographics are also reflective of the sample in South Africa as a developing country, since the sample consisted of women entrepreneurs who live and own businesses in the country. The demographic data collected included the age, level of education, business size and source of funding of the female entrepreneur.

6.2.1 Age

The sample targeted were female entrepreneurs over the working age of 18 years old. The age group was broken down into four categories: 18 to 30, 31 to 40, 41 to 50 and above 50. The age group statistics collected were relatively spread across the 4 categories, and revealed that 36,61% of the women entrepreneurs fell into the

41 to 50 category, and the second highest of 28.57% from the age category 31 to 40. The lowest response received from the age category 18 to 30 accounted for 14,29% of the sample and may be owing to the fewer number of women participating in entrepreneurship or who have been successful in that age category. In the South African context, most women in that age category may be at the early start up stage of the business after having completed their tertiary education.

6.2.2 Education

The education level of the respondents were acquired and the results showed that the women in the sample were relatively well educated. Majority of women involved in entrepreneurship had a tertiary level qualification, either a diploma, bachelors or masters degree, which accounted for 80% of the total sample. The education level of the respondents were broken up into five categories, namely, primary, secondary, diploma, bachelors, and master's degree. This insightful information highlights the benefits and importance of social and human capital drawing attention to entrepreneurship theory which indicate that education is one of the factors that make up human capital required for the success entrepreneurs (Lim & Suh, 2019). Extensive literature has been conducted with the aim to address the challenges experienced by women in obtaining formal education globally. It was positive to note the high levels of education profile among the women in South Africa, since studies have highlighted access to formal education as a challenge experienced by women in developing countries. The drive and support in educating females in South Africa is evident from the high education profiles of the respondents. Education and training have further been recognised as a fundamental element in driving innovation (Strohmeyer et al., 2017), however this theory has not been proved for women entrepreneurs since women entrepreneurs may exhibit different innovative behaviour to men (Marvel, Lee & Wolfe, 2015). Therefore, high or low levels of innovation cannot be attributed to the education profile of women entrepreneurs.

6.2.3 Business size

The business size was obtained to ascertain an estimate of the number of employees employed to operate the business. The research targeted businesses of all sizes in the attempt to achieve a spread across very small and large businesses since the funding requirements to operate and sustain these different size of businesses would vary. There was a large response from businesses with one to nine employees, which accounted for 77% of the sample. A small percentage of the sample fell with

the 21 to 30 category accounting for 15% of the sample, however only 1% of the sample respondents having a business size of 50-99 and 100 or more employees. This result could suggest that there is a higher number of small women owned businesses as compared to large businesses in South Africa. Literature suggests that businesses with fewer employees could result in high profits hence does not support this claim due to the actual profits of the businesses being unknown.

Literature suggest that business size is a measure of performance and business success. In addition, xxx indicate that the number of employees increase as the business grows. However, xxxx suggests that the some businesses may employ a fewer number of staff, but yield high profits, hence business size cannot be used alone as a measure of performance and success but rather coupled with additional measures such as growth in sales, profits and return on equity of the business.

The business size of the respondents may have been better understood if the different stages of the business life cycle was known, for example the lower number of employees could have suggested early stage (start-up) of the business, or the higher number of employees indicating maturity stage of the business. This parameter was not collected, hence this claim cannot be assumed or inferred on the results obtained.

6.2.4 Source of funding

The source of funding was a crucial indicator in establishing the method of funding used to finance the business. Funding was a construct being tested in hypothesis 1 to determine the relationship between funding and the performance of women entrepreneurs, and hypothesis 3 to determine the relationship between funding and innovation of women entrepreneurs. The data collected revealed that 69% of the sample had utilised their own funds to finance their businesses. This result confirms the findings from the literature review, which indicated most women utilise their own funds to finance their businesses (Adomdza et al., 2016; Robb & Robinson, 2014; Yacus et al., 2019). In addition, supports the view from studies, which suggest women are more risk-averse and therefore forces them to rely on informal sources of funding such as personal savings and family funds rather than more formal funding such as credit and bank loans (Adomdza et al., 2016; Leitch et al., 2018; Robb & Robinson, 2014). This finding was evident in the results obtained from the response in that only 4% of women had made use of a personal loan or business loan to fund

their business. Fifteen percent (15%) of the sample sourced finding from family whereas 11 % utilised both self-funds and a bank loan.

6.3 Business Performance of women entrepreneurs

According to Schumpeter's theory, economic growth is based on innovations, furthermore, Powell and Eddleston (2013) shows that innovation has a positive influence in enhancing the competitive advantage of a venture thus resulting in its performance (Brettel et al., 2015; Nicoletti, 2018). However, Song *et al*. (2008) show that there is a significant negative association between innovation and performance (Bloodgood et al., 1986; John, 1990). The inconsistent views shared by the authors may have been attributed to a number of factors.

In addition, studies have indicated that challenges in accessing funding may hinder the growth and performance of women entrepreneurs thus resulting in poor performance of women owned businesses (Cansiz & Tekneci, 2018; Chaudhuri, Sasidharan, & Raj, 2018; Giotopoulos, Kontolaimou, & Tsakanikas, 2017). The remainder of this chapter will unfold the results of the tests carried out to understand how the two construct's, funding and innovation, influences women entrepreneurs performance in South Africa.

Numerous studies conducted suggest that business performance can be measured in terms of growth in sales, growth in profitability, return on equity, return on assets, profit margin on sales, and the ability to fund growth from profit (Hasan & Almubarak, 2016; Lumpkin & Dess, 1996). The dependent variable performance comprised of six questions consisting of the six financial indicators mentioned above. The researcher adapted these questions based on the measurement scale designed by Gupta and Govindarajan (1984).

The relationship between the variables and the constructs were tested to confirm the legitimacy and soundness of the measurement instrument using the Pearson's bivariate correlation test, which had confirmed convergent and discriminant validity of the data as presented in Chapter 5. Further reliability tests were conducted, which yielded an acceptable Cronbach's alpha value for performance hence all questions were used in the statistical analysis.

The overall mean of performance yielded a score of 2.15, and was inclined toward "disagree" of the five-point Likert scale used in the questionnaire. Majority of the respondents leaned towards disagree of the scale. This finding implies that the

overall performance of the respondents was low, in that they did not believe their businesses acquired growth in sales, were able to fund growth from its profit, acquired growth in profitability and acquired a return on equity. The remainder of this chapter will discuss how these results on performance, correlated with funding and innovation.

6.4 Discussion on Hypothesis 1

In academic literature, a number of studies have suggested that funding has a positive influence of the success and performance of a business (Adomdza et al., 2016; Atmadja, 2015; Welsh et al., 2017). Yong *et al.* (2016) provide empirical evidence suggesting increased finance increase business performance. However, there's a view by Liaqat et al. (2018), suggesting that the capital structure incurs significant negative impacts on the financial performance of the business. These difference in findings have led to a gap in literature, further highlighting the need to understand how these findings can be interpreted on women owned businesses.

The following hypotheses were formulated to test the relationship between funding and performance of women owned businesses:

H_0: There is no significant relationship between Funding and the performance of woman entrepreneurs

H_2: There is a significant positive relationship between Funding and the performance of woman entrepreneurs

The construct funding was made up of 10 questions adapted by the researcher based on the literature by various authors. The questions on funding were designed to assess the accessibility of the various sources of funding available to women entrepreneurs mentioned above. Amsi *et al*. indicated various factors in terms of accessing funding such as, microfinance credit from commercial banks, credit repayment terms, collateral requirements and the interest rates, influence business performance (Amsi, Ngare, Imo, & Gachie, 2017). In addition other sources of funding such as government subsidies, venture capital, and foreign investments and funds from family and friends, were highlighted by various studies and authors in terms of improving business performance (Bellavitis et al., 2017; Robb & Robinson,

2014; Yacus et al., 2019). For the purpose of this study, all of the above mentioned sources of funding were used to measure the supply of funding.

The relationship between the variables and the constructs were tested to confirm the legitimacy and soundness of the measurement instrument using he Pearson's bivariate correlation test, which had confirmed convergent and discriminant validity of the data as presented in Chapter 5. Further reliability tests were conducted, which yielded a low Cronbach's alpha value for funding, thus resulting in the removal of question one and question 10 to improve the reliability of the measurement instrument. The determination of funding that were appropriate for statistical analysis was an exploratory exercise to determine the most appropriate components that made up the construct.

The overall mean of the construct funding, after question one and ten were removed, yielded a score of 2.41, and was inclined toward "disagree" of the five-point Likert scale used in the questionnaire. This finding implied the respondents believed that the support for funding obtained from the various sources, were insufficient to meet their business needs. The average score for each question were consistent with the total score for the construct, thus indicating that respondents generally believed that the financial support was not adequate and reasonable. Question 10 had received the highest mean value of 3.08, suggesting that they were unsure of the support from family and friends.

The lowest mean was received for question two with a value of 2.04, leaning towards "disagree" of the scale, indicating that respondents generally could not access government grants and subsidies. The overall findings indicated that the respondents did not believe that the various sources of funding were accessible, since all mean values leaned towards "disagree" of the scale. These findings are consistent with the study by (Chowdhury et al., 2018), who found that women face barriers in accessing funding during start-up and growth stages of the business.

Despite the progress made by women entrepreneurs, funding may still pose a challenge. This finding suggests that access to funding among women entrepreneurs still exist, which supports studies carried out by various authors. Possible barriers hindering the accessibility to funding may be due to complexities regarding family, society, financial access and support services (Chowdhury et al., 2018).

Research question one sought to establish if there was a significant relationship between Funding and performance of woman entrepreneurs. The Spearman's rank

correlation coefficient was calculated to be 0.11. This implied that the relationship between funding and performance was positive, however at a 95% confidence level, there was no significance that could be shown with the strength of the relationship. Therefore, it could be concluded that funding did not influence the performance of women entrepreneurs. This finding contradicted the study by Amsi et al. (2017)who suggested that funding positively impacts the performance of the business.

Despite there being a positive relationship between funding and performance, the insignificant relationship that was found could be attributed to women entrepreneurs utilising their own funds and not relying on other sources of funding to sustain the business. These findings are in congruence with literature, suggesting that women's higher levels of risk aversion may likely influence their decisions to pursue and rely on personal funds to finance their business, as discussed in chapter 2. In addition, women may also assume that due to perceived biases of poor performance (Gupta et al., 2019), they may be rejected and therefore choose not to seek the business funding (Chowdhury et al., 2018; Leitch et al., 2018), hence reducing the demand for funding.

Women entrepreneurs choose personal equity as well as use smaller amounts of capital (Rosa & Sylla, 2018), to avoid the risks associated with losing control of their businesses and their collateral. The 69% of the sample in this study who utilised their own funds to finance their business is consistent with the argument above and may be the reason for weak significance found between funding and performance. Yacus et al. (2019) suggested reliance on personal funding may lead to undercapitalization which in turn may result in underperformance (Yacus et al., 2019). Access to funding is therefore crucial to ensure women have alternate sources of finance to sustain their businesses.

Furthermore, the performance by women entrepreneurs may be influenced by additional factors which may include leadership style and women entrepreneurs attitude and behaviour (Bendell et al., 2019), decision making skills (Byrne et al., 2019) and family support (Powell & Eddleston, 2013; Welsh et al., 2017). The positive correlation between funding and performance indicates that there may be underlying factors associated and influencing the relationship between them. It is the assumption of the researcher suggesting the strength of the relationship between funding and performance may increase when mediated or moderated by the

additional factors highlighted above. Additional research was recommended to understand this association.

6.5 Discussion on Hypothesis 2

Literature by Schumpeter's theory (1934) has focussed on processes and product innovation (Atalay et al., 2013; Uddin et al., 2014), as the key source to business performance. Empirical research suggest that the success of a venture relies on the ability of a business to innovate and diversify their products and services (Farinha et al., 2018). However, the level of innovation carried out by women entrepreneurs is unknown and the impact this has on the performance of women owned businesses.

The following hypotheses were formulated to test the relationship between innovation and performance:

H_0: There is no significant relationship between Innovation and the performance of woman entrepreneurs

H_1: There is a significant positive relationship between Innovation and the performance of woman entrepreneurs

The construct innovation was made up of seven questions adapted by the researcher based on a study carried out by Marvel and Lumpkin (2007). The questions on innovation were designed to assess the level of innovation and its influence on the performance of women entrepreneurs. The five-point Likert scale was utilised in the questionnaire as discussed in Chapter 4.

The relationship between the variables and the constructs were tested to confirm the legitimacy and soundness of the measurement instrument using the Pearson's bivariate correlation test, which had confirmed convergent and discriminant validity of the data as presented in Chapter 5. Further reliability tests were conducted, which yielded an acceptable Cronbach's alpha value above the 0.7 threshold for innovation, therefore all seven questions were used to test the hypothesis.

The overall mean of the construct, yielded a score of 3.04 indicative of an average level of innovation carried out across the sample population. Question 1 returned the highest mean score value of 3.88 and was inclined toward "agree" of the five-point Likert scale used in the questionnaire. This finding implies that the respondents believed that, a large number of customers already used a similar product/service

offered. Questions 2 and 3 leaned more towards “disagree”, indicating that the products and services offered were not new to the market.

The Spearman's rank-order correlation test illustrated a statistically significant, small positive correlation ($0.1 < rs < 0.30$) between Innovation and the performance of woman entrepreneurs, $rs = 0.27$, $p < 0.05$. The findings suggest that the control variable innovation positively influences women entrepreneurs performance.
This finding was in consistent with most literature discussed in Chapter 2, which suggested that innovation would positively influence the performance of businesses. Schumpeter’s theory has highlighted the vital role that innovation plays in entrepreneurship (Fritsch, 2017). He argued that innovation drives growth and development of entrepreneurial ventures. George, Mcgahan and Prabhu (2012) have shown that businesses participating in innovative activities obtain inclusive growth (George, Mcgahan, & Prabhu, 2012) through creating products and services to aid in the social upliftment and wellbeing of the economy. In addition various authors have supported this view, highlighting the positive effects of innovation on increasing creativity of businesses (Farinha et al., 2018), access to greater opportunities, and business success through the creation of new products and services (Poblete, 2018).

Furthermore, Giotopoulos, Kontolaimou and Tsakanikas (2017) have regarded innovativeness as a key factor for sustainable competitive advantage. It is evident through empirical studies that innovation has a positive impact on entrepreneurial ventures, by improving business performance (Fairlie & Fossen, 2018; Rainey et al., 2015; Yacus et al., 2019). The findings of this research are consistent with past literature, indicating from the results that innovation positively influences the performance of women owned businesses.

However, the findings did not support a study by Cansiz and Tekneci (2018), who indicated that innovation in terms of R&D were negatively associated with performance. This study was carried out in Turkey on women entrepreneurs. In addition empirical studies provided evidence that innovation had a negative impact on income (Bloodgood et al., 1986). The difference in findings may be attributed to a number of factors such as majority of prior research focussed on both men and women. However this study directed the tests to women entrepreneurs in particular.

It can be further inferred that men and women have much more in common than differences, since literature by Desiree and Kengne (2016) show that gender influences the entrepreneurial management style of the individual thus impacting their ability to take risks and innovative. Further studies link gender to innovative behaviour (Marvel, Lee & Wolfe, 2015) and in support of this view, empirical studies provide suggestive evidence indicating that women exhibit a lower level of innovation as compared to men (Strohmeyer et al., 2017). The low level of innovation conducted by women suggests that women focus more attention on other strategic goals such as management style and decision making however, further research in this aspect is required.

6.6 Discussion on Hypothesis 3

Based on literature review, Cecere, Corrocher and Mancusi (2018), state in their study that funding have an impact on eco-innovations, suggesting that if ample funds are available then a business would be able to carry out innovation. , Li, Chen, Gao and Xie (2019) indicate that financial constraints are a major barrier to conduct research and development projects. Further studies suggest that innovation can be capital intensive and inherently involve a number of risks.

Concerning women entrepreneurs in particular, it is evident through literature that their innovation activity rate is low. This may be due to a number of factors such as financial constraints, limited resources and skills as well as the management style and strategy of the business. Hence, this study focussed on the impact funding has on women entrepreneurs' ability to carry out innovation.

The following hypotheses were thus formulated to test the relationships accordingly:

H_0: There is no significant relationship between Funding and the innovation of woman entrepreneurs

H_3: There is a significant positive relationship between Funding and the innovation of woman entrepreneurs

The Spearman's rank-order test calculated an rs = 0.20. This shows that the relationship between funding and innovation was found to be positive. The relationship was also significant at the 95% confidence level. This finding suggests that if access to funding increases, the level of innovation carried out by women entrepreneurs will also increase.

In the sample being studied, 69% of the women had utilised their own funds to finance their business. Further to this, the respondents did not believe that the various sources of funding were accessible as mentioned in chapter 6.4 above. This finding confirms literature in that the access to various sources of funding constraints were experienced by majority of these women entrepreneurs, as seen in the results for funding in chapter 5. These findings draw a relation to the conceptual framework of Entrepreneurship theory focusing on social capital, highlighted in Chapter 2 of the literature review. The views of social capital demonstrate that relationships and networks are essential in building financial ties and appropriating external financial ties and resources. In addition, studies by Yacus, Esposito and Yang (2019), indicated that the acquired networks aid in the transfer of creative ideas and expertise necessary for innovation. These theories and insights advocate that women entrepreneurs should increase their social capital to aid the accessibility to funds, which in turn would assist in the proliferation of innovation.

It is possible to infer that the moderate level of innovation carried out by this sample could improve if accessibility to funding improves. In support of this view, Li, Chen, Gao and Xie (2019) indicate that funding is a major constraint hindering the increase and growth of innovative entrepreneurial ventures, thus funding plays a major role in the proliferation of innovation. This study has proven this theory for the sample of women entrepreneurs in particular.

6.7 Summary of findings

The overall demographics acquired provided context into the sample of women entrepreneurs in South Africa. There was a moderate spread across all age categories. Most participants fell within the age category 41 to 50, with the second highest coming from the age category 31 to 40. South Africa has embarked on many initiatives to encourage and facilitate entrepreneurship among the youth, however, fewer participants responded in the younger age category 18 to 30, which potentially is a gap and could be further investigated.

It was positive to note that majority of the women had tertiary level education, suggesting that great strides have been made in recent years to upskill and include women to enable them to contribute to the economy.

A further interesting finding showed that majority of the women had utilised their own funds to finance their businesses. Despite the several initiatives and policies put in

place by the South African government to support women entrepreneurs in terms of financing their businesses, women have chosen their own personal capital. Policy makers and institutions would require insight through further studies to understand the reasoning behind the decision of women entrepreneurs to use of their own funds.

All constructs were validated and found to be reliable through tests carried out in chapter 5. The response for funding indicated that access to funding remains a challenge. The various sources of funding were found not be accessible. The participants response for innovation suggested that women carry out a moderate level of innovation. In terms of business performance, majority of the participants suggested that their businesses were profitable and acquired growth in sales.

The hypotheses testing resulted in both consistent and contradictory findings with literature. The Spearman's rank order test was used to statistically analyse the response data.

Hypothesis 1: There was no significant relationship between Funding and the performance of women entrepreneurs.

Hypothesis 2: There was a significant negative relationship between Innovation and the performance of women entrepreneurs.

Hypothesis 3: There was a significant positive relationship between Funding and innovation of women entrepreneurs.

6.8 Conclusion

The performance of women entrepreneurs have not been influenced by funding and innovation. Despite the various challenges experienced by women in accessing funds and conducting innovative activities, women have found it possible to thrive and sustain their businesses. Majority of the findings in this study may seem to contradict academic literature; however, it is important to note that most studies were conducted on men and woman with the sample being in-comparable.

Numerous literature findings have provided empirical evidence suggesting that gender influences the performance of women entrepreneurs through their behaviour and management style. These factors may have influenced the participants in the survey and may account for the contradictions in findings. Further to the above-mentioned, majority of prior literature focussed on different measurements as well as different method of research in different economies.

The findings of the research study show a positive correlation between funding and innovation, which are consistent with prior studies.

7. CONCLUSION AND RECOMMENDATIONS

7.1 Introduction

The chapter contains the combined findings of the research study, the implications of the study, the limitations of the research, and the recommendations for future research.

The proliferation of women entrepreneurs has spiked great interest among many scholars in their attempt to understand the drivers and factors influencing their business performance. Many are off the view that both funding and innovation influence the performance of women entrepreneurs however empirical evidence by other authors have identified alternate contradictory findings resulting in ambiguity in the conclusions made. The theory on entrepreneurship, funding supply and demand factors, as well as a conceptual framework on innovation, were all reviewed and tested with the attempt to investigate the influence of funding and innovation on the performance of women entrepreneurs.

7.2 Principal Findings

The first objective was to ascertain the influence of funding on the performance of women entrepreneurs. Based on the research findings, majority of the women entrepreneurs indicated that various sources of funding were not easily accessible. The limited access to funding has been proven by various studies and is consistent with the findings of this study. Furthermore, it was found that there was no significant correlation between funding and women entrepreneurs performance. This finding was not consistent with past studies, which found a positive correlation between funding and performance of new ventures (Bellavitis et al., 2017; Yacus et al., 2019). It is reasonable to conclude that women entrepreneurs do not rely on external sources of funding to ensure business performance. This may however incur financial strains on women entrepreneurs for future growth initiatives, since they may rely on business profits to fund these activities. This finding also suggests that women entrepreneurs may focus on non-financial aspects of the business to improve their performance such as more operations that are efficient, strategic management style and decision making as well as streamlined business processes.

The second objective was to ascertain the influence of innovation on the performance of women entrepreneurs. Based on the research findings majority of women entrepreneurs suggested that they carried out a moderate level of innovation, which was consistent with most literature findings. It was interesting to note that, further to

this finding, was the results indicating that a negative correlation existed between innovation and performance. This is in line with prior literature suggesting that innovation has a negative or almost no significant influence on performance. It is reasonable to suggest that women entrepreneurs carrying out innovation may incur greater risks and implications on their performance as compared to those who are not.

The third objective was to ascertain the influence of funding on innovation of women entrepreneurs. The findings showed a positive correlation between the two constructs which is consistent with studies by Cecere, Corrocher and Mancusi (2018), who showed that access to funding encourages innovation in business.

The above mentioned findings obtained from this research has provide insight into two factors that play a crucial role in understanding the business dynamics of women entrepreneurs. It is clear that funding remains a challenge and barrier to women entrepreneurs, despite the progress made in recent years. Women however are further encouraged to take on more risks and increase the demand for financial support, which inherently could force policy makers to re-assess their policies and become more inclusive of women entrepreneurs. The findings have also revealed that the innovative behaviour of women entrepreneurs could be unique in that the findings contradicted most literature studies that suggested innovation positively influences business performance.

7.3 Study implications for Business and Theory

The results from the hypotheses testing have provided insight into access to funding and the level of innovation of women entrepreneurs. These two constructs were analysed in relation to the business performance of women entrepreneurs. A more comprehensive exploration of the nuances detected herein concerning the relationship between innovation, funding and performance is encouraged. This is especially so considering that women play a vital role in the sustainable economic development of the country. Women owned businesses in South Africa face many challenges and run the risk of poor performance and eventual liquidity.

Women entrepreneurs have made substantial growth in their entrepreneurial footprint globally. Despite this progress made, women-owned businesses lag male-owned businesses, by facing stiff competition for markets, resources and skills. This study revealed that funding remain a challenge to women entrepreneurs, it is therefore recommended that government and credit institutions focus their efforts in

uplifting and re-aligning their policies to better support women venturing into business or those whom are looking at funds to grow their business.
Efforts when designing policies should be directed to tackle gender-based financial exclusion, foster women's entrepreneurship and aid in narrowing the gender gaps in the entrepreneurial ecosystems (Leitch et al., 2018). This further encourages institutions to expedite the supply of funding and become more financially inclusive of women entrepreneurs (Patrick et al., 2016).

Furthermore, female entrepreneurs should focus on unique and competitive enterprises to showcase their businesses as attractive to investors and venture capitalist to gain more access to external funding and increase market opportunities. Women are encouraged to enter more lucrative male dominated sectors such as manufacturing and technology driven industries to gain experience which would further increase their human and social capital.

In addition to government and credit institutions are private investors, angel funding and crowdfunding sources of income that can be explored by women as alternate sources of funding. There is a suggestion for established women entrepreneurs to empower and mentor young aspiring female entrepreneurs, thus stimulating greater confidence levels to reach out to venture capitalist and foreign investors. Over and above the individual confidence gained would be the acquisition of strategic networks to build alliances and partnerships to foster the sharing of ideas and skills to improve the level of innovation conducted.

This research suggests implications for public institutions in South Africa to re-assess existing policies that aim to support women entrepreneurs. These policies should stimulate innovation in women-owned firms not only by providing resources, but also through practical tasks and projects. For example, the stimulation of collaborative business networks by public institutions acting as mediators and encourage joint ventures to share skills, ideas and resources, especially during the growth stages of the business. Further efforts should be channelled towards incubator projects to provide a platform for women to practice and acquire skills and training and expert knowledge.

In spite of the limitations, the study has important implications for theory. This study advances in the study of the relationship between innovation and funding, as well as the impact of innovation and funding on the performance of women entrepreneurs. Business performance of females have other factors that may have significant influence such as leadership style, management style influencing decision making, operational efficiencies and much more. A follow-up study would be recommended to explore these factors to add to the body of knowledge with the attempt to foster growth and success of women entrepreneurs.

From the practical point of view, women entrepreneurs should demand more funding, through increased self-confidence and more risk taking to stimulate the acquisition of funding from both government and private institutions as a way of reducing limitations in gaining access to funding. Women should act to establish strategic networks to help them to exploit financial ties and increase their social capital necessary for gaining further accessibility to external funds.
Women entrepreneurs should also be mindful and proactively seek new entrepreneurial opportunities, by overcoming the risks associated with proactive and innovative initiatives.

7.4 Limitations of the research

This research study identified the following limitations:

- The study targeted women entrepreneurs, who make up a small percentage of the population. Hence, the number of respondents to the online survey were low. The survey was distributed to various women in business support groups with the hope of reaching a wider sample. However, this may have omitted a number of women entrepreneurs not included and registered in those groups, which could have potentially increased the sample response and enriched the data obtained.

- The study focussed on women owned businesses that were solely owned by a female and had not included those businesses that may have had women partnerships such as co-owned with male partners or businesses that were led by a female CEO or director but not 100% owned by that individual.

- During the course of the study, a number of elements were highlighted as significant insights to the study; however, the questionnaire designed was unable to capture these insights. A qualitative analysis would have afforded the researcher greater discernments when analysing and comprehending the data. A qualitative study may have eliminated various biases and misunderstandings to the questions asked, by providing more in depth analysis of the findings.

- The questionnaire was made up of definitive type questions whereby all questions were compulsory, which may have forced the participant to answer the question irrespective of whether it was applicable to them or not. This may have led to distortions in the data received.

7.5 Suggestions for future research

This research study has delivered an empirically tested underpinning into the study of the impact of funding and innovation on the performance of women entrepreneurs for further research development. The following suggestions for future research should be considered that will aid in intensifying the literature on the aspects of innovation, business performance, and access to funding among women entrepreneurs:

- Sixty nine percent of the respondents of this study had made use of their own funds to finance their business. Various sources of funding entrepreneurial ventures exists however greater insight is required to fully comprehend the barriers in retrieving these sources of finance. Future research could consider separating each source of funding to understand the individual limitations observed or experienced in accessing a particular source of funding. Furthermore, each financial stream could be dissected into internal and external, public and private sources of funding. This in turn may assist institutions supplying funding to re-assess their processes in making it more conducive for women to acquire these alternate streams of funding.

- This study focussed on women entrepreneurs only, however the questions adapted for this study were sourced from prior studies that were conducted on both men and women. Majority of the findings contradicted prior literature,

suggesting that the “one size fits all” approach to running a successful entrepreneurial venture may not be beneficial. Hence, the need to focus future research into the gender influences on business performance, would afford women entrepreneurs with a direct approach to achieving business success.

- Literature has suggested that the innovation process is resource intensive with added risks involved in terms of funds required to implement R&D and deployment of new technology. Innovation comprises a number of factors, and this study focussed on the innovation depth aspects such as products and services. If one were to comprehend the level of innovation carried out by the entrepreneur, further insight into the innovation breadth would be required. Innovation breadth comprises of the marketing methods for improving relations with customers, the methods for production of services, and methods of organizing the workplace, business practices, and external relationships. Further research on the combination of innovation breadth and depth would enable women entrepreneurs with sufficient evidence to either explore innovative opportunities or invest their capital into alternate business needs.

- Based on this study, the sample data received could not be split between sectors or industry. Sector and industry demographics of the participants were not requested. However, further analysis and rich data could be obtained for future studies to include this demographic data. The reason being is that innovation carried out by entrepreneurs may vary from industry to industry. Some industries may be more technology driven with a high level of innovation, whereas other industries may not require it or view it as beneficial. Researchers should consider expanding the scope to cater for the different sectors and industry, by analysing the level of innovation for each industry and thereafter understanding its influence on the business performance for women entrepreneurs in particular.

- Finally, majority of the findings obtained from this study was not consistent with literature and was found to be contrary to the views of most authors. It is

important to note that most of the prior studies were conducted on Organisation for Economic Co-operation and Development (OECD) countries. Hence, the suggestion for future research is to conduct a similar study on a group of developing countries similar to South Africa, to determine whether or not the economical state of the country influences the entrepreneurial orientation of businesses in respect to funding and innovation.

7.6 Conclusion

Extant literature of examining the performance of entrepreneurial ventures has focussed on either male dominated businesses or a combination of both male and female owned businesses. This descriptive quantitative study directed its efforts towards women entrepreneurs to determine the influence of innovation and funding on their business performance. The findings have shown that there was no significant relationship between funding and the performance of women entrepreneurs, however it was interesting to note that despite the progress made by women entrepreneurs, access to funding remains a limitation and challenge. Majority of the women entrepreneurs studied had utilised their own funds to finance their businesses. In past studies, the relationship between innovation and performance was found to be ambiguous whereby two thirds of researchers suggested that a positive correlation existed between these two constructs, and the remainder contradicted these studies showing a negative correlation. However, this study revealed that a positive significant relationship was found between innovation and performance of women. Furthermore, the findings found a positive significant relationship between innovation and funding. The true degree of performance of women owned businesses may be difficult to measure due to its many dynamic facets. These findings has extended the literature on women entrepreneurs' performance and has added greater insight into some of the misconceptions and beliefs about the two constructs innovation and funding.

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Appendix A: Questionnaire and Consent

Consent Statement

You are invited to participate in this Integrated Research project.

The purpose of this research project is to understand how funding and innovation impact women entrepreneurs and the performance of the business. This is a research project being conducted by Krystle Annamalai, an MBA student at The Gordon Institute of Business Science (GIBS).

Your participation in this research study is voluntary. You may choose not to participate. If you decide to participate in this research survey, you may withdraw at any time. If you decide not to participate in this study or if you withdraw from participating at any time, you will not be penalized.

The survey involves answering questions on Innovation, Funding and Performance of the business and will take approximately 10 minutes. Your responses will be confidential and we do not collect identifying information such as your name, email address or IP address.

The results of this study will be used for scholarly purposes only and may be shared with The Gordon Institute of Business Science representatives.

If you have any questions about the research study, please contact Krystle Annamalai (krystle.annamalai@gmail.com).

Section A: General Characteristics of the Entrepreneur

Demographics	**Please select the category that describes you best.**	
Age	18-30	

	31- 40	
	41- 50	
	Above 50	
Education	Primary	
	Secondary	
	Bachelors	
	Masters	
	Doctorate	
	Other	
Business Size	1-9	
	10-20	
	21-30	
	31-50	
	51-99	
	Above 100	
Source of Initial Capital	Own Funds	
	Family Finance	
	Personal Loan	
	Business Loan	
	Loan from NGO	
	Loan from another institution	
	Both Self funds and Bank Loan	

Section B: The level of Innovation of the business

Please answer the following in terms of the level of innovation carried out by your business

Innovation	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
	1	2	3	4	5
There is a large group of customers that already uses a very similar product/service.					
The product/service offered represents an entirely new type of product/service					
The product/service offered may be described as a new technology/invention					
The product/service offered has developed/progressed since the last generation/model/version					
The product/service offered could be described as a product line extension.					
The product/service offered meets a want or a need that has not been addressed by other products/services					
The product/service offered is a new twist on an old theme					

Section C: Overall Performance of the business

Please answer the following in terms of the performance of your business

Business Performance	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
	1	2	3	4	5
The business acquires growth in sales					
The business acquires growth in profitability					
The business acquires a return on equity					
The business acquires a return on assets					
The business acquires a profit margin on sales					
The business has the ability to fund growth from its profit					

Section D: Financing of the business

In your opinion, please answer the following in terms of financial support to your business

Financial Support	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
	1	2	3	4	5
The finance applied for was granted					
Government Subsidies/Grants are accessible					
Credit from institutions other than Commercial Banks are accessible					
Access to foreign investments is accessible					
Finance from venture capital is accessible					
Finance from Commercial Banks are accessible					
The repayment terms of credit is affordable					
Interest rates are affordable					
The collateral/security required was not onerous					
Finance from family and friends are accessible					

Appendix B: Descriptive Statistics

Descriptive Statistics									
	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Innovation1rc	112	1,00	5,00	2,1161	1,36722	0,907	0,228	-0,658	0,453
Innovation2	112	1,00	5,00	2,1429	1,21446	0,981	0,228	-0,143	0,453
Innovation3	112	1,00	5,00	2,2589	1,22838	0,975	0,228	-0,079	0,453
Innovation4	112	1,00	5,00	3,5446	1,13811	-1,083	0,228	0,263	0,453
Innovation5	112	1,00	5,00	3,0446	1,13414	-0,428	0,228	-1,028	0,453
Innovation6	112	1,00	5,00	3,0268	1,27668	-0,342	0,228	-1,334	0,453
Innovation7	112	1,00	5,00	3,6250	1,28136	-0,781	0,228	-0,580	0,453
Performance 1	112	1,00	5,00	1,90	0,95	1,166	0,228	1,211	0,453
Performance 2	112	1,00	4,00	2,01	1,01	0,839	0,228	-0,315	0,453
Performance 3	112	1,00	4,00	2,42	0,95	0,496	0,228	-0,731	0,453
Performance 4	112	1,00	5,00	2,39	0,99	0,559	0,228	-0,329	0,453
Performance 5	112	1,00	4,00	2,13	1,00	0,772	0,228	-0,382	0,453
Performance 6	112	1,00	4,00	2,05	0,86	1,030	0,228	0,806	0,453
Funding1	112	1,00	5,00	2,4375	1,46294	0,363	0,228	-1,427	0,453
Funding2	112	1,00	5,00	2,0446	1,31785	0,878	0,228	-0,562	0,453
Funding3	112	1,00	5,00	2,4643	1,27292	0,295	0,228	-1,217	0,453
Funding4	112	1,00	5,00	2,4196	1,15967	0,216	0,228	-0,780	0,453
Funding5	112	1,00	5,00	2,4464	1,22907	0,155	0,228	-1,079	0,453
Funding6	112	1,00	5,00	2,7589	1,39009	-0,172	0,228	-1,613	0,453
Funding7	112	1,00	5,00	2,4018	1,29071	0,388	0,228	-1,044	0,453
Funding8	112	1,00	5,00	2,2321	1,21538	0,738	0,228	-0,387	0,453
Funding9	112	1,00	5,00	2,5179	1,23742	0,176	0,228	-0,945	0,453
Funding10	112	1,00	5,00	3,0804	1,30928	-0,274	0,228	-1,060	0,453
Valid N (listwise)	112								

Appendix C: Exploratory Factor Analysis Results

Appendix C1: EFA Results for Funding

Correlation Matrix

		Funding2	Funding3	Funding4	Funding5	Funding6	Funding7	Funding8	Funding9
Correlation	Funding2	1,000	0,562	0,648	0,661	0,493	0,577	0,590	0,516
	Funding3	0,562	1,000	0,721	0,793	0,761	0,702	0,739	0,561
	Funding4	0,648	0,721	1,000	0,872	0,678	0,585	0,665	0,500
	Funding5	0,661	0,793	0,872	1,000	0,744	0,687	0,726	0,469
	Funding6	0,493	0,761	0,678	0,744	1,000	0,607	0,561	0,356
	Funding7	0,577	0,702	0,585	0,687	0,607	1,000	0,905	0,602
	Funding8	0,590	0,739	0,665	0,726	0,561	0,905	1,000	0,632
	Funding9	0,516	0,561	0,500	0,469	0,356	0,602	0,632	1,000

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of		0,857
Bartlett's Test of Sphericity	Approx. Chi-Square	814,873
	df	28
	Sig.	0,000

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5,516	68,951	68,951	5,516	68,951	68,951
2	0,806	10,069	79,021			
3	0,563	7,040	86,061			
4	0,418	5,225	91,286			
5	0,320	3,994	95,280			
6	0,199	2,482	97,762			
7	0,108	1,344	99,106			
8	0,072	0,894	100,000			

Extraction Method: Principal Component Analysis.

Appendix C2: EFA Results for Innovation

Correlation Matrix

		Innovation1rc	Innovation2	Innovation3	Innovation 4	Innovation 5	Innovation 6	Innovation 7
Correlation	Innovation1rc	1,000	0,560	0,508	0,243	0,037	0,313	0,123
	Innovation2	0,560	1,000	0,500	0,282	0,270	0,433	0,353
	Innovation3	0,508	0,500	1,000	0,485	0,095	0,231	0,400
	Innovation4	0,243	0,282	0,485	1,000	0,421	0,411	0,419
	Innovation5	0,037	0,270	0,095	0,421	1,000	0,441	0,328
	Innovation6	0,313	0,433	0,231	0,411	0,441	1,000	0,640
	Innovation7	0,123	0,353	0,400	0,419	0,328	0,640	1,000

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of		0,669
Bartlett's Test of Sphericity	Approx. Chi-Square	274,738
	df	21
	Sig.	0,000

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3,175	45,362	45,362	3,175	45,362	45,362	2,334	33,341	33,341
2	1,311	18,723	64,085	1,311	18,723	64,085	2,152	30,743	64,085
3	0,778	11,118	75,203						
4	0,717	10,237	85,440						
5	0,477	6,809	92,249						
6	0,325	4,639	96,888						
7	0,218	3,112	100,000						

Extraction Method: Principal Component Analysis.

Rotated Component Matrix[a]

	Component	
	1	2
Innovation1rc		0,867
Innovation2		0,740
Innovation3		0,789
Innovation4	0,641	
Innovation5	0,776	
Innovation6	0,776	
Innovation7	0,756	

Extraction Method: Principal Component Analysis.

Appendix C3: EFA Results for Performance

Correlation Matrix

		Performance1	Performance2	Performance3	Performance4	Performance5	Performance6
Correlation	Performance1	1,000	0,556	0,207	0,339	0,394	0,516
	Performance2	0,556	1,000	0,289	0,529	0,418	0,478
	Performance3	0,207	0,289	1,000	0,467	0,597	0,394
	Performance4	0,339	0,529	0,467	1,000	0,320	0,230
	Performance5	0,394	0,418	0,597	0,320	1,000	0,464
	Performance6	0,516	0,478	0,394	0,230	0,464	1,000

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of		0,717
Bartlett's Test of Sphericity	Approx. Chi-Square	227,299
	df	15
	Sig.	0,000

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3,073	51,217	51,217	3,073	51,217	51,217
2	0,966	16,108	67,325			
3	0,829	13,817	81,142			
4	0,461	7,686	88,828			
5	0,403	6,721	95,549			
6	0,267	4,451	100,000			

Extraction Method: Principal Component Analysis.

Appendix D: Hypotheses Test Results

Appendix D1: Spearman's Rank Order between Funding and Performance (Hypothesis 1)

Correlations				
			Performance	Funding
Spearman's rho	Performance	Correlation Coefficient	1,000	-0,113
		Sig. (2-tailed)		0,236
		N	112	112
	Funding	Correlation Coefficient	-0,113	1,000
		Sig. (2-tailed)	0,236	
		N	112	112

Appendix D2: Spearman's Rank Order between Innovation and Performance (Hypothesis 2)

Correlations

			Performance	Innovation	Inn1	Inn2
Spearman's rho	Performance	Correlation Coefficient	1,000	-.259**	-.295**	-0,167
		Sig. (2-tailed)		0,006	0,002	0,078
		N	112	112	112	112
	Innovation	Correlation Coefficient	-.259**	1,000	.800**	.836**
		Sig. (2-tailed)	0,006		0,000	0,000
		N	112	112	112	112
	Inn1	Correlation Coefficient	-.295**	.800**	1,000	.433**
		Sig. (2-tailed)	0,002	0,000		0,000
		N	112	112	112	112
	Inn2	Correlation Coefficient	-0,167	.836**	.433**	1,000
		Sig. (2-tailed)	0,078	0,000	0,000	
		N	112	112	112	112

Appendix D3: Spearman's Rank Order between Funding and Innovation (Hypothesis 3)

Correlations

			Funding	Innovation	Inn1	Inn2
Spearman's rho	Funding	Correlation Coefficient	1,000	.200*	.268**	0,164
		Sig. (2-tailed)		0,034	0,004	0,084
		N	112	112	112	112
	Innovation	Correlation Coefficient	.200*	1,000	.800**	.836**
		Sig. (2-tailed)	0,034		0,000	0,000
		N	112	112	112	112
	Inn1	Correlation Coefficient	.268**	.800**	1,000	.433**
		Sig. (2-tailed)	0,004	0,000		0,000
		N	112	112	112	112
	Inn2	Correlation Coefficient	0,164	.836**	.433**	1,000
		Sig. (2-tailed)	0,084	0,000	0,000	
		N	112	112	112	112

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Appendix E: Ethical Clearance Approval Letter

Gordon Institute of Business Science
University of Pretoria

14 August 2019

Annamalai Krystle

Dear Krystle

Please be advised that your application for Ethical Clearance has been approved.

You are therefore allowed to continue collecting your data.

Please note that approval is granted based on the methodology and research instruments provided in the application. If there is any deviation change or addition to the research method or tools, a supplementary application for approval must be obtained

We wish you everything of the best for the rest of the project.

Kind Regards

GIBS MBA Research Ethical Clearance Committee

Appendix F: Pearson Correlation Test Results for Validity

		Innovation 1rc	Innovation 2	Innovation 3	Innovation 4	Innovation 5	Innovation 6	Innovation 7	Performan ce1rc	Performan ce2rc	Performan ce3rc	Performan ce4rc	Performan ce5rc	Performan ce6rc	Funding1	Funding2	Funding3	Funding4	Funding5	Funding6	Funding7	Funding8	Funding9	Funding10
Innovation 1rc	Pearson Correlation	1	0,560	0,508	0,243	0,037	0,313	0,123	0,266	0,221	0,324	0,306	0,278	0,087	-0,084	0,452	0,290	0,230	0,312	0,295	0,101	0,054	0,033	-0,342
Innovation 2	Pearson Correlation	0,560	1	0,500	0,282	0,270	0,433	0,353	0,114	0,146	0,308	0,313	-0,031	-0,085	0,010	0,362	0,184	0,104	0,132	0,170	0,193	0,112	0,106	-0,211
Innovation 3	Pearson Correlation	0,508	0,500	1	0,485	0,095	0,231	0,400	0,130	0,093	0,224	0,071	-0,072	-0,047	-0,013	0,355	-0,031	-0,007	0,078	0,047	-0,089	-0,101	-0,196	-0,108
Innovation 4	Pearson Correlation	0,243	0,282	0,485	1	0,421	0,411	0,419	0,192	0,255	0,221	0,112	0,157	-0,049	0,067	0,254	0,203	0,016	0,211	0,209	0,230	0,162	-0,151	0,248
Innovation 5	Pearson Correlation	0,037	0,270	0,095	0,421	1	0,441	0,328	0,029	0,000	0,176	-0,104	0,098	0,072	-0,316	-0,152	-0,264	-0,323	-0,351	-0,130	-0,105	-0,256	-0,273	-0,045
Innovation 6	Pearson Correlation	0,313	0,433	0,231	0,411	0,441	1	0,640	0,270	0,189	0,125	0,241	-0,052	0,097	0,056	0,315	0,231	0,303	0,222	0,308	0,245	0,170	0,088	0,004
Innovation 7	Pearson Correlation	0,123	0,353	0,400	0,419	0,328	0,640	1	0,229	0,233	0,198	0,174	0,025	-0,039	0,011	0,351	0,146	0,289	0,147	0,131	0,125	0,178	0,004	0,211
Performance1rc	Pearson Correlation	0,266	0,114	0,130	0,192	0,029	0,270	0,229	1	0,556	0,207	0,339	0,394	0,516	0,044	0,357	0,128	0,202	0,293	0,159	0,128	0,114	-0,041	0,282
Performance2rc	Pearson Correlation	0,221	0,146	0,093	0,255	0,000	0,189	0,233	0,556	1	0,289	0,529	0,418	0,478	-0,106	0,210	-0,066	0,074	0,157	-0,063	0,073	0,086	-0,069	0,252
Performance3rc	Pearson Correlation	0,324	0,308	0,224	0,221	0,176	0,125	0,198	0,207	0,289	1	0,467	0,597	0,394	0,140	0,129	-0,006	0,035	0,016	0,071	-0,125	-0,062	-0,257	-0,166
Performance4rc	Pearson Correlation	0,306	0,313	0,071	0,112	-0,104	0,241	0,174	0,339	0,529	0,467	1	0,320	0,230	0,166	0,187	0,126	0,279	0,306	0,168	0,157	0,186	-0,020	0,108
Performance5rc	Pearson Correlation	0,278	-0,031	-0,072	0,157	0,098	-0,052	0,025	0,394	0,418	0,597	0,320	1	0,464	-0,059	0,166	-0,021	0,068	0,098	0,010	0,007	0,078	-0,115	0,012
Performance6rc	Pearson Correlation	0,087	-0,085	-0,047	-0,049	0,072	0,097	-0,039	0,516	0,478	0,394	0,230	0,464	1	-0,012	0,086	-0,237	-0,068	-0,125	-0,155	-0,150	-0,176	-0,086	-0,004
Funding1	Pearson Correlation	-0,084	0,010	-0,013	0,067	-0,316	0,056	0,011	0,044	-0,106	0,140	0,166	-0,059	-0,012	1	0,326	0,408	0,332	0,311	0,460	0,235	0,338	0,346	0,334
Funding2	Pearson Correlation	0,452	0,362	0,355	0,254	-0,152	0,315	0,351	0,357	0,210	0,129	0,187	0,166	0,086	0,326	1	0,562	0,648	0,661	0,493	0,577	0,590	0,516	0,212
Funding3	Pearson Correlation	0,290	0,184	-0,031	0,203	-0,264	0,231	0,146	0,128	-0,066	-0,006	0,126	-0,021	-0,237	0,408	0,562	1	0,721	0,793	0,761	0,702	0,739	0,561	0,231
Funding4	Pearson Correlation	0,230	0,104	-0,007	0,016	-0,323	0,303	0,289	0,202	0,074	0,035	0,279	0,068	-0,068	0,332	0,648	0,721	1	0,872	0,678	0,585	0,665	0,500	0,150
Funding5	Pearson Correlation	0,312	0,132	0,078	0,211	-0,351	0,222	0,147	0,293	0,157	0,016	0,306	0,098	-0,125	0,311	0,661	0,793	0,872	1	0,744	0,687	0,726	0,469	0,224
Funding6	Pearson Correlation	0,295	0,170	0,047	0,209	-0,130	0,308	0,131	0,159	-0,063	0,071	0,168	0,010	-0,155	0,460	0,493	0,761	0,678	0,744	1	0,607	0,561	0,356	0,169
Funding7	Pearson Correlation	0,101	0,193	-0,089	0,230	-0,105	0,245	0,125	0,128	0,073	-0,125	0,157	0,007	-0,150	0,235	0,577	0,702	0,585	0,687	0,607	1	0,905	0,602	0,311
Funding8	Pearson Correlation	0,054	0,112	-0,101	0,162	-0,256	0,170	0,178	0,114	0,086	-0,062	0,186	0,078	-0,176	0,338	0,590	0,739	0,665	0,726	0,561	0,905	1	0,632	0,384
Funding9	Pearson Correlation	0,033	0,106	-0,196	-0,151	-0,273	0,088	0,004	-0,041	-0,069	-0,257	-0,020	-0,115	-0,086	0,346	0,516	0,561	0,500	0,469	0,356	0,602	0,632	1	0,158
Funding10	Pearson Correlation	-0,342	-0,211	-0,108	0,248	-0,045	0,004	0,211	0,282	0,252	-0,166	0,108	0,012	-0,004	0,334	0,212	0,231	0,150	0,224	0,169	0,311	0,384	0,158	1