Enhancing the performance of women-owned small and medium-sized enterprises in developing countries – A study of Zambia

A thesis submitted to the University of Manchester for the degree of Doctor of Philosophy in the Faculty of Humanities

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Abstract

The University of Manchester
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Doctor of Philosophy
Enhancing the performance of women-owned small and medium sized enterprises in developing countries – A study of Zambia.

Female entrepreneurs contribute significantly to the global economy especially through employment creation, contributing to diversity in entrepreneurship and economic growth. Notwithstanding this contribution, their potential remains considerably unexploited in many countries, evidenced by businesses that underperform those owned by men. Significant research gaps on the subject of female entrepreneurship exist in the literature. To illustrate, the number of studies focusing on women-owned businesses remains significantly fewer than that of studies focusing on businesses owned by men, resulting in little being known about the subject. Another important research gap is the absence of a conceptual model of factors affecting performance of women-owned SMEs in the context of Sub-Saharan African countries. Furthermore, the majority of studies on female entrepreneurship have been done in developed countries, giving rise to theories originating from those contexts and relative lack of knowledge and empirical results in the context of developing countries. Zambia represents a specific case of a developing context where little is known about female entrepreneurs.

This research develops and tests a conceptual model of individual level and firm level factors affecting performance in women-owned SMEs in Zambia, drawing on the Competency Approach, Entrepreneurial Orientation (EO), and Resource Based View of the firm as the main theoretical foundations. It adopts a mixed method approach implemented in two stages: an exploratory qualitative study (carried out as the initial stage of this research) and a main quantitative study. The study uses the findings of the exploratory qualitative study to refine the conceptual model developed and to provide insights into the quantitative findings. The conceptual model is tested empirically using structural equation modelling with SPSS Amos software.

The research makes a new contribution by identifying a new set of entrepreneurial competencies relevant to the Zambian context. It also attempts to integrate two literature streams (i.e. competency approach and entrepreneurial orientation) by providing empirical evidence that the relationship between entrepreneurial competencies and firm performance is partially mediated by entrepreneurial orientation.

The study also extends the boundaries of knowledge by challenging the applicability of established measures and research approaches originating from developed contexts to non-industrially developed contexts. For example, it provides empirical evidence that the relevance of entrepreneurial competencies in a particular context is contingent on the unique aspects of its business environment. The study also challenges widely accepted knowledge that EO enhances firm performance, and provides empirical evidence for the argument that this relationship is context-specific. It further demonstrates that the individual dimensions of EO may have varying effects on firm performance, suggesting that it is better to view the EO construct as a multidimensional rather than unidimensional construct.

This research also extends literature on entrepreneurial competencies by showing that they are strong predictors of firm performance in the current research context, and that formal education and previous entrepreneurship experience contribute to their development.
Declaration

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Dedication

This thesis is dedicated to the memory of my loving mother, **Millika Lwenje Mandawa** for her endless support and encouragement, and for always believing in me. I will forever cherish everything you taught me.
Acknowledgement

I wish to express my profound gratitude to my supervisors Professor Nitin Sanghavi and Dr. Claudio De Mattos for their guidance and support.

I would also like to sincerely thank my wonderful family (my dad Benedict Mandawa; my husband Richard Bray; my daughter Mapalo Chikumbi; my siblings Scholastica Mandawa, Jane Mandawa, Antonio Mandawa, Ludiya Mandawa and Rhoda Mandawa; my nephews Sean Mwale and Aiden Mwiko) and friends (Stella Zulu-Chisanga and David Chisanga; Suzy James; Mercy Matewa; Linda Moonga; Edith Wigohora, Ingrid Maus and Mena Ujiri) for their love, support and encouragement throughout this process. I could never have done this without you all.

Special thanks to my lovely daughter Mapalo Chikumbi for being such a brave, understanding, caring and helpful child during this PhD journey. You’re my little hero and I am very proud to be your mother.
CHAPTER 1: INTRODUCTION AND OVERVIEW OF STUDY

Chapter overview

Chapter 1 presents the overview of this research project. The aim of this study is to develop and test a conceptual model for understanding individual level and firm level factors which influence performance in women-owned SMEs in Zambia, using the competency approach, entrepreneurial orientation and resource-based view of the firm as theoretical perspectives. This chapter outlines the research questions to be addressed, and the objectives of the study. It also provides a general overview of the research context. In conclusion, chapter 1 provides a summary of how each chapter in the thesis is organized.

1.1 BACKGROUND TO THE STUDY

The 21st century has seen a significant upsurge in the level of interest in the subject of entrepreneurship in general and small business research in particular. Consequently, there has been a considerable rise in the amount of research being undertaken on the subject. With many countries adopting a market approach to running their economy, it follows that entrepreneurship has become a fundamental tool of economic growth and development, generating a significant amount of employment growth in many countries (Fernández-Serrano and Romero, 2013; Singh and Belwal, 2008). Entrepreneurship is crucial to national and regional economic development (Liñán and Fernández-Serrano, 2014; Anokhin et al., 2008). It follows that governments the world over are increasingly seen to look to entrepreneurship for wealth creation and the well-being of their countries (Langowitz and Minniti, 2007). Naudé (2010) in Frontiers of Entrepreneurship contends that “agencies, donors, and international development institutions are advocating the promotion of entrepreneurship as a tool for economic development” (p. 86). The subject of entrepreneurship is therefore an important one.

1.1.1 Why focus on female entrepreneurship

Female entrepreneurship represents an important share of the global SME activity, contributing significantly to the global economy especially through employment creation (Allen et al., 2007; Marcovic, 2007; De Bruin et al., 2006; Brush, 1992). Female entrepreneurs accounted for nearly 42% of all entrepreneurs in the world in 2010 (Kelley et al., 2010). The most highly developed countries have particularly benefited from the contribution of female entrepreneurship. For example, in 2007, women-owned SMEs accounted for 38% of small businesses and employed approximately 23.8 million people in the USA, and accounted for around 26% of SMEs in the UK (Marcovic, 2007, p.18). The employment creation attributed to women entrepreneurship in turn increases social inclusion because women entrepreneurs tend to employ not only themselves but also other women
(Allen et al., 2007). It follows that female entrepreneurship contributes to the diversity of entrepreneurship in the economic process (Verheul and Thurik, 2001) as well as social equity (Langowitz and Minniti, 2007). Similarly, in low and middle income nations, women entrepreneurship represents a key contributor to economic growth (Allen et al., 2007, p. 10). In some transition countries (e.g. Ukraine and Moldova), it has been found that women entrepreneurs have not only contributed to economic development but also economic transition by engaging in entrepreneurial activities that were new to their economies (De Bruin et al., 2006). Developing countries such as Taiwan (Sanyang and Huang, 2008) and Bangladesh (Chowdhury, 2011) have also benefited from the contribution of women entrepreneurs. On the African continent, Nigeria represents a specific case in that women entrepreneurs played an important role in the industrialization process of that country and continue to play a significant role in the social and economic development of their communities (Dionco-Adetayo et al., 2005).

Furthermore, previous research (e.g. Bardasi et al., 2007; Allen et al., 2007) suggests that women contribute more to the economic well-being of society or communities than do their male counterparts because women tend to share their gains with many other people. GEM data reinforces this point by suggesting that “investment in women’s entrepreneurship is an important way for countries to exponentially increase the impact of new venture creation as women are simply more likely to work for, buy for, and share their economic and non-economic rewards with other people,” (Allen et al., 2007, p.6). Similarly, Kuada (2011) argues that women tend to invest most of the earnings (about 90%) from their entrepreneurial activities in the crucial sectors of the economy such as health and education and in the welfare of the family.

Correspondingly, research by global organisations such as the World Bank and ILO point to the fact that empowering women economically does not only contribute to poverty reduction but is also likely to result in higher standards of living (ILO, 2003). Therefore, the participation and success of women in entrepreneurship is cardinal for a more sustainable and successful economic development of any country (Allen et al., 2007). This is particularly true for the African continent, where women account for approximately 50 per cent of the population (Dionco-Adetayo et al., 2005) and more than 33 per cent of all business (Bardasi et al., 2007). Therefore, there is empirical evidence that the participation and success of women in entrepreneurship is fundamental to achieving sustainable and successful economic progress in all nations (Allen et al., 2007). Consequently, having more successful women-owned businesses in developing countries would significantly contribute to economic
development, rendering this study an important one. Given the significance of the women-owned small businesses to any economy, it is vital to investigate and understand the factors which would affect the success of such businesses. This would in turn inform measures that could potentially increase the chances of success of the said businesses, thereby contributing to economic progress.

1.2 Problem statement
Unfortunately, despite the contribution mentioned above, the potential of women entrepreneurs remains significantly untapped in many countries (McGowan et al., 2015; Tambunan, 2009; OECD, 2004; Arenius, 2003). For example, it has been found that more men than women start their own business (Koellinger et al., 2013). In addition, previous studies have found that women-owned businesses are generally smaller in size and tend to underperform similar male-owned businesses (Marcovic, 2007; Minniti et al. 2005; Watson, 2003). The measurement of under-performance has generally been based on quantitative financial measures such as sales turnover, jobs created and profitability (Fairlie and Robb, 2009; Marcovic, 2007, Carter and Jones-Evans, 2006).

Moreover, the number of studies on women-owned businesses remains significantly fewer than that of studies investigating their male counterparts (Rodríguez-Gutiérrez et al., 2014; Lee et al., 2009) resulting in little being known about the subject. Brush and Cooper (2012) argue that studies on women in entrepreneurship account for less than 10% of all entrepreneurship research. Likewise, De Bruin et al. (2006) note that research on women entrepreneurship represents an average of 6-7% of all publications across the top eight refereed entrepreneurship journals since 1994. Lee et al. (2009) observe that “work in this area is a much-needed complement to studies of men who own small businesses,” (p. 260). Furthermore, it has been argued that the study of women in entrepreneurship is characterized by various limitations including the neglect of structural, historical and cultural factors; a lack of theoretical grounding; the absence of a power perspective; the lack of explicit feminist analysis and a one-sided empirical focus (Ahl, 2006)

While there are comparatively few studies on female entrepreneurship in developing countries, there is evidence that most of the studies on the subject have been done in the developed contexts especially the United States and Europe (Lee et al., 2009; Lerner and Almor, 2002; Lerner et al., 1997; Allen and Truman, 1993). This has resulted in theories that originate from those contexts, rendering it important to investigate to what extent these theories apply to developing contexts. Investigating and understanding women-owned businesses in developing contexts is important for several reasons. For example, social
structures (e.g. work, family and organized social life) differ between developed and developing countries, resulting in potential differences in individual factors affecting performance of women-owned businesses (Lerner et al., 1997). Other structural barriers identified include those associated with the institutional environment surrounding women entrepreneurs in developing countries, such as unavailability of basic training and business skills, low education levels and technical skills, under-development and lack of access to social networks and support systems, and a general lack of business information and advice (Lerner et al., 1997). Similarly, Honig (1998) found that obtaining credible data is a challenge in developing countries due to limited institutional frameworks and weak infrastructure. These context-specific challenges tend to limit the success of women entrepreneurs in varying contexts.

Regrettably, the absence of a conceptual model for understanding factors influencing performance in women-owned businesses in developing countries, particularly sub-Saharan Africa remains an important knowledge gap in the literature. Such a conceptual model would provide a better understanding of factors affecting performance in women-owned businesses, thereby enabling policy makers and other relevant stakeholders to design more effective programmes and interventions aimed at improving the performance of those businesses and ultimately increasing their contribution to the economy.

In the Zambian context, the unfavourable economic situation and high unemployment rate makes it necessary for women to engage in entrepreneurial activity as a way to support themselves as well as their families. However, very little literature exists on women entrepreneurs in that context (Konyayuma, 2007). It follows that little is known about the performance of their businesses in general. Ultimately, little is known about their contribution to the country’s economy. This is in line with the argument advanced by Dzisi (2008) that even though there is evidence that indigenous women entrepreneurs dominate SME activity in African countries such as Zambia, Gambia, South Africa, Kenya, Nigeria, Tanzania and Ghana, little is known about them in the literature in terms of their contribution to venture start-up, employment creation and ultimately poverty reduction. Moreover, Zambia’s SME sector represents about 95% of all businesses yet accounts for a meager 5% of the country’s GDP (MCTI, 2007). This is considerably below the contribution SMEs make to other economies in the Sub-Saharan African region. For instance, while accounting for an estimated 92% of all businesses in Ghana, SMEs are also believed to contribute around 70% of that country’s GDP (Abor and Quartey, 2010, p. 218). The Republic of South Africa (RSA) represents another example even though one might argue that this country boasts of
characteristics rather peculiar when compared with most African countries. Nevertheless, SMEs in RSA account for approximately 91% of formal businesses (Berry et al., 2002), with a contribution in the range of 52% to 57% to GDP, and around 61% of employment (Gumede, 2000; Berry et al., 2002). Similar figures have been reported in the context of developed countries. For example, SMEs account for 99.9% of all businesses and contribute 65.7% to GDP in Spain (Rodríguez-Gutiérrez et al., 2015). The above information implies that the majority of SMEs in Zambia are not productive enough to thrive and make meaningful contribution to the country’s economic well-being (Chisala, 2008), rendering the investigation of factors influencing their performance crucial.

To help investigate the subject and contribute to narrowing this knowledge gap, the current research will focus on two categories of factors that influence performance i.e. the behavioral aspects of the individual entrepreneur (individual level factors) and firm characteristics (firm level factors). Specifically, this study will develop a conceptual model of individual and firm level factors affecting the performance of women-owned SMEs in Zambia using the competency approach, entrepreneurial orientation and the resource-based view of the firm as theoretical perspectives. Thus, this research represents a response to calls for more behavioral approaches to understanding small firm performance, and for contextualizing entrepreneurship research (Welter, 2011; Bruton et al., 2008).

1.3 Research questions
The following general research question and sub research questions will be addressed:

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1.4 Research objectives
This research will aim at achieving the following objectives;

1. To determine what entrepreneurial competencies affect performance in women-owned SMEs in Zambia.
2. To evaluate the effects of the entrepreneur’s competencies on firm performance in women-owned SMEs in Zambia.
3. To determine if human capital variables (i.e. education level, previous work experience, previous entrepreneurship experience, previous entrepreneurship training) serve as antecedents of entrepreneurial competencies.
4. To determine the effect of entrepreneurial orientation on firm performance in women-owned SMEs in Zambia.
5. To determine how entrepreneurial orientation affects the relationship between entrepreneurial competencies and firm performance.

1.5 The Zambian Context
Zambia is a landlocked Sub-Saharan African country located in Central Southern Africa. It covers an area of approximately 753,000 square kilometers with a population of approximately 14.08 million people (Zambia Central Statistical Office, 2014). In 2012, Zambia had a GDP of approximately USD 20.68 billion. Its annual GDP growth has been averaging between 5% and 6% (World Bank, 2012), leading to the World Bank classifying Zambia as a lower middle-income nation in 2011.

Despite this achievement, Zambia’s poverty levels remain high as evidenced from the fact that approximately 60% of its population still lives below the national poverty line (World Bank, 2012). As of 2009, sixteen per cent (16%) out of a total labour force of approximately 9 million people were unemployed, and of the 4.1 million Zambians in employment, approximately 88 percent worked for informal enterprises employing below five employees (Conway and Shah, 2010, p. 14). Despite driving the economy, the small number of large companies in Zambia’s private sector only accounts for around 7% of employment (Conway and Shah, 2010) signifying the importance of the small business sector as far as employment creation is concerned in Zambia.
The country’s major economic activity is copper mining, followed by agriculture which mostly produces for domestic consumption. Since the liberalization of Zambia’s economy in 1991, its Government has implemented various macro-economic strategies and other efforts aimed at promoting private sector development. The country has also been striving to reduce its over-dependency on copper exports through diversification of the economy. One of the strategies implemented to achieve this was the creation of Micro, Small and Medium Enterprises (MSMEs). This led to the development of the MSME policy 2009 to provide support to the development of this sector.

Clarke et al. (2010) informs that the MSME sector in Zambia has the potential to redistribute the wealth of the nation more broadly and equitably throughout the population. This is reaffirmed in MCTI (2007, p. 24), where it is argued that “the development of SMEs is viewed as one of the sustainable ways of reducing the levels of poverty and improving the quality of life of households in wealth and job creation in Zambia.” However, this sector remains largely underdeveloped resulting in a negligible contribution to the economy. To illustrate, SMEs represent 95% of all firms in Zambia yet account for a meagre 5% of the country’s GDP (Chisala, 2008). Part of the reason for this is that little information exists about the MSME sector in Zambia, making it problematic for policy makers and other stakeholders to develop policies and interventions that can assist these MSMEs to become more productive and to grow (Conway and Shah, 2010).

The agricultural sector accounts for around 70% of Zambia’s MSME, the retail sector 21% and the remainder is split between services and manufacturing (Conway and Shah, 2010). The majority of these MSMEs are informal owner-operated micro businesses (Clarke et al., 2010).
1.6 Dissertation organisation
This dissertation will comprise eight (8) chapters.

Chapter 2
This chapter reviews literature relevant to the subject at hand. It covers literature on factors affecting small business performance in general and factors influencing performance in women-owned businesses in particular. The theoretical perspectives informing the current research are also highlighted.

Chapter 3
Drawing on the competency approach, entrepreneurial orientation and the resource-based view of the firm, a conceptual model of individual level and firm level factors influencing performance in women-owned SMEs is developed in this chapter. The hypotheses to be tested are also proposed.

Chapter 4
Chapter 4 discusses the methodology used to conduct this research. The chapter consists of two main parts. The first part focuses on the methodology used for the initial stage of this research project, which comprised an exploratory qualitative study. The second part of the chapter discusses the method employed to conduct the main quantitative study.

Chapter 5
This chapter discusses the findings of the exploratory study conducted as the initial phase of this research project. Consequently, the conceptual model developed in chapter 3 is revised to accommodate the findings of the qualitative study and presented.

Chapter 6
In this chapter, the empirical work conducted to analyse quantitative data and test the main hypotheses is presented. The relationships proposed in the conceptual model are tested using structural equation modelling, and the results presented.

Chapter 7
Chapter 7 presents a discussion of the findings of this research project in light of the hypotheses being tested.

Chapter 8
This final chapter of the thesis discusses the theoretical and empirical contribution of the current research to knowledge, as well as the managerial and policy implications of the findings. The limitations of the study are also highlighted. The chapter concludes by suggesting directions for future research.
CHAPTER 2: LITERATURE REVIEW

2.1 The Concept of Entrepreneurship

There is no universally agreed upon definition of entrepreneurship. Low and Macmillan (1988) attribute the existence of many and varied definitions of entrepreneurship to the diversity of entrepreneurship studies in terms of purpose, objectives, questions addressed, units of analysis, theoretical perspectives and methodologies. They argue that “entrepreneurship is a multifaceted phenomenon that cuts across many disciplinary boundaries,” (Low and Macmillan, 1988, p. 140). Gedeon (2010) shares this view and argues that the concept of entrepreneurship has its roots in multiple fields of research including Economics, Sociology, Psychology and Organisational Behaviour. His view is that entrepreneurship is a multi-dimensional concept, which can be defined from various perspectives including “owning a small business (risk theory), being innovative (dynamic theory), acting as a leader (traits school), or starting up a new company (behavioural school)” (p. 30). Cunningham and Lischeron (1991) argue that entrepreneurship literature appears to fall into six schools of thought namely the "Great Person" School of Entrepreneurship, the Psychological Characteristics School of Entrepreneurship, the Classical School of Entrepreneurship, The Management School of Entrepreneurship, the Leadership School of Entrepreneurship and the Intrapreneurship School of Entrepreneurship. They further argue that each of the above mentioned schools of thought has its own fundamental beliefs, yet they all provide insights into different aspects of the multifaceted phenomenon of entrepreneurship. It follows that the subject of entrepreneurship is not only wide but also complex.

2.1.1 Definitions of entrepreneurship

One of the earliest definitions of entrepreneurship was by Schumpeter (1934), who proposed that “entrepreneurship is the creation of new combinations.” Cole (1968) viewed entrepreneurship as “purposeful activity to initiate, maintain and develop a profit-oriented business.” Gartner (1988, p. 11) posits that “entrepreneurship is the creation of organisations.” In his conceptual model for describing new venture creation, Gartner (1985) views the concept of entrepreneurship as one that encompasses four major perspectives namely the person (s) who start the business, the business they start, the surrounding environment and the process they undertake to establish the business. In the view of Kao (1993, p. 69), “entrepreneurship is the process of doing something new and something different for the purpose of creating wealth for the individual and adding value to society.” Low and MacMillan (1988) suggest that entrepreneurship be defined as the “creation of
enterprise,” (p. 141). Furthermore, entrepreneurship is defined by Cole (1959, p.7) as the “purposeful activity of an individual or group of individuals, undertaken to initiate, maintain, or aggrandize a profit-oriented business unit for the production or distribution of economic goods and services.” The challenge with all the numerous definitions of entrepreneurship is that whereas they all capture an aspect of the concept, none of them paints the complete picture of it. The fact that the concept can be identified with multiple disciplines (e.g. psychology, management, sociology etc...) each with its specific concepts and rules further adds to the complexity.

The definition by Cole (1959, p.7) will be adopted for this study for two reasons; first, it recognizes entrepreneurship as a multi-dimensional concept, in this case encompassing new venture creation, management and possible growth. Second, this definition is based on the premise that the primary aim of a business undertaking is to be profitable. These two characteristics are in line with the objective of this study. The investigation of firm performance itself is based on the assumption that when the SMEs come into being at venture start-up, there is at the onset an expectation that these would remain profitable or at least continue to be in operation by achieving a certain level of performance. Another reasonable assumption would be that every entrepreneur would establish a new venture with the hope of seeing it transform into a better venture at any point in time than when it was first established.

Linked to the problem of lack of a single definition of entrepreneurship is the challenge of developing a universal definition of the term “entrepreneur.” According to Bygrave and Hofer (1991, p. 14) “An Entrepreneur is someone who perceives an opportunity and creates an organization to pursue it.” Brockhaus (1980, p. 510) defines an entrepreneur as “a major owner and manager of a business venture who is not employed elsewhere.” According to Evans (1949, p. 337), very broadly defined, entrepreneurs are “those who organize, manage and actively control the affairs of the units that combine the factors of production for the supply of goods and services.” In Hull et al. (1980, p.11) an entrepreneur is “a person who organises and manages a business undertaking assuming the risk for the sake of profit”.

The current study adopts the definition by Brockhaus (1980) that an entrepreneur is a major owner and manager of a business venture who is not employed elsewhere but will adapt this definition by excluding the part “who is not employed elsewhere” in order to accomodate entrepreneurs who may either own more than one business or may be in formal employment at the time of the research. It is worth noting that the terms entrepreneur, business owner and owner-manager will be used interchangeably in the context of the current study.
There is extensive research on the subject of entrepreneurship, covering a wide range of topics across its various dimensions. One reason for this is the argument advanced by Thurik and Wennekers (1999) that there is strong evidence of a shift in economic activity from large to small firms in the 1970s and 1980s. Notably, this tendency is still very evident in the 21st century with some (e.g. Naudé, 2010 p. 88) arguing that “a substantial part of the entrepreneurship literature is concerned with the dynamics of small and medium enterprises (SMEs) and most new firms are small firms.” This renders such firms very significant to the development of entrepreneurship. Like the broad field of entrepreneurship, the study of small businesses is multi-disciplinary, drawing insights from several disciplines including psychology, sociology, economics, management, anthropology, and regional sciences (Rauch and Frese, 2000). The authors note that this presents a challenge in terms of achieving a complete overview of the field as the literature is distributed across various disciplines and therefore found in diverse journals. Given their characteristics of being more adaptable, capable to respond to market changes more flexibly and quickly, more innovative and closer in contact with customers when considered in relation to large businesses (Rauch and Frese, 2000), SMEs offer a unique contribution to every economy. Empirical evidence points to the fact that SMEs represent an important source of employment generation, innovation, and economic development (Javalgi and Todd, 2011; OECD, 2015). Furthermore, they act as agents of change and stimulate industrial revolution (Acs, 1992). SMEs play an important role in promoting sustainable, diversified, long-term economic growth (Ardic et al., 2011). Their contribution is indisputably significant to both the developed and developing worlds. To illustrate, SMEs contribute 50 per cent of GDP on average and account for two thirds of the formal workforce in high income countries (Dietrich, 2012; Beck et al., 2008; Ayyagari et al., 2007). Furthermore, SMEs represent over 90% of private businesses in number and contribute to more than 50% of employment and of GDP in most African countries (UNIDO, 1999). Essentially, they dominate the private sector on the African continent (Chisala, 2008). The Asian continent attests to the significance of the small business sector, with the success of two of its major economies, i.e. Hong Kong and Taiwan, being largely attributed to the dynamics of small businesses (Yu, 2001).

2.1.2 Definitions of small and medium enterprises (SMEs)

The definition of SME remains a dilemma for researchers in the field of entrepreneurship, as it continues to vary from country to country. This comes as no surprise considering that consensus regarding the definition of entrepreneurship itself is yet to be reached. Scholars (e.g. Rahman, 2001; Sevilla and Soonthornthada, 2000; Husband and Mandal, 1999) have observed that various factors and criteria including sales volume or worth of assets, industry,
number of employees, location, size, age and ownership through innovation and technology are used to define SMEs. Ayyagari et al. (2007) notes that different countries use different criteria to define SMEs such as employment, sales or investment. Nevertheless, the most commonly used basis for defining SMEs is employment (OECD, 2004) with many sources taking 250 employees as the cut-off number (Ayyagari et al., 2007). The OECD (2004, p.10) argues that “the European Union (EU) and a large number of OECD transition and developing countries set the upper limit of number of employees in the SMEs between 200-250, with a few exceptions such as Japan (300 employees) and the USA (500 employees).” Similarly, the IFC (2009) is of the view that an SME is commonly defined as a registered business with not more than 250 employees.

The definition that appears to set a standard in terms of the definition of an SME is that developed by the EU, which countries both within and outside the EU have adopted, usually with adaptations (Eikebrokk and Olsen, 2007). The official EU Journal (2003, L 124/39) defines SMEs in terms of number of employees and either turnover or balance sheet total as follows;

1. “The category of micro, small and medium-sized enterprises (SMEs) is made up of enterprises which employ fewer than 250 persons and which have an annual turnover not exceeding EUR 50 million, and/or an annual balance sheet total not exceeding EUR 43 million.” (2003, L 124/39)

2. “Within the SME category, a small enterprise is defined as an enterprise which employs fewer than 50 persons and whose annual turnover and/or annual balance sheet total does not exceed EUR 10 million.” (2003, L 124/39)

3. “Within the SME category, a microenterprise is defined as an enterprise which employs fewer than 10 persons and whose annual turnover and/or annual balance sheet total does not exceed EUR 2 million.” (2003, L 124/39)

In the Zambian context, the Micro, Small and Medium Enterprise Policy (MCTI, 2008, p. 16) defines SMEs as follows;

1. “A micro enterprise shall be any business enterprise registered with the Registrar of Companies: i) Whose total investment excluding land and buildings shall be up to eighty million Kwacha (K80,000,000); ii) Whose annual turnover shall be up to one hundred and fifty million Kwacha (K150, 000,000); and iii) Employing up to ten (10) persons.”

2. “A small enterprise shall be any business enterprise registered with the Registrar of Companies: i) Whose total investment, excluding land and buildings: - In the case of manufacturing and processing enterprises, shall be between eighty million and two hundred
million Kwacha (K80,000,000 – K200,000,000) in plant and machinery; and - in the case of trading and service providing enterprises shall be up to one hundred and fifty million Kwacha (K150,000,000); ii) Whose annual turnover shall be between one hundred and fifty million and two hundred and fifty million Kwacha (K150,000,000- K250,000,000); and iii) Employing between eleven and forty nine (11- 50) persons.”

3. “A medium enterprise shall be any business enterprise larger than a small enterprise registered with the Registrar of companies: i) Whose total investment, excluding land and buildings: - In the case of manufacturing and processing enterprises, shall be between two hundred million and five hundred million Kwacha (K200, 000,000 –K500,000,000) in plant and machinery; and - In the case of trading and service providing shall be between one hundred and fifty one million and three hundred million Kwacha (K151,000,000 – K300,000,000). (ii) Whose annual turnover shall be between three hundred million and eight hundred million Kwacha (K300,000,000 - K800,000,000); and (iii) Employing between Fifty-One and One Hundred (51 -100) persons.”

In order to allow for comparison with other countries, the definition adopted by the EU and OECD will apply to this research, however, only the number of employees (threshold of 250 employees) will be considered. It is worth noting that the threshold for number of employees is the same for micro (10 employees) and small businesses (50 employees) in both the EU and Zambian definitions.

2.2 Factors influencing performance in Small and Medium enterprises (SMEs)
Research on performance in entrepreneurial firms is informed by various theoretical perspectives. At small and medium-sized enterprise level, literature (e.g. Baum et al., 2001; Dollinger, 2003) suggests that firm performance is influenced by three broad categories of factors: firm characteristics and resources (organisation theory and resource-based theory), the individual entrepreneur (psychology, organisational behaviour, entrepreneurship theory) and the environment (strategic management theory). These factors are referred to as the generally agreed determinants of firm performance (Kiggundu, 2002; Man et al., 2002) and are discussed in the context of small businesses in following sections.

2.2.1 Firm characteristics and resources
The characteristics of the firm together with its various resources constitute a set of variables that influence firm performance. Firm age and firm size represent two of the most widely investigated firm characteristics in entrepreneurship literature, often included as control variables in research models. Storey (1994) argues that firm age and size are associated with firm growth.
Previous studies that have investigated the relationship between firm age and performance have generally reported a significant negative relationship between the two constructs (e.g. Hashi and Krasniqi, 2011; Park et al., 2010; Davidsson et al., 2002). The argument therefore is that as firms progress in age, their rate of growth declines. However, some studies have found inconclusive results (e.g. Alegre and Chiva, 2013).

Firm size influences the accumulation of the various resources required by a business including money, people and facilities, and empirical evidence suggests that it influences performance (Tippins and Sohi, 2003; Baum et al., 2001). While the general argument is that larger firms have certain advantages (e.g. resources, experience) over smaller firms (Penrose, 1968) and therefore should perform better, previous research has shown that this does not always hold especially when the growth dimension of performance is considered. For example, Alegre and Chiva (2013) and Hashi and Krisniqi (2011) found that firm size did not have a significant effect on firm performance and firm growth respectively, while Blackburn et al. (2013) and Hamilton (2012) found a significant negative relationship between firm size and growth. The negative relationship between firm size and growth has been attributed to the fact that smaller businesses are more flexible and quicker at responding to business opportunities given that the owner-manager is closer to the market compared to larger businesses (Steffens et al., 2009). Results pertaining to the above relationships have therefore been mixed.

Firm resources represent another critical determinant of performance in small firms. To illustrate this point, Galbreath and Galvin (2007, p. 109) argue that “firm resources are becoming the basis upon which firms compete.” That study found that firm resources were more significant determinants of firm performance in firms operating in the services industry than those in manufacturing. Firm resources are defined as “all assets, capabilities, organizational processes, firm attributes, information, knowledge, etc.…controlled by a firm that enable it to improve its efficiency and effectiveness” (Barney, 1991, p. 101). Following this definition, Barney (1991) further classified resources in three categories: 1) physical capital resources (physical technology, equipment and geographical location); 2) human capital resources (e.g. experience and training); 3) organisational capital resources (internal and external relationships, planning). Similarly, Javalgi and Todd (2011, p. 1005) define firm resources as consisting of “all assets tangible and intangible, human and nonhuman, that the firm possesses and that permit the firm to create and apply value-enhancing strategies.” Resources are fundamental to the success of every business, with some (e.g.
Brush et al., 2005; Brush and Changati, 1999) arguing that they are important for firm performance.

In the context of SMEs, financial resources have been identified as one of the most significant determinants of firm performance. The availability of financial resources is not only seen to act as a cushion against unfavourable environmental conditions such as market down-turns, slow start-ups or managerial mistakes, but also to provide for the development of more capital-intensive strategies, investment in products or services and marketing; which ultimately influence firm performance (Chandler and Hanks, 1998; Cooper et al., 1994). A study by Cooper et al. (1994) found that financial capital influences firm performance both directly (ability to buy time, pursue more ambitious strategies, meet financing demands generated by growth) and indirectly (better training, more wide-ranging planning). Lee et al. (2001) suggest that financial capital during the development years of a start-up is particularly vital as it offers various advantages to the firm such as the capacity to exploit resource-rich niches, develop products, advertise and recruit valuable human capital. It follows that inadequate financial resources have been cited as one of the major causes of business failure (Chandler and Hanks, 1998) and a considerable obstacle to business growth (Hughes and Storey, 1994). Financial capital therefore represents an important antecedent of firm performance.

2.2.2 The environment
Businesses do not exist in a vacuum. They operate within an external environment which they have to adapt and respond to. The business environment has considerable effect on the owner-manager of an SME, as well as the firm and its critical success factors (Simpson et al., 2012). Environmental factors that have been found to have a significant link to firm performance include resource availability (e.g. capital, loans), support services, favourable entrepreneurial sub-culture (Bruno and Tybgee, 1982), socio-political variables (e.g. availability of government assistance), location of business and differential structure of opportunity (Lerner et al., 1997), as well as economic variables such as market structure, availability of labour and investment climate (Gibb, 1988). Environmental factors affect businesses differentially depending on the industry in which they operate. The most commonly cited industry sector factors in small business research include availability of opportunities, market attractiveness in terms of level and intensity of competition, the strength of suppliers and customers, market demand and technological sophistication (Simpson et al., 2002).
2.2.3 The individual entrepreneur

Research investigating the role of the entrepreneur in the success of their firm has typically focused on psychological characteristics that explain entrepreneurial behaviour (Caputo and Dolinsky, 1998; Brush, 1992). Earlier studies mostly considered personality traits relevant to need for achievement, locus of control and risk-taking propensity to explain variances in entrepreneurial behaviour (Caputo and Dolinsky, 1998; Begley and Boyd, 1987). These traits are discussed below;

**Need for achievement**

Need for achievement reflects one’s need to strive hard to perform well and as a consequence achieve a sense of personal accomplishment (McClelland, 1961). Poon et al. (2006) identify five main attributes that characterise people with a strong need for achievement: a strong desire for success, a preference for personal responsibility for decisions and outcomes, desire for objective performance feedback, setting moderate achievement goals and taking calculated risks. The importance of the concept of need for achievement in entrepreneurship research lies in the argument that a strong desire to succeed is likely to drive individuals to exploiting entrepreneurial opportunities and consequently performing better than their counterparts with a weaker desire to succeed (Shane and Venkataraman, 2000). While positive associations between need for achievement and firm performance have been reported in the literature (e.g. Lee and Tsang, 2001), some studies (e.g. Poon et al., 2006) did not find a significant relationship between the two constructs. Mixed results have therefore been achieved.

**Locus of control**

Locus of control refers to an individual’s perception regarding their ability to exercise control over the events they encounter in their life (Lee and Tsang, 2001). Individuals with an internal locus of control believe that outcomes in life are a consequence of their own behaviour (e.g. effort), whereas those with an external locus of control attribute outcomes to external factors (e.g. fate) (Poon et al., 2006). It follows that relative to those low on internal locus of control, individuals high on the trait feel that they can control outcomes and therefore work harder and more persistently toward achieving the desired outcomes. Some studies (e.g. Poon et al., 2006; Lee and Tsang, 2001) have established a significant association between locus of control and performance-related outcomes. However, non-significant results have also been reported (Cooper and Gimeno-Gascon 1992; Duchesneau and Gartner 1990).
**Risk-taking propensity**

Risk-taking propensity refers to a personality trait concerned with one’s willingness to undertake decisions or courses of action associated with uncertain outcomes (Wiklund and Shepherd, 2005; Lumpkin and Dess, 2001). Risk-taking behaviour is considered to be an important characteristic of entrepreneurs, with some (e.g. Begley and Boyd, 1987) describing it as the “hallmark of the entrepreneurial personality”. Entrepreneurs with a risk-taking orientation tend to seize market opportunities with potentially high returns and make profitable deals (Li et al., 2009). Consequently, risk-taking behaviour has been associated with firm success (Lumpkin and Dess, 1996). However, empirical evidence of this relationship has been inconsistent (Rauch and Frese, 2000). For example, while Krauss et al. (2005) found a significant positive relationship between risk taking and firm growth, Zhao et al. (2010) found that risk-taking propensity was not related to entrepreneurial performance, and Lechner and Gudmundsson (2014) found that risk taking was negatively related to firm performance. Recent research (e.g. Lechner and Gudmundsson, 2014; Soininen et al., 2013; has mostly considered risk taking as a dimension of the entrepreneurial orientation construct, which will be discussed in more detail later in this chapter. Despite its notable contribution to entrepreneurship literature, the trait-based perspective has been widely criticised for achieving little success in linking personality traits to firm performance (Sadler-Smith et al., 2003; Herron and Robinson, 1993; Gartner, 1988, Begley and Boyd, 1987). For example, Begley and Boyd (1987) investigated the effect of a number of important psychological attributes on firm performance and came to the conclusion that “relationships between psychological attributes and financial performance are few, but suggestive” (p. 79). The weaknesses identified with the trait approach to investigating firm performance in entrepreneurial firms led to the recommendation that research interest should shift to behavioural approaches (Gartner, 1989). Aldrich (1999, p. 76) even argued that “research on personality traits seemed to have reached an empirical dead end.”

2.3 Women entrepreneurship

2.3.1 Theoretical origins of women’s entrepreneurship research

Women entrepreneurship has over the past 30 years seen a dramatic increase in scholarly interest, with research on the topic expanding to a myriad of disciplines, methods and countries (Minniti and Naudé, 2010). While business ownership by women spans decades, published academic work only dates back to the late 1970s and early 1980s (Jennings and Brush, 2013). Jennings and Brush (2013) highlight three of the major milestones achieved by women entrepreneurship as a field of research: first, the first special issue dedicated to women entrepreneurship was published in the *Entrepreneurship and Regional Development*. 
Journal in 1997. Second, the first policy and academic conferences dedicated to the subject were held in 1998 and 2003. Third, in 2009 the International Journal of Gender and Entrepreneurship was established as a specialty niche Journal. The historical inattention to the subject of women entrepreneurship demonstrated in the above milestones has in recent years been corrected by the field’s rapid expansion, leading some (e.g. Hughes et al., 2012) to describe it as a field of research that is “at the brink of adolescence”.

Women’s entrepreneurship research finds its roots in two research areas: (1) the gender and occupations literature and (2) feminist theory and research (Jennings and Brush, 2013). The gender and occupations literature “examines the evolving roles and experiences of men and women in the global workplace” (Powell, 2011, p. 2). These studies have generally revealed gender-segregated labour markets where men and women are clustered in different occupations, with women often found at lower level positions associated with lower levels of pay, skills and status compared to their male counterparts (Marlow, 2002). This gender-based segregation and stratification has provided important insights into how entrepreneurship is structured on the part of both men and women (Greer and Green, 2003). Furthermore, gender and occupations literature informs women’s entrepreneurship research by suggesting that restricted opportunities in the labour market may act as a push factor for people to venture into self-employment (McDonald, 1996). For example, labour market discrimination and “glass ceiling” career difficulties may give rise to more women opting to be self-employed (Carter and Marlow, 2003). Also, venturing into self-employment is seen to be easier than overcoming barriers to entering formal employment in some countries (Minniti and Arenius, 2003). Another insight is that women may opt to be self-employed because it offers them flexibility to reconcile work and family responsibilities, which may not be possible in formal employment (Greer and Greene, 2003; Minniti and Arenius, 2003).

Feminist theory is classified into two main groups: liberal feminist theory and social feminist theory (Fischer et al., 1993). Liberal feminist theory sees men and women as essentially equal beings and argues that any situation that results in women being subordinate is a consequence of discrimination or structural barriers such as unequal access to education (Ahl, 2006). Proponents of this theory therefore argue that while equal rights should not be denied on the basis of one’s biological sex, the gendered structuring of society disadvantages women (Jennings and Brush, 2013). Studies consistent with this line of thought include those that have examined the possibility that men have more relevant education and experience compared to women, and discrimination of women by lenders (Fischer et al., 1993). On the other hand, social feminist theory is premised on the assumption that while men and women
are essentially different because of differences emanating from early and ongoing socialisation, women are not inferior and may have different but equally effective traits as men (Fischer et al., 1993). The authors further note that examples of entrepreneurship studies that are consistent with this view include those that have used socialised traits and values as the basis for comparing men and women. The result of such studies has often been few reported gender differences, suggested to have little impact on firm performance (Fischer et al., 1993). The primary objective of feminist scholarship, therefore, has been to eliminate legal and institutional barriers which keep women from participating equally with men in society (Calás et al., 2009). Greer and Greene (2003) note that while significant progress has been made on the subject, historical laws that constrained women’s economic activity contributed to the introduction of institutional and social practices that continue to restrict their entrepreneurial behaviour. The authors further inform that gender differences relating to education, work experiences, networks and access to financial capital have frequently resulted in firms owned by women being less than those owned by men in terms of number, size, type as well as scope.

The perspectives discussed above provide insights into the distinctiveness of women entrepreneurship by bringing to light the “more silent feminine personal end of entrepreneurship” (Bird and Brush, 2002, p. 57). As De Bruin et al. (2007, p. 332) argue, “women’s entrepreneurship needs to be analysed and understood in its social context.”

2.3.2 Previous studies on factors influencing performance in women-owned businesses

Given the unique nature of women-owned businesses when considered in relation to those of their male counterparts, investigating factors specifically affecting their performance represents an important area of research. For example, Lim and Envick (2013) argue that differences exist between men- and women-owned businesses in terms of motivations for starting a business, types of opportunities sought and expectations about success and business growth. Similarly, DeTienne and Chandler (2007) note that as a result of different socialisation, women’s perceptions of opportunities differ from those of men, leading to different entrepreneurial behaviours. Moreover, a prominent argument in the literature is that when compared to businesses owned by men, women-owned businesses tend to be smaller in size (Fairlie and Robb, 2009; Rosa et al., 1996; Fischer et al., 1993), generate less revenues (Fairlie and Robb, 2009; Loscocco et al., 1991), make less profits (Fairlie and Robb, 2009; Watson and Robinson, 2003; Loscocco et al., 1991) and grow less quickly (Bosma et al., 2004; Cooper et al., 1994). This is commonly referred to as the “female under-performance hypothesis” (Du Rietz and Henrekson, 2000). A growing number of studies
have however challenged this hypothesis (e.g. Robb and Watson, 2012; Watson, 2002), arguing that the characteristics of men-owned and women-owned businesses differ, and therefore when the appropriate control variables and performance measures are included in performance investigations, the result is that women-owned businesses do not underperform those of their male counterparts.

Literature on the performance of women-owned small businesses has until the past decade been limited (Lee et al., 2009). It has been argued for instance that empirical studies that have investigated the relationships between capabilities and performance among entrepreneurs have considered the entrepreneur in a general sense rather than distinguished by gender (Rodríguez-Gutiérrez et al., 2014). Previous research has identified various categories of factors which impact the performance and subsequent success of businesses owned by women. These categories of factors include social structures, cultural factors, institutional factors, gender-related factors, personal factors, firm characteristics and business skills and competencies. Literature pertaining to these factors is discussed below;

Social structures represent one of the most significant factors affecting women-owned businesses. To illustrate, women are ascribed to traditional family roles and child care responsibilities in many societies, with some societies expecting women to first and foremost tend to those family duties and responsibilities (Jamali, 2009). This often results in women having less time available for their business (Lee et al., 2009). Occupational segregation and under-representation of women at senior levels of management in many countries may also potentially limit women to certain industry sectors and influence their motivations and goals for their business. Along these lines, some studies have attributed the lower performance of women-owned businesses to the tendency of female entrepreneurs to operate in sectors generally perceived as traditional (which require less investment in terms of initial capital) and characterized by high levels of competition and few opportunities and resources (Rodríguez-Gutiérrez et al., 2014). The favorability of the entrepreneurship sub-culture also influences the performance of women-owned firms. For example, societal role expectations, the level of credibility a particular society ascribes to women self-employment and availability of support (e.g. from family) play a significant role in the well-being of such businesses (Jamali, 2009). Relationships with family and friends are particularly considered an important source of information and advice for purposes of maintaining confidentiality and personal control in small firms (Bennett and Robson, 1999).

The institutional environment in which the business operates also influences firm performance. According to Baumol (1990), institutional arrangements impact the quantity and type of entrepreneurial efforts. Literature suggests that access to capital, which
constitutes one of the most important resources in SMEs, remains a challenge for women-owned businesses (Klapper and Parker, 2011; Lee et al., 2009). Some barriers to women entrepreneurs accessing formal credit highlighted in the literature include difficulties completing complicated loan application forms (Buvinic and Berger, 1990), lower financial literacy (Lusardi and Tufano, 2009), lack of relevant education and business experience (Carter et al., 2003), failure to provide collateral (Buvinic and Berger, 1990) or personal guarantees (Coleman, 2002) as well as laws which disproportionately restrict women by requiring married women to get approval from their husband for their banking transactions in some countries (Klapper and Parker, 2011). Unfortunately, insufficient financial resources can be a significant hindrance to firm success (Coleman, 2007). Lack of government support has been cited as another institutional constraint especially in women-owned businesses in developing countries (Jamali 2009). Government support can be in form of effective tax policies, licensing procedures, employment laws as well as funding programs related to important aspects of business such as training of entrepreneurs or access to capital (Benzing et al., 2009). Performance in women-owned firms is also influenced by gender-related factors. Risk taking propensity represents one of the factors shown to vary with gender. Literature suggests that compared to their male counterparts, women entrepreneurs are generally more risk-averse (Lakovleva et al., 2013; Lim and Envick, 2013; Carliendo et al., 2009; Watson and Robinson, 2003), and this is evidenced in their reluctance to undertake business debt and to embrace fast-pace business growth (Bird and Brush, 2002). Consequently, the low tolerance for risk by women entrepreneurs has been used to explain the supposed low growth rates of their businesses (Johnson and Powell, 1994). Another gender-related factor linked to performance in women-owned firms is network affiliation. Entrepreneurship is entrenched in multifaceted social relationships where the absence and presence of networks have influence of firm performance (Lerner et al., 1997). Literature indicates that personal networks are a source of resources (Adler and Kwon, 2002) which enable entrepreneurs to identify opportunities (Bhagavatula et al., 2010), organise resources (Batjargal, 2003) and build legitimacy for their business (Elfring and Hulsink, 2003). The general argument is that more resources accrue to entrepreneurs that are better connected (Hoang and Antoncic, 2003). However, previous research suggests that men and women entrepreneurs tend to operate in different social networks respectively. For example, women entrepreneurs are less likely than men to personally know someone who started their own business (Koellinger et al. 2013). Women entrepreneurs also tend to spend less time developing and maintaining contacts due to family responsibilities (Munch et al., 1997; Cromie and Birley, 1992.) and
often prioritise networks emanating from family and friends over professional networks (Orhan, 2001).

The entrepreneur’s personal factors represent another category of factors investigated in relation to performance in women-owned firms in the literature. For example, in an attempt to determine the impact of the antecedent influence of the woman entrepreneur on the survival or growth of her firm, Brush and Hisrich (1991) investigated the influence of four categories of variables namely education, work experience, business skills and personal factors e.g. the business founder’s age as well as motivations. This study found that previous work experience in the field of the venture, financial skills (e.g. financial controls and cash management), strength in dealing with people (i.e. negotiating, managing, personal selling), and idea generation combined with a market opportunity motivation were key contributors to firm survival. Similarly, in addition to previous work experience in the field of the business and dealing with people, the study found that strength in organising and planning, and the business founder’s field of education were highly significant to the growth of the businesses sampled. A study by Lerner and Almor (2002) also demonstrated that an entrepreneur’s financial, marketing and managerial skills were important determinants of firm performance in women-owned businesses.

The final category of factors relates to characteristics of women-owned businesses. Performance in this context has been linked to type of industry in which the business operates as well as age and size of the business. For example, Klapper and Parker (2011) and Lerner et al. (1997) found that women-owned businesses tend to be concentrated in industry sectors such as retail, sales and services given the small capital investment requirements. However, these sectors are often characterised by smaller scale, intense competition and lower returns on average compared to high-growth or high technology sectors (Klapper and Parker, 2011). Consequently, women-owned businesses tend to be smaller in size in relation to those of their male counterparts. Meanwhile, Watson (2003) found that the age of the business was one of the factors responsible for the underperformance of women-owned businesses compared to those owned by men, arguing that the former are generally younger.

2.4 Theoretical perspectives
As highlighted in Chapter 1, the current research answers the call to contextualise entrepreneurship research (Welter, 2011; Bruto et al., 2008) on one hand and the call for more behavioral approaches to understanding small firm performance on the other. The study focuses on the behavioural aspects of the individual entrepreneur (individual level factors) and aspects of the firm (firm level factors) that influence firm performance. According to Sarwoko et al. (2013), individual level factors focus on such factors as the
individual characteristics, competencies and demographic factors of the entrepreneur, while firm level factors emphasise factors relating to the organisation such as resources, the firm's competence, organizational culture, and structure. Ahmad et al. (2010a) argue that notwithstanding the significance of organisational variables to firm success, there is need to acknowledge the entrepreneur’s important role as custodian of the various internal firm resources particularly in SMEs, through investigating their knowledge, skills, attitudes and behaviours and how these relate with firm performance. Li (2009) summarised research on personal factors affecting firm performance in terms of four categories; 1) personal characteristics; 2) psychological characteristics including risk taking, creativity, and innovation; 3) human capital i.e. level of education, work experience, skills and technical knowledge; and 4) behavioural approaches that propose competence as a distinguishing factor of successful Managers.

It follows that recent entrepreneurship research is anchored in human capital theory, with studies consistently linking human capital variables to firm success (Marvel et al., 2014; Unger et al., 2011), and the competency approach, with a focus on investigating the business owner’s skills, knowledge and capabilities as individual level factors affecting firm performance. Taking into consideration this development and the above categorisations (i.e. Sarwoko et al., 2013; Ahmad et al., 2010a; Li, 2009), this research is grounded in three dominant theoretical perspectives in entrepreneurship literature: The Resource Based View (RBV) of the firm, the Competency Approach and Entrepreneurial Orientation (EO). It attempts to use the RBV to explain how entrepreneurial competencies, entrepreneurial orientation and human capital as well as their interaction influence firm performance in women-owned SMEs in Zambia.

2.4.1 The Resource Based View (RBV) of the firm
The Resource Based View (RBV) of the firm provides a theoretical foundation for the significance of different forms of resources to firm competitiveness and performance (Roxas and Chadee, 2011). The RBV is a principal view in Strategic Management (Newbert, 2007), which has also informed several fields within management research including organization theory, technology management, international management and HR management (Foss, 2011). This theory is premised on the strategic importance of a firm’s resources and capabilities (Brush and Chaganti, 1999). The RBV views a business as a collection of resources, whose features considerably affect its competitive advantage and consequently performance (Barney, 1991; Penrose, 1959; Wernerfelt, 1984). According to this theory, the performance of a firm is best explained in terms of the resources, skills and assets it possesses (Lerner and Almor, 2002). Furthermore, it suggests that firms have the potential to attain
and sustain their competitive advantage by possessing tangible and intangible resources with the characteristics of being valuable, rare, inimitable and non-substitutable (Lee et al., 2001; Wernerfelt, 1984). The most important assets in the context of a small business are the business owner’s skills (Lerner and Almor, 2002) because in such businesses, the business owner makes and implements all the important decisions. The general belief in entrepreneurship literature is that a small firm is an extension of its founder (Chandler and Jansen, 1992; Dyke et al., 1992) and because everything revolves around them, the founder’s human capital may prove critical to the success of the small firm (Segal et al., 2010). This research therefore focuses on this category of resources.

2.4.1.1 Human capital (Intangible firm resources)

Human capital refers to the skills and knowledge acquired through investment in education, on-the-job training and other types of experience (Becker, 1964; Davidsson and Honig, 2003). Literature suggests that human capital represents one of the most significant resources for the success of entrepreneurial businesses. Some have described it as an essential source of competitive advantage (Coleman, 1998) while others have considered it vital to economic growth and entrepreneurial opportunities (Javalgi and Todd, 2011). The human capital theory proposes that knowledge improves the cognitive abilities of individuals, resulting in their potential activity being more productive and effective (Schultz, 1959; Becker, 1964; Mincer, 1974). In the context of entrepreneurship, human capital improves the business owners’ ability to identify and exploit business opportunities, acquire resources such as financial capital as well as accumulate new knowledge and skills (Unger et al., 2011). Along these lines, Davidsson and Honig (2003) observe that individuals equipped with a higher quality human capital are better placed at perceiving and successfully exploiting profitable opportunities when they arise. It follows that human capital theory suggests that higher level of knowledge, skills and other competencies are associated with higher firm performance (Martin et al., 2013). According to Lerner et al. (1997), human capital elements such as field and level of education, previous entrepreneurship experience and business skills impact performance. In another study, Aldrich and Martinez (2001) found that a certain amount of prior knowledge is required for success, either through training, experience or formal education. Some (e.g. Watson, 2003) have even linked lower levels of education and experience to the underperformance of women entrepreneurs when considered in relation to their male counterparts. It follows that previous studies (e.g. Santarelli and Tran, 2013; Unger et al., 2011) generally support a positive relationship between human capital and firm performance. However, mixed results have been achieved, signifying the presence of other factors potentially confounding the relationship or suggesting that different stages of the
entrepreneurial process may require different types of human capital (Davidsson and Honig, 2003). For example, Lerner et al. (1997) found that the impact of human capital factors on the performance of Israeli women entrepreneurs had mixed results. In that study, previous entrepreneurship experience was not significant, whereas previous paid employment was highly correlated with profitability and previous experience in the industry with revenues. Reuber and Fischer (1994) considered eight studies investigating the relationship between human capital and entrepreneurial success and found eleven significant positive effects, eleven non-significant effects and two significant negative effects. Furthermore, a study by Newbert (2007) identified 33 tests of the relationship between human capital and firm performance in the literature, out of which only 11 (33%) supported the proposition that human capital has a positive and significant relationship with performance. Furthermore, a quantitative review by Rauch and Frese (2000) revealed that different studies showed different aspects of human capital to be important. The authors argued that human capital only works through goals and strategies and therefore include a proposition in their framework for small business owners’ success called “The Giessen-Amsterdam Model,” that human capital relates to firm success through goals and strategies. While the human capital-firm performance relationship has been extensively researched, mixed results have been achieved. This signifies the need for further research on the subject.

Following the Brush and Chaganti (1999) and Barney (1991) typology as well as considering the conceptualisations of human capital in the literature, this research focuses on human capital in form of level of education, entrepreneurship training, work experience in the industry and previous entrepreneurship experience as the intangible resources of the firms under investigation.

Level of education

There is a general consensus in the literature that education furnishes owner/managers with the knowledge and skills required to effectively and successfully manage their businesses (Tundui, 2012; Segal et al., 2010). Cooper et al. (1994) suggest that the entrepreneur’s education may enhance his or her problem-solving skills as well as allow access to valuable networks. Furthermore, it is argued that one’s level of education stimulates their intellectual capability and develops knowledge which might in turn influence their strategic choices leading to firm performance (Becker, 1993; Hitt et al., 2001). Supporting these arguments, Santarelli and Tran (2013) and Sapienza and Grimm (1997) found a positive relationship between the business owner’s level of education and firm performance. In spite of the evidence pointing to the influence of level of education on performance, previous studies
have reported mixed findings on the subject. To illustrate, whereas a literature review by Cooper and Gimeno-Gascon, 1992) reported that 10 of 17 previous studies had found a positive relationship between the founder’s level of education and firm performance, others such as Kanti Prasad et al., 2013; Haber and Reichel, 2007; Olomi, 2001 and Barkham et al., 1996 found no significant association between level of education and firm performance. Likewise, in a comprehensive meta-analysis of 94 studies investigating the relationship between schooling and entrepreneurial entry and performance, Van der Sluis et al. (2003) found that schooling has a significant and positive effect on entrepreneurial performance notwithstanding how it is measured.

Some findings relate to the relationship between level of education and specific performance dimensions. For instance, Jo and Lee (1996) found a significant relationship between education level and profitability whereas Mengistae (2006) reported a relationship between the number of years of schooling by the founder and small firm survival and growth. Similarly, Storey (1994) identified an entrepreneur’s education attainment as a significant positive determinant of business growth. On the other hand, Fischer et al. (1993) found no significant relationship between level of education and firm size. These results potentially indicate that the outcome of a study investigating the relationship between education level and firm performance is influenced by the performance measure used, pointing to the problem associated with the diversity of performance and success measures used in entrepreneurship studies.

**Previous work experience in the industry**

Experience in similar environments gives entrepreneurs a better understanding of the environment in which their business operates and reduces the degree of uncertainty associated with the process of evaluating prospects (Chandler, 1996). Industry experience is often a source of relevant and accurate information relating to business opportunities (Landier and Thesmar, 2009), thereby allowing entrepreneurs to better assess opportunities in the industry. Furthermore, industry experience makes it easier for entrepreneurs to cope with an uncertain and changing environment, and provides the necessary information required to plan and predict in a stable environment (Nielsen, 2015). Industry experience also equips entrepreneurs with knowledge about important aspects of business such as products, pricing, cost structure and profitability of different market segments (Dimov, 2010). Another benefit of paid employment is that it is the main source of social capital which sustains entrepreneurship (Brush and Diaz-Garcia, 2012). This is especially true because the networks of contacts acquired during previous employment are attracted as customers, suppliers or a channel for enhancing market credibility (Murphy et al., 2007).
**Previous entrepreneurship experience**

While education and industry experience are an important source of information and skills relating to exploiting business opportunities, most of such important information and knowledge is acquired through practise (Hebert and Link, 1988; Jovanovic, 1982). As argued by Colombo and Grilli (2005), learning by doing improves entrepreneurial judgment and evaluation. Much of an entrepreneur’s knowledge derives from experience (Kassean et al., 2015; Delmar and Shane, 2006; Rae and Carswell, 2000) with some (e.g. Steiner and Solem 1988; Rausch et al., 2001) contending that a business owner’s experience and managerial background, or lack thereof may cause or contribute to the failure or success of a small business. Prior knowledge gained through such experience enhances an entrepreneur’s alertness (Westhead et al., 2005), equipping them with skills to identify specific business opportunities that are not evident to others (Shane, 2000). It also helps in the acquisition of resources such as financial and physical capital (Brush et al., 2001), and can partly make up for lack of financial capital which represents a limitation for many entrepreneurial firms (Chandler and Hanks, 1998).

**Entrepreneurship training**

Training enhances individual knowledge and cognitive skills and is therefore essential to business (Boukamcha, 2015). According to the Theory of Planned Behaviour, training programmes contribute to the development of positive attitudes toward entrepreneurship (Ajzen, 1991). It follows that individuals who have undergone entrepreneurship training or education are likely to be more successful at identifying business opportunities than their counterparts who have not (DeTienne and Chandler, 2004). It is noteworthy that entrepreneurship training in the context of the current study refers to programmes such as business start-up schemes, where the objective is to teach practical skills required to start and manage a business (Henry et al., 2005; Jamieson, 1984). Entrepreneurship training not only brings about more awareness about business opportunities and threats, but also how to deal with them (Bae et al., 2014). Furthermore, entrepreneurship training has been linked to improvement in individual imagination, flexibility, creativity, willingness to think conceptually and to perceive change as an opportunity (Byabashaija and Katono, 2010). It follows that the general argument is that investment in training results in improved firm performance (Patton et al., 2000). For example, a study by Martin et al. (2013) found that entrepreneurship education and training had a significant positive association with entrepreneurship outcomes in general and entrepreneurial performance. Similarly, Brink and Madsen (2015) argue that training has a positive effect on innovation and growth.
Notwithstanding that, many studies have failed to establish a link between the two constructs (Patton et al., 2000).

To sum up, literature suggests that human capital represents an important subject in entrepreneurship research in general and small business performance in particular. While empirical evidence exists that human capital shares a positive relationship with firm performance, research on the subject has generally yielded mixed results, signifying the need for further research in this area.

2.4.1.2 Dynamic capabilities

While the RBV has been widely used to understand how firms achieve and sustain competitive advantage, it has been argued that this theoretical framework does not sufficiently explain why and how some businesses achieve a competitive advantage in markets characterised by rapid and unpredictable change (Eisenhardt and Martin, 2000). This has given rise to the concept of dynamic capabilities. Dynamic capabilities have been defined as “the firm’s ability to integrate, build and reconfigure internal and external competences to address rapidly changing environments” (Teece et al., 1997, p. 516). They comprise strategic and organisational processes such as product development, alliancing and strategic decision making, which managers use to achieve new resource configurations as a response to or to create market change (Eisenhardt and Martin, 2000). Ambrosini and Bowman (2009) describe dynamic capabilities as the outcome of experience and learning within the firm. Owing to their ability to manipulate resources into new value-creating strategies, dynamic capabilities have been identified as sources of value as well as sustained competitive advantage for firms operating in dynamic markets. Eisenhardt and Martin (2000) identify three types of dynamic capabilities according to the role they play in altering a firm’s resource base: 1) integration of resources 2) reconfiguration of resources and 3) gaining and releasing resources. The authors argue that dynamic capabilities concerned with integrating resources include activities such as product development routines and strategic management decision making, which involve combining varied skills and expertise across functional domains to achieve competitive advantage. Eisenhardt and Martin’s second category of dynamic capabilities concentrates on reconfiguration of resources, and involves processes used to copy, transfer and recombine resources within a firm. Examples of such processes include knowledge brokering routines and routines used to allocate scarce resources across the organisation. The third category of dynamic capabilities emphasises the gain and release of resources. These capabilities include knowledge-creation routines aimed at building new thinking within a firm (which is critical in industries driven by cutting-edge
knowledge), routines related to bringing resources into the firm from external sources (e.g. alliances and acquisitions) and routines by which managers discard resource combinations that are no longer profitable to the firm (Eisenhardt and Martin, 2000). Dynamic capabilities have an indirect impact on a firm’s economic performance through altering its resources, operational routines and competencies (Zott, 2003). They generally involve long-term resource commitments (e.g. specialised personnel with a full-time commitment to change roles) (Winter, 2003), which result in considerable managerial, operational and cognitive costs (Ambrosini and Bowman, 2009). Dynamic capabilities are also influenced by organisational processes, systems and structures (Ambrosini and Bowman, 2009). The characteristics mentioned above suggest that deploying dynamic capabilities in small businesses may be a considerable challenge due to inadequate resources and lack of established structures and systems. The current research targets small businesses, which usually use informal management practices and are generally necessity-driven. Mitchell (2004) observes that female entrepreneurs in Africa mostly manage their firms for survival. It follows that the major concern of the firms in question is short-term performance. This research therefore focuses on investigating entrepreneurial competencies, which represent operational capabilities. Operational capabilities (also called ordinary or zero-level capabilities) represent those capabilities that allow a firm to earn a living in the present (Winter, 2003). Dynamic capabilities on the other hand are future-oriented, and work on modifying and altering operational capabilities (Ambrosini and Bowman, 2009).

2.4.2 Entrepreneurial Competencies
In small businesses, the business owner-manager possesses resources in the form of a unique blend of personal characteristics which are essential to the wellbeing of the firm (Brush et al., 2005). The critical role played by the owner-manager entails that the success or failure of the venture is dependent on their competencies (Capaldo et al., 2004; Chandler and Jansen, 1992).

Entrepreneurship research has over the recent past seen a dramatic shift in research focus to competency theories in examining entrepreneurial success. Man and Lau (2005) inform that the study of entrepreneurial competencies represents the most recent approach to investigating the influence of the entrepreneur’s behaviour on firm success outcomes. This comes in response to the limitations associated with trait approaches and related theory, evidenced in the failure of entrepreneurial traits and motives e.g. internal locus of control and need for achievement, to produce strong support for their impact on entrepreneurial success (Tehseen and Ramayah, 2015; Baum et al., 2001). Fastre and Van Gils (2007) note
that since its introduction, many researchers have used the competence concept to investigate the impact of the entrepreneur on firm success criteria.

The competency concept and related theory emanate from management literature, where competencies are viewed as a collection of skills required by managers to perform specific tasks. Along these lines, Mitchelmore and Rowley (2010) observe that there is evidence of close relationships within the competency literature with other disciplines such as leadership and management competencies. The concept of entrepreneurial competencies finds its roots in the competence, competency and entrepreneurship groups of literature (Mitchelmore and Rowley, 2010). In a comprehensive literature review, Mitchelmore and Rowley (2010) found that the past two decades have seen several studies in different contexts, aimed at creating a list of entrepreneurial competencies. They argued that the result has been the development of numerous frameworks and lists of entrepreneurial competencies, with varying degrees of categorisation. To illustrate, some researchers have adopted alternative terms such as skills or expertise, yet all contribute to the overall field of entrepreneurial competencies. It follows that the concept of entrepreneurial competencies has been defined in different yet similar ways (Baum et al., 2001; Mitchelmore and Rowley, 2010; Man et al., 2002; Ahmad et al., 2010a). Most notably, Baum et al. (2001, p. 293) define this phenomenon as “individual characteristics such as knowledge, skills, and/or abilities required to perform a specific job”. Bird (1995, p.51) takes a broader perspective and views entrepreneurial competencies as “underlying characteristics such as generic specific knowledge, motives, traits, self-images, social roles, and skills which result in venture birth, survival, and/or growth”. In Kiggundu’s (2002, p. 244) conceptualisation, entrepreneurial competencies are the “the total sum of entrepreneurs’ attributes such as attitudes, beliefs, knowledge, skills, abilities, personality, expertise and behavioural tendencies needed for successful and sustaining entrepreneurship”. Similarly, Inyang (2009) has described entrepreneurial competencies in terms of individual characteristics comprising related phenomena such as knowledge, attitudes, skills, and/or abilities required to perform a particular job, which can be acquired through managerial training and development. Furthermore, according to Hunt (1998), competent behaviour is a function of several factors including a person’s motivation, personality traits, self-concept, knowledge or skills. Another interesting conceptualisation is provided by Mitchelmore and Rowley (2010, p.104), who argue that within the context of SMEs, “competencies mean the capability of the entrepreneur and his or her collaborators in acquiring, using and developing successfully resources for their business purpose, in the specific context in which the firm operates.”
point out two characteristics of entrepreneurial competencies that researchers ought to be aware of: first that they are learnable, signifying that entrepreneurs are not necessarily born with them and second, that they tend to vary with context and situation. The second characteristic is of particular interest in the current study as it points to the fact that differences may exist in the way entrepreneurial competencies relate with firm performance in the context of the developed world (where the bulk of studies have been conducted) and the developing context (the context of this study). Furthermore, the authors note that entrepreneurial competencies stem from factors in a person’s background including traits, personality, social role and self-image and that there may be overlapping relationships among entrepreneurial competencies (p.104).

It is noteworthy that the existence of many definitions of competency represents one of the major challenges in the competency literature. Having said that, various operationalisations of entrepreneurial competencies have also been identified in the literature. For example, Baum et al. (2001) categorised entrepreneurial competencies into general and specific competencies; where general competencies refer to general management skills (unrelated to the industry) such as decision-making, oral presentation and use of authority while specific competencies are those competencies and technological knowledge specifically required in the industry in which the firm is operating. Following a comprehensive literature review, Mitchelmore and Rowley (2010) generated the following list of competencies thought by various researchers to be important for entrepreneurs: management skills such as the ability to develop management systems and organisation and coordination skills; idea generation; conceptual and analytical competencies, such as the ability to co-ordinate activities; customer management skills; delegation and motivation skills; opportunity recognition and the ability to take advantage of opportunities, the capability to formulate strategies for exploiting opportunities; hiring skills; decision making skills; leadership skills; and commitment (p.102). Furthermore, in summarising the entrepreneurial role, Ahmad et al. (2010a) argue that an entrepreneur must demonstrate competency across a myriad of domains including learning, strategic, conceptual and opportunity. Along these lines, Man et al., (2002) propose a competency approach emphasising on the behavioural or process approach. They define entrepreneurial competencies as “higher-level characteristics encompassing personality traits, skills and knowledge, and therefore can be seen as the total ability of the entrepreneur to perform a job successfully,” (p.124). Six areas of entrepreneurial competencies were identified by Man et al. (2002) namely: opportunity, commitment, organising, relationship, conceptual and strategic. This competency approach
is adopted for the current research based on its comprehensiveness in that it includes most of the competencies suggested by other researchers. Furthermore, the competency dimensions proposed have been adopted on the basis that they were established as directly or indirectly impacting the performance of a firm (Mitchelmore and Rowley, 2010). Therefore, entrepreneurial competencies in the context of the current research will be defined as in Man et al. (2002) as shown in Table 2.01

Table 2.01: Definitions of entrepreneurial competencies according to Man et al. (2002)

<table>
<thead>
<tr>
<th>Entrepreneurial competence</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opportunity competencies</td>
<td>Competencies concerned with identifying and developing market opportunities through various means</td>
</tr>
<tr>
<td>Commitment competencies</td>
<td>Competencies that motivate the entrepreneur to advance the business by exercising initiative and willingly undertaking job roles.</td>
</tr>
<tr>
<td>Organizing competencies</td>
<td>Competencies relating to the organisation of different internal, external, human, physical, financial and technological resources</td>
</tr>
<tr>
<td>Relationship competencies</td>
<td>Competencies concerned with person-to-person or individual-to-group relations with both the internal and external stakeholders. e.g. customers, suppliers, employees. Include the ability to have communication, persuasive and relationship-building skills required to build beneficial relationships</td>
</tr>
<tr>
<td>Conceptual competencies</td>
<td>The ability to make decisions and to solve problems using cognitive and analytical thinking</td>
</tr>
<tr>
<td>Strategic competencies</td>
<td>Competencies related to setting, evaluating and implementing the strategies of the firm.</td>
</tr>
</tbody>
</table>

The major criticism surrounding the application of competency theory in entrepreneurship research is premised on the argument that managers and entrepreneurs may not necessarily require the same competencies to manage firms successfully, with entrepreneurs being perceived to potentially require more complex competencies (Busenitz and Barney, 1997). In line with this argument, Man et al. (2002) argue that entrepreneurs require both managerial and entrepreneurial competencies to manage businesses successfully as they assume both managerial and entrepreneurial roles in a venture.

Despite its evident importance, the discussion on entrepreneurial competencies is still in its infancy in entrepreneurship literature (Mitchelmore and Rowley, 2010; Brinckmann, 2008). Mitchelmore and Rowley (2010) inform that studies investigating skills and competences of entrepreneurs not only remain few in number but also to some extent dependent on context,
with only one or two focusing on women-owned businesses. This has resulted in calls for more research in this area in order to achieve further statistical validation.

2.4.3 Entrepreneurial Orientation

The significance of Entrepreneurial Orientation (EO) as an antecedent of firm performance has achieved broad scholarly acceptance in entrepreneurship literature, with growing recognition that EO is essential for the growth and survival of firms. Some (e.g. Lumpkin and Dess, 1996; Covin and Slevin, 1991) have argued that EO represents one of the most critical resources for venture performance. EO represents the strategic orientation or strategy-making process of a firm (Lechner and Gudmundsson, 2014; Rauch and Frese, 2000). It encompasses the organisational processes, methods, practices and decision-making styles used to implement a firm’s strategy (Lee and Peterson, 2000; Lumpkin and Dess, 1996; Miller, 1983). Rauch and Frese (2000) describe EO as one of the three dimensions of business strategies, the other two being strategic content and strategic process. Whereas strategic process focuses on the formulation and implementation of strategic decisions, strategic content focuses on the nature of business decisions (Olson and Bokor, 1995). Previous studies into EO generally conceptualise it as having three dimensions: risk taking, innovativeness and proactiveness. This follows the work of Miller (1983, p. 771) who defined an entrepreneurial firm as one that “engages in product market innovation, undertakes somewhat risky ventures, and is first to come up with ‘proactive’ innovations, beating competitors to the punch”. Some studies including Lumpkin and Dess (1996) and Covin and Slevin (1989) have extended the EO concept to include two additional dimensions i.e. autonomy and competitive aggressiveness. The five dimensions of EO proposed above are described in the following passages;

2.4.3.1 Innovativeness

Innovativeness as a concept became an important feature in characterising entrepreneurship after Schumpeter’s (1942) contribution of an economic process termed “creative destruction” (Lumpkin and Dess, 1996). Innovative behaviour is seen as a fundamental characteristic of entrepreneurs (Drucker, 1985). Lumpkin and Dess (1996, p. 142) propose that “Innovativeness reflects a firm's tendency to engage in and support new ideas, novelty, experimentation, and creative processes that may result in new products, services, or technological processes”. Innovativeness enables start-ups to differentiate themselves from other firms and to depart from traditional ways of doing business thereby preventing failures associated with resource shortcomings, scale diseconomies etc… (Lee et al., 2001). Firms have to be innovative in response to changes in their external environment (Zahra and Neubaum, 1998). Opportunities may arise from changes in a firm’s external environment,
requiring the adoption of new innovative strategies to take advantage of them (Javalgi and Todd, 2011).

The significance of the concept of innovativeness to the study of entrepreneurship in general and small businesses in particular is indeed apparent. However, evidence of its relationship to firm success has generally been mixed, prompting researchers to engage in the process of testing moderating variables (Rauch and Frese, 2000). This meta-analytical study identified the size of the firm (measured by number of employees), formal planning, environmental conditions and competitive position as some of the moderating variables that have been successfully tested in the literature.

2.4.3.2 Risk taking
Risk taking is an EO dimension which entails being willing to invest significant amounts of resources in the exploitation of business opportunities or undertaking business actions with potentially highly uncertain outcomes (Wiklund and Shepherd, 2003; Keh et al., 2002). It has been recognised as a characteristic of entrepreneurs and entrepreneurial firms (Ndubisi et al., 2005), with the general argument being that a risk taking orientation enables entrepreneurs to seize market opportunities which result in higher returns and lucrative business deals, thereby positively impacting firm success (Frese et al., 2002; Lumpkin and Dess, 1996). Some studies (e.g. Nasution et al., 2011; Ndubisi et al., 2005) have found that risk taking significantly impacts technology and innovation creation and diffusion. However, several studies have also reported a negative relationship between high risk taking and business success (Rauch and Frese, 2000).

2.4.3.3 Proactiveness
Proactiveness is generally viewed as the ability to anticipate and pursue opportunities by taking initiative and participating in emerging markets (Lumpkin and Dess, 1996). It involves the use of a combination of proactive and aggressive strategies such as introducing products or services ahead of competition and anticipating future demand to change and shape the environment in which the firm operates (Keh et al., 2007). The major advantage of proactiveness is that it enables entrepreneurs to anticipate the moves of competitors, thereby maintaining first-mover advantage (Lechner and Gudmundsson, 2014), as well as to anticipate changes in customer needs (Lumpkin and Dess, 2001). Previous research has reported a significant relationship between proactiveness and entrepreneurial activity (Kickul and Gundry, 2002) and a link between proactiveness and innovation (Nasution et al., 2011; Blumentritt and Danis, 2006).
2.4.3.4 Autonomy
Autonomy refers to “the independent action of an individual or a team in bringing forth an idea or a vision and carrying it through to completion,” (Lumpkin and Dess, 2001, p.431). Ndubisi and Argawal (2014, p.457) describe it as the “authority to follow through one’s conviction.” Autonomy generally means one’s ability and resolve to be self-driven toward the quest for opportunities. Individuals with a high need for autonomy generally have a preference for making their own decisions and care less about the views and rules of others (Lee, 1997). In studies involving small firms, behaviour relating to autonomy has generally been examined by considering how often managers delegate and how centralised the leadership is (Lumpkin and Dess, 1996). It follows then that the size, leadership style and ownership of the firm may influence the extent to which autonomous behaviour is evidenced. The most entrepreneurial firms have been found to be those whose leaders are the most autonomous (Miller, 1983).

2.4.3.5 Competitive aggressiveness
“Competitive aggressiveness refers to a firm's propensity to directly and intensely challenge its competitors to achieve entry or improve position, that is, to outperform industry rivals in the marketplace;” (Lumpkin and Dess, 1996, p.148). It is reflected by a combative posture and forceful response to competitors’ moves (Lumpkin and Dess, 2001) such as direct confrontation (e.g. by entering a market which has been identified by a competitor or being reactive (e.g. retaliating to competitive challenge by reducing own prices) (Lumpkin and Dess, 1996). Other strategies reflecting competitive aggressiveness include aggressive price competition, market entry with a new and superior product, fast-following a competitor into a market and using unconventional surprise tactics (Hughes and Morgan, 2007). Highly aggressive firms view competitors as foes that need to be conquered, and therefore constantly assess competitors to identify and take advantage of their weaknesses (Hughes and Morgan, 2007). According to Lumpkin and Dess (1996), competitive aggressiveness can enhance performance in that a firm’s competitive position is strengthened by its competitive moves aimed at out-doing or out-maneuvering competitors. Such moves tend to undermine a competitor’s ability to compete as well as their capacity to anticipate and respond to the aggressive firm’s next move (Hughes and Morgan, 2007).

2.4.4 Performance measurement in SMEs
Performance measurement is an important subject particularly in small business research. This is in part because it allows researchers and business practitioners to explore ways in which small businesses, which hold the majority of jobs in most economies, can further be developed and make meaningful contribution to the economy. The majority of performance measurement research emanates from organisation theory and strategic management. From
a strategic point of view, performance is often seen as success or failure of a business, and success is generally associated with goal and objective achievement from whatever viewpoint it is considered (Pasanen, 2003). Herron and Robinson (1993) define performance as “the evaluation of the results of a particular behaviour within a specific context” (p. 284). Performance is also viewed as “the outcome of any activity” (Simpson et al., 2012, P.6) or the “result of action” (Slack, 1997, p. 134). There is consensus therefore that performance is a multi-dimensional variable, whose measurement and analysis requires the inclusion of numerous factors (Simpson et al., 2012; Robb and Watson, 2012; Murphy et al., 1996; Lumpkin and Dess, 1996; Cooper et al., 1994; Herron and Robinson (1993). Furthermore, the use of both objective and subjective measures in performance is widely recommended in the literature, especially small business research (e.g. Haber and Reichel, 2007; Chandler and Hanks, 1993). Murphy et al. (1996) point out three important theoretical approaches to measuring organisational performance that stem from organisation theory; the goal-based approach, systems approach and the multiple constituency approach. In their argument, the multiple constituency approach compensates for the weaknesses of the other two approaches by incorporating the interests of the various stakeholders to firm performance. This approach however, may not be appropriate for small businesses, due to their usually closed operation nature.

Strategy research on the other hand incorporates the above theoretical perspectives and considers firm performance in terms of financial performance, operational performance (such as product quality and market share) and sees beyond performance measurement by incorporating multiple constituencies (Murphy et al., 1996). Lumpkin and Dess (1996) caution that “research that only considers a single dimension or a narrow range of the performance construct (e.g., multiple indicators of profitability) may result in misleading descriptive and normative theory building” (p.153).

Performance in entrepreneurship literature has generally been operationalized in terms of firm growth (measured by turnover, number of employees, market share), profitability (measured by profit, return on investment, etc.), and survival and business volume (Lerner et al., 1997; Pasanen, 2003; Simpson et al., 2012; Haber and Reichel, 2007). Brush and Vanderwerf (1992) argue that performance measures most frequently used by researchers include annual sales, number of employees, return on sales, growth in sales, and growth in employees (p.157). Of the three measures, growth has been identified as the most appropriate measure of SME performance. Additionally, the use of both financial and non-financial measures has been widely recommended in the literature (e.g. Simpson et al., 2012; Greenbank, 2001).
Chandler and Hanks (1993) suggest that the three most common approaches to measuring new venture performance when only self-report data are available are:

1. Measuring firm performance in broadly defined categories – They propose that this approach has the advantage that it may allow researchers to overcome the challenge of unwillingness to respond as the data are classified in a limited number of categories. This approach was used in Blackburn et al. (2013), where performance was defined in terms of changes in employment, financial turnover and profits.

Chandler and Hanks further contend that using broadly defined categories to measure performance is advantageous because the measures are also tied to objective performance criteria and seem to have content validity. They argue, however, that the downside to this approach is that “little research substantiates the accuracy of self-report performance data, and the multidimensional nature of performance measures remains problematic” (p. 395).

2. The use of subjective measures of the business owner’s satisfaction with performance - They argue that this approach allows researchers to escape the restrictions imposed by objective performance measures, however warn that “the research using these measures has consistently denigrated the use of objective measures of performance, but has not provided strong evidence for the validity and reliability of the subjective measures they propose as replacements” (p. 395). Another argument they raise about this approach is that satisfaction with performance measurement may not only be a function of objective performance but also of the business owner’s expectations, effectively meaning that individuals may not be satisfied with the same level of performance.

3. The use of subjective measures of performance in relation to competitors – the argument regarding this approach is that much as it has been substantiated by research (e.g. Brush and Vanderwerf (1992) and Porter (1980), business founders may not be in a position to provide accurate information on their competitors because performance information is usually strictly guarded.

They further recommend that data for performance in emerging businesses must satisfy the criteria of relevance, availability, reliability and validity in instances where self-administered evaluative questionnaires are used.

In a longitudinal study of 1053 firms representing diverse sectors and geographical locations, Cooper et al. (1994) defied common practice in the field by using different performance measures i.e. failure, marginal survival and growth in employment; and in examining whether there was a difference between factors contributing to marginal survival and high growth respectively. The demerit of using survival as a performance measure is of course that it can only be applied in longitudinal studies. Cooper et al. (1994, p. 382) site three
benefits of using growth in employment as a performance measure; 1) it measures economic contribution; 2) As opposed to profits, it is not sensitive to decisions pertaining to the business owner’s salary; 3) Unlike sales, it does not require an estimation of the full-year performance mid-way through the year.

Evidently, the lack of consensus as to what constitutes SME performance means that its measurement still remains a challenge. The level of diversity in performance measures used in SME research has led to the area being criticised and perhaps rightly so, for the difficulties it presents in making cross-study comparisons and ultimately theoretical advancement.

2.4.4.1 Challenges associated with performance measurement in small business research

Measuring performance in new ventures is significantly challenging for scholars. Researchers (e.g. Murphy et al., 1996; Brush and Vanderwerf, 1992) have acknowledged that there is great diversity in the performance measures used in entrepreneurship research, which adds to the complexity of cross-study comparison. Chandler and Hanks (1993) note some challenges associated with performance measurement in small business research; first, there have been limited studies focused specifically on the development of performance measures for small businesses. Also, there is evidence that traditional financial performance measures may not only be inappropriate for small businesses, but may also be unavailable given the lack of obligation on the part of small businesses to disclose performance information. In line with this argument, Venkatraman and Ramanujam (1986) assert that financial performance measures seem to explain different dimensions of performance. Another argument is that objective measures like survival are not practical because they require a longitudinal approach (Chandler and Hanks, 1993). The absence of historical data, inconsistent record-keeping, source bias, difficulties with accessibility and the lack of performance measurement information in the entrepreneurship field (Brush and Vanderwerf, 1992) add to the list of challenges associated with gathering performance information in small businesses.

With the arguments presented above, it is unquestionable that gathering performance information and consequently estimating performance in small businesses is a highly challenging task.
CHAPTER 3: CONCEPTUAL MODEL AND DEVELOPMENT OF HYPOTHESES

3.1 Direct effect of human capital variables on entrepreneurial competencies

Entrepreneurial competencies are understood to encompass various elements, all of which can potentially be linked to a common source. For example, a comprehensive analysis by Man and Lau (2005) identified two sources of entrepreneurial competencies; first, the entrepreneur’s background characteristics (i.e. traits, personality, attitudes, self-image, and social roles) and second, theoretical and practical learning as well as work experience (i.e. knowledge, skills and experience). Whereas the first category represents aspects related to the individual’s personality and character (internal attributes), the latter category, which is the focus of the current research, focuses on aspects which an entrepreneur can acquire by way of training and learning (external attributes) (Muzychenko and Saee, 2004). Bird (1995) submits that prior work experience, education and industry experience should be considered as factors which affect the development of entrepreneurial competencies. She further informs that because entrepreneurial competencies are behavioural, they are learnable and can change over time through the intervention of training and development. This view is supported in various other studies. For example, Chandler and Jansen (1992) found that education plays a role in the development of competencies. Also, Segal et al. (2010, p. 5) argue that “entrepreneurs who possess the potent, synergistic combination of education with industry managerial experience have the competencies and capabilities to manifest better results”. Similarly, Unger et al. (2011) contends that human capital improves the business owners’ ability to identify and exploit business opportunities, acquire resources such as financial capital as well as accumulate new knowledge and skills. In these lines, Krueger and Brazeal (1994) argue that prior work experience has the potential to advance one’s skills and abilities especially opportunity recognition. Likewise, Politis (2005) suggests that the entrepreneur’s experiences result into the development of knowledge that enables them identify and act on business opportunities, as well as organise and manage new firms. Furthermore, Man and Lau (2005) identified theoretical and practical learning, and work i.e. knowledge, skills and experience as one source of entrepreneurial competencies. It is noteworthy that empirical research examining the antecedents of entrepreneurial competencies remains rare.

Drawing on the above arguments, we propose that human capital, defined by level of education, entrepreneurship training, previous work experience in the industry and previous entrepreneurship experience serve as antecedents of entrepreneurial competencies and
ultimately influence firm performance. In light of the above, the following relationships are hypothesised:

**Hypothesis 1a:** Level of education has a positive direct effect on the development of entrepreneurial competencies

**Hypothesis 1b:** Previous entrepreneurship training has a positive direct effect on the development of entrepreneurial competencies

**Hypothesis 1c:** Previous work experience in the industry has a positive direct effect on the development of entrepreneurial competencies

**Hypothesis 1d:** Previous entrepreneurship experience has a positive direct effect on the development of entrepreneurial competencies

### 3.2. Direct effect of entrepreneurial competencies on firm performance

Empirical studies have generally reported significant relationships between entrepreneurial competencies and firm performance, with some (e.g. Ahmad et al., 2010a) arguing that they are a key driver of success in SMEs. To illustrate, that study found that entrepreneurial competencies are strong predictors of business growth and success, especially through contributing to profitability. Empirical evidence particularly points to entrepreneurial competencies influencing firm growth. For example, Chandler and Jansen (1992) reported a positive relationship between the two constructs, while Chandler and Hanks (1994) found a direct correlation between entrepreneurial competencies and firm growth. Sony and Iman (2005) also found that entrepreneurial competencies (operationalised as management, industry, technical and opportunity skills) shared a positive relationship with firm growth. Furthermore, a study by Capaldo et al. (2004) took a broader perspective and suggested that competencies not only share a direct relationship with firm growth but also value creation and a firm’s strategy. Other studies have found empirical evidence that entrepreneurial competencies influence overall firm performance. For instance, Baum et al. (2001) found that a CEO’s specific competencies i.e. industry and technical skills respectively had a significant direct effect while the general competencies i.e. organisational skills and opportunity skills had significant indirect effects on firm performance. Other studies have also shown that the effect of entrepreneurial competencies on firm performance is not always direct. For example, Ahmad et al. (2010a) investigated the role of the environment in the relationship between entrepreneurship competencies and firm success and found that in addition to a direct relationship, the effect of entrepreneurial competencies on firm success were stronger in a dynamic and hostile environment compared to a benign and stable one.
Other variables that have been found to influence the relationship between entrepreneurial competencies and firm success include a firm’s stage of development (Gasse et al., 1997) and the context in which it operates (Capaldo et al., 2004).

This research therefore hypothesises the following:

*Hypothesis 2: Entrepreneurial competencies have a positive direct effect on firm performance*

3.3 The Mediating effect of entrepreneurial orientation on the relationship between entrepreneurial competencies and firm performance

EO has been found to be a good predictor of entrepreneurial behaviour (Merz et al., 1994; Covin and Slevin, 1989). Many studies (e.g. Lechner and Gudmundsson, 2014; Baker and Sinkula, 2009; Rauch et al., 2009; Keh et al., 2007) suggest a positive relationship between EO and firm performance, signifying that EO improves performance. Nonetheless, several other studies show mixed and inconclusive results (Su et al., 2011; Tang et al., 2008; Wiklund and Shepherd, 2005). For example, Zahra (1993) highlights an investigation which found that EO does not result in higher firm performance in the way of profitability, survival and growth, but has a significant direct effect on achieving a competitive advantage, thereby contributing to firm capital and potentially non-financial gains. Likewise, a study by Covin and Slevin (1989) saw a positive relationship between entrepreneurial orientation (risk taking, innovativeness and proactiveness) and firm performance in a hostile environment but noted that this relationship was rather weak in a benign environment. On the other hand, some studies (e.g. Stam and Elfring, 2008; Li et al., 2005) did not find a significant relationship between EO and firm performance, while others reported a negative relationship between the two constructs (Hart, 1992). Lumpkin and Dess (1996) point to external factors (e.g. industry and business environment) and internal factors (e.g. organisation structure or the founder’s characteristics) for answers, arguing that these may determine the magnitude with which each of the EO dimensions may predict the success of a firm.

It has been argued that a firm’s EO is defined by the role of the entrepreneur, their competencies and personality Camuffo et al. (2012). Similarly, Zahra (1993) suggests that the characteristics of executives should be included as potential antecedents of EO in models investigating firm-level entrepreneurship. Along these lines, Soininen et al. (2013) contend that EO may be regarded as a product of individual level determinants rather than firm level outcomes. This argument demonstrates the role of the owner-manager’s characteristics in the EO-performance relationship. To illustrate, Lechner and Gudmundsson (2014) argue that in order for any competitive strategy to be implemented, a variety of resources and
competencies is required. This point is of particular importance because EO is considered as
top managers’ strategy as defined by risk taking, innovativeness and proactiveness (Poon et
al., 2006). Moreover, top management characteristics have been empirically linked to
innovation strategy and other facets of strategy in strategy research (Michel and Hambrick,
1992; Grimm and Smith, 1991). While there is no direct evidence demonstrating that EO
mediates the relationship between the entrepreneurial competencies and firm performance,
there is empirical evidence that competitive strategy mediates the relationship between
personality traits and firm performance (e.g. Poon et al., 2006; Baum et al., 2001).
Meanwhile, it has also been established that traits manifest in one’s competencies (Boyatzis,
1982). Baum et al. (2001 argue that traits affect competencies because people tend to practice
what they like and this in turn results in skill development. Their study found that while traits
were significant predictors of firm growth, their impact was primarily through competencies,
motivation and strategy. Drawing on the above arguments, this research adopts the position
that EO mediates the relationship between entrepreneurial competencies and firm
performance. Consequently, it attempts to integrate two literature streams (competency
approach and entrepreneurial orientation) which up to now have tended to evolve on separate
tracks, signifying an important research gap. Few studies have considered both theoretical
perspectives in single study. For example, Wickramaratne et al. (2014) examined the effect
of entrepreneurial competencies on entrepreneurial orientation and found support for a
positive relationship. That study also considered the effect of background characteristics
such as education, training, business owner’s age, prior business experience and having other
businesses on entrepreneurial competencies. However, it did not investigate the concepts in
relation to firm performance.

Based on the above arguments, the following relationships are postulated:

**Hypothesis 3:** Entrepreneurial competencies have a positive direct effect on entrepreneurial
orientation

**Hypothesis 4:** Entrepreneurial orientation has a positive direct effect on firm performance

**Hypothesis 5:** Entrepreneurial orientation mediates the relationship between
entrepreneurial competencies and firm performance

### 3.4 Direct effect of previous entrepreneurship experience on firm performance

Previous studies generally support a positive relationship between previous entrepreneurship
experience and firm performance (Santarelli and Tran, 2013; Santarelli et al., 2009; Bosma
et al., 2004). Supporting these findings, a study by Kirschenhofer and Lechner (2012) found
an entrepreneur’s previous entrepreneurship experience especially in the industry to be positively related with firm performance. This has been attributed to the fact that through previous entrepreneurship activities, entrepreneurs accumulate and cultivate social networks that help them to attract and gather resources (Wright, 2001). Consistent with the RBV, Kanti Prasad et al. (2013), whose study found a positive significant relationship between entrepreneurial experience and firm growth, posit that entrepreneurial experience can enhance an entrepreneur’s skills and decision-making capabilities thereby enabling them to better manage the current business. This perspective is also supported in D’haese et al., (2008). Furthermore, previous entrepreneurship experience has been found to be a good predictor of re-ventinguring, which consequently has the potential to contribute to future success (Davidsson and Honig, 2003; Ronstadt, 1988). However, mixed results have also been reported, signifying the need for further research on the subject. For example, Santarelli and Tran (2013) found a significant negative relationship between entrepreneurship experience and performance. Similarly, Haber and Reichel (2007) found a negative yet insignificant relationship between previous experience in entrepreneurship and firm performance. On the other hand, Davidsson and Honig (2003) found that prior start-up experience was not significant for profitability or business success. Given the above evidence regarding the relationship between previous entrepreneurship experience and firm performance, it is hypothesised as follows:

Hypothesis 6: Previous entrepreneurship experience has a positive direct effect on firm performance

3.5 Direct effect of previous work experience in the industry on firm performance

Industry-specific experience is one of the key determining factors of small business success (Loscocco et al., 1991). According to Cooper et al. (1994), industry-specific knowledge would equip the entrepreneur with a general understanding of the relevant factors pertaining to that specific industry such as the critical success factors, specialised product knowledge and accumulated goodwill with customers and suppliers. Previous studies have generally found that prior experience in the industry positively relates with overall firm performance (Santarelli and Tran, 2013; Segal et al., 2010), with firm growth (Colombo and Grilli, 2005) and with revenue growth (Batjargal, 2005). Similarly, Bosma et al. (2004) found that previous experience in the industry was responsible for a significant improvement in success, growth and survival of SMEs in the Netherlands. On the contrary, prior experience in other industries was found not to be associated with firm growth (Colombo and Grilli, 2005). Given the above evidence, it is hypothesised that:
Hypothesis 7: Previous work experience in the industry has a positive direct effect on firm performance

3.6 Conceptual model
Drawing on the theoretical perspectives presented in this chapter, an integrated conceptual model of factors which influence SME performance based on the RBV of the firm, competency approach and entrepreneurial orientation, was developed and is proposed in Figure 3.01 below;

Figure 3.01 Conceptual model
CHAPTER 4: METHODOLOGY

Chapter overview
This chapter discusses the methodology used for this research project. Drawing upon the literature review and development of the conceptual model described in the previous chapter, the approach used to conduct empirical investigations in the study is described. The chapter begins with a discussion of the epistemology and ontology used as the basis of this research, and proceeds with a description of the research design employed to address the research questions. The two main parts of the research project are then described: Part one focuses on the methodology used for the exploratory qualitative study carried out as the initial stage of this research project, while part two discusses the method employed to conduct the main quantitative study.

4.1. Epistemology and ontology of the research
Epistemology and ontology represent the philosophical basis of a research, and are closely related to methodology. While ontology represents the philosophy of reality, epistemology is concerned with how that reality becomes known and methodology identifies the specific ways in which knowledge of reality can be achieved (Krauss, 2005). Epistemology and ontology influence the whole research process i.e. topic selection, research question formulation, method selection, sampling and research design (Hesse-Biber and Leavy, 2011).

Ontology focuses on the nature of reality and what can be known about the world (Ormston et al., 2014; Saunders et al., 2012). Ormston et al. (2014) identify two fundamental ontological questions: 1) is there a social reality that exists independently of human conceptions and interpretations and 2) Is there a shared social reality or multiple context-specific realities? The questions relate to two ontological perspectives: objectivism (associated with the positivist approach) and subjectivism (associated with the constructivist/interpretivist approach). The objectivist ontology holds that a social reality exists independently of the observer or social actor, while the subjectivist view is that multiple social realities exist, constructed through the perceptions, human interactions and actions of observers or social actors (Saunders et al., 2012). The current research embraces the latter view and therefore adopts a subjective ontology. This is because the main constructs of this research i.e. entrepreneurial competencies, entrepreneurial orientation and human capital variables all relate to the individual entrepreneur’s skills, abilities and orientations, which are generally a product of ongoing social interaction. Supporting this view, Hill and McGowan (1999, p.7) argue that “the enterprise in terms of its character
reflects the individual personality and behaviour of its management; the individual is the product of all manner of complex antecedent variables and ongoing influences which define personality and behaviour, determining their own unique view of the world.” Furthermore, Bruyat and Julien (2000, p. 165) note that an entrepreneur is “not simply a blind machine responding automatically to environmental stimuli, but a human being capable of creating, learning and influencing the environment.” Thus, the concept of multiple socially constructed realities is suitable for this research project given that the characteristics of an entrepreneur are a result of repeated social interaction and therefore each entrepreneur constructs their own reality depending on how they interpret and perceive their world.

Epistemology refers to what is considered to be acceptable knowledge in a particular field of study (Saunders et al., 2012, p. 132). It is concerned with “ways of knowing and learning about the world and focuses on issues such as how we can learn about reality and what forms the basis of our knowledge” (Ormston et al., 2014, p. 6). Several epistemological positions or paradigms of enquiry exist, and Guba and Lincoln (1994) propose that one way of differentiating them is by answering the following questions concerned with the ontological, epistemological and methodological positions:

1. Ontological position: What is the form and nature of reality and what can be known about it?
2. Epistemological position: What is the relationship between the observer (inquirer) and the subject, and what can be known?
3. How should the observer proceed to discover what they believe can be known?

This research project adopts a pragmatist epistemology, however, four of the major alternative paradigms of inquiry i.e. positivism, post-positivism, constructivism and realism, are also discussed below.

Pragmatism: The current research is based on literature in the broad field of entrepreneurship, focusing on four main theoretical perspectives namely; the competency approach, entrepreneurial orientation, the resource based view of the firm and performance. These theoretical perspectives find their roots in various disciplines including strategic management, organisation theory, psychology and management literature, and therefore adopt different epistemological approaches. For example, strategic management embraces both the positivist and constructivist paradigms (Porter, 1991).

Pragmatism is considered to be the primary philosophy of mixed methods research (Molina-Azorín et al., 2012; Johnson and Onwuegbuzie, 2004; Tashakkori and Teddlie, 2003).
methods research has developed as a response to the paradigm “wars”, which have basically been debates about how the main research paradigms i.e. positivism/postpositivism and constructivism/interpretivism are fundamentally opposed to each other and which is the superior approach (Creswell and Plano Clark, 2007). Another important feature of the paradigm “wars” has been the incompatibility thesis (Howe, 1998), which argues that qualitative and quantitative research paradigms as well as their associated methods are not compatible and therefore cannot and should not be used in combination. While the paradigm “wars” have tirelessly focused on the differences between qualitative and quantitative approaches, mixed methods research has rejected the need to choose between the two approaches and instead explicitly advocates for the combined use of both methods. *(Note: The mixed methods research design is discussed in more detail later in the chapter).*

Pragmatists are of the view that the world can be interpreted in various ways, research can be undertaken in many different ways, no single viewpoint can paint the complete picture and multiple realities may exist (Saunders *et al.*, 2012). Pragmatism advocates for the use of the most appropriate research method to investigate research questions, theories or phenomena (Feilzer, 2010). It questions the dichotomy of postpositivism and constructivism and advocates for the compatibility of quantitative and qualitative methods (Molina-Azorín *et al.*, 2012; Johnson and Onwuegbuzie, 2004). Cherryholmes (1992) argues that for pragmatists, decisions about what to research and how are dependent on where one wants to go, and an approach is chosen which demonstrates to be better than other approaches at achieving desired or anticipated outcomes.

It follows that the most distinctive feature of pragmatism is that it places the research question above allegiance to a particular research paradigm, and allows the researcher to use a combination of methods to address the research problem (Tashakkori and Teddlie, 1998). This renders it the most suitable philosophy for this study. Johnson *et al.* (2007) argue that pragmatism allows the use of a “combination of methods and ideas that helps one best frame, address, and provide tentative answers to one’s research question”, (p. 126). The two most important considerations in pragmatism are whether the research enables the researcher to uncover what they want to know (Hanson, 2008), and whether the results of the research are useful (Rorty, 1999).

**Positivism:** The major assumptions of the positivist paradigm of inquiry are that an objective reality exists that can be determined using scientific methods of research, and that research should be conducted in a value-free way i.e. the observer is independent of the subject of observation, and therefore is not affected by, and does not affect the subject of research
The proponents of positivism believe in researching a social reality that is observable, with the aim of generating law-like generalisations like in the physical and natural sciences (Remenyi et al., 1998, p. 32). Observation and measurement are seen as the core of scientific inquiry. Positivists contend that the actual causes of social outcomes can be reliably and validly ascertained (Molina-Azorín et al., 2012). Furthermore, they believe in deductive reasoning i.e. they use existing theory to develop hypotheses, which are then tested and confirmed or refuted (Saunders et al., 2012). The positivist epistemology is generally associated with quantitative methods (Howe, 1988), and has been described as the “cornerstone of the quantitative paradigm” (Hesse-Biber and Leavy, 2011, p. 8). Post-positivism on the other hand is regarded as a softer version of the positivist perspective. While it also advocates for the existence of an objective social reality, value-free research and the use of existing theory to develop hypotheses to be tested, it differs from the positivist approach by proposing that epistemologically, reality can only be understood probabilistically and not fully (Molina-Azorín et al., 2012; Guba and Lincoln, 1994). According to Annells (1996), the knowledge creation process of a post positivist researcher involves modified experimental research and hypothesis falsification (i.e. verifying or disproving hypotheses).

Although the current research is principally deductive and the majority of prior research into small firms stems from positivist thinking, the positivist/post-positivist perspective is not appropriate here because of the subjective ontology and the fact that multiple paradigms are supported in the core literature.

Constructivism is a paradigm of inquiry which holds that reality is a mental construction formed by individual human beings and therefore multiple social realities exist (Annells, 1996). In this view, knowledge creation derives from understanding meanings attached to phenomena under investigation; inquirers interact with the subject of the research to collect data; both researcher and subject are changed by the investigation and knowledge is dependent on both context and time (Coll and Chapman, 2000; Cousins, 2002). Therefore, contrary to the positivist/post-positivist views, constructivists argue that time-free and context-free generalisations are both undesirable and impossible, that research is value-bound, that it is not possible to completely differentiate causes and effects, that inductive reasoning is desirable (i.e. explanations are drawn inductively from the data), and that because the subjective knower is the sole source of reality, the latter cannot be detached from or uninvolved with the known (Guba, 1990).
In relation to the current study, while the constructivist view would well support the qualitative stage of the research due to its focus on inductive reasoning, it is not suitable for the quantitative phase of the research which is deductive in nature. Howe (1988) observes that the constructivist view is largely associated with qualitative methods.

**Realism:** The fundamental tenet of the realist paradigm is that there is one reality out there independent of the human mind, but multiple perceptions exist about it (Healy and Perry, 2000). This means that reality and people’s perceptions of it are two different things. Within this paradigm, reality extends beyond consciousness and is not entirely discoverable or knowable (Krauss, 2005). There are two forms of realism i.e. direct (naïve) and critical realism. While direct realists contend that what we experience through our senses is an accurate representation of reality, critical realists argue that our experiences are “sensations, images of the things in the real world, not the things directly” (Saunders et al., 2012, p. 136). Critical realists accept that the world is socially constructed, but not in its entirety and they aim to construe and not construct the world (Easton, 2010). Bhaskar (1978) proposes that the critical realist ontology comprises three strata i.e. the empirical, the actual and the real. While observations and experiences take place in the empirical realm, events happen in the actual realm which may not be observed or may be understood differently by observers. These events are triggered by mechanisms present in the real world. Critical realism contends that observation is “fallible, it is unlikely to reveal completely and lead to a full understanding of any social situation” (Easton, 2010, p. 123). For this reason, the proponents of this approach argue that there is need for social science to critically assess its object if social phenomena are to be understood or explained (Sayer, 1992). For a critical realist, knowledge of reality is a product of social conditioning and hence understanding it requires the involvement of the social actors (Dobson, 2002). Similar to constructivism, critical realism is not appropriate for the current study because it is better suited to qualitative research.

### 4.2 Research Design

Following the identification of research gaps in the literature (see Chapter 2), four research questions have been raised. In addition, a conceptual model incorporating the relationships between entrepreneurial competencies and their antecedent variables, entrepreneurial orientation, and firm performance respectively, has been developed to allow these relationships to be empirically tested. The overall aim of this research is to address the research questions, which are presented again below;
**General Research Question:** How can the performance of women-owned SMEs in Zambia be enhanced?

**Research Question 1a:** What entrepreneurial competencies characterise female SME owners in Zambia?

**Research Question 1b:** How do entrepreneurial competencies (e.g. opportunity, commitment, organising, relationship and personal) affect firm performance in women owned SMEs in Zambia?

**Research Question 2:** How do human capital variables (e.g. business owner’s level of education, previous work experience, previous entrepreneurship experience, previous entrepreneurship training) affect entrepreneurial competencies and ultimately firm performance in women owned SMEs in Zambia?

**Research Question 3a:** How does entrepreneurial orientation (e.g. risk taking, innovativeness, proactiveness) affect the performance of women-owned SMEs in Zambia?

**Research Question 3b:** Does entrepreneurial orientation mediate the relationship between entrepreneurial competencies and firm performance in women-owned SMEs in Zambia?

**Research Question 4:** Do human capital variables e.g. previous work experience in the industry and previous entrepreneurship experience have a direct effect on firm performance?

This study adopts a mixed method research approach to address the research questions. Mixed methods research in this study refers to a multiple research methods approach which involves the use of both qualitative and quantitative data collection and data analysis techniques in a single study (Creswell and Plano Clark, 2007; Johnson and Onwuegbuzie, 2004).

Notably, research question 1a (What entrepreneurial competencies characterise female SME owners in Zambia) can best be addressed using qualitative methods as this would allow the researcher to not only determine whether the variables identified in the literature are represented in the sample, but also capture those that may be specific to the context under investigation. On the other hand, the nature of the remainder of the research questions requires the use of quantitative methods to evaluate the relationships among the constructs.
and provide for generalizability of the findings. Quantitative techniques will also enable the researcher to determine which specific variables e.g. which competencies are most relevant to the context being investigated.

The objective of mixed methods research is to capitalize on the strengths and minimize the weaknesses of both quantitative and qualitative research (Johnson and Onwuegubuzie, 2004), rather than replace either approach. According to Johnson and Turner’s (2003) fundamental principle of mixed research, various strategies, approaches and methods must be employed to collect multiple data, and the combination of these should result in complementary strengths rather than overlapping weaknesses. When this principle is used effectively, it represents a major source of justification for the adoption of mixed research since it results in a superior outcome to that of a mono-method study (Johnson and Onwuegubuzie, 2004).

The mixed methods approach has gained recognition in the field of entrepreneurship research. Molina-Azorín et al. (2012) argue that the use of this approach in entrepreneurship research is justified given the multi-faceted and complex nature of this field of study, and calls within the literature for entrepreneurship research to be context-specific. They contend that the approach can potentially contribute to the advancement of the field by helping to contextualise entrepreneurship research thereby incorporating the complexity, richness and uniqueness of different research contexts, at the same time achieving greater rigor.

Furthermore, empirical evidence points to the fact that entrepreneurship research in general and female entrepreneurship specifically, is dominated by studies conducted in developed countries. This has undoubtedly resulted in theories that originate from the context of the developed world, resulting in calls for more investigations involving developing contexts. For example, Lerner et al. (1997, p.317) argue that “because the theories have emerged primarily from research in developed countries, it is important to examine the extent to which these apply in the context of non-OECD countries.” This research approach therefore allows for contextual differences to be accounted for.

Additionally, mixed methods research, unlike other research paradigms, recognises that both quantitative and qualitative research are relevant and beneficial (Johnson and Onwuegubuzie, 2004) given that they are applied to address different research questions. To illustrate, whereas qualitative research methods are appropriate when the objective of the study is to explore or understand underlying phenomena, or address questions such as ‘what’, ‘why’, or ‘how’ (Creswell and Plano Clark, 2007), quantitative methods are suitable for establishing
causal relationships between variables or addressing questions such as ‘how many’, or ‘how often’ (Molina-Azorín et al. (2012).

The major strength of qualitative research is that it generally results in rich, in-depth information about the sample, which allows a deeper understanding of phenomena (Molina-Azorín et al. (2012). Unfortunately, findings from qualitative studies are typically not generalisable to other samples. Quantitative studies on the contrary are advantageous for establishing causal relationships and drawing generalizations about populations, but “less useful for exploring new phenomena or for documenting participants’ internal perspectives and personal meanings about phenomena” (Molina-Azorín et al. (2012, p.430). The authors argue that the major strength of the mixed method approach is that it makes it possible to generate a theory and authenticate it within the same study.

A mixed method approach called the sequential exploratory design, proposed by Creswell and Plano Clark (2007) will be used in this study. It involves the sequential implementation of qualitative and quantitative methods respectively, where the quantitative method is dominant and the qualitative method complementary. The approach “can be useful for generalizing qualitative findings to various samples, determining how a phenomenon is distributed in a selected population and developing and testing an instrument” (Creswell and Plano Clark, 2007, p.216). It has the advantage of enabling the exploration of a phenomenon and expansion on the qualitative findings. Its major disadvantage is that it is time consuming because of its two-phase nature (Creswell, 2003).

The sequential exploratory design is appropriate for this research because very little is known about female entrepreneurship in Zambia in the literature, and therefore there is need to first conduct an exploratory (qualitative) study to understand the context, and then a quantitative study to expand on the qualitative findings and achieve generalisation of the said findings. This research approach will not only ensure that context-specific variables are identified and incorporated in the conceptual model developed, but that the conceptual model is also tested within the same study. It follows that the main purpose of the sequential implementation of the two research methods in this study is so that the qualitative study informs or develops the use of the quantitative method by improving the understanding of the specific context being examined (Greene et al., 1989).

The use of this research design has been validated in previous entrepreneurship research (e.g. Molina-Azorín et al., 2012; Dewald et al., 2007; Man et al., 2002). To illustrate, in their review of the use of mixed methods research in five journals, Molina-Azorín et al. (2012)
found that the sequential implementation was the most used approach in mixed method studies in entrepreneurship research. Similarly, Dewald et al. (2007) investigated the determinants influencing the vertical quasi-integration preferences of small firms. In that study, they conducted qualitative interviews to better understand the industry context of the research and consequently used the findings to develop a suitable questionnaire which was then administered in the form of a mail-in survey instrument. Man et al. (2002) also adopted the research approach in their investigation of the relationship between entrepreneurial competencies and firm performance in the context of small and medium enterprises in Hong Kong. In that study, in-depth interviews were conducted with owner/managers for the purpose of identifying entrepreneurial competencies specific to the Hong Kong contexts, and that were potentially not identified from previous studies. The qualitative phase of the study also served to modify a theoretical model developed following a literature review. Subsequently, the results of the qualitative study were used to construct a suitable survey instrument. A quantitative study was then conducted to test the modified model, thereby evaluating the entrepreneurial competencies that were more pertinent to the Hong Kong context.

4.3 Part one: Exploratory qualitative study
This section of the chapter discusses the methodology used to conduct the exploratory qualitative study carried out as the first stage of the research project. Note should be made that this research has followed all the prescribed University of Manchester (UOM) ethical practices as and where relevant.

The choice of data collection method is guided by the research objectives, research questions and study design (Carter and Little, 2007). Qualitative research is especially suitable when the objective of the research is to explore or understand underlying phenomena (Creswell and Plano Clark, 2007) as it generates rich, in-depth information about the sample (Molina-Azorín et al. (2012). Robson (2002) describes it as an important way of getting to know “what is happening; to seek new insights; to ask questions and to assess phenomena in a new light” (p. 59). The qualitative approach is therefore appropriate for the exploratory study here whose purpose is threefold: (1) to identify entrepreneurial competencies perceived to be important by female entrepreneurs in the Zambian context, which may not be reported in previous studies, (2) to gather evidence of the applicability of entrepreneurial competencies and entrepreneurial orientation dimensions reported in the literature to female entrepreneurs in the Zambian context and (3) to identify other individual level and firm level
factors perceived by female entrepreneurs in Zambia as relevant to the performance of their businesses.

4.3.1 Data collection

Saunders et al. (2009) identify three ways of conducting exploratory studies: conducting a literature search, focus group interviews and interviews with experts in the subject area. An interview is selected as the data collection technique for this exploratory study given that by this stage of the study a comprehensive review of literature had been conducted to inform the development of a conceptual model, and the researcher had a good understanding of the various constructs that needed to be explored. Interviews are advantageous because they allow researchers to collect information on a broad range of issues, are flexible in that different types of interviews can be used to address different research questions and they are a more readily accepted data collection technique not only because most people are familiar with them but also because many like to talk about what they do (Cassell and Symon, 2004). Nevertheless, interviews are not without problems. Apart from the possibility of the researcher suffering from data overload due to large quantities of data, interviews are time-consuming for the participants (which may result in some being unwilling to participate), and for the researcher in terms of developing the interview guide, transcribing the interviews and analysing the transcripts (Cassell and Symon, 2004).

Two types of interviews are commonly used in qualitative studies: semi-structured interviews and in-depth interviews. With semi-structured interviews, the researcher compiles a list of themes and key questions to be asked during the interview, and this is used for each interviewee (Saunders et al., 2012). In an in-depth interview on the contrary, the researcher does not have a pre-determined set of questions to use in the interview although they have a clear idea of what phenomena they want to explore (Saunders et al., 2012). The latter approach is therefore non-directive, allowing the interviewee to freely talk about the topic of interest.

Given that the aim of collecting data at this stage of the research project is to confirm the applicability of already existing entrepreneurial competency constructs to the Zambian context as well as identify entrepreneurial competencies specific to that context, a semi-structured interview is most suitable and is selected for the exploratory study. An in-depth interview is not appropriate because a purely grounded theory of entrepreneurial competencies is not the agenda of this study.

Note should be made that a focus group would be an alternative data collection technique for a qualitative study of this nature in that it makes it possible to generate detailed
information in a short space of time and low cost (Acocella, 2012) and enables the investigation of complex behaviours and motivations through interaction among participants (Morgan and Krueger, 1993). However, this approach is not suitable for the current study because the research focuses on capturing information about the individual characteristics of the business owners as well as information related to the performance of their respective businesses which some participants consider to be sensitive and may not be comfortable discussing in a group.

Based on the literature review, an interview schedule is developed covering entrepreneurial competencies, entrepreneurial orientation, human capital variables, demographic variables and the business environment as determinants of SME performance (see Appendix A). The interview comprises nine (9) sections. Section 1 covers questions to gain a general understanding of the business including who established it and when, what motivated them, what type of company it is, what products it offers and the number of employees at the time of the interview. Section 2 covers human capital variables. It includes questions about prior work experience, prior entrepreneurship experience and prior training related to business start-up or improvement. Section 3 consists of questions about entrepreneurial competencies, with some aimed at identifying competencies specific to the sample e.g.

- “What are the qualities and skills that support your business?”
- “Are there other qualities or skills lacking that you would like to have that would benefit your business?”

Other questions aim to confirm the applicability of entrepreneurial competency dimensions proposed by Man et al. (2002) i.e. opportunity, commitment, organising, relationship, conceptual and strategic competencies to the Zambian sample. The questions include:

- “Can you please describe a situation in which you identified an opportunity in the market, to improve your business?”
- “What are you doing to understand your market or customers better?”
  (Probe: what they want in terms of products, service etc…?).
- “Do you use a formal plan or business plan to run the development of your business?”
- “How do you ensure that your business activities run smoothly on a day-to-day basis?”
- “Can you please describe your typical working day as business owner/manager?”
  Prompt: You obviously have a lot of matters to deal with, how do you allocate your time?
• “What are the major difficulties you have experienced when it comes to managing your business and how did you handle these?”
• “Did you at any point in time consider quitting this business? If yes, please describe the situation.”
• “Can you please talk about times (if any) when you introduced something new in your business e.g. new product or service, new way of doing things…?”

Section 4 of the interview covers questions relating to factors within the business that could potentially affect its performance such as its financial position, the cost of running the business, the quality of its products and service in relation to competitors, the quality of employees and investment in technology. Having identified access to financial capital as one of the major challenges faced by female entrepreneurs in developing countries during the literature review, Section 5 seeks to establish if this is consistent with the Zambia context. Questions asked relate to challenges associated with accessing formal credit and how the business was financed at start-up. Section 6 comprises questions about the entrepreneurial orientation dimensions proposed in the literature i.e. risk taking, innovativeness, proactiveness, autonomy and competitive aggressiveness. The aim of this section is to determine which entrepreneurial orientation dimensions can be identified with the sample. Questions include the following:

• “Describe a situation where you took a risk which you believed could benefit your business?”
• “Do you try new ways of doing things in your business?”
• “How often do you introduce new products or services in your business?”
• “In undertaking your business, do you initiate actions which other companies respond to, or do you usually respond to the activities of other companies?”
• “In general, what do you do to ensure that you outperform your competition?”
• “How are business decisions made in your company…do you make them independently i.e without interference from any other party or through consultation with other parties?”
• Are your employees allowed to act on their own if they think it to be in the best interests of the business or do they always have to consult with you?

Section 7 comprises performance-related questions to provide a general overview of the performance of the businesses sampled. It is also the objective of this section to enlighten the researcher on what sort of questions the business owners would be willing to respond to given the sensitive nature of such information. Questions asked include the number of employees, average value of monthly sales and monthly net income, value of productive
assets, business growth over the past year and how satisfied the business owner is with the overall performance of their business.

In order to gain a broader understanding of other relevant factors not captured in the main constructs of the study, the respondents are further asked to identify factors which they feel affect the performance of their business positively and/or negatively. Section 8 asks questions about factors to do with the industry in which the firms operate as well as the general regulatory environment. Its aim is to establish what external factors play an important role in the performance of the businesses sampled. The interview schedule concludes with questions about the business owner’s demographics i.e. age, marital status and highest level of education in Section 9.

Following the development of the interview schedule, an exploratory qualitative study was conducted in Zambia’s Lusaka and Copperbelt Provinces, covering three major cities of Lusaka, Ndola and Kitwe in January and February 2013. The two provinces were selected on the basis that they house approximately 65% of all businesses in Zambia (MCTI, 2007).

4.3.2 Sampling
The exploratory nature of this stage of the research dictates the use of non-probability sampling techniques to select an information rich sample that would best address the research question. Non-probability sampling uses non-random means to select a sample. This exploratory study takes a pragmatic approach to finding respondents by employing a combination of purposive sampling and snowball sampling techniques because it was a considerable challenge to acquire an official comprehensive list of SMEs in Zambia.

**Purposive (judgmental) sampling** involves the selection of participants who will best help address the research questions and meet research objectives (Saunders *et al.*, 2009). It is the form of sampling where “particular settings, persons, or events are deliberately selected for the important information they can provide that cannot be gotten as well from other choices” (Maxwell, 1997, p.87). The major strength of using purposive sampling is that a sample may be selected that is particularly informative. However, this approach is mostly used in studies involving small samples (Neuman, 2005), which cannot be deemed to be statistically representative of the whole population (Saunders *et al.*, 2012). **Snowball sampling** entails selecting potential respondents who possess the characteristics relevant to the study and asking them to identify others that share the same characteristics (Gobo, 2004). This approach is particularly useful in situations where identification of or access to the desired population is a challenge (Saunders *et al.*, 2009). The major strength of this approach is that a snowball sample may expand very quickly as a result of the recommendations made by...
participants, however, there is a risk of having a homogeneous sample because of the tendency by participants to recommend others similar to themselves (Tracy, 2013).

The use of a combination of purposive sampling and snowball sampling in the current research enabled the researcher to gain access to an information-rich sample that was otherwise difficult to access given that an official comprehensive list of SMEs in Zambia could not be obtained. Various organisations that deal with SMEs in Zambia were approached in an attempt to obtain an official SME list or their respective membership lists in order to identify potential respondents. These organisations include the Zambia Chamber of Small and Medium Business Associations (ZCSMBA), Zambia Development Agency (ZDA), Patents and Companies Registration Agency (PACRA), Zambia Federation of Women in Business (ZFWIB), Women Entrepreneurship Development Association of Zambia (WEDAZ) and Zambia Chamber of Commerce and Industry. The PACRA is an agency responsible for registering companies in Zambia and therefore it was hoped that an official list of registered SMEs could be obtained from there. Unfortunately, such a list could not be provided by the agency and the reason given was that they only registered ‘business names’ and that their filing system at the time of the research made it extremely difficult to categorise businesses according to size, sector or even business activity. The researcher was therefore referred to the ZDA, which offers various services such as training to SMEs. This agency provided their membership list, spread across sectors and the entire country. However, the database was missing relevant information about the businesses such as industry, gender of the business owner and products offered, and the contact details mostly turned out to be dated. Furthermore, it was observed that the majority of the businesses on the ZDA membership list operated in other sectors of the economy, e.g. agriculture. This made it a considerable challenge to identify businesses relevant to the current research.

As indicated above, some business associations were also visited to request for membership lists. For example, the ZCSMBA did not provide a membership list but made a few referrals to some of its members. Part of the reason for this was that most of its members operated in sectors that were not part of the research objective such as agriculture and mining. Similarly, the WEDAZ and ZFWIB did not provide a comprehensive membership list but singled out members in the trading industry and made a few referrals to the researcher.

Consequently, some participants were purposively sampled from the SME register provided by the ZDA while others were sampled through referrals made by the business associations. These business owners were then asked to identify others like themselves and refer the researcher to them. Hence, referrals from business associations as well as entrepreneurs
themselves were also used to target potential respondents. The researcher later discovered that this approach was particularly useful in that study context because the business owners were generally not willing to participate in the interview unless the researcher had been referred to them by someone they personally knew or a respected member of a business association or other organisation. Part of the reason was that they feared that the researcher was from the tax authorities and therefore after tax-related information.

4.3.3 The interview
Prior to starting each interview, an informed consent form (see Appendix B) was read out to the potential respondent. The form outlined the objectives of the study, criteria for selecting respondents, the expected benefits of the study and the duration of the interview. It further assured the potential respondents of confidentiality and anonymity in terms of the information provided, and informed them of their right to discontinue the interview at any time or to refuse to discuss any subject they did not wish to. The potential respondent was then asked to sign the form to indicate their consent to the interview. Subsequently, the respondent was asked for permission to tape-record the interview.

A total of twenty-two (22) semi-structured interviews were conducted with female SME owners in Zambia’s retail (apparel) industry in a face-to-face fashion. This sample size is in line with Creswell’s (1998) suggested range of between 20 and 30 interviews for a qualitative study. Each interview had an average duration of 1 hour 15 minutes, was tape-recorded and then transcribed. The interview transcripts were then analysed with the help of the Nvivo software and the results were used to further develop the conceptual model developed from literature.

4.4 Part two: Quantitative (main) study
This section of the chapter discusses the method used to conduct the second and main part of the research project. It is noteworthy that this research has followed all the prescribed UOM ethical practices as and where relevant.

As highlighted in the research design section (section 3.3), this stage adopts a quantitative approach. The section begins with a description of the research strategy selected for this study. Next, the research sample as well as data collection and data analysis methods are discussed respectively. Subsequent sub-sections address the relevant preliminary assessments conducted before data analysis such as assumption testing, missing data analysis, validity and reliability issues and common method variance. In conclusion, the goodness-of-fit statistics used to evaluate model fit in the study are described.
4.4.1 Hypotheses (re-stated)
Quantitative research involves measuring variables empirically and using statistical
techniques to assess relationships among them. This approach is suitable for the current
research project because statistical testing is required to assess the conceptual model fit and
the nature of the relationships among the constructs under investigation. The reader is
referred to Section 3.3 of this chapter for a re-cap of the research questions guiding this
research project. Note should be made that Research Question 1a has been addressed through
the exploratory qualitative study hence the quantitative stage of the research project focuses
on Research Questions 1b to 4. Subsequent analyses therefore assess the following
relationships:

1. The direct effect of level of education, entrepreneurship training, previous industry
   experience and previous entrepreneurship experience (as antecedents) on
   entrepreneurial competencies.
2. The direct effect of entrepreneurial competencies (i.e. opportunity, commitment,
   organising, relationship and personal) on firm performance.
3. The direct effect of entrepreneurial competencies (i.e. opportunity, commitment,
   organising, relationship and personal) on entrepreneurial orientation.
4. The direct effect of entrepreneurial orientation on firm performance.
5. The direct effect of previous work experience in the industry on firm performance
6. The direct effect of previous entrepreneurship experience on firm performance
7. The mediating effect of entrepreneurial orientation on the relationship between
   entrepreneurial competencies and firm performance.
8. The effect of control variables i.e. firm age, firm size, business owner’s age and
   operating capital on firm performance.

The relationships specified above are summarised in the proposed hypotheses in Table 4.01
below;
### Table 4.01: Hypotheses

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Hypothesised relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Antecedents of entrepreneurial competencies</strong></td>
<td></td>
</tr>
<tr>
<td>H1a</td>
<td>Level of education has a positive direct effect on the development of entrepreneurial competencies</td>
</tr>
<tr>
<td>H1b</td>
<td>Previous entrepreneurship training has a positive direct effect on the development of entrepreneurial competencies</td>
</tr>
<tr>
<td>H1c</td>
<td>Previous work experience in the industry has a positive direct effect on the development of entrepreneurial competencies.</td>
</tr>
<tr>
<td>H1d</td>
<td>Previous entrepreneurship experience has a positive direct effect on the development of entrepreneurial competencies</td>
</tr>
<tr>
<td><strong>Direct effects</strong></td>
<td></td>
</tr>
<tr>
<td>H2</td>
<td>Entrepreneurial competencies have a positive direct effect on firm performance</td>
</tr>
<tr>
<td>H3</td>
<td>Entrepreneurial competencies have a positive direct effect on entrepreneurial orientation</td>
</tr>
<tr>
<td>H4</td>
<td>Entrepreneurial orientation has a positive direct effect on firm performance</td>
</tr>
<tr>
<td>H6</td>
<td>Previous entrepreneurship experience has a positive direct effect on firm performance</td>
</tr>
<tr>
<td>H7</td>
<td>Previous work experience in the industry has a positive direct effect on firm performance</td>
</tr>
<tr>
<td><strong>Mediating effects</strong></td>
<td></td>
</tr>
<tr>
<td>H5</td>
<td>Entrepreneurial orientation mediates the relationship between entrepreneurial competencies and firm performance</td>
</tr>
<tr>
<td><strong>Control variables</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>The business owner’s age has a negative direct effect on firm performance.</td>
</tr>
<tr>
<td></td>
<td>Firm age has a negative direct effect on firm performance</td>
</tr>
<tr>
<td></td>
<td>Firm size has a positive direct effect on firm performance</td>
</tr>
<tr>
<td></td>
<td>Operating capital has a positive direct effect on firm performance</td>
</tr>
</tbody>
</table>

### 4.4.2 Research strategy

The choice of research methodology is mainly dependent on the epistemology and ontology, objectives of the research and the research questions. The current research adopts a pragmatic epistemology, which provides a wide choice of methodology options. Consequently, the research questions are the determining factor here. In view of the aforementioned, the research strategy selected for this research project is the survey. The survey strategy is a frequently used data collection approach in business studies, and typically uses a questionnaire to collect data (Ghauri and Grønhaug, 2005). Survey research is suitable for the current research because it allows the investigation of the nature of associations among the constructs under investigation (Bryman and Bell, 2007), in this case entrepreneurial competencies, entrepreneurial orientation, human capital and firm
performance. Furthermore, questionnaire-based surveys have conventionally been the main strategy used in entrepreneurship research and research in entrepreneurial competencies specifically (Mitchelmore and Rowley, 2013). Adopting this approach therefore provides for comparison with previous research. Additionally, questionnaire-based surveys enable the researcher to collect data from a large population (Saunders et al., 2012), thereby increasing the possibility of obtaining a large number of usable responses. Another factor that renders the survey approach the research strategy of choice is that several measurement scales for entrepreneurial competencies, entrepreneurial orientation and firm performance are available in the literature that can be adapted to the current study.

The survey approach selected for this research project is the interviewer-completed face-to-face interview questionnaire. The face-to-face interview questionnaire is particularly suitable when the questions relate to complex and sensitive issues as it allows the researcher to probe, prompt and clarify any queries the respondent may have (Saunders et al., 2012). This approach is therefore appropriate for the current research which covers questions about the entrepreneur’s personal characteristics as well as information relating to the performance of their business, which may be considered sensitive by some. Another advantage of administering the questionnaire face-to-face is that the presence of the interviewer tends to generate empathy and interest in the research on the part of the respondent, resulting in high response rates (Saunders et al., 2012). This characteristic is particularly useful in the Zambian context, where the researcher discovered during the exploratory study that potential respondents are reluctant to participate in surveys because they feel they will not accrue any benefits from it or because they fear that researchers have links to tax authorities. The downside to using the face-to-face interview questionnaire is that it is very costly and time-consuming especially when the sample is geographically dispersed as it involves travelling between respondents (Bryman and Bell, 2007). This may make it challenging to achieve a large sample size. Furthermore, the presence of the interviewer may be a source of bias as some respondents may feel inclined to respond to questions in a certain way (Bryman and Bell, 2007).

It is noteworthy that Saunders et al. (2012) identify three other approaches to administering questionnaires surveys i.e. postal or mail questionnaires, web-based questionnaires or telephone questionnaires. However, these approaches could not be employed in the current study because of the absence of the relevant contact details such as telephone, email or postal address of potential respondents.
4.4.3 Measurements
A survey instrument was developed after extensive review of related literature and an exploratory qualitative study. It is noteworthy that Zambia boasts of multiple local languages spoken, however, English is the country’s official language and the language dominantly used by businesses. The questionnaire is therefore prepared in English (see Appendix C), and comprises five sections:

1) General information about the business (i.e. business name, business address, year of establishment, products offered and ownership structure).
2) The profile of the business owner (i.e. gender, age, marital status, level of education, field of study, work experience, entrepreneurship experience).
3) Entrepreneurial orientation (i.e. risk taking, innovativeness, proactiveness).
4) Entrepreneurial competencies (i.e. opportunity, commitment, organising, relationship, personal).

The main sections of the questionnaire cover entrepreneurial orientation, entrepreneurial competencies and firm performance constructs.

4.4.3.1 Entrepreneurial orientation (EO)
In the current research, the EO construct is measured on a scale adapted from Hughes and Morgan’s (2007) nine-item EO scale. The authors reported item-total scale correlations ranging between .76 and .87 and Cronbach’s alpha >.70. An additional item (i.e. “I consider myself to be a risk taker”) is incorporated into the original scale on the basis that some respondents stated that they considered themselves to be risk-takers when asked questions about risk-taking during the exploratory study. The inclusion of this new item brings the total number of measurement items to 10 as shown in Table 4.02;
The measurement scale was adapted to suit the needs of the research context following an observation during the pilot study that some of the wording was difficult for the less educated respondents to understand. Subsequently, the language on some of the measurement items was simplified. For example, having been modified, measurement item number 2 now reads: “The term risk taker is considered a positive quality for people in our business”. In the original scale, this measurement item read: “The term risk taker is considered a positive attribute for people in our business.” Similarly, after modification, measurement item number 4 reads: “Our business encourages looking for opportunities and trying them out”, while the original item read: “our business emphasizes both exploration and experimentation for opportunities.”

Participants are asked to indicate the number that best represents their opinion against each statement on a 7-point Likert scale with options ranging from 1 (strongly disagree) to 7 (strongly agree). A 7-point Likert scale is selected for measuring the EO construct in the current study because this is consistent with the original measurement scale in Hughes and Morgan (2007). Other studies have also used a 7-point Likert scale to measure the EO construct (e.g. Wang, 2008; Lumpkin and Dess, 2001; Miller, 1983).
4.4.3.2 Entrepreneurial competencies

Five sets of entrepreneurial competencies are incorporated in the main study i.e. opportunity, commitment, organising, relationship and personal competencies. The measurement scales used to measure opportunity, relationship, organising and commitment entrepreneurial competency constructs are adapted from a measure developed and validated by Man (2001). Internal consistencies above 0.70 were reported for this measure.

The original measurement scales for the entrepreneurial competency constructs are adapted in this study to include the findings of the exploratory qualitative study. During the analysis of data collected in the exploratory study, statements providing evidence of behaviours reflecting the proposed competency dimensions were extracted. These are included in the measurement scales as they are a reflection of the behaviours associated with the competency constructs within the current study context. Furthermore, the language in some of the measurement items is simplified to accommodate the needs of the sample, as was done for the entrepreneurial orientation construct above. Each of these competency dimensions is measured on a seven-point Likert scale, with options ranging from 1 (strongly disagree) to 7 (strongly agree) to be consistent with the original measurement scales. Tables 4.03, 4.04, 4.05, 4.06 and 4.07 below show the original measurement scales and the measurement scales after adaptation to the current study context;

Table 4.03: Opportunity competencies

<table>
<thead>
<tr>
<th>Original opportunity competencies measurement scale</th>
<th>Adapted opportunity competencies measurement scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Identify goods or services customers want</td>
<td>I identify products or services which customers want</td>
</tr>
<tr>
<td>2 Perceive unmet customer needs</td>
<td>I identify products or services which customers need but are not offered on the market</td>
</tr>
<tr>
<td>3 Actively look for products or services that provide real benefit to customers</td>
<td>I actively look for products or services that provide real benefit to customers</td>
</tr>
<tr>
<td>4 Seize high quality business opportunities</td>
<td>I identify good opportunities to do business</td>
</tr>
<tr>
<td>5 Evaluate the advantages and disadvantages of potential business opportunities</td>
<td>I carefully look at the advantages and disadvantages of business opportunities before investing in them</td>
</tr>
</tbody>
</table>

As can be noted from Table 4.03, the original number of measurement items (5 items) is maintained for the opportunity competencies construct. However, adaptation is made to the language in the measurement items to simplify it.


<table>
<thead>
<tr>
<th>Original relationship competencies measurement scale</th>
<th>Adapted relationship competencies measurement scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Create a distinctive image for the firm</td>
<td>I supply customers with the goods or services they specifically want</td>
</tr>
<tr>
<td>2 Maintain personal network of work contacts</td>
<td>I make customers feel welcome by being friendly to them</td>
</tr>
<tr>
<td>3 Understand what others mean by their words and actions</td>
<td>I encourage customer feedback and use it to improve our service</td>
</tr>
<tr>
<td>4 Deal with complaints</td>
<td>I deal with customer complaints quickly</td>
</tr>
<tr>
<td>5 Communicate with others effectively</td>
<td>I maintain regular communication with customers and employees</td>
</tr>
<tr>
<td>6 Develop long-term trusting relationships with others</td>
<td>I develop long-term trusting relationships with our customers and employees</td>
</tr>
<tr>
<td>7 Negotiate with others</td>
<td>I negotiate with our customers e.g. prices</td>
</tr>
<tr>
<td>8 Build and use an informal relational network</td>
<td>I negotiate with our employees e.g. employment conditions, work targets</td>
</tr>
<tr>
<td>9 Interact with others</td>
<td>I interact with our customers and build friendships with them</td>
</tr>
<tr>
<td>10 Resolve disputes among others</td>
<td>I resolve conflict among employees</td>
</tr>
</tbody>
</table>

Measurement items 6, 7, 8 and 10 in the original relationship competencies scale are replaced with statements made by respondents in the exploratory study that are more representative of relationship competencies in the current study context. Additionally, where the original scale uses the term “others” to refer to the various stakeholders to the business (i.e. items 1, 2, 3, 4, 8 and 9), this term is replaced with either customers or employees or both as these were identified as the main stakeholders to the businesses sampled in the qualitative study.
Table 4.05: Organising competencies

<table>
<thead>
<tr>
<th>Original organising competencies measurement scale</th>
<th>Adapted organising competencies measurement scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Plan the operations of the business</td>
<td>I plan the operations of the business</td>
</tr>
<tr>
<td>2 Plan the organisation of different resources</td>
<td>I plan how different resources will be organised in the business e.g. finances, employees</td>
</tr>
<tr>
<td>3 Acquire resources and capabilities from inside and outside the firm</td>
<td>I get resources and capabilities from inside and outside the firm</td>
</tr>
<tr>
<td>4 Organise people</td>
<td>I organise employees to get work done</td>
</tr>
<tr>
<td>5 Motivate people</td>
<td>I motivate employees through bonuses, meals, transport money etc…</td>
</tr>
<tr>
<td>6 Delegate effectively</td>
<td>I give employees responsibilities and the right to make decisions</td>
</tr>
<tr>
<td>7 Supervise subordinates</td>
<td>I maintain close supervision of employees to ensure they perform</td>
</tr>
<tr>
<td>8 Organise resources</td>
<td>I organise resources for the business</td>
</tr>
<tr>
<td>9 Take remedial actions to solve operational problems and difficulties</td>
<td>I take corrective actions to solve day-to-day problems and difficulties.</td>
</tr>
<tr>
<td>10 Lead subordinates</td>
<td></td>
</tr>
<tr>
<td>11 Keep organisation running smoothly</td>
<td></td>
</tr>
<tr>
<td>12 Co-ordinate tasks</td>
<td></td>
</tr>
</tbody>
</table>

As with the other constructs, the language in the original measurement scale for organising competencies is adapted slightly to simplify it. Additionally, three measurement items (i.e. items 10, 11 and 12 above) are removed from the measurement scale on the basis that they appear to be represented in the other measurement items.

Table 4.06: Commitment competencies

<table>
<thead>
<tr>
<th>Original commitment competencies measurement scale</th>
<th>Adapted commitment competencies measurement scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Dedicate to make the venture work whenever possible</td>
<td>I am determined to make the business work as much as possible</td>
</tr>
<tr>
<td>2 Refuse to let the venture fail whenever appropriate</td>
<td>I do not intend to quit this business</td>
</tr>
<tr>
<td>3 Make large personal sacrifices in order to ensure the venture to succeed</td>
<td>I make large personal sacrifices in order to ensure the business succeeds</td>
</tr>
<tr>
<td>4 Commit to long-term business goals</td>
<td>I am dedicated to achieving long-term business goals</td>
</tr>
<tr>
<td>5 Possess an extremely strong internal drive</td>
<td>I spend most of my time at the business</td>
</tr>
</tbody>
</table>

The same procedure followed to adapt the original measurement scales of the other entrepreneurial competency dimensions is applied to the commitment competency domain. Item 5 i.e. “possess an extremely strong drive” is removed from the scale as it was described
as being “vague” during the pilot study and is replaced with “I spend most of my time at the business” as the latter emerged as a prominent statement reflecting commitment in the qualitative stage of the research.

The final set of entrepreneurial competencies (i.e. personal competencies) emerged from the exploratory qualitative study (refer to Chapter 5 for a description of this set of competencies). This construct comprises items relating to qualities or characteristics which the respondents felt were necessary for running their business successfully. To measure the construct, respondents are asked to indicate to what extent they agree or disagree with each statement on a 5-point Likert scale with values ranging from 1 (strongly disagree) to 5 (strongly agree). The items included in the measurement scale are shown in Table 4.07

<table>
<thead>
<tr>
<th>Personal competencies measurement scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 I have an outgoing personality</td>
</tr>
<tr>
<td>2 I have patience when it comes to running my business</td>
</tr>
<tr>
<td>3 I am enthusiastic about achieving my business goals</td>
</tr>
<tr>
<td>4 In general, I consider myself to be hard working</td>
</tr>
<tr>
<td>5 I am determined to make my business succeed</td>
</tr>
<tr>
<td>6 My leadership skills help my business to do well</td>
</tr>
<tr>
<td>7 My administration skills help my business to do well</td>
</tr>
<tr>
<td>8 I have financial discipline in that I do not use business finances on personal expenses</td>
</tr>
</tbody>
</table>

4.4.3.3 Firm performance

Assessing firm performance is a crucial subject particularly in small business research. It enables researchers and business practitioners to explore ways in which small businesses, which hold the majority of jobs in most economies, can further be developed to make a meaningful contribution to the overall economy. Owing partly to the nature of small businesses e.g. lack of financial reporting obligation, inconsistent record-keeping and lack of historical data (Chandler and Hanks, 1993; Brush and Vanderwerf, 1992), performance measurement remains a challenge in small business research. As a result, the use of both subjective and objective measures to assess firm performance is widely recommended (Haber and Reichel, 2007). Furthermore, multiple dimensions of the construct are to be considered (Simson et al., 2012).
In the current research, firm performance is assessed using subjective measures primarily because of unwillingness on the part of respondents to provide financial data. As observed by Dess and Priem (1995), the fact that respondents are often reluctant to supply sensitive information to outsiders renders the collection of objective data very complicated. Subjective measures are especially useful in researching small business performance where the absence of a legal obligation to report financial information makes it extremely challenging to obtain objective performance-related data. For example, Honig (1998) argues that income-related information is considerably difficult to obtain as “typically the proprietor of an informal firm will have little if any accurate conception of profit or income, as accounting and bookkeeping are rarely evident, whereas personal and business accounts typically mingle within a single cash box” (p. 374). Furthermore, Covin and Lumpkin (2011) argue that subjective measures of organizational results are more useful and reliable in the context of SMEs because temporary reductions in the results of such businesses may not necessarily be an indication of less successful performance. Several studies (e.g. Camisón and Villar-López, 2014; Wall et al., 2004) have reported a high correlation between objective and subjective data. Moreover, precedence has been established for the use of subjective measures to measure firm performance in small businesses (e.g. Brush and Chaganti, 1998; Chandler and Hanks, 1993; Brush and Vanderwerf, 1992).

Three dimensions of performance are incorporated in the study:

1) The perceived growth of the business

2) The perceived growth of the business in relation to competitors

3) The business owner’s satisfaction with the performance of the business

Brush and Vanderwerf (1992) argue that while annual sales, number of employees, return on sales, growth in sales and growth in employees are the most frequently used performance measures, growth is the most appropriate measure of SME performance. The use of subjective measures of the business owner’s satisfaction with performance is also recommended where only self-report data are available (Chandler and Hanks, 1993). This approach allows researchers to escape the restrictions imposed by objective performance measures.

The perceived growth of the business is measured using a 5-item scale in the current study. The items are adapted from Chandler and Hanks (1993) and Lerner and Almor (2002) and include growth in sales, net profit, number of customers, number of employees and the salary of the business owner. Respondents are asked to select the option that best describes the
growth of their business over a two-year period on a 5-point Likert scale with options ranging from 1 (decreased significantly) and 5 (increased significantly).

The perceived growth of the business in relation to competitors is measured using a 5-item scale also adapted from Chandler and Hanks (1993) and Lerner and Almor (2002). The items include growth in sales, profitability, number of customers, number of employees and the salary of the business owner. An additional item i.e. ability to fund business growth from profit is incorporated in the scale from Covin and Slevin (1990). On a 5-point Likert scale ranging from 1 (decreased significantly) to 5 (increased significantly), respondents are asked to indicate how each variable has changed in comparison to their competitors over a period of two years.

The business owner’s satisfaction with firm performance is measured using a scale adapted from Chandler and Hanks (1993) in the present study. The items in the original scale include sales growth, net profits, growth in market share, return on sales, cash flow, return on investment, net profits and return on assets. This scale is adapted by excluding three items i.e. cash flow, return on investment and return on assets on the basis that it was observed during the exploratory study that respondents were generally unable to provide this information. Alternatively, four new items are added to the scale to incorporate the findings of the exploratory qualitative study (work of employees and general behaviour of employees) and items identified in the literature (current sales level, overall business performance). The adapted measurement scale therefore comprises eight items namely sales growth, net profits, growth in market share, current sales level, salary of business owner, the work of employees, general behaviour of employees and overall business performance. Respondents are asked to indicate the extent to which they are satisfied with the performance of their business over the past two years on each respective variable, using a 5-point Likert scale with options ranging from 1 (not satisfied at all) to 5 (very satisfied). The measurement scale for the firm performance construct is shown in Table 4.08.
Table 4.08: Firm performance

<table>
<thead>
<tr>
<th>Item number</th>
<th>Performance indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth in business</td>
<td>1 Growth in sales</td>
</tr>
<tr>
<td></td>
<td>2 Growth in net profits</td>
</tr>
<tr>
<td></td>
<td>3 Growth in number of customers</td>
</tr>
<tr>
<td></td>
<td>4 Growth in number of employees</td>
</tr>
<tr>
<td></td>
<td>5 Growth in the salary of the business owner</td>
</tr>
<tr>
<td>Growth of business in relation to competitors</td>
<td>1 Growth in sales</td>
</tr>
<tr>
<td></td>
<td>2 Growth in net profits</td>
</tr>
<tr>
<td></td>
<td>3 Growth in number of customers</td>
</tr>
<tr>
<td></td>
<td>4 Growth in number of employees</td>
</tr>
<tr>
<td></td>
<td>5 Growth in the salary of the business owner</td>
</tr>
<tr>
<td>Satisfaction with business performance</td>
<td>1 Current sales level</td>
</tr>
<tr>
<td></td>
<td>2 Growth in sales</td>
</tr>
<tr>
<td></td>
<td>3 Net profits</td>
</tr>
<tr>
<td></td>
<td>4 Salary of business owner</td>
</tr>
<tr>
<td></td>
<td>5 The work of employees</td>
</tr>
<tr>
<td></td>
<td>6 General behaviour of employees</td>
</tr>
<tr>
<td></td>
<td>7 Overall business environment</td>
</tr>
</tbody>
</table>

4.4.3.4 Human capital
In this research, human capital is operationalised in terms of the business owner’s level of education, previous work experience in the industry, previous entrepreneurship experience and entrepreneurship training. These variables have been used as proxy to represent human capital in prior studies (e.g. Haber and Reichel, 2007; Colombo and Grilli, 2005; Lerner et al., 1997). Highest level of education is determined using a seven-point ordinal scale covering the education brackets shown in Table 4.09;

Table 4.09: Level of education scale

<table>
<thead>
<tr>
<th>Item number</th>
<th>Education bracket</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No formal education</td>
</tr>
<tr>
<td>2</td>
<td>Basic education (grades 1 to 9)</td>
</tr>
<tr>
<td>3</td>
<td>Secondary education (grades 10 to 12)</td>
</tr>
<tr>
<td>4</td>
<td>Trade School or College (certificate holder)</td>
</tr>
<tr>
<td>5</td>
<td>College/University Diploma</td>
</tr>
<tr>
<td>6</td>
<td>University Degree</td>
</tr>
<tr>
<td>7</td>
<td>Master</td>
</tr>
<tr>
<td>8</td>
<td>PhD</td>
</tr>
</tbody>
</table>

A similar scale was used in Segal et al. (2010). However, some the categories used in the current research reflect the levels of education identified in the Zambian context during the exploratory qualitative study. Previous work experience in the industry, previous
entrepreneurship experience and entrepreneurship training are measured using a dichotomous scale with ‘yes’ and ‘no’ as the response options respectively. The questions asked for these variables are as follows;

“Did you work in this industry before starting your own business?”
“Did you own another business before starting the current one?”
“Have you attended any training or workshops related to running this business?”

4.4.3.5 Control variables
Four control variables are incorporated in the study: firm age, firm size, business owner’s age and availability of operational financial capital. Firm age (measured by the number of years since establishment of the business), firm size (measured by number of employees) and business owner’s age (measured using an ordinal scale) have been used as control variables in previous studies (e.g. Javalgi and Todd, 2011; Stam and Elfring, 2008; Kraus et al., 2012; Kanti Prasad et al., 2013). The age and size of a business are particularly considered to be important when investigating firm performance (Blackburn et al., 2013). Operating financial capital is also included as a control variable because previous studies (e.g. Wiklund, 1999) have suggested that controlling for the impact of financial capital is important when investigating firm-level performance. Moreover, financial capital also emerged as a potentially very significant determinant of firm performance from the exploratory qualitative study conducted in the first phase of the current research. In the context of this research, availability of operating financial capital is estimated by asking the respondents to indicate how often their business has enough financial capital to cover the costs of running the business. A five-point ordinal scale is used with options ranging from 1 (never) to 5 (always).

Other demographic and firm profile information collected include the business owner’s marital status, business name and address, products offered, firm ownership structure and ownership of other businesses.

4.4.4 Pilot study and survey refinement
Having operationalised the main constructs in the study, pre-tests of the questionnaire were conducted with the aim of refining the survey instrument and determining its face validity. Pilot testing allows the researcher to check for any potential difficulties that might arise from the level of difficulty of the questionnaire, understanding of the respondents and their willingness to respond to sensitive information, as well as the length of time required to complete the questionnaire (Ghauri and Grønhaug, 2005).

Questionnaires were distributed using a combination of referrals and snowballing to seven (7) SME owners in Zambia’s apparel industry and three (3) academics. The respondents
were asked to complete the questionnaire and comment on any difficulties they encountered during the process. It was found that there was need to clarify a few survey items, particularly by revising the wording and sentence construction of some measurement items. Consequently, the affected statements were revised and more simplified language was used to suit the requirements of the context. Given the small sample size of the pilot study, an exploratory factor analysis (EFA) could not be performed on the data collected. Nonetheless, this did not present a major limitation because the bulk of the measurement items originated from previous research and had been tested for validity and reliability.

4.4.5 Data collection
Data consisted of a cross-sectional sample of women SME owners in Zambia’s apparel industry located in the Lusaka, Copperbelt, Central and Southern provinces. As stated earlier, these provinces collectively house approximately 65% of all businesses in Zambia (MCTI, 2007). Data collection was conducted from August to November 2013, covering the major towns of Lusaka, Kabwe, Kitwe, Ndola, Luanshya, Chambishi, Chingola and Choma. The questionnaires were administered to 299 women business owners by the researcher and three trained research assistants in a face-to-face fashion. It was discovered that respondents were generally reluctant to complete the questionnaires in the absence of the researcher, citing busy schedules and the fact that they had not personally benefitted from participating in previous studies as reasons for their unwillingness to participate. Furthermore, some feared that researchers might be representatives of government tax authorities who could potentially use the information gathered against them. A face-to-face approach therefore proved particularly effective at encouraging participation, assuring respondents of the potential benefits of the study and assuring them that the research had no links with tax authorities. It also allowed the researcher to clarify the options on the Likert scales to respondents who were not familiar with them. The questionnaires were completed on behalf of the respondents to make the process easier for those that were not highly educated, as well as to accommodate those who felt that self-completing the questionnaire would take up too much of their time.

A combination of convenience sampling and snowballing was used to select the sample. Convenience sampling has been used in previous entrepreneurship studies (e.g. Mitchelmore and Rowley, 2013; Davey et al., 2011; Xiang, 2009; Ahmad, 2007), and is especially useful when achieving a sufficient level of response is a challenge (Bryman and Bell, 2007). As stated earlier in the chapter, the agency responsible for registering all companies in Zambia could not provide a register of SMEs because its system of registration was not designed to categorise the businesses according to size, sector and/or business activity. Additionally,
while a database comprising the membership list of the Zambia Development Agency (ZDA) was made available to the researcher, efforts to elicit responses from business owners listed on it were to a large extent futile. The database was missing information about the businesses such as industry, gender of business owner and/or products offered, thereby making it very difficult to identify businesses relevant to this research. Furthermore, it was observed, that the majority of the businesses on the ZDA membership list operated in other sectors of the economy e.g. agriculture. Not only that but also the contact details of the businesses mostly turned out to be dated.

Note should be made that while traditional contexts (i.e. developed countries) have reasonably detailed and dependable information on businesses to develop a sampling frame, this may not be the case in non-traditional contexts such as developing countries (Kriauciunas et al., 2011). The authors argue that sampling frames and survey administration techniques ought to be context-specific and therefore in the absence of established databases or where firms are privately owned or industry players are still emerging, significant adaptation needs to be made. Consequently, in the current research respondents were identified through referrals from three business associations that have membership-based networks with SMEs in Zambia namely Zambia Chamber of Small and Medium Business Associations (ZCSMBA), Zambia Federation of Women in Business (ZFWIB) and Women Entrepreneurship Development Association of Zambia (WEDAZ). However, this yielded only 25 responses. Considering the unsatisfactory response rate, a change of strategy was deemed necessary. Accordingly, a decision was made to use door-to-door visits at shopping centres to elicit responses from the business owners. A snowball approach was also incorporated where the business owners who participated in the survey were asked to identify other potential respondents. The latter method followed an observation that some potential respondents were reluctant to participate in the survey unless the researcher had been referred to them by someone they knew or trusted, which is in line with Stopher’s (2011) argument that respondents may be more willing to participate in a survey if it is endorsed by a trusted authority. The two approaches collectively generated a further 274 responses.

4.4.6 Data analysis technique
Structural equation modelling (SEM) (using SPSS Amos 20 and 22 software) was selected as the data analysis technique to estimate the postulated relationships among the variables in the current study. SEM (also referred to as causal modelling, causal analysis, simultaneous equation modeling, analysis of covariance structures, path analysis or confirmatory factor analysis) is a collection of statistical techniques that make it possible to investigate
relationships between one or more independent variables and one or more dependent variables simultaneously (Tabachnick and Fidell, 2007; Kline, 1998). The authors point out two major advantages of using SEM; first, it estimates and removes measurement error within the analysis, resulting in error-free relationships among factors. Second, SEM is the only technique that allows comprehensive and simultaneous analysis of complex and multidimensional relationships. Further advantages identified by Byrne (2010) include; 1) SEM allows the modeling of multivariate relations and assessment of indirect effects. 2) SEM is a confirmatory rather than exploratory technique, rendering it suitable for analyzing data for inferential purposes. 3) Whereas most other methods can only use observed variables, in SEM it is possible to incorporate both observed and unobserved (latent) variables in an analysis. The above desirable characteristics have resulted in SEM being a popular statistical technique for estimating models.

Of interest to this study is confirmatory factor analysis (CFA) that may be performed by means of SEM. CFA tests the extent to which the measured variables are representative of the construct they are hypothesized to measure (Hair et al., 2010). It serves to validate the fit between the data and the proposed structure of constructs. The dimensionality of the latent variables (i.e. both independent and dependent variables) in the current study is confirmed and validated using CFA because this approach is appropriate in instances where the dimensionality of the variables in question is determined a priori based on previous research (Kline, 2005). Therefore, confidence regarding the dimensions of the main constructs i.e. entrepreneurial competencies, entrepreneurial orientation and performance measures is drawn from extensive previous research on each respective construct (Ahmad, 2007; Man et al., 2002; Man, 2001; Lumpkin and Dess, 1996; Chandler and Hanks, 1993; Covin and Slevin, 1991; Miller, 1983). Several other justifications exist for the use of CFA. For example, Muthén and Muthén (2006) argue that CFA allows researchers to determine the degree to which predetermined dimensions of a particular construct fit a sample. When considered in relation to EFA, CFA has been found to be more statistically robust when the aim of the analysis is hypothesis testing, while EFA is useful for generating hypotheses (Crowley and Fan, 1997). Additionally, CFA provides for an overall test of the measurement model through the chi-square test, an aspect which is absent when EFA is undertaken. Nevertheless, while the distinction between exploratory and confirmatory research is a convenient one, it is not unambiguous (Anderson and Gerbing, 1988). As Joreskog (1974, p. 2) notes, “many investigations are to some extent both exploratory and confirmatory since they involve some variables of known and other variables of unknown composition.” This
is the case in the current research, which seeks to analyse variables reported in the literature as well as those specific to the Zambian context.

4.4.7 Data preparation and assumption testing

The data preparation stage represents an important pre-requisite to any data analysis, serving the main purpose of ensuring that data are complete and valid by allowing the researcher to deal with missing data, identify outliers and test for assumptions underpinning the relevant data analysis techniques (Hair et al., 2010).

4.4.8 Data editing

The first step in the data preparation process involves data editing. In the current research, this comprises checking individual questionnaires to identify any ineligible and unusable questionnaires. Eligibility is checked by confirming the gender of the business owner and the type of products being offered by the business, while usability is assessed on the basis of completeness of the questionnaire. All questionnaires were found to be eligible for further analysis given that by design and as a pre-condition, the survey was only administered to female business owners of SMEs selling clothing in Zambia. Data were then coded and entered in SPSS 20 software. The data entry process revealed that out of the 299 questionnaires, 143 (47.8%) had missing data and were therefore potentially unusable.

4.4.9 Missing data analysis

Missing data is described as “one of the most pervasive problems in data analysis” (Tabachnick and Fidell, 2007, p. 62). Missing data generally arise as a result of data collection problems and/or data entry problems, and must be dealt with because they can affect the validity of the research findings (Hair et al., 2003). Data collection problems include failure to get the answer for certain questions in the questionnaire, unwillingness to answer sensitive items, the respondent no longer wishing to participate and the respondent not being available on the day of data collection (Byrne, 2010). Tabachnick and Fidell (2007) identify three categories of missing data: missing completely at random (MCAR), missing at random (MAR) and missing not at random (MNAR). When data are MCAR, it is not possible to predict the distribution of the missing data. On the contrary, when data are MNAR other variables in the dataset can be used to determine the pattern of missing data. In the last category, the problem of missing data is related to the dependent variable and hence cannot be disregarded. Literature suggests two main approaches to handling missing data; 1) deleting the affected cases or variables and 2) estimating missing data.

Deleting affected cases or variables - There is no generally agreed rule regarding how much missing data qualifies a questionnaire for elimination from an analysis although suggestions do exist. For example, Tabachnick and Fidell (2007) propose that affected cases
or variables should be deleted when only a few cases have missing data that is random, or if the missing data relates to a small number of variables which are not vital for the analysis or which share a high correlation with other complete variables. Hair et al. (2003) suggest that as a rule of thumb, questionnaires with at least 10% missing data should be deleted.

**Estimating missing data** - This approach is also known as imputation, and is described as “the process of estimating the missing value based on valid values of other variables and/or cases in the sample (Hair et al., 2010, p. 50). Imputation can be done based on the researcher’s prior knowledge in the research area or using techniques available in data analysis software such as SPSS (Tabachnick and Fidell, 2007). One popular data imputation technique is mean substitution, which involves calculating the mean of the affected variable using available data and then replacing the missing values on that variable with the mean.

As stated in the data editing section above, 143 questionnaires out of 299 were found to have missing data in the current research. An examination of the affected cases indicated that data were missing at random, spread across various questions in the questionnaire. As a first step towards correcting the situation, a decision was made to try and contact the affected respondents through the telephone numbers provided during the structured interview and attempt to complete the questionnaires over the telephone. With this method, a total of 77 questionnaires were completed, bringing the total number of usable questionnaires to 233. Note should be made that this approach also allowed the researcher to verify the respondents and their contact details. The remaining 66 incomplete questionnaires were not included in the analysis on the basis that they were missing at least 10% of the responses or missing data on the dependent variable (Tabachnick and Fidell, 2007; Hair et al., 2003).

**4.4.10 Assessment of normality and outliers**

The majority of SEM estimation techniques are premised on the assumption that data in the sample under investigation are normally distributed. Non-normality can be determined by checking for skewness and kurtosis, as well as examining the data for the presence of both univariate and multivariate outliers in the measured variables (Tabachnick and Fidell, 2007). Skewness indicates the symmetry of the distribution, while kurtosis is a reflection of the peakedness of the distribution. In a symmetrical (normal) distribution, both skewness and kurtosis are equal to zero (Hair et al., 2003). The problem presented by skewness is that it tends to affect tests of means (Byrne, 2010), whereas non-normal kurtosis tends to underestimate the variance of a variable (Tabachnick and Fidell, 2007). While there is no consensus on what constitutes extreme skewness and kurtosis, it has been suggested that univariate skewness values greater than +/-1 may indicate problematic non-normality (Hair et al., 2003). Similarly, univariate kurtosis values greater than +/-3 (Hair et al., 2003) or ≥7
(West et al., 1995) are indicative of problematic non-normality. Nevertheless, Tabachnick and Fidell (2007) argue that skewness and kurtosis do not result in significant difference in an analysis when the sample size is large i.e. ≥ 200. In the current study, univariate skewness values ranged from -1.954 to 0.547, while univariate kurtosis values ranged from -1.997 to 6.200 signifying non-normality based on Hair et al. (2003)

Non-normality indicated by multivariate kurtosis i.e. when the multivariate distribution of the observed variables comprises tails and peaks that vary from those in a normal distribution, is particularly problematic as it tends to severely affect tests of variances and covariances (Byrne, 2010). In SPSS AMOS, multivariate kurtosis is measured by the critical ratio (C.R) value which can be obtained as part of the normality tests output file, and it represents Mardia’s (1970) normalised estimate of multivariate kurtosis. According to Bentler (2005), non-normality is indicated by C.R. values > 5. Ory and Mokhtarian (2010) propose that the severity of kurtosis should be considered in terms of three categories, with multivariate kurtosis values < 1 indicating negligible non-normality, 1 to 10 indicating moderate non-normality, and greater values signifying severe non-normality. The multivariate kurtosis value (C.R) in the current study was 7.142. Following Ory and Mokhtarian’s (2010) recommendation, this finding is suggestive of a moderately non-normally distributed sample.

As stated earlier, another important way of determining that the assumption of normality is met is by checking for univariate and multivariate outliers in the data. Outliers are defined as “cases whose scores are substantially different from all the others in a particular set of data” (Byrne, 2010, p. 105), and they result in both Type I and Type II errors. While a univariate outlier has an extreme score on one variable, a multivariate outlier has extreme scores on multiple variables (Kline, 2005). One commonly used method of identifying outliers is to compute the squared Mahalanobis distance (D²) for each case, which measures “the distance in standard deviation units between a set of scores for one case and the sample means for all variables” (Byrne, 2010, p. 10). An outlier has a D² value that is distinctively distant from all the other values. For the current research, these values were obtained as part of the output file in SPSS AMOS. A check on the D² values revealed a number of cases with extreme values. Following Ory and Mokhtarian’s (2010) recommendation, a total of thirteen cases were removed from the analysis, leaving a total sample size of 220.

Subsequently, prior to conducting data analysis using structural equation modelling, preliminary assessments i.e. reliability and validity of the measurements as well as an assessment of common method variance is conducted.
4.4.11 Reliability and validity assessment of measures

One of the fundamental goals of every researcher is to minimise measurement error, and therefore ensure that the population under investigation is as closely represented by the sample as possible (Hair et al., 2010). Reliability and validity assessments are recommended as a pre-requisite to any statistical analysis, to ensure that the aforementioned goal is attained and a high level of confidence in the outcome of the statistical solution is achieved (Tabachnick and Fidell, 2007).

Reliability is concerned with measuring the internal consistency of a construct (Nunnally, 1978). Tabachnick and Fidell (2007) describe reliability in terms of the stability of a measure when measurement is taken at different times and in different ways. This concept suggests that more reliable measures will demonstrate greater consistency and stability over time, when measurement is taken repeatedly (Gefen et al., 2000).

The internal consistency method is used to assess the reliability of measurement scales in the current study. This is a commonly used method and is based on the premise that items measuring the same construct should be highly inter-correlated (Hair et al., 2010). The internal consistency method determines how much systematic variance is in a measurement scale by correlating scores achieved by one scale with scores from a form of duplication of the scale (Peter, 1979). With this approach, the measurement scale is applied to individuals at one point in time and subsets of the items in the measurement scale are then correlated to establish reliability. A high correlation indicates that the majority of the variance is systematic, and with a certain degree of consistency, the measure can be deemed reliable (Peter, 1979).

The internal consistency techniques employed in the current study are Cronbach’s alpha and construct reliability. Cronbach’s alpha (also known as the reliability coefficient or coefficient alpha) is the most widely used measure of scale reliability in the social sciences and is considered to be the most suitable measure of internal consistency (Peterson and Kim, 2013; Churchill and Iacobucci, 2005; De Vaus, 2002). It measures the consistency of the entire measurement scale, by testing the extent to which multiple items representing a particular construct belong together. Nunnally (1967) proposes that a minimum coefficient alpha value of .60 is acceptable to demonstrate internal consistency, whereas a coefficient alpha of above .70 is good (Nunnally and Bernstein, 1994; Nunnally, 1978). Cronbach’s alpha is used to assess the internal consistency of measurement scales used in the current study because in addition to its wide use in the literature, it is a more practical option compared to an alternative approach called the test-retest method, which requires the administration of the scale at two different times to the same sample. One major limitation
of using Cronbach’s alpha is that its value relates positively to the number of items in a scale i.e. the longer the scale, the higher the Cronbach’s alpha value (Streiner, 2003).

**Construct reliability (CR)** is incorporated as an additional measure of reliability in this research following the recommendation by Hair *et al.* (2010) that multiple measures of reliability should be used in a study. Furthermore, CR is appropriate for the current study because it is usually used in SEM models. Some have argued that construct reliability results in better estimates of the real reliability of a scale compared to Cronbach’s alpha because construct loadings are allowed to vary whereas they are constrained to be equal in the case of Cronbach’s alpha (Peterson and Kim, 2013).

Based on the Fornell and Larcker (1981) formula, the CR value is computed using the squared sum of the factor loadings ($L_i$) for each construct and the sum of the error variances for a construct ($e_i$) as:

\[
CR = \frac{\left( \sum_{i=1}^{n} L_i \right)^2}{\left( \sum_{i=1}^{n} L_i \right)^2 + \left( \sum_{i=1}^{n} e_i \right)^2} 
\]

Therefore, Construct Reliability (CR) = \{((sum of standardized factor loadings) $^2$) / \{(sum of standardized loadings) $^2$ + (sum of indicator measurement errors)$\}.

The rule of thumb is that values greater than .70 indicate internal consistency (i.e. all items measure the same latent construct) and therefore the scale portrays good reliability (Segars, 1997; Thompson *et al.*, 1995). However, it is noteworthy that reliability estimates between .6 and .7 are considered acceptable if other measures of construct validity are good (Hair *et al.*, 2010).

An alternative approach to the internal consistency method is the test re-test method of assessing reliability. This approach involves applying the same measure to the same individuals at two different time periods e.g. taking responses for the same survey from an individual at two different time periods. To compute the reliability coefficient, the scores obtained from the two sets of responses are correlated to check for consistency. Subsequently, interpretation is done based on the stability of performance of the measure over a period of time. This approach has been described as the simplest way of assessing
reliability, however it is often not practicable to administer a survey to the same sample at two time periods (De Vaus, 2002). This limitation renders the test re-test method inappropriate for the current research context where access to potential respondents is a considerable challenge. Other limitations associated with this approach include; different results may be achieved depending on length of time between first measurement and second measurement and initial participation in the survey may cause changes in the subjects (Peter, 1979). Considering the aforementioned limitations, the test re-test method is not used in the current research.

**Validity** refers to the degree to which a measure or group of measures can accurately measure the intended concept (Kline, 2005). It describes how well the measure represents the concept and the extent to which it boasts of the absence of systematic and non-systematic error. Two of the most widely acknowledged types of validity i.e. convergent validity and discriminant validity are assessed in the current study. **Convergent validity** measures the extent to which measures of the same construct are correlated, with high correlations signifying that the intended concept is being measured. When the individual measurement items of a construct share a high percentage of variance in common, they are said to converge and therefore demonstrate convergent validity (Hair et al., 2010). As suggested by Mullen et al. (2009), convergent validity is estimated by assessing the size of the factor loadings, average percentage of variance extracted and reliability in the current study. These techniques are discussed below;

**Size of factor loadings**
The size of the factor loadings represents one important means of establishing convergent validity, with high loadings providing evidence of convergence. As a rule of thumb, the minimum requirement is that all factor loadings must achieve statistical significance, with standardised factor loading estimates of .50 or higher (Hilderbrandt, 1987; Hair et al. 2010). Some (e.g. Bagozzi, 1981; Nunnally, 1967) have proposed values of .70 or higher to be preferable to demonstrate convergent validity. However, Cohen (1988) proposes a less stringent threshold of > .3 to be acceptable. In addition to the minimum requirement of statistical significance of all factor loadings, we adopt Cohen’s (1988) proposition of factor loadings of > .3 in this study.

**Average Variance Extracted (AVE)**
The Average Variance Extracted (AVE) is another method used to assess convergent validity. According to Fornell and Larcker (1981), while the reliability and construct reliability measures provide important information, they do not measure the amount of variance accounted for by the construct in relation to that attributed to measurement error.
Variance extracted refers to the proportion of variance in a measurement item that is explained by the construct (Hair et al., 2010). The AVE is estimated by calculating the mean variance extracted for the items associated with a particular construct using the following formula proposed by Hair et al. (2010, p.709);

\[
\frac{\sum_{i=1}^{n} L_i^2}{n}
\]

Where \( L_i \) is the standardised factor loading, \( i \) is the number of items and \( n \) is the number of items. Therefore,

\[\text{AVE} = \frac{\text{Total of all squared standard factor loadings (squared multiple correlations)}}{\text{Number of items in scale}}\]

As a rule of thumb, an AVE of .50 or higher suggests sufficient convergent validity, signifying that half the proportion of the error variance in the items is explained by the latent factor being measured (Anderson and Gerbing, 1988).

**Reliability**

Reliability may also be used as a measure of convergent validity, with coefficient alpha still dominating as the preferred reliability estimate. Hair et al. (2010) argue that construct reliability (CR) is often used in SEM models as a reliability estimate.

**Discriminant validity** is the second approach used to estimate validity in the current research. It aims at assessing to what degree a particular construct differs from other similar but distinct constructs. In order to demonstrate that a scale has discriminant validity, there is need for evidence showing that “it is unique and captures some phenomena other measures do not” (Mullen et al., 2009, p.289). According to Hair et al. (2010), discriminant validity is demonstrated when the correlation between two similar but conceptually different measures is low.

**4.4.12 Common method variance (CMV)**

Method biases represent one of the main sources of measurement error. Measurement error undermines the validity of conclusions about relationships between measures and is widely understood to comprise two components i.e. random error and systematic error (Bagozzi and Yi, 1991; Nunnally, 1978). Notwithstanding that both random and systematic errors are problematic, the latter is considered to pose a serious problem in research because “it provides an alternative explanation for the observed relationships between measures of different constructs that is independent of the one hypothesized,” Podsakoff et al. (2003,
Systematic measurement errors originate from common methods, and are known for inflating or deflating the observed relationships between constructs, thereby creating both Type I and Type II errors (Chang et al., 2010). Common method variance (CMV) is the “systematic error variance shared among variables measured with and introduced as a function of the same method and/or source” (Richardson et al., 2009, p. 763). In this context, method is defined as “the form of measurement at different levels of abstraction such as the content of specific items, scale type, response format, and the general context”, (Fiske 1982, pp. 81–84). CMV arises from the measurement method rather than from the constructs the measures represent (Bagozzi and Yi, 1991). Because it is a method bias and therefore source of measurement error, CMV may be problematic for research.

Some sources of common method biases identified by Podsakoff et al. (2003) include; 1) method effects arising from a common source rater; 2) method effects produced by item characteristics; 3) method effects produced by context measurement.

4.4.12.1 Method effects arising from a common source rater (Common method bias)
Method effects arising from a common source rater are a form of self-report bias that is produced from the fact that the same person provides information pertaining to both the predictor and dependent variables. This source of error is of particular interest to the current study because the study uses self-reported data from single informants (i.e. the business owner). Biases arising from a common source rater that may be applicable to the current study include social desirability and acquiescence. Social desirability refers to the tendency by individuals to feel the need to be accepted and to achieve social approval by conforming to culturally acceptable behaviours despite their true position on an issue (Podsakoff et al., 2003). Acquiescence (yea-saying or nay-saying) describes the tendency to agree with attitude statements without regard to their content (Winkler et al., 1982). In order to reduce the impact of the aforementioned method biases in the current research, the researcher assured the respondents of anonymity and confidentiality, emphasized the importance of answering the questions as honestly as possible and assured the respondents that there are no right or wrong answers. This approach is recommended by Podsakoff et al. (2003), who argue that it reduces the possibility of respondents completing the questionnaire in a way that is socially desirable, acquiescent and consistent with what they perceive the researcher expects as a response.

4.4.12.2 Method effects produced by item characteristics
This type of bias results from the way items are presented to the respondent. Podsakoff et al. (2003) identified the following method effects produced by item characteristics;
1) Item social desirability: related to the concept of social desirability, scholars have argued that a respondent may view the relationship between questionnaire items and constructs in terms of the extent to which they share the characteristics of social desirability.

2) Item complexity and/or ambiguity: the content of and amount of ambiguity and complexity in questionnaire items can potentially affect the relationships that emerge between the variables under investigation. Some of the causes of item ambiguity or complexity include using double-barreled questions, words with several meanings, technical jargon or infrequently used words (p. 883). This problem can be addressed by using clear, concise and specific items to measure constructs of interest (Peterson, 2000).

3) Scale format and scale anchors: The consistency resulting from the use of similar scale formats (e.g. Likert scales, semantic differential) and similar scale anchors (e.g. always vs never, strongly agree vs strongly disagree) may affect responses, thereby influencing some of the covariation detected among the constructs under investigation (p. 884).

The fact that the current research employs a survey approach to data collection makes it particularly prone to two of the method biases mentioned above i.e. item complexity and/or ambiguity and scale format and scale anchors. To minimise errors arising from complexity and/or ambiguity of questionnaire items, the questionnaire was pilot tested prior to the main study and any complex or ambiguous terms were identified and removed. According to Chang, Witteloostuijn and Eden (2010, p. 181) “these methods reduce problems in the comprehension stage of the response process”. In line with this approach, the language in some of the measurement items of the constructs under investigation was simplified to make it easier for respondents to understand the concepts. Errors relating to scale format and scale anchors were minimised by using varying scales including Likert scales, ordinal scales and dichotomous scales.

4.4.12.3 Method effects produced by measurement context.

The broader research context is responsible for this category of biases. Time, location and media employed to measure the constructs of interest are some of the main contextual influences e.g. taking measures at the same time and in the same place may result in systematic covariation among them because of the similar context (Podsakoff et al., 2003). Similarly, the medium used to collect data may breed common method variance. Within the context of the current research, this method bias may arise as a result of the use of the face-to-face approach to administering the questionnaire. This approach is associated with prompting socially desirable responses because of characteristics of the interviewer, expectations and verbal idiosyncrasies (Podsakoff et al., 2003). The impact of this source of method bias was minimised by using standardised probes where probing was required and
avoiding prompting, following Bryman and Bell’s (2007) recommendation. Furthermore, to minimise the effects of the characteristics of the interviewer, the researcher commended the respondents and assured them that what they were doing (running their own business) was inspirational to the researcher. This in turn encouraged the respondents to provide honest answers to questions as they felt a sense of pride in talking about their business.

Despite the various strategies available for avoiding CMV or reducing its impact on research, situations have been identified where contextual factors may render CMV tolerable. For example, Chang, Witteloostuijn and Eden (2010, p. 182) note that “sometimes common methods cannot be totally avoided, for example, if the research probes into difficult waters where data of any kind are scarce such as in severely understudied parts of the world (Africa, the Middle East).” This statement is representative of the current research context (Zambia).

Various techniques may be used to test for CMV and determine to what extent such bias exists including the Harman’s one-factor test, the correlational marker technique and the common latent factor method. The Harman’s one-factor test represents one of the most widely used techniques of addressing the issue of common method variance (Chang, Witteloostuijn and Eden, 2010). The authors inform that this method involves loading all the variables in the analysis in an exploratory factor analysis and checking whether one single factor emerges or whether one factor accounts for the majority of the covariance between the measures; if not, CMV is considered not to be pervasive. Despite being simple and straightforward (Malhotra et al., 2006), this approach has been criticized on the basis that a single-factor model is unlikely to fit the data, that the emergence of multiple factors is not confirmation of the absence of CMV and that it is a diagnostic technique that fails to control for the method effects (Podsakoff et al., 2003). The second approach to testing for CMV is the Correlational Marker technique developed by Lindell and Whitney (2001). It involves the inclusion of a marker variable, which they define as “a variable that is theoretically unrelated to substantive variables and for which its expected correlation with these substantive variables is 0” (Williams et al., 2010, p. 478). Because of the aforementioned assumption, CMV is determined by examining the correlation between the marker variable and the variable to which it is theoretically unrelated (Malhotra et al., 2006). The smallest observed correlation between a substantive variable and the marker variable is considered to represent CMV. Achieving a reliable estimate of CMV with this approach requires careful identification of the marker variable prior to collecting data (Lindell and Whitney, 2001). Podsakoff et al. (2003) note that the major strength of this method is that it is easy to implement. However, they criticize the method citing the following conceptual and empirical problems; 1) failure to control for some of the most notorious sources of common method
biases such as social desirability, consistency motif and implicit theories; 2) the assumption that CMV impacts all the observed variables in the exact same way; 3) the assumption that the only effect CMV has on the relationship between the marker variable and a substantive variable is that of inflating and 4) that the approach ignores measurement error and assumes no interaction between common method factors and traits.

Another approach used to assess CMV is the common latent factor method. This method involves allowing all measurement items to “load on their theoretical constructs, as well as on a latent CMV factor, and examining the significance of theoretical constructs with and without the common method factor” (Chang, Witteloostuijn and Eden, 2010, p. 181). The strength of this method is that it shows the impact of the method factor on the individual measures and not the constructs they measure, and does not require the said impact to be equal for all measures (Podsakoff et al., 2003). Like the other methods, this approach is not without problems. Podsakoff et al. (2003) criticize it for the following weaknesses: the assumption that there is no interaction between the method factor and the trait factors; failure to identify the specific cause of the method bias and lastly, adding the method factor may result in the model being under-identified if the number of constructs is more than the number of indicators.

As detailed in the above discussion, all the techniques have their limitations. The Harman’s one-factor test is selected for examining the possible problem of CMV in the current study because it has been widely used in previous entrepreneurship research (e.g. Su et al., 2011; Bloom and Smith, 2010; Li et al., 2009; Stam and Elfring, 2008; Zahra et al., 2004).

A principal components factor analysis was conducted on all the variables and five factors with eigenvalues greater than 1.0 emerged, accounting for 56.8% of the total variance. The first factor accounted for 21.3% (see Appendix D). Given that more than one factor was identified and the first factor did not account for the majority of the variance, this finding satisfies the criteria for establishing that CMV is unlikely to be a serious problem in the current study (Podsakoff, and Organ, 1986).

4.4.13 Model estimation method
The model estimation technique selected for the current study is Browne’s (1982, 1984) Asymptotically Distribution Free (ADF) method. This method is used on the basis that it is not dependent on any distributional assumptions. Its major strength is that normality is not a requirement, rendering it the appropriate technique for the current study given that data are non-normally distributed as highlighted in Section 3.2.10 above. Despite the aforementioned strength, the ADF method has been criticized for performing poorly with small to moderate sample sizes based on the findings of some simulation studies (Hau and Marsh, 2004; Curran
et al., 1996). However, in response to the criticism referred to above, Ory and Mokhtarian (2010, p. 433) caution that “unless the dataset and model structure a given researcher is working with are similar to those used in the simulations studies, the advice may or may not be relevant or helpful.”

An alternative technique that has received wide recommendation in the literature is the normal theory Maximum Likelihood (ML). According to Nevitt and Hancock (2001), the popularity of this method derives from its desirable properties including that it “yields unbiased, consistent, and efficient parameter estimates and provides a model test statistic for a sample of size $n$ evaluated at the minimum value, for assessing the adequacy of an hypothesized model” (p. 354). A fundamental assumption (and potential limitation) of ML is the distributional assumption that measured variables have a multivariate normal distribution in the population (Curran et al., 1996). Unfortunately, it is often the case that applied researchers work with data which violates this assumption (Nevitt and Hancock, 2001). It follows that ML estimation has been criticized for failing to be robust under conditions of non-normality (Nevitt and Hancock, 2001; Curran et al., 1996). Byrne (2010, p. 105) notes that “when data reveal evidence of multivariate kurtosis, interpretations based on the usual ML estimation may be problematic, and thus an alternative method of estimation is likely appropriate.” Following this recommendation, the Asymptotic Distribution Free (ADF) estimation method is used in the current study.

4.4.14 Overview of goodness of fit indices
The fundamental purpose of analyzing structural models is to determine the extent to which the hypothesised model best explains or achieves a fit with the sample data. Goodness-of-fit indices provide one way of evaluating model fit. Several goodness-of-fit statistics options are available in statistical analysis software packages. The chi-square ($\chi^2$) statistic represents the most commonly reported goodness-of-fit statistic in the literature. However, it has been criticized for its sensitivity to sample size, violations of assumptions particularly normality and model complexity (Baumgartner and Homburg, 1996), potentially leading to the rejection of too many models. Owing to these limitations, it has been recommended in the literature (e.g. Byrne, 2010) that the chi-square ($\chi^2$) statistic should be considered in combination with other goodness-of-fit statistics that have been developed. These measures include the following, which have been considered in the current study: the chi-square/degree of freedom ratio ($\chi^2$/df), Goodness-of-fit Index (GFI), Root Mean-Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), and Tucker Lewis Index (TLI).
The chi-square/degree of freedom ratio ($\chi^2/df$) allows for the adjustment of the $\chi^2$ statistic by its degrees of freedom, thereby reducing the impact of sample size and offering a better measure of model fit. Kline (2005) suggests that for a model to be considered of reasonable fit, the value of this statistic must not exceed 3 i.e. $\chi^2/df \leq 3$. The GFI is categorised as an absolute fit index, which means that it measures how well a specified model fits with the sample data without comparison to any other possible models (Hair et al., 2010). GFI values range from zero to one, with values above .90 indicating good model fit (Byrne, 2010; Hooper et al., 2008). The RMSEA is one of the most widely used measures of model fit and it assesses model fit by comparing the estimated model to a perfect or saturated model. RMSEA values less than or equal to .05 indicate close fit, those between .05 and .08 reasonable fit and above .10 poor fit (Browne and Cudeck, 1993). The CFI and TLI both represent what are known as incremental fit indices i.e. they assess model fit in relation to some baseline model. The CFI has been found to be relatively insensitive to model complexity and for that reason has been one of the most preferred goodness-of-fit statistics in the literature (Hair et al., 2010). Both CFI and TLI values range from zero to one, with a higher value signifying better model fit. Marsh et al. (2004) suggest that CFI and TLI values > .90 and > .95 indicate acceptable and excellent fit to the sample data, respectively. A couple of reasons account for the use of the goodness-of-fit statistics discussed above in the current study. First, it has been recommended in the literature that several indices should be reported when assessing model fit (Byrne, 2010; Crowley and Fan, 1997). Second, reporting these measures in the current study is consistent with previous work. For example, Marsh et al. (2009) note that previous research has particularly focused on reporting RMSEA, TLI and CFI based on the premise that these measures are sample size independent.

4.5 Conclusion

To summarise, this chapter discussed the research approach undertaken to address the research questions. The chapter comprised two main sections: part one focused on the exploratory qualitative study and part two discussed the method used to conduct the main quantitative study. Part one of the chapter started with an explanation of the philosophical perspective guiding the research, and then a discussion of the research strategy i.e. mixed methods approach followed. Subsequently, the approach used to conduct the exploratory qualitative study was discussed. The main objective of the qualitative study was to confirm the relevance of the entrepreneurial competencies and entrepreneurial orientation dimensions identified in the literature to the Zambian context, as well as identify entrepreneurial competencies specific to that context. To achieve this, 22 semi-structured interviews were conducted with female SME owners in Zambia’s clothing (retail) industry.
and data were then analysed qualitatively with the help of Nvivo sofware. The findings of this qualitative study will be discussed in Chapter 5. Note should be made that these findings will be used to revise the conceptual model developed from the literature and inform the development of a questionnaire survey.

Part two of the chapter discussed the method used to conduct the main quantitative study. The objective of the study was to empirically test the conceptual model developed following a comprehensive literature review, and refined to incorporate the results of the exploratory qualitative study. The second part of the chapter therefore highlights the research strategy selected for the study i.e. a questionnaire survey administered face-to-face to a sample of 299 female SME owners in Zambia’s clothing industry. It further discussed the data analysis technique used in the study i.e. structural equation modeling using SPSS Amos 20/22. Furthermore, preliminary analyses done prior to conducting data analysis such as assumption testing, reliability and validity assessments, and examining the data for the presence of common method variance were also discussed. In conclusion, the goodness-of-fit indices used to evaluate model fit in the study were explained. The next chapter (chapter 5) will discuss the findings of the exploratory qualitative study.
CHAPTER 5: EXPLORATORY QUALITATIVE STUDY: RESULTS AND DISCUSSION

Chapter overview
This chapter discusses the findings of the exploratory qualitative study conducted as the initial stage of the research project. The aim of the exploratory qualitative study was threefold: (1) to identify entrepreneurial competencies perceived to be important by female entrepreneurs in the Zambian context, which may not be reported in previous studies, (2) to gather evidence of the applicability of entrepreneurial competencies and entrepreneurial orientation dimensions reported in the literature to female entrepreneurs in the Zambian context and (3) to identify other individual level and firm level factors perceived by female entrepreneurs in Zambia as relevant to the performance of their businesses. The findings of the exploratory study will be used to refine the conceptual model developed in Chapter 3, which will then be tested empirically in the main quantitative study.

5.1 Profile of respondents
5.1.1 Age and marital status
The majority of the business owner-managers sampled were aged between 46 and 55 years at the time of the study. The relatively high average age observed may be due to the possibility that the business owners sampled only seized the opportunity to start their own business after raising a family. Moreover, the majority of the respondents (i.e. 15) were married at the time of the study. This is consistent with the strong family orientation that characterises the Zambian culture. It is noteworthy that this cultural orientation has also been reported in other contexts (e.g. Kanti Prasad et al. 2013; Lerner et al., 1997). Marlow and McAdam (2013, p. 116) identify the challenge of family responsibilities as a general one to female entrepreneurs, arguing that “the operating profiles of women-owned firms reflect generalised feminised working patterns which accommodate caring responsibilities alongside their economic activity.” Within the sub-Saharan African region family responsibilities represent a major challenge for female entrepreneurs and potential female entrepreneurs, more so because of the significant personal consequences of the high fertility rates among women (Belwal et al., 2012; Mordi et al., 2010; Amine and Staub, 2009). In the Zambian context, women’s involvement in entrepreneurship is increasingly motivated by the shift in their role in the family over the recent past. As observed by the ILO (2012), in addition to disproportionately shouldering the burden of family responsibilities and being the primary caregivers, female entrepreneurs are increasingly also seen as providers in the home.
5.1.2 Human capital

In order to assess the human capital levels among the owner-managers sampled, four variables were considered namely the highest level of education of the respondent, their field of education, their prior work experience as well as their prior entrepreneurship experience. The findings indicate that the sample generally had a high level of human capital in terms of education level and previous work experience. The majority of the respondents had a College Diploma (9 respondents), eight (8) had a College Certificate, two (2) had a University Degree, two (2) went up to secondary school and one (1) had a Master’s Degree. This finding appears to suggest that female small business owners in Zambia are generally formally educated, with a significant number acquiring tertiary education, and is consistent with previous studies (e.g. Morris et al. 2006) which have demonstrated that women entrepreneurs are highly educated. According to Davidsson and Honig (2003), formal education is linked to the accumulation of explicit knowledge which could result in useful skills for the entrepreneur. Therefore, this represents a major strength for the owner-managers in the current research. Moreover, Bates (1995) observed that education appears to be especially essential for female entrepreneurs. In line with this argument, Chirwa (2008) argued that education had a stronger effect on performance in female-owned businesses than it did in male-owned businesses. Having said that, low levels of education among female entrepreneurs have been reported in other developing contexts (Mauchi et al., 2014; De Vita et al., 2014).

On the question of previous work experience, 18 respondents (i.e. over 75%) indicated that they were previously in employment. Of these, 8 were in employment related to their current business indicating a possible link between familiarity with the industry and the decision to establish one’s business in that industry. In line with this finding, Moore (2010) observed that the majority of successful female entrepreneurs tend to deal in familiar products or services or establish their businesses in industries related to their previous employment. Furthermore, some respondents indicated that they started their own business whilst in formal employment, hence corroborating Estrin and Mickiewicz’s (2011) argument that being in employment improves one’s chances of becoming an entrepreneur.

Turning to field of education, the study found that the field or subject of study of eighteen (18) respondents was not related to their current business. This result appears to be a reflection of the non-high tech nature of the industry, where participation does not require technical expertise on the part of entrepreneurs. It further confirms findings in the literature which demonstrate that women-owned businesses tend to be concentrated in retail and
service sectors (Robichaud et al., 2015; Koellinger et al., 2013; Marlow et al., 2009) where involvement is generally driven by low barriers to entry resulting from minimal initial financial investment, human resources and assets (Brush et al., 2005).

Another question asked to establish human capital levels among the respondents was whether or not they had previous entrepreneurship experience. Interestingly, it was found that 50% of the respondents had prior business ownership experience.

5.2 Entrepreneurial competencies and entrepreneurial orientation

Six sets of entrepreneurial competency domains proposed by Man et al. (2002) were considered in the current study namely strategic, conceptual, relationship, commitment, opportunity and organising competencies. This research found that of the six competency domains, strategic and conceptual competencies did not appear to be relevant to the sample. This finding is potentially linked to the small size of the businesses in the sample, consistent with findings in Solesvik (2012). Strategic competencies are concerned with the long-term performance of the firm, particularly through planning. However, formal planning is not conventionally a feature of small businesses. As argued by Solesvik (2012), strategic competencies represent a professional management feature which is typical for medium-sized to large businesses. Along these lines, Martin and Staines (1994) argue that small businesses often employ informal management practices rather than sophisticated planning and control methods. The lack of evidence for the significance of strategic competencies in the context of the current study may also be linked to the firms in question being mostly necessity-driven. To illustrate, Mitchell (2004) identified survival as one of the most important motivating factors for female entrepreneurs in Africa to establish their own businesses. Consequently, rather than think or plan long-term, the focus of these entrepreneurs would be to maintain their business for survival. The finding that strategic competencies may not be relevant in the current context could also be an indication that the entrepreneurs sampled tend to base business operations and decisions on “gut instinct”. For example, when asked if they used a formal plan to run their business, one respondent in the current study stated “No, I use my personal judgment.” Another respondent said “I use my own judgment plus the experience I have had... and I have told my workers to advise me on how we can take the business to another level.” The use of “gut instinct” by entrepreneurs to run their business has been highlighted in a study by Ahmad et al. (2011), which found that Australian entrepreneurs relied mostly on “gut instinct” to make business decisions.
Likewise, the study found no evidence that conceptual competencies characterised the sample under investigation. Conceptual competencies are concerned with the use of analytical skills to systematically develop solutions to complex problems. Lack of evidence for this category of competencies could be associated with the nature of the industry, which is non technological and therefore is not characterised by a high degree of complexity/ambiguity. The finding could also be a demonstration of the context-specific nature of this category of competencies. As previous studies indicate, entrepreneurial competencies vary from one context to another because they are influenced by a myriad of factors including cultural values (Ayadurai and Ahmad, 2006), economic, institutional and demographic factors (Wennekers, 2006).

Turning to the other competency domains, the findings indicate that the owner-managers sampled perceive relationship competencies to be very cardinal to the operation of the businesses. The respondents particularly emphasised the importance of maintaining good relationships with customers and employees. For example, when asked how they managed employee motivation, the response from one respondent was “you know, one critical thing is the relationship you have with employees and how you treat them…that is key because if you treat them like they are nobody they will bring you down. So you have to have a relationship with them. Most of my employees call me aunt. It is very difficult to please someone but we assist them when they are unwell and when they have personal problems or funerals. Sometimes we just recognise their effort.”

Likewise, respondents were asked how they managed their relationships with customers. One of the responses given was “we listen to our customers…for example when they ask for a product we do not know about; we try to find information about it. We try to look into whatever their needs are.”

The finding that relationship competencies appear to be relevant to the owner-managers sampled in this research is consistent with Keskin’s (2006) argument that SMEs tend to maintain close relationships with customers, allowing them to identify and respond to customer needs and wants quickly and skillfully. Moreover, Rodríguez-Gutiérrez et al. (2014) observed that relationships with customers, suppliers and employees are very important in the context of women-owned businesses, hence women entrepreneurs tend to invest in these relationships through their decision-making processes. Along these lines, Fuentes-Fuentes et al. (2015) in their study of Spanish female entrepreneurs found that close professional relationships with entrepreneurs in other industries and with customers had a significant positive effect on the firms’ innovativeness.
The findings of this study also appeared to indicate that commitment competencies were significant in the current study context. This was demonstrated in that the owner managers interviewed indicated that they were determined to succeed despite operating their businesses under very challenging conditions. For instance, when asked whether they were planning to quit their current business, one interesting answer was “no…it’s a livelihood. If we quit, then what? It has to work whether I like it or not. I’ve got two girls in University and their fees have to be paid. Moreover, the employees depend on us and they have families so it’s a chain reaction. It has to work.” It seems reasonable to suggest that in order to survive the challenging environment in which the businesses sampled operate, owner-managers need to demonstrate a high level of commitment. Some of the major challenges cited by the respondents were difficulties accessing finance and intense competition in the industry. Ahmad et al. (2010b) note that a strong commitment helps entrepreneurs overcome challenges imposed by the environment and keeps them motivated to pursue their business goals. In the current research, commitment competencies were also demonstrated in that most of the respondents stated that they spent long hours at their business and ensured that the business was open even on days when they should ideally be closed such as Sundays. In line with this finding, Timmons (1978) argued that one of the characteristics of thriving entrepreneurs is the ability to work long hours.

Another set of competencies that appeared to be significant in the current research context were organising competencies. As the name suggests, these competencies are concerned with organising the various resources required by the firm, using both internal and external resources. The relevance of organising competencies in this sample could particularly be linked to the challenges associated with accessing finance. To illustrate, the study found that only one respondent obtained formal credit to establish their business while the rest had to use their personal savings. This suggests the need for entrepreneurs in this context to have skills that enable them organise their start-up capital as well as other resources required to start the business and keep it in operation.

The results of the study also indicate that opportunity competencies do characterise the sample under investigation. This finding is in line with evidence in the literature that opportunity recognition and pursuit are fundamental to entrepreneurship (De Koning, 2003; Shane and Venkataraman, 2000). It follows that an entrepreneur’s ability to recognise an opportunity is reflected in their ability to perceive customer needs and identify goods and services customers want (Mitchelmore and Rowley, 2013). The respondents in the current study appeared to be generally alert to business opportunities in their environment. For
example, one respondent explained, “back in 2011 when our country was going to the polls, I saw an opportunity to sell plain t-shirts to the ruling party which they could then print and give out to people to advertise their political candidates…. there was good money in that. Even now there are opportunities such as the International Women’s Day and Labour Day celebrations, one can sell chitenge material (traditional Zambian attire) and suits to government and private companies for women to wear at the celebrations. So opportunities are there, one just needs the right connections.” According to De Koning (2003), opportunity development not only involves seeking and exploring opportunities but also assessing which opportunities are better than others. Along these lines, Chandler and Hanks (1994) note that the pursuit of business opportunities is influenced by availability of resources. Consistent with this argument, the current research found that while the entrepreneurs were able to identify opportunities that could potentially benefit their business, they lacked the capability to pursue some of the opportunities. For example, one respondent observed “the coming of the African Growth Opportunity Act (AGOA) represented a good opportunity for us Zambian entrepreneurs to export our products to the U. S., however, the conditions for the American market were just too severe for us so we didn’t even think about it.”

In addition to investigating which established competency constructs applied to Zambian entrepreneurs, it was the objective of this research to identify competencies specific to that research context. To achieve this, respondents were asked to identify qualities which they felt supported their business. The following cluster was reported by respondents as important: having an outgoing personality (being able to interact with different people), determination, hard work, patience and enthusiasm (to keep one going during times when business is particularly tough), good leadership and administration skills, and financial discipline (ability to separate business finances from personal finances). Below are some of the statements made by respondents in relation to the qualities mentioned above;

Respondent 1: “My personality is quite good…I’m outgoing.”

Respondent 2: “I’m hard working and very determined. I also easily relate with customers.”

Respondent 3: “You know business can be tough at times but I’m patient. I wait for the business to pick up. I have a passion for what I do so I get my patience from there.”

Respondent 4: “When I’m doing business, I’m very focused and hard working.”
Respondent 5: “Financial discipline is very important, you need to know how much your capital is and how much your profit is...only profits should be spent.”

Respondent 6: “I think determination and financial discipline stand out for me.”

The qualities presented above represent a new cluster of competencies which in the context of this research will be termed “personal competencies. These will be incorporated in the conceptual model and tested in the next stage of the research.

5.3 Entrepreneurial orientation (EO)
As indicated in Chapter 2, entrepreneurial orientation is generally conceptualised as comprising five dimensions i.e. risk taking, innovativeness, proactiveness, autonomy and competitive aggressiveness. Respondents in the current study were asked questions relating to these five dimensions to investigate the EO construct. The results indicate that the majority of the respondents considered themselves to be risk-takers and felt that taking risks was an essential part of doing business. This finding is consistent with the finding in Phillips and Bhatia-Panthaki, (2007). Interestingly, the respondents generally associated risk-taking to a time when they took out a loan or borrowed money from sources other than a bank. The following were some of the notable statements made by respondents in relation to risk-taking:

Respondent 1: “When I borrowed money from the loan shacks, that was a huge risk because I had no idea how I would pay it back.”

Respondent 2: “You know, in trading you take risks. For instance, recently someone placed a bulk order with me, which I went and sourced from abroad. Unfortunately, when I brought the order, the customer did not want it anymore. It was a risk for me because I now had to look for other customers and start selling the product in small quantities.”

Respondents 3: “Business really is risk-taking. If you can’t take a risk, then you can’t run a business.”

Respondent 4: “Even just venturing in new products is a risk because you don’t know if they’ll sell. You don’t know what the response will be from clients.”

To determine whether the sample of business owner-managers interviewed were innovative, they were asked to talk about times when they had introduced something new in their business and how often they did so. The findings indicate that innovativeness does characterise the sample. Notably, due to the apparel industry being non-high tech, being
innovative was mostly linked to business owners being able to consistently stock unique and new products to stay up-to-date with fashion trends. Consistent with this finding, Lumpkin and Dess (2001) and Zahra and Covin (1995) described innovativeness as being inclined to pursue new products and services. To illustrate, one respondent observed, “fashion is all about stocking whatever is new on the market.” Other respondents referred to situations in which they introduced products that were conventionally not offered on the Zambian market: “when I first introduced the scuba fabric, it was a hot cake….it was something new on the market and so I was the only one who had it.” Apart from offering new products, the findings indicate that some owner-managers tried to be innovative in the way they did business, for example by allowing loyal customers to pay by post-dated cheque rather than risk having the product on the shelf for a potentially longer duration.

Moving on to the next EO dimension i.e. proactiveness, the majority of the respondents indicated that they were both proactive (i.e. initiated actions which competitors then responded to) and reactive (responded to the actions of competitors). A respondent who indicated that her business was proactive stated, “I think our competitors are more affected by us than we are affected by them. For example, we were the first to start displaying our products outside the store and to offer lay-by facilities then our competitors also started. Moreover, when our suppliers have new products, they communicate directly to us via email and show us what they have. We then select what’s unique and place an order. When our competitors discover what products we have, they go looking for the same products on the market and they don’t find them.” This finding is in line with the argument by Covin et al. (2006) that proactiveness means taking the initiative and achieving first mover advantage. Other respondents indicated that they endeavoured to be proactive by listening to customers and stocking products which customers wanted.

On the contrary, the study found no evidence of autonomy or competitive aggressiveness among the sample. Lumpkin and Dess (1996) argue that autonomy may vary as a function of firm size, management style or ownership i.e. where the business owner is the principal decision-maker, autonomy is implicit in the ownership rights. This appears to be the case in the current research, where the firms in question are small and the owner-manager is main decision-maker. For example, when asked if employees could make decisions in the business, most respondents indicated that employees had to consult them prior to making decisions. In addition, the respondents generally stated that they consulted with family members and employees before making business decisions, signifying a lack of autonomy.
Similarly, competitive aggressiveness did not appear to characterise the sample. The main response given to the question of what the respondents did to outperform competition was that they tried to ensure they offered unique high quality products at affordable prices. However, competitive aggressiveness is demonstrated by “a strong offensive attitude and a forceful response to competitors’ actions” (Soininen et al., 2013, p. 614), involving such aggressive actions as price cutting (Lechner and Gudmundsson, 2014). According to Lumpkin and Dess (1996), the five dimensions of EO may vary depending on environmental and organisational contexts. The lack of evidence for competitive aggressiveness among the sample in current research could be linked to the nature of the industry, where it was observed that businesses generally offered similar products from the same suppliers, and prices were for most uniform. The finding could also be a reflection of the culture surrounding the context of the research. To illustrate, Rauch et al. (2009, p. 779) argue that competitive aggressiveness “may be less valid in certain cultural contexts that frown upon high competitiveness.”

It is noteworthy that based on the above findings, two dimensions of EO i.e. autonomy and competitive aggressiveness will not be considered for further investigation in the next stage of the research. The exclusion of these two EO dimensions is not new to EO literature. For example, George et al. (2001) argue that the use of all five EO dimensions in a study has been unusual in comparison with the use of three dimensions i.e. risk taking, innovativeness and proactiveness.

5.4 Firm level factors

Apart from individual level factors, the current research also sought to investigate firm level factors affecting performance in the businesses sampled. One of the major challenges highlighted was the lack of or insufficient financial capital. The findings indicate that this challenge resulted in failure by the businesses in question to fulfil customer orders and/or replenish stock as required. Lack of financial capital was largely attributed to two factors: difficulties associated with access to formal credit and intense competition in the industry.

The study found that female small business owners generally had difficulty accessing formal credit due to collateral requirements, high interest rates, cumbersome loan application procedures or ignorance about the loan application process and the banks’ negative attitude toward lending to them. This finding is consistent with studies conducted in different contexts. For example, Haber and Reichel, (2007) note that private investors generally find small new ventures less attractive, hence owner-managers are faced with enormous
challenges associated with accessing financial capital from external sources such as banks. Verheul (2005) attributes these challenges to high risks, low expected profits and distorted information. The banks would further argue that start-ups lack an established track record which to refer to in arriving at decisions relating to loan assessments. The finding is also substantiated in Phillips and Bhatia-Panthaki (2007), who argue that accessing start-up as well as working capital is difficult for Zambian firms generally because of the high interest rates. Also, a study by the ZCSMBA (2006) found that the three most cited reasons by Zambian entrepreneurs in the trading sector for not applying for formal credit were high interest rates, lack of collateral and ignorance about the application process. Van Klaveren et al. (2009) submit that these difficulties force most of the Zambian women to depend on informal sources of borrowing. They further inform that the challenges (e.g. lack of collateral) experienced by Zambian women in accessing formal credit are linked to their lack of ownership rights. Historically, Zambian women experienced discrimination in terms of ownership rights and while strides have been made in this area, traces of discrimination are still evident today with most of the land in Zambia being owned by men and women still having limited rights in relation to family matters. Another challenge linked to this is the perceived negative attitude of lending institutions toward lending to female small business owners. It emerged in the current study that some lending institutions required spouse approval before lending to women, signifying a lack of confidence in female business owners. Another interesting finding was that female business owners who were not highly educated did not feel welcome at banks and were of the view that banks favoured the highly educated. On the contrary, one respondent argued that rather than the problem being the banks, women lacked the self-confidence required to clearly articulate their business proposals and to convince the bank to grant them loans. Nevertheless, a study by ZCSMBA (2009) found that lending institutions particularly commercial banks were hesitant to lend to small business owners because they considered it a high risk. The study further notes that lack of or poor access to finance represents the paramount impediment to the growth and development of the small business sector in Zambia.

The lack of financial capital can also be attributed to the high levels of competition in the industry, which results in thin profit margins. The retail (apparel) industry in Zambia appeared to be characterised by high levels of competition, and to be potentially saturated. To illustrate, Phillips and Bhatia-Panthaki (2007) found that almost all micro business owners did not undertake any kind of market research before entering the market, with over half of them believing there was an opportunity in that market merely by seeing others in it.
One source of competition identified in the industry in question was the street vendors or informal traders that had been allowed by the Zambian government to trade freely on the streets as an attempt to bring down unemployment levels in the country. The respondents felt strongly that they were competing unfairly with the street vendors because the latter did not pay taxes, or incur other costs associated with formally established businesses such as rent and overheads. In their study, Phillips and Bhatia-Panthaki (2007) found that some business owners were resorting to tax avoidance because the informal traders were pushing them out of business. Another source of perceived unfair competition identified were foreign retailers especially the Chinese and South African retailers. Apart from being generally bigger in size these retailers were also benefitting from government incentives (e.g. tax incentives) meant to promote foreign investment. Unfortunately, similar incentives did not exist for the smaller local businesses. It was argued that much as an initiative called the Citizen’s Economic Empowerment Commission had been implemented to help support the local small business sector, very few people had benefitted from it due to high levels of corruption and poor management of the programme.

To conclude, this chapter has discussed the findings of the qualitative exploratory study carried out as the first stage of the research project. The findings indicate that opportunity, commitment, organising and relationship competencies represent entrepreneurial competencies reported in the literature which also apply to the Zambian context. On the contrary, there was no evidence to indicate that strategic competencies and conceptual competencies were significant to the current research context. In addition, the findings highlight a new set of competencies i.e. personal competencies, representing entrepreneurial competencies identified by the respondents as important to the current context. The findings also indicate that three dimensions of EO characterise the sample i.e. risk-taking, innovativeness and proactiveness, while autonomy and competitive aggressiveness did not appear to be significant. Finally, lack of operating capital was highlighted as one of the major challenges facing the women business owners sampled.

5.5 Refined conceptual model
The conceptual model proposed in Chapter 3 (i.e. Figure 3.01) was refined to incorporate the findings of the exploratory study and control variables as presented in Figure 5.01.

As shown in the two diagrams, two sets of entrepreneurial competencies (i.e. strategic competencies and conceptual competencies) and two dimensions of entrepreneurial orientation (i.e. autonomy and competitive aggressiveness) which were in the initial conceptual model (Figure 3.01) were excluded from the refined conceptual model (Figure
5.01) to reflect the findings of the exploratory study. Similarly, control variables (i.e. firm age, firm size, business owner’s age and operating capital), which were not part of the initial conceptual model (Figure 3.01) were included in the refined conceptual model (Figure 5.01) following the exploratory study.

*Figure 3.01. Initial conceptual model*

*Figure 5.01. Refined conceptual model*
CHAPTER 6: EMPIRICAL FINDINGS

Chapter overview
The objective of this chapter is to test the main hypotheses using structural equation modeling, and present the relevant findings. This chapter is organized as follows: first, a brief recap of the overview of the study is presented together with the relationships being investigated. Next, descriptive results are presented. Subsequently, confirmatory factor analysis is run to confirm the structure of all the latent variables in the model and finally, the structural model is carried out and the results are presented.

6.1 Recap of the overview of the study
The current research was conducted in Zambia, a developing Sub-Saharan country located in Central Southern Africa, and the sample comprised female SME owners in the retail clothing industry. Previous entrepreneurship research, particularly GEM data suggests that female entrepreneurship represents a key contributor to the growth of low and middle income economies. This renders the investigation and understanding of the key factors affecting the success of women owned SMEs crucial especially in the current context, where unfavourable economic conditions and consistently high unemployment rates have made it necessary for women to engage in entrepreneurial activity as a survival strategy. Nevertheless, significant research gaps exist in the literature. To illustrate, an important research gap is the absence of a conceptual model of factors affecting the performance of women-owned SMEs in the context of a Sub-Saharan African country. In addition, the number of studies focusing on women-owned businesses remains significantly less than that of their male counterparts, resulting in little being known about the subject (Rodríguez-Gutiérrez et al., 2014; Lee et al., 2009). Moreover, the majority of studies on female entrepreneurship have been done in developed countries especially the USA and Europe (Lee et al., 2009; Lerner and Almor, 2002; Lerner et al., 1997), resulting in theories that originate from those contexts. Zambia represents a specific case of a developing context where little is known about female entrepreneurs (Konayuma, 2007). This research seeks to contribute to narrowing the knowledge gaps highlighted above. It draws on the competency approach, entrepreneurial orientation and Resource Based View (RBV) of the firm to test a model of individual level factors and firm level factors which affect the performance of women-owned SMEs in Zambia. Relationships among entrepreneurial competencies, entrepreneurial orientation, human capital variables and firm performance are examined. Other covariates in the investigation include operating financial capital and demographic variables believed to be associated with SME performance i.e. the business owner’s age, firm age and firm size.
6.2 Hypotheses
The analyses will therefore be aimed at addressing the following relationships through the associated hypotheses.

1) The direct effect of level of education, entrepreneurship training, previous industry experience and previous entrepreneurship experience (as antecedents) on entrepreneurial competencies:
   *H1a:* Level of education has a positive direct effect on the development of entrepreneurial competencies
   *H1b:* Previous entrepreneurship training has a positive direct effect on the development of entrepreneurial competencies.
   *H1c:* Previous work experience in the industry has a positive direct effect on the development of entrepreneurial competencies.
   *H1d:* Previous entrepreneurship experience has a positive direct effect on the development entrepreneurial competencies.

2) The direct effect of entrepreneurial competencies (i.e. opportunity, commitment, organising, relationship and personal) on firm performance:
   *H2:* Entrepreneurial competencies have a positive direct effect on firm performance

3) The direct effect of entrepreneurial competencies (i.e. opportunity, commitment, organising, relationship and personal) on entrepreneurial orientation:
   *H3:* Entrepreneurial competencies have a positive direct effect on entrepreneurial orientation

4) The direct effect of entrepreneurial orientation on firm performance:
   *H4:* Entrepreneurial orientation has a positive direct effect on firm performance

5) The mediating effect of entrepreneurial orientation on the relationship between entrepreneurial competencies and firm performance:
   *H5:* Entrepreneurial orientation mediates the relationship between entrepreneurial competencies and firm performance

6) The direct effect of previous entrepreneurship experience on firm performance:
   *H6:* Previous entrepreneurship experience has a positive direct effect on firm performance

7) The direct effect of previous work experience in the industry on firm performance:
   *H7:* Previous work experience in the industry has a positive direct effect on firm performance
8) The effect of control variables i.e. firm age, firm size, business owner’s age and operating capital on firm performance:

*Business owner’s age:* The business owner’s age has a negative direct effect on firm performance.

*Firm age:* Firm age has a negative direct effect on firm performance.

*Firm size:* Firm size has a positive direct effect on firm performance.

*Operating capital:* Operating capital has a positive direct effect on firm performance.

### 6.3 Results

#### 6.3.1 Usable questionnaire

A total number of 299 questionnaires were distributed and completed by the researcher in a face-to-face fashion. The questionnaires were completed on behalf of the respondents in order to address challenges associated with level of education and the general tendency of respondents to be reluctant to complete surveys. Following the data preparation and assumption testing process, 79 questionnaires were removed from the analysis, leaving 220 usable questionnaires. This represented a rate of usable questionnaires of 73.6%.

#### 6.3.2 Descriptive results

##### 6.3.2.1 Respondent Demographics

A demographic profile of the respondents can be established using four broad categories: 1) The business owner’s age and marital status; 2) Education i.e. highest level of education and field of study; 3) Experience i.e. previous work, management and entrepreneurship experience and 4) general characteristics of the business including type of ownership, size, location, number of outlets and number of other businesses owned.

##### 6.3.2.2 The business owner’s age and marital status

The business owner’s age was measured using five categories as indicated in Table 6.01 below. The categories were then recoded into two, representing respondents in the age groups 35 years and below and those above the age of 35 years respectively for purposes of the analysis.
Table 6.01: Age group of business owners

<table>
<thead>
<tr>
<th>Age Group of Business Owner</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 years and below</td>
<td>21</td>
<td>9.5</td>
<td>9.5</td>
</tr>
<tr>
<td>26 to 35 years</td>
<td>86</td>
<td>39.1</td>
<td>48.6</td>
</tr>
<tr>
<td>36 to 45 years</td>
<td>70</td>
<td>31.8</td>
<td>80.5</td>
</tr>
<tr>
<td>46 to 55 years</td>
<td>35</td>
<td>15.9</td>
<td>96.4</td>
</tr>
<tr>
<td>Above 55 years</td>
<td>8</td>
<td>3.6</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>220</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

It was found that the majority of the respondents fell in the age bracket 26 to 35 years (39.1%), followed by 36-45 years (31.8%). These two age brackets collectively represent 70.9% of the sample. The age group ‘above 55 years’ was the least represented, with only 3.6% of the sample.

Similarly, the marital status of the respondents was investigated using five categories; single, married, separated, divorced or widowed. Frequencies associated with these categories are indicated in the Table 6.02 below;

Table 6.02 Marital status of business owners

<table>
<thead>
<tr>
<th>Marital Status of Business Owner</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td>56</td>
<td>25.5</td>
<td>25.5</td>
</tr>
<tr>
<td>Married</td>
<td>146</td>
<td>66.4</td>
<td>91.8</td>
</tr>
<tr>
<td>Separated</td>
<td>4</td>
<td>1.8</td>
<td>93.6</td>
</tr>
<tr>
<td>Divorced</td>
<td>5</td>
<td>2.3</td>
<td>95.9</td>
</tr>
<tr>
<td>Widowed</td>
<td>9</td>
<td>4.1</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>220</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Table 6.02 indicates that the majority of the respondents were married, representing 146 respondents (66.4%) of the sample. Linking this finding to the age group of the respondents,
it reflects the Zambian culture regarding marriage, where on average, one is expected to get married upon reaching the age of 25. It also reaffirms the finding in other studies e.g. Lerner et al. (1997) which found that in the context of Israel, women entrepreneurs generally ventured into entrepreneurship after raising a family.

6.3.2.3 Business owner’s level of education

Education among the respondents was investigated using the highest level of education, measured using six categories (i.e. no education, basic education or grade 9, secondary education or grade 12, College Certificate, Diploma or Undergraduate Degree, Master’s Degree) as indicated in the table below. For purposes of the analysis, these categories were then recoded into two groups representing those who had attained a secondary education as their highest education level and those who had attained a College Certificate or better.

<table>
<thead>
<tr>
<th>Business owner’s highest level of education</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>No education</td>
<td>4</td>
<td>1.8</td>
<td>1.8</td>
</tr>
<tr>
<td>Basic education (grade 9)</td>
<td>16</td>
<td>7.3</td>
<td>9.1</td>
</tr>
<tr>
<td>Secondary education (grade 12)</td>
<td>93</td>
<td>42.3</td>
<td>51.4</td>
</tr>
<tr>
<td>Trade school or college (certificate holder)</td>
<td>20</td>
<td>9.1</td>
<td>60.5</td>
</tr>
<tr>
<td>College/University Diploma or Degree</td>
<td>83</td>
<td>37.7</td>
<td>98.2</td>
</tr>
<tr>
<td>Masters</td>
<td>4</td>
<td>1.8</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>220</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

The results of the study show that the majority of the respondents i.e. 93 (42.3%) went up to Grade 12 in their education and did not proceed to tertiary education. The category with Diploma and Degree holders was the second highly represented, with 83 respondents (37.7%) of the sample. On the other hand, the ‘No education’ category had a total of only 4 respondents (1.8% of the sample). Similarly, the same percentage of respondents were found to have attained a Master’s Degree. Whereas this result may be an indication of the general education pattern in Zambian female entrepreneurs, it may also suggest that those who have attained this level of education potentially find it more lucrative to be involved in other
industries or better still be formally employed rather than to establish businesses in the industry in question.

The study also sought to establish whether the field of study of the respondents who had attended College or Varsity were business-related or not. The following table shows the results achieved in terms of frequencies.

Table 6.04: Business owner’s field of study

<table>
<thead>
<tr>
<th>Business owner’s field of study</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business training</td>
<td>69</td>
<td>31.4</td>
<td>64.5</td>
<td>64.5</td>
</tr>
<tr>
<td>Non-business training</td>
<td>38</td>
<td>17.3</td>
<td>35.5</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>107</td>
<td>48.6</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

The above results indicate that sixty-nine (69) out of a total of the 107 respondents with higher education had undertaken some business-related training. Some notable courses in this category included Business Administration, Accounting, Marketing and Sales and Economics. On the other hand, non-business-related training in the context of this study was found to include among others, Teaching, Computer studies, Nursing, Hotel management and Secretarial courses. Much as the majority of the respondents received some business-related training, the results show a significant number of respondents (i.e. 38 or 17.3%) who were trained in non-business related disciplines.

6.3.2.4 Business Owner’s Experience

Experience in the sample was measured in categorical terms by asking the respondents if they had four types of experience prior to starting their current business i.e. general work experience, work experience in the industry in question, management experience and entrepreneurship experience respectively. In addition, the respondents were asked if they owned other businesses at the time the survey was administered to them. The results are indicated in the following tables;
It was found that the majority of the respondents (63.2%) were previously employed before starting their current business. This reaffirms our finding in the exploratory qualitative study, which revealed that most of the respondents pursued a career in formal employment before proceeding to establish their own businesses, with some actually starting a business whilst in employment.

Of the respondents with previous work experience, 53 respondents of the 139 (39%) indicated that they had previous work experience in the industry in question. The frequencies are shown in Table 6.06 below;

<table>
<thead>
<tr>
<th>Previous work experience in the industry</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>53</td>
<td>38.1</td>
<td>38.1</td>
</tr>
<tr>
<td>No</td>
<td>86</td>
<td>61.9</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>139</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

To establish whether the respondents had previous entrepreneurship experience, they were asked if they owned a business prior to establishing the current one. It was found that 85 respondents (38.6%) were business owners prior to establishing the current business.

Furthermore, when asked if they owned other businesses besides the current one, 71 business owners (32.3%) responded in the affirmative.
### Table 6.07: Previous entrepreneurship experience

<table>
<thead>
<tr>
<th>Previous entrepreneurship experience</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>85</td>
<td>38.6</td>
<td>38.6</td>
</tr>
<tr>
<td>No</td>
<td>135</td>
<td>61.4</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>220</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

### Table 6.08: Current ownership of other businesses

<table>
<thead>
<tr>
<th>Other businesses currently owned</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>71</td>
<td>32.3</td>
<td>32.3</td>
</tr>
<tr>
<td>No</td>
<td>149</td>
<td>67.7</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>220</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

### 6.3.2.5 General characteristics of the firms

#### 6.3.2.5.1 Ownership structure

The ownership structure of the firms was defined in terms of four categories; Sole Proprietorship, Partnership, Private Limited Company and Family Business. The Sole Proprietorship represented the majority of the sample with 199 firms (90.5%) while 17 (7.7%) firms were Partnerships and the last two categories represented 1.4% and 0.5% of the sample respectively.

#### 6.3.2.5.2 Firm location

The firms included in the study were sampled across four regions of Zambia namely Lusaka, Central, Copperbelt and Southern Provinces, representing 66.8%, 11.8%, 15% and 6.4% of the sample respectively. See table below;
Table 6.09: Location of business

<table>
<thead>
<tr>
<th>Province where business is located</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lusaka</td>
<td>147</td>
<td>66.8</td>
<td>66.8</td>
</tr>
<tr>
<td>Central</td>
<td>26</td>
<td>11.8</td>
<td>78.6</td>
</tr>
<tr>
<td>Southern</td>
<td>14</td>
<td>6.4</td>
<td>85.0</td>
</tr>
<tr>
<td>Copperbelt</td>
<td>33</td>
<td>15.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>220</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

6.3.2.5.3 Firm size
Business size among the firms sampled was measured by number of employees. All the participating firms had less than ten (10) employees, and therefore qualified as micro enterprises under the Zambian definition of MSME considering only the number of employees as a size threshold. It was also found that 154 firms (70%) had less than three (3) employees, leaving 30% of the firms with between three (3) and ten (10) employees as indicated in Figure 6.01.
An additional measure used to assess the size of the firms was the number of shops or outlets owned by a particular business owner. The results show that most of the business owners (144 or 65.5%) owned only one shop, 61 or 27.7% owned two, 12 (5.5%) owned three and 3 (1.4%) owned four shops respectively. See Table 6.10 for frequencies;

Table 6.10: Number of shops or outlets

<table>
<thead>
<tr>
<th>Number of shops or outlets</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>144</td>
<td>65.5</td>
<td>65.5</td>
</tr>
<tr>
<td>2</td>
<td>61</td>
<td>27.7</td>
<td>93.2</td>
</tr>
<tr>
<td>3</td>
<td>12</td>
<td>5.5</td>
<td>98.6</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>1.4</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>220</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
6.3.3 Structural model estimation

Assessment of discriminant validity

A test of discriminant validity involves comparing the AVE value of each construct with the squared value of the correlation estimate between the said construct and any other latent construct (Fornell and Larker, 1981). If the variance extracted values are greater than the squared correlation estimate, there is evidence that discriminant validity is achieved (Alipour et al., 2012). The idea is to demonstrate that a latent variable explains more of the variance in its measurement items that it shares with another construct (Hair et al., 2010).

Discriminant validity is assessed using this approach in the current study. The AVE of each latent construct is found to exceed the values of all the squared correlations with other constructs, thereby demonstrating discriminant validity (see Table 6.11 below).

Table 6.11 Average variance extracted and squared multiple correlations

<table>
<thead>
<tr>
<th>EOrientation</th>
<th>Personal Competencies</th>
<th>Organising Competencies</th>
<th>Commitment Competencies</th>
<th>Relationship Competencies</th>
<th>Opportunity Competencies</th>
<th>PERFORMGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>EOrientation</td>
<td>0.45</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal Competencies</td>
<td>0.14</td>
<td>0.62</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organising Competencies</td>
<td>0.13</td>
<td>0.16</td>
<td>0.44</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commitment Competencies</td>
<td>0.04</td>
<td>0.07</td>
<td>0.15</td>
<td>0.54</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relationship Competencies</td>
<td>0.13</td>
<td>0.15</td>
<td>0.21</td>
<td>0.1</td>
<td>0.5</td>
<td></td>
</tr>
<tr>
<td>Opportunity Competencies</td>
<td>0.15</td>
<td>0.15</td>
<td>0.34</td>
<td>0.05</td>
<td>0.28</td>
<td>0.54</td>
</tr>
<tr>
<td>PERFORMGS</td>
<td>0.02</td>
<td>0.04</td>
<td>0.01</td>
<td>0.03</td>
<td>0.02</td>
<td>0.02</td>
</tr>
</tbody>
</table>

6.3.3.1 Measurement models for entrepreneurial competencies:

Four sets of entrepreneurial competencies (i.e. opportunity, commitment, organising and relationship) proposed by Man et al. (2002), and an additional set of competencies which emerged from the pilot study were included in the study. A one-factor congeneric model was constructed for each of the competencies to establish how well the constructs were linked to their respective measured variables (refer to Appendix E). An assessment of the factor loadings and model fit indices was then conducted to determine which variables could be retained in the model.

The following Table 6.12 indicates the findings of the confirmatory factor analysis with the re-specified congeneric models of the entrepreneurial competencies;
Table 6.12: Confirmatory Factor Analysis – Competencies

<table>
<thead>
<tr>
<th>Entrepreneurial competency</th>
<th>Measurement items</th>
<th>Standardised factor loadings</th>
<th>Cronbach's alpha</th>
<th>Construct reliability</th>
<th>Average variance extracted (AVE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opportunity</td>
<td>OPC1 - I identify products or services which customers want</td>
<td>0.52</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>OPC2 - I identify products or services which customers need but are not offered on the market</td>
<td>n/a*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>OPC3 - I actively look for products or services that provide real benefit to customers</td>
<td>0.86</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>OPC4 - I identify good chances or opportunities to do business</td>
<td>0.79</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>OPC5 - I carefully look at the advantages and disadvantages of business opportunities before investing in them</td>
<td>0.74</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.79</td>
<td>0.88</td>
<td>0.54</td>
</tr>
<tr>
<td>Commitment</td>
<td>CC1 - I am determined to make the business work as much as possible</td>
<td>0.69</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CC2 - I do not intend to quit this business</td>
<td>0.60</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CC3 - I spend most of my time at the business</td>
<td>n/a*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CC4 - I make large personal sacrifices in order to ensure the business succeeds</td>
<td>0.78</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CC5 - I am dedicated to achieving long-term business goals</td>
<td>0.84</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.78</td>
<td>0.88</td>
<td>0.54</td>
</tr>
<tr>
<td>Organising</td>
<td>OG1 - I plan the operations of the business</td>
<td>0.67</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>OG2 - I plan how different resources will be organised in the business e.g. finances, staff</td>
<td>0.77</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>OG3 - I get resources and capabilities from inside and outside the firm</td>
<td>0.74</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>OG4 - I organise employees to get work done</td>
<td>n/a*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>OG5 - I motivate our employees through bonuses, meals, transport money etc</td>
<td>n/a*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>OG6 - I give employees responsibilities and the right to make decisions</td>
<td>0.57</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>OG7 - I maintain close supervision of employees to ensure they perform</td>
<td>0.50</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 6.12 above indicates the results of the confirmatory factor analysis of each congeneric model of entrepreneurial competencies. As depicted in the table, some items were removed from the models (indicated by n/a) because of lack of a good fit with the rest of the items representing a particular construct (i.e. OPC3; CC3; OG4, OG5, OG8; RC3; PQ1, PQ8).
6.3.3.2 Assessment of reliability and validity (entrepreneurial competencies)

The internal consistency approach proposed by Hair et al. (2010) was used to assess the reliability of the measurement scales, with a Cronbach’s alpha of .6 considered acceptable and >.70 good. In addition, construct reliability (Fornell and Larker, 1981) was also computed for each factor, with values of between .6 and .7 representing the lower boundary of acceptability (Hair et al. 2010).

As depicted in Table 6.13, the results show consistently good reliability for all the constructs, with Cronbach’s alpha (α) values ranging from .73 to .83. Similarly, the construct reliability (CR) values achieved were well above the recommended threshold and ranged from .78 to .92.

In addition, the size of the factor loadings were assessed to estimate the level of convergent validity in the entrepreneurial competency constructs. Hair et al. (2010) propose that convergent validity can be said to be achieved when all the factor loadings are significant, with a value of .5 as the minimum and .7 or higher being preferable. Cohen (1988) however, adopts a less stringent value and proposes a cut-off point of > .3. Following Cohen (1988), Table 6.13 indicates that all measurement items achieved a significant factor loading of at least .3 (p < .001), signifying that convergent validity has been achieved.

Convergent validity was further assessed by estimating the Average Variance Extracted (AVE). Hair et al. (2010) recommend a value of .5 or higher to establish convergent validity. Table 6.12 reveals that all the entrepreneurial competency constructs achieved an AVE value .5 or greater except for the organising competency construct (AVE .44). Given that the other measure of convergent validity i.e. significant factor loadings indicated good results, it was assumed that both reliability and validity were established for this construct.

Table 6.13: Reliability and validity assessment for entrepreneurial competencies

<table>
<thead>
<tr>
<th>Competency area</th>
<th>Cronbach’s alpha (α)</th>
<th>Construct Reliability (CR)</th>
<th>Average Variance Extracted (AVE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opportunity</td>
<td>.79</td>
<td>.88</td>
<td>.54</td>
</tr>
<tr>
<td>Commitment</td>
<td>.78</td>
<td>.88</td>
<td>.54</td>
</tr>
<tr>
<td>Organising</td>
<td>.73</td>
<td>.78</td>
<td>.44</td>
</tr>
<tr>
<td>Relationship</td>
<td>.81</td>
<td>.82</td>
<td>.50</td>
</tr>
<tr>
<td>Personal</td>
<td>.83</td>
<td>.92</td>
<td>.62</td>
</tr>
</tbody>
</table>
6.3.3.3 Goodness of fit

Each congeneric competency model was examined for goodness of fit to determine the overall fit of the model with the data. Following the recommendation by Hair et al. (2010), both absolute fit and incremental fit measures were used to assess model fit. As indicated in Table 6.14 the goodness-of-fit indices generally revealed a good fit between the competency constructs and the data, with $\chi^2$/df values being below the acceptable limit of 3 (Kline, 2005). The $\chi^2$/df value for commitment competencies fell below 1, signifying some model overfit. However, given the influence of sample size on the $\chi^2$ and $\chi^2$/df values (Byrne, 2001), and taking into account the reliability and validity demonstrated by the construct, the model overfit was considered acceptable. Furthermore, two sets of competencies (i.e. relationship and personal) did not produce a good model fit at the first run of the model. An examination of the modification indices (Byrne, 2001) revealed that some error terms were correlated and therefore needed to either be co-varied or deleted from the model (Jöreskog and Sörbom, 1996). Given that the measurement items involved were all significantly related to their respective construct (as indicated by the factor loadings), the models for relationship competencies and personal competencies were re-specified by co-varying the concerned measurement items (refer to Appendix E for diagrams showing the covariance) and a good model fit was established.

Table 6.14: Goodness-of-fit statistics for congeneric models of entrepreneurial competencies

<table>
<thead>
<tr>
<th>Competency construct</th>
<th>$\chi^2$</th>
<th>df</th>
<th>p</th>
<th>$\chi^2$/df</th>
<th>GFI</th>
<th>TLI</th>
<th>CFI</th>
<th>RMSEA</th>
<th>PCLOSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opportunity</td>
<td>37.848</td>
<td>2</td>
<td>.036</td>
<td>1.577</td>
<td>.925</td>
<td>.905</td>
<td>.937</td>
<td>.056</td>
<td>.350</td>
</tr>
<tr>
<td>Commitment</td>
<td>.274</td>
<td>2</td>
<td>.872</td>
<td>.137</td>
<td>.998</td>
<td>1.077</td>
<td>1</td>
<td>.000</td>
<td>.923</td>
</tr>
<tr>
<td>Organising</td>
<td>12.554</td>
<td>9</td>
<td>.184</td>
<td>1.395</td>
<td>.974</td>
<td>.957</td>
<td>.974</td>
<td>.042</td>
<td>.536</td>
</tr>
<tr>
<td>Relationship</td>
<td>37.848</td>
<td>24</td>
<td>.036</td>
<td>1.577</td>
<td>.925</td>
<td>.905</td>
<td>.937</td>
<td>.051</td>
<td>.439</td>
</tr>
<tr>
<td>Personal</td>
<td>18.492</td>
<td>8</td>
<td>.018</td>
<td>2.312</td>
<td>.974</td>
<td>.932</td>
<td>.964</td>
<td>.077</td>
<td>.143</td>
</tr>
</tbody>
</table>

Inter-correlation analysis (entrepreneurial competency constructs)

Having confirmed the factor structure of each entrepreneurial competency construct, a correlation analysis was done to establish to what extent these constructs were related to each other, determine the possibility of the existence of a second-order factor and to test for
multicollinearity among them (Table 6.15 below). Multicollinearity refers to the degree to which other constructs explain a particular construct within an analysis (Hair et al., 2010).

Table 6.15: Correlations among competencies

<table>
<thead>
<tr>
<th></th>
<th>Organising competencies</th>
<th>Relationship competencies</th>
<th>Personal competencies</th>
<th>Opportunity competencies</th>
<th>Commitment competencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opportunity competencies</td>
<td>Pearson Correlation</td>
<td>.584**</td>
<td>.530**</td>
<td>.384**</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>220</td>
<td>220</td>
<td>220</td>
<td>220</td>
</tr>
<tr>
<td>Commitment competencies</td>
<td>Pearson Correlation</td>
<td>.384**</td>
<td>.308**</td>
<td>.260**</td>
<td>.223**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>220</td>
<td>220</td>
<td>220</td>
<td>220</td>
</tr>
<tr>
<td>Organising competencies</td>
<td>Pearson Correlation</td>
<td>.394**</td>
<td>1</td>
<td>.390**</td>
<td>.530**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>220</td>
<td>220</td>
<td>220</td>
<td>220</td>
</tr>
<tr>
<td>Relationship competencies</td>
<td>Pearson Correlation</td>
<td>.394**</td>
<td>.390**</td>
<td>1</td>
<td>.384**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>220</td>
<td>220</td>
<td>220</td>
<td>220</td>
</tr>
</tbody>
</table>

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

Table 6.15 indicates that the level of correlation among all the entrepreneurial competencies was highly significant (p < .01), signifying the presence of a higher-order structure (Byrne,
2001) and possible multicollinearity (Hair et al., 1998). To tackle this problem, a second-
order factor of entrepreneurial competencies was modelled and a CFA conducted. This
approach has been used in the literature (e.g. Ahmad, 2007). Figure 6.02 shows the facture
structure of the new higher-order construct for entrepreneurial competencies;

*Figure 6.02: Higher-order construct for entrepreneurial competencies*

6.3.3.4 Model estimation: higher-order entrepreneurial competency construct
Before the structural model for entrepreneurial competencies could be estimated in this
study, composite scores were computed for each competency construct. The use of
composite scores in estimating structural models is recommended because it results in data
reduction, thereby promoting clear construct definition, model parsimony and greater model
testing power (Rowe, 2002).
Composite scores were computed using factor score weights generated for each respective congeneric model by the AMOS software. Rowe (2002) argues that this approach takes into account the measurement error and varying factor loadings representing each measured variable, and is therefore superior to merely averaging factor scores to compute composite scores.

Following Jöreskog and Sörbom (1996), the factor score weights of each congeneric model were summed up to find the total score weight. The factor score weight of each item representing a particular construct was then divided by this total score weight to determine its proportionate score weight. Next, weighted scores were computed using the compute variable function in SPSS, by multiplying the proportionate score weights with the raw data representing each construct. Finally, composite variables were computed by summing up the weighted scores.

Computing composite scores for the latent variables in the current study was also appropriate because much as the sample size of 220 cases was adequate for conducting SEM, this sample size was inadequate for estimating the structural model for the higher-order construct for entrepreneurial competencies, with the congeneric models in their original form using the ADF method. According to the ADF estimation method, the required sample size for estimating a structural model can be computed using the following formula: sample size = n*(n+1)/n, where n is the number of observed variables (Byrne, 2001). In the case of the model in question, n=29, implying a required sample size of 435 cases to perform the CFA. To reduce the sample size required and therefore remedy this situation, composite scores were computed for each competency construct (thereby reducing the number of observed variables) using the factor score weights generated by the AMOS software.

*Figure 6.03* shows the higher-order entrepreneurial competency construct modelled using the composite scores;
6.3.3.5 Goodness-of-fit: higher-order entrepreneurial competency construct

As depicted by Table 6.16, a good model fit was achieved between the higher-order entrepreneurial construct structural model and the data i.e. $\chi^2 = 8.171$, df = 5, $p = .147$; $\chi^2$/df = 1.634; Fit indices of the model were well above the preferred .90, with GFI = .985, Tucker Lewis Index (TLI) = .949, Comparative Fit Index (CFI) = .975, Root mean Squared Error of Approximation (RMSEA) = .054 and PCLOSE = .390. Furthermore, all the regression weights were highly significant at $p < .001$ (refer to Appendix F). These model fit statistics indicate a good fit with the data and therefore validate the proposed factor structure of the higher-order entrepreneurial competency construct.
Table 6.16: Goodness-of-fit statistics for higher-order entrepreneurial competency construct

<table>
<thead>
<tr>
<th>Model: higher-order construct</th>
<th>Goodness-of-fit Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\chi^2$</td>
</tr>
<tr>
<td>Entrepreneurial competencies</td>
<td>8.171</td>
</tr>
</tbody>
</table>

The new structure of the entrepreneurial competency construct will be used in the subsequent analyses.

6.3.3.6 Measurement model: Firm performance

Three dimensions of firm performance were proposed 1) growth in the business 2) growth in the business in relation to competitors and 3) satisfaction with firm performance. An Exploratory Factor Analysis (EFA) was conducted on the performance measures using the Principal Components Method, and varimax rotation. A one-dimensional solution emerged, with KMO = .899, $\chi^2 = 1679.602$, df = 28, p = .000 and Eigenvalues above 1. Total variance explained was 72.71% with communalities ranging from .643 to .796 (refer to Appendix G).

6.3.3.7 Model estimation: Firm performance construct

A one-factor congeneric model was created for the performance construct and a CFA conducted to confirm the factor structure. An initial run of the model did not achieve good model fit, with an assessment of the modification indices suggesting high correlations between some error variances. Model re-specification was undertaken by co-varying the error variances involved. Figure 6.04 below is a graphic representation of the congeneric model of the firm performance construct;
The factor loadings were then inspected to ensure that they were all statistically significant and above the recommended value of .5 (Hair et al., 2010).

Model fit statistics were also assessed to confirm the factor structure of the performance construct. Table 6.17 below indicates the results of the CFA.
Table 6.17: CFA for performance construct

<table>
<thead>
<tr>
<th>Code</th>
<th>Measurement item description</th>
<th>Standardised factor loading</th>
<th>Cronbach’s alpha (α)</th>
<th>Construct reliability (CR)</th>
<th>Average Variance Extracted (AVE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FPNETP</td>
<td>Growth in net profits</td>
<td>.90</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FPSARY</td>
<td>Growth in business owner’s salary</td>
<td>.88</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FPC3</td>
<td>Growth in number of customers compared to competitors</td>
<td>.84</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FPC5</td>
<td>Growth in ability to fund growth from profits compared to competitors</td>
<td>.86</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FPSSALE</td>
<td>Satisfaction with current sales level</td>
<td>.90</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FPSSALEG</td>
<td>Satisfaction with growth in sales</td>
<td>.90</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FPSCUST</td>
<td>Satisfaction with number of customers</td>
<td>.90</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FPSOVPER</td>
<td>Satisfaction with overall business performance</td>
<td>.84</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[ \alpha = .82 \quad \text{CR} = .96 \quad \text{AVE} = .77 \]

6.3.3.8 Assessment of reliability and validity

The results in Table 6.17 show that the firm performance construct demonstrated a high degree of reliability, with Cronbach’s alpha (α) = .82 and Construct reliability (CR) = .96 both well above the values recommended in the literature.

Furthermore, convergent validity was achieved, with all the factor loadings on the construct significant and exceeding the recommended .5 minimum (Hair et al., 2010). In addition, a high AVE value (.77) provides further confirmation of convergent validity.

6.3.3.9 Goodness-of-fit: Firm performance construct

The congeneric model of firm performance achieved an overall good fit with the data as shown in Table 6.18 below, with \( \chi^2 = 29.906; p = .018; df = 16 \chi^2/df = 1.869 \). Fit indices of the model were all within the acceptable limits, with GFI = .937, Tucker Lewis Index (TLI) = .909, Comparative Fit Index (CFI) = .948, Root mean Squared Error of Approximation (RMSEA) = .063 and PCLOSE = .244.
Table 6.18: Goodness-of-fit statistics - performance construct

<table>
<thead>
<tr>
<th>Construct</th>
<th>Goodness-of-fit Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\chi^2$</td>
</tr>
<tr>
<td>Firm performance</td>
<td>29.906</td>
</tr>
</tbody>
</table>

6.3.3.10 Measurement model/model estimation: Entrepreneurial Orientation

A ten-item one-dimensional construct (measuring risk-taking, innovativeness and proactiveness) is proposed for entrepreneurial orientation. Covin and Slevin (1989) offer justification for collapsing the EO scale into one based on their finding that the items in the EO dimensions (risk-taking, innovativeness and proactiveness) were interrelated and overlapped. In line with this argument, a meta-analysis by Covin and Lumpkin (2011) revealed that the EO construct is reasonably robust in relation to potential cultural biases and different scale formats.

As with the other latent variables, a CFA was conducted to confirm the factor structure of this construct. A good model fit was not achieved at the first run of the model, suggesting the need for model re-specification. One item did not fit well with the other items and so was removed from the model. Furthermore, an inspection of the modification indices revealed high correlation among error variances. These were then co-varied and an acceptable model fit was achieved. The figure below shows the graphic representation of the CFA for the congeneric model of entrepreneurial orientation;
All factor loadings achieved statistical significance and achieved the minimum acceptable values of at least .3 (Hair et al., 2010; Bird, 1995). Goodness-of-fit statistics were also assessed to confirm the factor structure of the construct.
The table below shows the factor loadings and reliability statistics;

**Table 6.19: Factor loadings and reliability statistics – entrepreneurial orientation**

<table>
<thead>
<tr>
<th>Code</th>
<th>Measurement item description</th>
<th>Standardised factor loading</th>
<th>Cronbach’s alpha (α)</th>
<th>Construct reliability (CR)</th>
<th>Average Variance Extracted (AVE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RT1</td>
<td>I consider myself to be a risk taker</td>
<td>.44</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RT2</td>
<td>The term risk taker is considered a positive quality for people in our business</td>
<td>.52</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RT3</td>
<td>People in our business are encouraged to take calculated risks with new ideas</td>
<td>.53</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RT4</td>
<td>Our business encourages looking for opportunities and trying them out</td>
<td>.64</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IN1</td>
<td>We actively introduce improvements and new ideas in our business</td>
<td>.90</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IN2</td>
<td>Our business is creative in the ways of doing business</td>
<td>.91</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IN3</td>
<td>Our business searches for new ways to do things</td>
<td>.88</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PR1</td>
<td>My business is normally the first to introduce actions which competitors then copy</td>
<td>.42</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PR2</td>
<td>My business is usually the first to introduce new products/services and new ways of doing things</td>
<td>n/a*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PR3</td>
<td>In general, I am strongly in the habit of introducing new ideas and new ways of doing things in my business</td>
<td>.57</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[ α = .79 \quad \text{CR} = .83 \quad \text{AVE} = .5 \]

*n/a*: Measurement item excluded from further analysis due to lack of fit with other items
6.3.3.11 Assessment of reliability and validity

The results in Table 6.19 show that the entrepreneurial orientation construct is reliable with Cronbach’s alpha ($\alpha$) = .79 and Construct reliability (CR) = .83 both well above the values recommended in the literature.

Furthermore, convergent validity was achieved, with all the factor loadings on the construct significant. Two factor loadings fell below the recommended .5 minimum (Hair et al., 2010), however, they were both significant. In addition, an AVE value of .5 was achieved, slightly below the preferred value of > .5.

6.3.3.12 Goodness-of-fit: Entrepreneurial Orientation construct

The congeneric model of entrepreneurial orientation achieved a satisfactory fit with the data as shown in Table 6.20 below, with $\chi^2 = 46.406; p = .002; df = 22; \chi^2/df = 2.109$. The model fit indices were as follows; GFI = .907, Tucker Lewis Index (TLI) = .769, Comparative Fit Index (CFI) = .859, Root mean Squared Error of Approximation (RMSEA) = .071 and PCLOSE = .106.

Table 6.20: Goodness-of-fit statistics – entrepreneurial orientation construct

<table>
<thead>
<tr>
<th>Construct</th>
<th>Goodness-of-fit Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\chi^2$</td>
</tr>
<tr>
<td>Firm performance</td>
<td>46.406</td>
</tr>
</tbody>
</table>

6.3.4 Model testing using SEM

The previous section estimated the measurement models for each of the latent variables i.e. entrepreneurial competencies, entrepreneurial orientation and firm performance constructs. This section focuses on testing the hypotheses presented in Section 5.2 of this chapter, using structural equation modelling.
The following diagram represents the conceptual framework detailing the hypotheses being tested;

*Figure 6.06: Conceptual model*

A confirmatory factor analysis was conducted on the structural model to test the relationships among the endogenous and exogenous variables as outlined above. The figure below indicates a graphical representation of the first model run;
Figure 6.07: Confirmatory Factor Analysis – structural model (1st run)

An initial run of the model did not achieve a good model fit as evidenced from the following model fit indices: $\chi^2 = 464.832$, $p = .000$; $\chi^2/df = 5.383$; Goodness of Fit Index (GFI) $= .999$; Tucker Lewis Index (TLI) $= .524$; Comparative Fit Index (CFI) $= .605$; Root mean Squared Error of Approximation (RMSEA) $= .141$ and PCLOSE $= .000$ (see table 6.21 below).

<table>
<thead>
<tr>
<th>Construct</th>
<th>Goodness-of-fit Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\chi^2$</td>
</tr>
<tr>
<td>Firm performance</td>
<td>464.832</td>
</tr>
</tbody>
</table>

The above results indicate the need to re-specify the model. Anderson and Gerbing (1988) argue that “because initially specified measurement models almost invariably fail to provide acceptable fit, the necessary re-specification and re-estimation using the same data mean that the analysis is not exclusively confirmatory”, (p. 412).
Upon examination of the modification indices it was observed that some error variances were correlated, with the highest correlation being between the business owner’s age (DC3_R2) and firm age (FA_R2). Following Jöreskog and Sörbom’s (1996) recommendation, these two variables were co-varied and the model re-run (see Figure 6.08 below).

Figure 6.08: Confirmatory Factor Analysis – structural model (2nd run)

Much as the model achieved significant improvement at the second run, it did not result in a good fit i.e. $\chi^2 = 212.253$, $p = .000$, $df = 86$; $\chi^2/df = 2.468$; GFI= .999; CFI= .868; TLI= .839; RMSEA= .082, PCLOSE=.000. These goodness-of-fit statistics are presented in Table 6.22 below;
Table 6.22: Goodness-of-fit statistics – structural model (2nd run)

<table>
<thead>
<tr>
<th>Construct</th>
<th>( \chi^2 )</th>
<th>df</th>
<th>( p )</th>
<th>( \chi^2/df )</th>
<th>GFI</th>
<th>TLI</th>
<th>CFI</th>
<th>RMSEA</th>
<th>PCLOSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm performance</td>
<td>212.253</td>
<td>86</td>
<td>.000</td>
<td>2.468</td>
<td>.999</td>
<td>.839</td>
<td>.868</td>
<td>.082</td>
<td>.000</td>
</tr>
</tbody>
</table>

The modification indices were examined again and further correlations between variables were identified. The variables “previous entrepreneurship experience” and “business owner’s age” shared the highest correlation. Following the previous procedure, the two were co-varied as shown in Figure 6.09 below;

Figure 6.09: Confirmatory Factor Analysis – structural model (3rd run)

The following results were achieved with the third model run; \( \chi^2=185.006 \), df= 85, \( p= .000 \), \( \chi^2/df= 2.177 \); GFI= 1.000; CFI= .896; TLI= .871; RMSEA= .073, PCLOSE= .005 (see Table
As the fit indices show, the model still did not achieve a satisfactory fit with the data.

*Table 6.23: Goodness-of-fit statistics – structural model (3rd run)*

<table>
<thead>
<tr>
<th>Construct</th>
<th>Goodness-of-fit Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\chi^2$</td>
</tr>
<tr>
<td>Firm performance</td>
<td>185.006</td>
</tr>
</tbody>
</table>

Further analysis of the modification indices revealed that “firm size” and “operating capital” shared a high correlation. The model was once again re-specified by co-varying these two variables, yielding the results shown in *Figure 6.10* and *Table 6.24*:

*Figure 6.10: Confirmatory Factor Analysis – structural model (4th run)*
A significant improvement in model fit was achieved by the model re-specification process at this stage. However, model fit is still not satisfactory as can be seen from the TLI value (i.e. .887).

Consequently, following the same procedure as above, the model was further re-specified by co-varying two pairs of variables respectively 1) previous work experience in the industry and previous entrepreneurship experience and 2) highest level of education and previous entrepreneurship training (see Figure 6.11)

Figure 6.11: Confirmatory Factor Analysis – structural model (final run)
The model re-specification process resulted in a good model fit of $\chi^2 = 150.888$, $p = .000$; $df = 82$; $\chi^2/df = 1.840$. The model fit indices were as follows; GFI = 1.000, Tucker Lewis Index (TLI) = .908, Comparative Fit Index (CFI) = .928, Root mean Squared Error of Approximation (RMSEA) = .062 and PCLOSE = .102 (see Table 6.25 below)

Table 6.25: Goodness-of-fit statistics – structural model (final run)

<table>
<thead>
<tr>
<th>Construct</th>
<th>$\chi^2$</th>
<th>df</th>
<th>$p$</th>
<th>$\chi^2/df$</th>
<th>GFI</th>
<th>TLI</th>
<th>CFI</th>
<th>RMSEA</th>
<th>PCLOSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm performance</td>
<td>150.888</td>
<td>82</td>
<td>.000</td>
<td>1.840</td>
<td>1.000</td>
<td>.908</td>
<td>.928</td>
<td>.062</td>
<td>.102</td>
</tr>
</tbody>
</table>

As depicted in Table 6.25 above, all the goodness-of-fit indices were above the recommended values, signifying that the model was a good fit with the data.

The following table indicates the results of the model testing in relation to the hypotheses;

Table 6.26: Model testing results by hypothesis

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Hypothesised relationship</th>
<th>Standardised effect ($\beta$)</th>
<th>P-value</th>
<th>Hypothesis supported?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Antecedents of entrepreneurial competencies</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H1a</td>
<td>Level of education has a positive direct effect on the development of entrepreneurial competencies</td>
<td>.37</td>
<td>&lt; .001</td>
<td>Yes</td>
</tr>
<tr>
<td>H1b</td>
<td>Previous entrepreneurship training has a positive direct effect on the development of entrepreneurial competencies</td>
<td>-.15</td>
<td>&lt; .01</td>
<td>No</td>
</tr>
<tr>
<td>H1c</td>
<td>Previous work experience in the industry has a positive direct effect on the development of entrepreneurial competencies</td>
<td>-.11</td>
<td>&lt; .05</td>
<td>No</td>
</tr>
<tr>
<td>H1d</td>
<td>Previous entrepreneurship experience has a positive direct effect on the development of entrepreneurial competencies</td>
<td>.19</td>
<td>&lt; .001</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Direct effects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H2</td>
<td>Entrepreneurial competencies have a positive direct effect on firm performance</td>
<td>.45</td>
<td>&lt; .001</td>
<td>Yes</td>
</tr>
<tr>
<td>H3</td>
<td>Entrepreneurial competencies have a positive direct effect on entrepreneurial orientation</td>
<td>.65</td>
<td>&lt; .001</td>
<td>Yes</td>
</tr>
<tr>
<td>H4</td>
<td>Entrepreneurial orientation has a positive direct effect on firm performance</td>
<td>-.22</td>
<td>&lt; .01</td>
<td>No</td>
</tr>
<tr>
<td>H6</td>
<td>Previous entrepreneurship experience has a positive direct effect on firm performance</td>
<td>-.17</td>
<td>&lt; .001</td>
<td>No</td>
</tr>
</tbody>
</table>
Hypothesis 1a: As indicated in Table 6.26 above, the results show support for Hypothesis 1a i.e. that the business owner’s level of education has a very significant positive direct effect on the development of entrepreneurial competencies. This is demonstrated by a standardised regression coefficient (β) = .37 at p < .001.

Hypothesis 1b: A significant direct relationship was found between a business owner’s previous entrepreneurship training and the development of entrepreneurial competencies with standardised regression coefficient (β) = -.15 at p < .01. However, contrary to the hypothesised positive relationship, the effect of entrepreneurship training on entrepreneurial competencies was found to be negative, signifying that attending such training results in the level of entrepreneurial competencies declining. Hypothesis 1b is therefore not supported.

Hypothesis 1c: The study found that previous work experience in the industry had a significant direct effect on the development of entrepreneurial competencies, indicated by a standardised regression coefficient (β) = -.11 and p < .05. Unexpectedly, this relationship was found to be negative as can be seen from the negative value of β. It follows that Hypothesis 1c is not supported.

Hypothesis 1d: It was hypothesised that previous entrepreneurship experience has a positive direct effect on the development of entrepreneurial competencies. The results support this hypothesis, with regression coefficient = .19 and p < .001.

Comparing all four proposed antecedents of entrepreneurial competencies, the highest level of education is the strongest antecedent, followed by previous entrepreneurship experience.
There is not much difference between the significance of entrepreneurship training and previous work experience in the industry. However, the former shows a slightly stronger effect.

It is also interesting to note that as human capital predictors of firm performance, previous entrepreneurship experience has a much stronger effect on firm performance ($\beta = -.17; p < .001$) than previous work experience in the industry ($\beta = -.11, p = .01$).

6.3.4.2 Hypothesis 2 – testing the direct effect of entrepreneurial competencies on firm performance
As depicted in Table 6.26, the results show a significant positive direct effect of entrepreneurial competencies on firm performance, thereby supporting Hypothesis 2. This is demonstrated by regression coefficient ($\beta = .45$, $p < .001$). An examination of the regression weights of each competency area suggests that organising competencies are the strongest contributor to the relationship with firm performance ($\beta = .78$), while opportunity, relationship and personal competencies contribute equally ($\beta = .76$). Commitment competencies on the other hand represent the lowest contribution ($\beta = .65$).

6.3.4.3 Hypothesis 3 – testing the direct effect of entrepreneurial competencies on entrepreneurial orientation
Table 6.26 indicates that Hypothesis 3 is supported i.e. entrepreneurial competencies have a very significant positive direct effect on entrepreneurial orientation ($\beta = .65$, $p < .001$). This suggests that a higher level of entrepreneurial competencies results in a stronger entrepreneurial orientation.

6.3.4.4 Hypothesis 4 – testing the direct effect of entrepreneurial orientation on firm performance
The results show that entrepreneurial orientation has a significant direct effect on firm performance ($\beta = -.22, p < .01$). However, this relationship is found to be negative, contrary to the hypothesised direction. Hypothesis 4 is therefore not supported.

These results also suggest that entrepreneurial competencies are stronger predictors of firm performance in the current research context than entrepreneurial orientation.

6.3.4.5 Hypothesis 5 – testing the mediating effect of entrepreneurial orientation on the relationship between entrepreneurial competencies and firm performance
Two methods are commonly used to test for mediation in the literature: Baron and Kenny’s (1986) regression approach and the SEM approach. It has been argued that the two approaches share various similarities and differences (James et al., 2006; Schneider et al., 2005), with the key difference being that the basis of Baron and Kenny’s (1986) regression approach is the presumption of a partial mediation model which is inappropriate for SEM. This study employed the SEM approach, which according to MacKinnon et al. (2002) offers the best trade-off between type I error rates and statistical power compared to the alternative method.
As Table 6.26 shows, the loading of competencies (independent variable) to entrepreneurial orientation (mediator) was significant ($\beta = .65, p < .001$), and the loading of entrepreneurial orientation (mediator) to firm performance (dependent variable) was also significant ($\beta = -.22, p < .01$). Following the SEM approach, also adopted in James et al. (2006); MacKinnon et al. (2002); Schneider et al. (2005), Wang (2008) and Alipour et al. (2012), these findings support Hypothesis 5: entrepreneurial orientation (partially) mediates the relationship between competencies and firm performance. The results show partial mediation in the sense that a positive direct relationship between the independent variable (competencies) and the dependent variable (firm performance) has also been confirmed i.e. ($\beta = .45, p < .001$).

6.3.4.6 Hypothesis 6 – testing the direct effects of previous entrepreneurship experience on firm performance

Previous entrepreneurship experience shows a very significant negative direct effect on firm performance ($\beta = -.17, p < .001$). Given that this result is contrary to the hypothesised positive relationship, Hypothesis 6 is not supported in this study.

6.3.4.7 Hypothesis 7 – testing the direct effects of previous work experience in the industry on firm performance

Previous work experience in the industry was hypothesised to have a positive significant direct effect on firm performance. While a significant direct effect is confirmed by the results ($\beta = -.11, p < .01$), the direction of this relationship is unexpectedly negative. Hypothesis 7 is therefore not supported in the current research.

6.3.4.8 Testing the effects of control variables (business owner’s age, firm age, firm size and operating capital) on firm performance.

Business owner’s age and performance: As depicted in Table 6.26 the findings indicate that the business owner’s age has a significant negative effect on firm performance ($\beta = -.15; p < .01$). The fact that this relationship is negative signifies that as the business owner progresses in age, the performance of their firm declines.

Firm age and performance: The results show that firm age does not have a statistically significant direct effect on firm performance. This relationship is demonstrated by a regression coefficient ($\beta$) of -.04 and $p > .05$.

Firm size and performance: Table 6.26 shows that there is a significant positive relationship between firm size and performance, demonstrated by regression coefficient ($\beta$) = .13 and $p < .01$.

Operating capital and performance: The results of the study strongly support a positive relationship between operating capital and performance, indicated by regression coefficient ($\beta$) of .23 and $p < .001$. 

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Comparing the four variables used as controls i.e. business owner’s age, firm age, firm size and operating capital, the findings reveal operating capital as the strongest predictor of firm performance.

6.4 Summary of hypothesis testing results

Table 6.27: Hypothesis testing results

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Hypothesised relationship</th>
<th>Hypothesis supported/not supported?</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1a</td>
<td>Level of education has a positive direct effect on the development of entrepreneurial competencies</td>
<td>Supported</td>
</tr>
<tr>
<td>H1b</td>
<td>Previous entrepreneurship training has a positive direct effect on the development of entrepreneurial competencies</td>
<td>Not supported</td>
</tr>
<tr>
<td>H1c</td>
<td>Previous work experience in the industry has a positive direct effect on the development of entrepreneurial competencies.</td>
<td>Not supported</td>
</tr>
<tr>
<td>H1d</td>
<td>Previous entrepreneurship experience has a positive direct effect on the development of entrepreneurial competencies.</td>
<td>Supported</td>
</tr>
<tr>
<td>H2</td>
<td>Entrepreneurial competencies have a positive direct effect on firm performance</td>
<td>Supported</td>
</tr>
<tr>
<td>H3</td>
<td>Entrepreneurial competencies have a positive direct effect on entrepreneurial orientation</td>
<td>Supported</td>
</tr>
<tr>
<td>H4</td>
<td>Entrepreneurial orientation has a positive direct effect on firm performance</td>
<td>Not supported</td>
</tr>
<tr>
<td>H5</td>
<td>Entrepreneurial orientation mediates the relationship between entrepreneurial competencies and firm performance</td>
<td>Supported</td>
</tr>
<tr>
<td>H6</td>
<td>Previous entrepreneurship experience has a positive direct effect on firm performance</td>
<td>Not supported</td>
</tr>
<tr>
<td>H7</td>
<td>Previous work experience in the industry has a positive direct effect on firm performance</td>
<td>Not supported</td>
</tr>
</tbody>
</table>
6.5 Conclusion
This chapter presented the findings of the research. Structural equation modelling was used to test the hypothesis of the study and the results were presented. In summary, the results indicate that:

1. All the antecedent variables (i.e. highest level of education, attendance of entrepreneurship training or workshops, previous work experience in the industry and previous entrepreneurship experience) have a statistically significant direct effect on entrepreneurial competencies. However, it was unexpectedly found that previous work experience in the industry and attendance of entrepreneurship training or workshops negatively impacted entrepreneurial competencies.

2. All the main direct relationships under investigation were found to be statistically significant i.e. the effect of entrepreneurial competencies on firm performance; entrepreneurial competencies on entrepreneurial orientation; entrepreneurial orientation on firm performance; previous work experience in the industry on firm performance and previous entrepreneurship experience on firm performance. However, entrepreneurial orientation, previous work experience in the industry and previous entrepreneurship experience were all found to share a negative relationship with performance contrary to the hypothesis.

3. The mediating effect of entrepreneurial orientation on the relationship between entrepreneurial competencies and firm performance was found to be statistically significant.

4. Three control variables incorporated in the analysis i.e. business owner’s age, firm size and operating capital were found to have a statistically significant direct effect on firm performance, while firm age was found not to have a statistically significant direct effect on firm performance.

The next chapter will discuss the findings presented here.
CHAPTER 7: DISCUSSION OF FINDINGS

Chapter overview
This chapter discusses the findings of this research project. The results are discussed in the order of the hypotheses being investigated i.e. the effects of human capital variables on the development of entrepreneurial competencies (H1a, H1b, H1c, H1d), direct effect of entrepreneurial competencies on firm performance (H2), direct effect of entrepreneurial competencies on entrepreneurial orientation (H3), the direct effect of entrepreneurial orientation of firm performance (H4), the mediating effect of entrepreneurial orientation on the relationship between entrepreneurial competencies and firm performance (H5), the direct effects of previous entrepreneurship experience and previous work experience in the industry on firm performance respectively (H6, H7), and finally the direct effect of the control variables on firm performance.

7.1 The effects of level of education, entrepreneurship training, previous work experience in the industry and previous entrepreneurship experience as antecedents of entrepreneurial competencies (H1a, H1b, H1c and H1d).

The results of the current study provide strong empirical evidence that the owner manager’s human capital characteristics significantly impact the development of entrepreneurial competencies and therefore serve as antecedents of entrepreneurial competencies. The owner manager’s level of education and previous entrepreneurship experience were both found to positively impact entrepreneurial competencies, implying that the higher the owner manager’s level of education, and the more experience they have managing their own business, the more equipped they are with the competencies and capabilities required to manage their own firm. These results support both hypotheses H1a and H1d and are consistent with findings in previous studies e.g. Sarwoko et al. (2013) and Ahmad (2007). Further, they validate suggestions in the literature that a business owner’s level of education enhances their abilities including communication, social and learning abilities (Avermaete et al., 2004), as well as the information and skills required to identify and exploit entrepreneurial opportunities (Marvel and Lumpkin, 2007). Similarly, high experience on the part of the owner manager has been associated with strong ability to identify profitable business opportunities and knowledge of the various courses of action that can improve decision-making (Boeker and Karichalil, 2002). It is interesting to note that while both human capital variables achieved very strong results, the impact of level of education on entrepreneurial competencies was stronger than that of previous entrepreneurship experience. The results seem to suggest that formal education has more influence on the development of entrepreneurial skills and capabilities in female entrepreneurs in the current research context than does experience as an entrepreneur.
Turning to prior entrepreneurship training and previous work experience in the industry, it was unexpectedly found that both were negatively associated with entrepreneurial competencies. These results did not support hypotheses H1b and H1c and contradict the general understanding in the literature that training and experience enhance an entrepreneur’s skills and abilities. For example, in an investigation of tea manufacturing firms in Sri Lanka, Wickramaratne et al. (2014) found that prior entrepreneurship training significantly impacted organising and relationship competencies. Similarly, Alarape’s (2007) study demonstrated that owner managers who had undergone entrepreneurship training exhibited better managerial performance than their counterparts who had not. However, in the context of the current research, prior entrepreneurship training does not translate into a higher level of competencies. This could be linked to the dynamic nature of the industry in that general entrepreneurship training may not equip owner managers with the sort of skills they require to cope with the constant changes that characterise the industry. In other words, training should be directly related to the development of relevant skills and knowledge in order to be effective.

The negative relationship between previous work experience in the industry and entrepreneurial competencies is also at odds with claims in the literature. For example, Bird (1995) suggests that industry experience is one of the factors that could influence the development of entrepreneurial competencies. Likewise, Krueger and Brazeal (1994) submit that previous work experience could enhance an owner manager’s skills and abilities, especially opportunity recognition. The fact that previous entrepreneurship experience was found to be positively associated with the development of entrepreneurial competencies in the current study while previous industry experience shares a negative relationship with entrepreneurial competencies could be an indication that different types of experience are useful in different contexts, such as industries. Another explanation could be that experience as an employee in the same industry does not necessarily equip one with the necessary knowledge and attitudes that can translate into competencies required by an entrepreneur to manage their own business.

7.2 The direct effect of entrepreneurial competencies on firm performance (H2)

The findings of the current research provide evidence that entrepreneurial competencies (i.e. opportunity, commitment, organising, relationship, personal) are strong predictors of firm performance in the context of women-owned SMEs in Zambia, and provide support for hypothesis H2 (Table 6.26). This corresponds to findings in previous studies that have demonstrated that entrepreneurial competencies are positively associated with firm
Some studies highlight findings relating to the impact of specific entrepreneurial competencies on firm performance. For example, an entrepreneur’s ability to recognise business opportunities and mobilise resources to pursue them was found to be positively associated with firm performance (Chandler and Hanks, 1994; Chandler and Jansen, 1992). Similarly, Baron and Markman (2000) found that the success of SMEs is highly dependent on the entrepreneur’s social skills, demonstrated in their ability to interact with others. The results support the argument premised in competence-based theories that the capabilities of owner-managers are critical to the success of small firms (Colombo and Grilli, 2005). They also validate Lerner and Almor’s (2002) contention that the owner-manager’s skills represent the most vital assets in a small business. Evidence that entrepreneurial competencies positively impact firm performance therefore has important implications for entrepreneurs as well as policy makers in the current research context.

The results of this research also provide insights into the importance of each competency domain in the Zambian context. Based on their individual contribution to the higher-order entrepreneurial competency construct, the results suggest that organizing competencies are perceived to be the most important by Zambian female entrepreneurs. Opportunity, relationship and personal competencies appear to contribute equally to the entrepreneurial competency construct while commitment competencies make the least contribution (see Figure 6.03). The relevance of each individual competency dimension is discussed in the following sections;

Opportunity competencies

The significance of opportunity competencies to the women entrepreneurs sampled in the current study validates previous studies (e.g. De Koning, 2003; Shane and Venkataraman) 2000) that have demonstrated that an entrepreneur’s ability to recognise and exploit business opportunities is at the centre of the entrepreneurial process. Within the context of this research, the importance of opportunity competencies can particularly be linked to the dynamic nature of the clothing industry, which requires entrepreneurs to be alert to changes in fashion trends and to respond accordingly. Entrepreneurs who possess this capability can perceive customer needs and identify products and services which customers want, thereby achieving a competitive advantage (Mitchelmore and Rowley, 2013; DeTienne and Chandler, 2007). While the findings of the exploratory study (Chapter 5) suggest that the women entrepreneurs sampled in the current study are generally alert to business
opportunities in their environment, the pursuit of such opportunities is influenced by the availability of relevant resources (Chandler and Hanks, 1994). One such resource highlighted in the exploratory study (Chapter 5) is the entrepreneur’s network ties. The women entrepreneurs interviewed observed that it was essential to have the ‘right connections’ to be able to pursue business opportunities such as those linked to the political environment in Zambia e.g. selling clothing to government offices for special occasions like labour day and international women’s day celebrations respectively. Social networks are valuable sources of information for opportunity recognition, and play an important role in an entrepreneur’s ability to mobilise the resources required to pursue those business opportunities (Elfring and Hulsink; Shane, 2000).

**Commitment competencies**

Women business owners in Zambia and other similar research contexts must overcome many challenges in order to manage their businesses successfully, hence the significance of commitment competencies. According to Ahmad *et al.* (2010b), strong commitment is key if entrepreneurs are to work towards achieving their business goals despite the challenges imposed by the environment. Interestingly, commitment competencies made the least contribution to the entrepreneurial competency construct in this study, suggesting that these competencies are not perceived to be as important as the other four categories. This finding suggests that the behaviours making up the commitment competency dimension are perceived to be less important to business performance in this research context, than those defining the other competency dimensions. Ayadurai and Ahma’s (2006) study demonstrates that the relevance of entrepreneurial competencies sometimes varies from country to country because of differences in cultural values. Along these lines, Thomas and Mueller (2000, p. 290), argue that entrepreneurs “reflect the dominant values of their national culture.” Fastré and Van Gils’ (2007) study involving Belgian and Dutch entrepreneurs validates this point. That study found that while the Dutch entrepreneurs attributed their success to relational and commitment competencies, the Belgian entrepreneurs considered their strategic and conceptual competencies to be more significant.

**Organising competencies**

Organising competencies are undoubtedly critical to the success of any business as they are concerned with the organisation of the various resources required by the firm such as financial, human, physical and technological resources. Lans *et al.* (2011) note that organising competencies are context-specific. Within the context of this study, the
importance of these competencies could specifically relate to the need for the women entrepreneurs to cope with challenges associated with the organisation of financial and human resources respectively. The women entrepreneurs’ ability to organise financial resources is directly linked to access to formal credit, which has been cited as one of the major constraints they face (see Chapter 4). Studies on other African countries e.g. Kenya and Ghana (Benzing et al., 2007), Nigeria (Mordi et al., 2010) and Ethiopia (Singh and Belwal, 2008) have also found access to formal credit/capital to be a major barrier to the success of women-owned businesses. Benzing et al. (2007) attribute this problem to the high interest rates charged and failure by the women entrepreneurs to meet collateral requirements. This entails that the business owners sampled here need to have the relevant organising skills required to find alternative sources of finance for new investments as well as operational purposes when need arises. Moreover, the problem of access to operational capital is further compounded by the fact that Zambia’s retail industry depends predominantly on imports. Unfortunately, the country’s currency has suffered a dramatic depreciation over the recent past, pushing the cost of importing considerably up, without a corresponding increase in disposable income on the part of consumers.

The need to organise human resources could be another reason why organising competencies are important in the current research context. In this respect, it is the role of the owner manager not only to acquire the right calibre of employees, but also to manage them in a way that they are inspired to work towards achieving the entrepreneur’s vision. Chandler and Hanks (1994) argue that through the organising function, the entrepreneur arranges the employees and other resources to execute the plan, and as managers, their role entails leadership and motivation of employees, delegation of tasks and managing employee relations. This role is particularly demanding in the context of the current research, where the results of the exploratory study suggest that employees generally have a negative attitude towards work which manifests into absenteeism, pilferage and/or a laissez-faire attitude toward customers. It follows that the business owner needs to maintain constant supervision of employees to ensure that tasks are carried out accordingly. Interestingly, having unreliable and undependable employees appears to be a common problem in SMEs in Africa as well as other developing countries. For example, it was found to be an important problem in a study conducted among women entrepreneurs in Kenya (Mwobobia, 2012) and Gambia (Della-Giusta and Phillips, 2006). Studies involving SMEs in Nigeria (Ojeka, 2011) and Turkey (Benzing et al., 2009) also cited it as a major problem. Referring to women entrepreneurs in Kenya, Mwobobia (2012) observes that providing job security and retaining
good employees is generally a challenge for women entrepreneurs. This observation possibly extends to the current research context and helps explain the employees’ negative attitude towards work. The aforementioned challenges therefore demonstrate the relevance of organising competencies in the context of women-owned SMEs in Zambia.

Relationship competencies

Relationship competencies contributed significantly to the entrepreneurial competency construct in the current study. Their significance here comes as no surprise given that SME owners interact with numerous categories of stakeholders such as customers, suppliers, employees, government authorities, competitors and others during the course of doing business. Such interaction is essential for entrepreneurs as it provides an avenue for information as well as other relevant resources (Jenssen and Greve, 2002). Moreover, the businesses in question operate in the services sector, ‘where high customer contact is crucial to their success’ (Martin and Staines, 1994, p. 27). Additionally, the customers in the industry in question have high bargaining power as a result of the stiff competition. This renders relationship skills such as negotiation skills, the ability to persuade, interpersonal skills and communications skills (Lans et al., 2011; Man et al., 2002) crucial to the survival of the businesses. Another important explanation could be that of cultural influence. Triandis (1995) observes that the relationship competency construct comprises behavioural items that reflect a strong commitment to collectivism. Based on Hofstede’s (1991) cultural dimensions, Zambian culture is collectivist in nature and collectivist cultures consider loyalty to a particular group such as family or company as fundamental to social acceptance (Beugré and Offodile, 2001). Business people in such contexts therefore benefit from building personal relationships of trust (Hofstede, 1984) and must portray qualities that enable them to establish and maintain valuable and lasting relationships with the various stakeholders to their business, especially customers.

Personal competencies

The new entrepreneurial competency construct (i.e. personal competencies), was found to be reliable and valid (refer to Chapter 5) and comprised six items relating to patience, enthusiasm, hard work, determination, leadership and administration skills. The findings in relation to these items are discussed in the following sections;

The results show that hard work and determination made the highest contribution to this construct. This finding provides evidence in support of previous research that has identified hard work and determination as relevant qualities of entrepreneurs in general and female
entrepreneurs specifically. For example, some female entrepreneurs interviewed in a study conducted in Canada attributed their success to hard work and determination (Lee-Gosselin and Grise, 1990). In Beugelsdijk and Noorderhaven (2005), entrepreneurs identified hard work as an important quality that children must be urged to learn at home. Furthermore, determination is said to depict entrepreneurial behavior and has been identified with successful entrepreneurs (Thompson et al., 1997; Lee-Gosselin and Grise, 1990). While the relevance of hard work and determination in entrepreneurship has been validated in other research contexts, their relevance here could be a reflection of the business environment in which the businesses sampled operate. As highlighted in Chapter 4, the apparel industry in Zambia is characterised by intense competition not only from the large foreign retailers (particularly Chinese and South African) who benefit from tax incentives offered to promote foreign investment, but also from local street venders who do not incur operations-related costs such as rent, overheads and taxes. Moreover, this industry suffers from small profit margins resulting from high rent charges, high import duty as well as low purchasing power among the Zambian population given the high inflation rate and weak currency. Furthermore, the industry in question is characterised by a large number of players (due to low capital requirements) offering products generally sourced from the same suppliers and that are therefore not differentiated. The result of this has been lower switching costs and higher bargaining power on the part of the customers. It follows that in order to survive the harsh conditions highlighted above, the female entrepreneurs in this research context need to have an ethic of hard work and determination.

Another finding was that enthusiasm and patience are significant contributors to the personal competency construct, signifying that they are necessary entrepreneurial attributes in this research context. The significance of enthusiasm and patience in business has also been highlighted in the literature. For example, Leitao and Franco (2011) found a positive relationship between an entrepreneur’s ‘enthusiasm at work’ and non-economic firm performance. Similarly, Kirby (2004) and Lee-Gosselin and Grise (1990) identified patience as one of the attributes needed by an entrepreneur.

The final two dimensions of the personal competency construct were leadership and administration skills. According to Jensen and Luthans (2006, p. 648), “leadership has emerged as one of the most important elements in any business, large or small.” It has also been argued that the effect of leadership is more likely to be evident in small entrepreneurial firms than in large organisations (Daily et al., 2002). In line with this argument, Ensley et al. (2000) note that leadership skills form part of the human skills that entrepreneurs must
possess. This is especially true because the entrepreneur develops the vision for the business, establishes the rules of operation and provides direction to their firm (Jensen and Luthans, 2006). The relevance of a business owner’s leadership capability in the context of a small business is also reflected in the fact that venture capitalists use it as a criterion to determine eligibility for funding (Chandler and Hanks, 1994). It is noteworthy that entrepreneurs not only need to lead but also manage their firms, hence the administrative skills. Administrative skills encompass those activities that ensure that the organisation runs efficiently and smoothly (Kazmi, 1999), including accounting, budgeting, finance and planning (Camuffo and Comacchio, 2005). These skills, especially accounting and financial management, may be important to female SME owners in Zambia given that the exploratory phase of this study suggested that the female entrepreneurs sampled generally had challenges separating business finances from personal finances. This challenge could be linked to the start-up motivations of the entrepreneurs under investigation. To illustrate, Mitchell (2004) found that the most important motivating factor for African women to start a small business was survival, either because they could not fully rely on someone else (e.g. spouse) to provide the basic needs of the family or because they were indeed the only providers for their family. Similarly, Kuiper (1993) identified economic pressure, family circumstances and the urge to improve economic status as some of the factors that motivate African women to become business-owners. Consequently, when the primary motivation is survival, entrepreneurs are more focused on using the proceeds of the business for the day-to-day survival of their families than on re-investing in the business.

7.3 The direct effect of entrepreneurial competencies on entrepreneurial orientation (H3)
The investigation of the relationship between entrepreneurial competencies and entrepreneurial orientation (EO) yielded the strongest result in the present study, providing empirical evidence that entrepreneurial competencies have a strong positive direct effect on entrepreneurial orientation (see Table 6.26). The results support hypothesis H3, and the notion that “the strategic posture of a small business reflects the inherent characteristics of a business owner,” (Altinay and Wang, 2011, p. 687). Furthermore, the findings are consistent with those of Wickramaratne et al. (2014) who found a positive relationship between entrepreneurial competencies and entrepreneurial orientation among owner-managers of tea manufacturing firms in Sri Lanka. Specifically, that study found a positive relationship between organising competencies and innovativeness; commitment competencies and proactiveness; and commitment competencies and risk taking respectively. Considering the EO dimensions individually, the current study found that risk taking and innovativeness were
significantly correlated with all the five competency dimensions (opportunity, commitment, organising, relationship and personal) while proactiveness was not significantly correlated with organising and commitment competencies respectively. This could mean that the two competencies are not relevant to an entrepreneur’s ability to behave proactively. Overall, this study found that all the individual entrepreneurial competencies had a significant positive relationship with the EO construct, with opportunity competencies showing the highest correlation (see Appendix H). The strong relationship found between opportunity competencies and EO is a reflection of opportunity identification as the starting point of the entrepreneurial process (Nonaka, 1994). It has previously been argued that the discovery and exploitation of profitable opportunities is what actually defines entrepreneurship (Shane and Venkataraman, 2000). In line with the above arguments, Wiklund and Shepherd (2003, p. 1310) view EO as representative of “how a firm is organised in order to discover and exploit opportunities.” These findings signify that opportunity competencies are fundamental to entrepreneurial behaviour in SMEs in general and women-owned SMEs in Zambia specifically.

The results represent an important contribution to literature investigating the relationship between entrepreneurial competencies and EO, which to a large extent remains uncharted territory. Few studies have indeed considered the two concepts in one study, hence the current study epitomises an important step towards bridging this research gap. The findings demonstrate that possessing relevant entrepreneurial competencies enhances the entrepreneur’s capability to behave entrepreneurially.

7.4 The direct effect of entrepreneurial orientation on firm performance (H4)

The current study found that EO has a significant negative direct effect on firm performance. This result is contrary to the positive relationship proposed in Hypothesis H4, and contradicts studies demonstrating empirical support for a positive relationship between the two constructs (e.g. Engelen et al., 2014; Rauch et al., 2009; Baker and Sinkula, 2009; Wiklund and Shepherd, 2005). The finding defies the notion that firms exhibiting higher entrepreneurial orientation also record better performance because a high EO enables firms to identify opportunities that can give them a competitive edge and distinguish them from competing firms (Wiklund and Shepherd, 2005). However, having found that EO was positively related to firm growth but had an insignificant relationship with profitability in 194 Finnish SMEs, Soininen et al. (2012) suggest that the positive relationship between EO and performance in previous studies is primarily a result of the growth dimension of performance. Having said that, the results of the current study support the argument advanced by contingency perspectives of entrepreneurship that particular structural and
market conditions do not always favour a high level of entrepreneurship (e.g. Slevin and Covin, 1990). For example, Frank et al. (2010) found that entrepreneurial orientation has a negative effect on business performance in particular configurations. In that study, EO had a negative impact on business performance when the business environment was dynamic and characterised by low access to financial capital. The authors argued that the finding highlighted the importance of access to financial capital in exploiting opportunities. In line with this argument, Shane and Venkataraman (2000) assert that access to and knowledge on how to acquire financial backing are most significant for exploiting opportunities. Similarly, Eggers et al. (2013) found that the availability of financial resources positively impacted EO. They noted that financial resources support EO strategies and so their availability has the potential to considerably affect a firm’s EO. This argument may well apply to the current research context, where access to financial capital remains one of the major challenges faced by the women SME owner-managers. Notably, the fashion industry is dynamic, with trends constantly changing. The businesses in question ought to constantly invest in staying up-to-date with the fashion trends in order to satisfy customer demands, hence access to financial resources is crucial to their performance. Moreover, EO is typically a resource-intensive activity as it involves making considerable resource commitments and thus its full implementation is a challenge for young firms, which are generally constrained in terms of resources (Hughes and Morgan, 2007; Covin and Slevin, 1991). Su et al. (2011) highlight this point when they advise that a mismatch between EO and its supporting resources and organisation structure may result in negative consequences for firm performance. Apart from that, the negative EO-performance relationship can be interpreted in terms of the argument that the effects of EO are long term (Zahra and Covin, 1995) and may therefore take a long time to materialise. For example, a study by Su et al. (2011) found that while the relationship between EO and firm performance was positive in established firms (i.e. above 8 years of age), it was inverse U-shaped in younger firms (8 years or below). The result was attributed to the liability of newness (Li and Zhang, 2007; Shepherd and Zacharachis, 2003) which suggests that new firms suffer from a lack of adequate resources, legitimacies and social ties and inappropriate role-formalisation which leads to EO hurting performance in such firms. This may apply to the firms sampled in the current study considering that 83.6% (see Appendix I) had been in operation for not more than 8 years at the time of the survey.

The result can further be attributed to the relationship between individual EO dimensions and the firm performance construct. An inspection of the correlations between each EO dimension and the firm performance construct (see Appendix J) revealed that only
proactiveness had a significant positive association with firm performance, while innovativeness and risk taking did not show significant correlation. This is consistent with previous studies (e.g. Kropp et al., 2008; Swierczek and Ha, 2003) that have found that not all EO dimensions correlate with different measures of performance. Interestingly, risk taking was negatively correlated with firm performance. This result could be linked to gender-related factors as well as cultural factors. For example, Langowitz and Minniti (2007) argue that the traditional role of women as caregivers for the family could mean that putting the family’s resources at risk increases their perception of risk. Moreover, the negative result could also be related to the fact that the phrase ‘risk taking’ appeared to be negatively perceived among the female entrepreneurs sampled in the Zambian context. Along these lines, Langowitz and Minniti (2007) observed that cultural factors that shape perceptions and risk profiles are contingent on the history of the specific place under investigation. That said, previous studies (e.g. Lechner and Gudmundsson, 2014; Hughes and Morgan, 2007; Naldi et al., 2007) have also reported a negative relationship between risk taking and firm performance. One explanation is that individual EO dimensions may have a varying impact on business performance depending on the firm’s stage of development because different stages of development are associated with different conditions and different needs (Lumpkin and Dess, 1996). Hughes and Morgan (2007) validated this point when they investigated a sample of firms at an emerging stage of development and found that the EO dimensions were not all equally or necessarily related to business performance. They observed that “performance improvement might be the product of one or two of the EO dimensions and its remaining components are either of no value or even work against initiatives to improve performance.” (p. 656). Evidently, only one EO dimension i.e. proactiveness translates into significant positive performance outcomes in the current research and therefore represents the EO dimension that business owner-managers must focus on developing in this research context. The strength of this relationship is also highlighted in Hughes and Morgan (2007). Similarly, while Andersén (2010) did not find a significant relationship between EO and performance, he found that proactiveness shared a significant positive relationship with performance. These findings demonstrate that proactiveness is a fundamental aspect of the strategy of emerging young firms (Hughes and Morgan, 2007), as it enables them sustain first-mover advantage by anticipating the competitive actions of competing firms (Lechner and Gudmundsson, 2014). Proactiveness also improves a firm’s ability to initiate and cultivate social networks that serve as a source of information and resources (Eggers et al., 2013).
7.5 The direct effects of previous entrepreneurship experience and previous work experience in the industry on firm performance (H6, H7)

The results do not support hypotheses H6 and H7. The findings indicate a significant negative effect on firm performance of previous work experience in the industry (P < .01) and previous entrepreneurship experience (P < .001) respectively. While the results show statistical significance, the negative relationships demonstrated here are unexpected and challenge the findings in other studies (e.g., Nielsen, 2015; Kanti Prasad et al., 2013; Coleman, 2007; Colombo and Grilli, 2005; Bosma et al., 2004) which have supported a positive relationship. The argument is that previous experience equips owner managers with the knowledge and skills required to identify and exploit opportunities, assess market trends and intuitively make decisions pertaining to customer needs as well as competitors’ moves (Altinay and Wang, 2011). It also offers the advantage of existing relationships with stakeholders such as customers and suppliers and an understanding of the capital requirements and suitable sales techniques in that particular sector (Marvel and Lumpkin, 2007).

Having said that, the investigation between the two forms of experience and firm performance has not always yielded positive results. For example, some studies (e.g., Cassar, 2014; West and Noel, 2009; Haber and Reichel, 2007) have failed to establish a significant association between previous entrepreneurship experience and firm performance. Similarly, a significant relationship could not be established between an entrepreneur’s prior experience in the same industry and performance in Teixeira and Castro (2015), Soriano and Castrogiovanni (2012) and West and Noel (2009).

Consistent with the results of the current study, Santarelli and Tran (2013) found a significant negative relationship between entrepreneurial experience and profitability. They attributed this result to the fact that experienced entrepreneurs tend to be more risk-averse and reluctant to invest in the profitable opportunities identified. Similarly, Jo and Lee (1996) found a significant negative relationship between entrepreneurial experience and performance. They suggested that an entrepreneur’s prior experience may be a hindrance to change when it is required. Interestingly, Dyke et al. (1993) observed that the impact of previous entrepreneurship experience on firm performance could vary from one industry to the other when they found a positive association between previous entrepreneurship experience and profitability in food manufacturing firms and computers service firms, but a negative relationship in furniture manufacturing firms.

The negative association of previous entrepreneurship experience and industry experience with firm performance in the current study could also be a demonstration of possible failure
by the business owner managers to translate their human capital into better performance. This is in line with Gannotakis’s (2012) argument that the owner managers might rely entirely on their experience/education for information that could affect the success of their firm, thereby overlooking the need to gather information from alternative sources which could aid managerial decision making and potentially lead to adaptation to environmental changes and identification of business opportunities. He further notes that highly experienced entrepreneurs “will be more inclined to adopt routines and strategies that have worked in the past, ignoring new information and also sources that have not been used previously” (p. 498). A high level of experience may therefore result in entrepreneurs portraying a “know-it-all” attitude that may hinder them from recognising the essence of incorporating new ideas in their decision making process and ultimately adapting to changes in their environment. Another explanation for the negative finding could be the argument that different forms of human capital are required at different stages of the entrepreneurial process (Davidsson and Honig, 2003). In line with this argument, Lee and Lee (2014), suggest that the impact of an entrepreneur’s human capital in terms of prior industry experience and education diminishes as the firm progresses through the various stages of entrepreneurship. The failure of the entrepreneur’s previous industry experience and entrepreneurial experience to result in increased performance in the current study may therefore be linked to the stage in the entrepreneurial process of the majority of the firms at the time of the study.

7.6 The mediating effect of EO on the relationship between entrepreneurial competencies and firm performance (H7)

The current study has found that EO partially mediates the relationship between entrepreneurial competencies and firm performance. This finding provides empirical evidence that EO significantly influences the impact of entrepreneurial competencies on firm performance and corresponds to Camuffo et al. (2012) assertion that entrepreneurial orientation is defined by the role of the entrepreneur, their competencies and personality. It also provides further justification for the call by researchers (e.g. Zahra, 1993) to include characteristics of owner managers or executives as potential antecedents of EO in firm-level entrepreneurship models. This is based on the notion that entrepreneurial characteristics impact the nature of the business that is formed and its subsequent management (Lafuente and Salas, 1989). Furthermore, the results provide support for a contingent relationship between EO and the internal characteristics of a firm (Wiklund and Shepherd, 2003). For example, Alipour et al. (2012) found that EO partially mediates the relationship between human capital and firm performance, implying that owner managers should use their human capital to enhance their EO and focus on EO behaviours to maximise firm performance.
However, contrary to Wiklund and Shepherd’s (2003) finding that EO improves the relationship between the knowledge-based resources in a firm and performance, the negative relationship found between EO and performance in the current study suggests that EO potentially weakens the relationship between entrepreneurial competencies and performance in this study context. Following Lumpkin and Dess’s (1996) recommendation that owner managers should only manipulate those EO dimensions that are value-adding, the results here suggest that owner managers in the current study context must focus on developing a proactive orientation if the benefits of the owner manager’s entrepreneurial competencies are to be maximised. On the other hand, risk taking needs to be applied cautiously by weighing the level of risk to be undertaken against the amount of resources available in the business. Hughes and Morgan (2007, p. 657) support this approach and note that “an ad hoc approach to the implementation of EO is potentially damaging since it unwittingly leads to a waste of resources and consequently leads to an unintended strategic decision to undermine the firm's performance.” Another implication is that rather than emphasise the application of an EO, owner managers in this study context should focus on developing strong entrepreneurial competencies as this would result in significant positive outcomes in terms of firm performance.

7.7 The direct effects of control variables i.e. business owner’s age, firm age, firm size and operating capital on firm performance.

As indicated in Chapter 4, the direct effects of the business owner’s age, firm age, firm size and operating capital on firm performance were investigated in the current study.

The business owner’s age was found to have a significant negative association with firm performance (p < .01). This finding is consistent with previous research that has suggested that as entrepreneurs progress in age, they tend to become less entrepreneurial (e.g. Cragg and King, 1988). Similarly, others have found that the entrepreneur’s age is negatively related to innovative activity (Roper, 1998) and that older age reduces the chances of success (Harada, 2003). One explanation could be that older entrepreneurs are likely to have started families and that could make them reluctant to undertake certain business risks that would potentially be essential for the growth of their business (Colombo and Delmastro, 2001). This argument possibly holds for the Zambian context where we found that 66.4% (see Chapter 4) of the women entrepreneurs sampled were married. Moreover, the majority of those sampled (i.e. 90.5%) were above the age of 25, which represents the age around which women generally start a family in Zambia.
The current study found no evidence of a significant relationship between firm age and performance (p > .05). This finding supports those of earlier studies (e.g. Lubatkin et al., 2006; Ahmad, 2007; Baum and Locke, 2004) that found that firm age was not associated with performance. Some (e.g. Lubatkin et al., 2006; Ahmad, 2007) have argued that while the effects of firm age apply to larger organisations, the same may not be true for SMEs. Additionally, the argument that the effect of firm age on an SME is contingent upon its life-cycle may also hold here. For example, Nunes et al. (2013) and Lotti et al. (2009) investigated the growth dimension of performance in Greek and Italian SMEs respectively and found that while age and growth shared a negative and statistically significant relationship at the start of the SMEs’ life cycle, the relationship was statistically insignificant in the later stages of their life-cycle.

Literature suggests that organisational and environmental characteristics portrayed by businesses may vary with their size and age, consequently affecting performance (Wiklund and Shepherd, 2005). Firm size affects performance by influencing the endowment of various resources significant to the business such as finances, human resources and facilities (Tippins and Sohi, 2003). The current study found that firm size has a significant positive direct effect on firm performance (p < .01), thereby supporting the proposed relationship. This finding is consistent with earlier studies (e.g. Lechner and Gudmundsson, 2014; Lubatkin et al., 2006; Poon et al., 2006; Wiklund and Shepherd, 2005) that demonstrate that larger firms perform better than their smaller counterparts. Some studies have associated firm size with success. For example, in a study involving successful and unsuccessful young firms that distributed fresh juices in parts of the United States of America, Duchesneau and Gartner (1990) found that larger firms were more successful than smaller ones when sales and number of employees were considered. Similarly, Soriano and Castrogiovanni (2012) found that firm size was significantly related to profitability and productivity, as well as gaining general business knowledge after start-up. While it is without question that small firms have the advantage of the commitment of the owner manager, bigger firms generally have more capacity to access the various resources required by the firm including financial, human and organisational resources (Cooper and Dunkelberg, 1986) and this potentially translates into economies of scale and/or scope (Porter, 1985). The better performance by larger firms can also be explained in terms of Camuffo et al. (2012) finding that owner managers of larger firms possess a higher level of competencies such as planning, negotiation, business bargaining and oral communication. These competencies inevitably translate into positive performance outcomes for the businesses.
Financial resources are crucial to the performance of small firms (Benzing et al., 2009; Coleman, 2007) leading some e.g. Camuffo et al. (2012) to describe them as a ‘prerequisite’ for business success. The direct relationship between operating financial capital and firm performance emerged as one of the strongest results in the current research. It was found that operating financial capital had a significant positive direct effect on firm performance ($p < .001$), which provides strong support for the proposed relationship between the two constructs. This result validates the findings from previous studies on the widely accepted positive impact of financial resources on small business performance (e.g. Frank et al., 2010; Wiklund and Shepherd, 2005; Wiklund, 1999), and suggests that firms with better access to financial resources perform better than others. Part of the explanation for this is that because financial resources can easily be converted into other resources, they can help make up for other resource constraints in the firm (Wiklund and Shepherd, 2005). This attribute is especially important in the context of small firms as they are generally faced with numerous constraints posed by size limitations. Additionally, financial resources support the implementation of various essential business activities including the introduction or development of new products and services, recruitment of required personnel and growth of the firm (Coleman, 2007). Furthermore, they increase the firm’s capacity to implement entrepreneurial orientation strategies such as R&D, market exploration activities and investment in risky projects, which would give the firm a competitive advantage (Eggers et al., 2013). The small businesses under investigation here need sufficient financial resources to invest in the above mentioned strategies, particularly adopting a proactive posture by constantly monitoring competitor actions and ensuring that they introduce new products and services ahead of the competition to thrive in an industry characterised by intense competition and possible market saturation. Another reasonable interpretation of the results is that the fashion industry is generally dynamic, and the businesses in question have to keep up with the constantly changing trends. While this is demanding in terms of working capital, clothes are generally not a fast-selling product. The working capital needs are compounded in the Zambian context by the fact that business owners generally import their merchandise from outside the country, hence various costs such as transportation, import duty and others also come into play.

7.8 Conclusion
This chapter has discussed the findings of this research project. To sum up, the results provide empirical evidence that within the context of women-owned small businesses in Zambia, some human capital variables serve as antecedents of entrepreneurial competencies. Furthermore, that entrepreneurial competencies are strong predictors of firm
performance. The study also provides empirical evidence that the relationship between entrepreneurial competencies and firm performance is partially mediated by EO. Additionally, the results demonstrate that operating capital and firm size share a positive relationship with firm performance, while the business owner's age has a significant negative impact on firm performance respectively. On the other hand, the size of the firm does not show a significant effect on firm performance. The next Chapter presents the contribution of this research to knowledge, managerial and policy implications of the results, the limitations of the study and suggestions for future research.
CHAPTER 8: CONTRIBUTION TO KNOWLEDGE AND CONCLUSIONS

Chapter overview
The main purpose of this concluding chapter is to present the contribution to knowledge of this research. It provides insights into managerial and policy implications of the findings of the study and offers directions for future research. The chapter closes by highlighting the limitations of the study.

8.1 Theoretical contribution
This research creates new knowledge on the important subject of female entrepreneurship by developing and testing a conceptual model for understanding individual level and firm level factors influencing performance in women-owned SMEs in the context of a sub-Saharan African developing country. To the best of the researcher’s knowledge, the conceptual model developed and tested in the present research is the first of its kind to be developed in the Zambian research context, thereby representing a unique contribution to knowledge. Given that the bulk of entrepreneurship studies have been conducted in developed countries especially the United States of America and Europe (Lee et al., 2009; Lerner and Almor, 2002), the present research makes a notable contribution to the debate on factors influencing female entrepreneurship in non-industrially developed contexts.

This research further broadens the boundaries of current knowledge by attempting to integrate two main literature streams i.e. the competency approach and entrepreneurial orientation, which have historically tended to evolve as separate tracks. The relationship between entrepreneurial competencies and entrepreneurial orientation has been widely ignored in the literature as evidenced from the fact that few studies (e.g. Wickramaratne et al., 2014) have considered both theoretical perspectives in one study. Therefore, this research offers a better understanding of this relationship and how interaction between the two constructs influences firm performance. To illustrate, the finding that entrepreneurial orientation partially mediates the relationship between entrepreneurial competencies and firm performance highlights the importance of taking a contingent approach in investigating small business performance. This study therefore represents a meaningful contribution to the growing body of literature whose agenda is to develop and test conceptual frameworks for understanding small business performance. It is noteworthy that the subject of small business performance is receiving increasing interest from the research fraternity owing to the indisputable role small businesses play in both the developed and developing economies as far as employment creation, innovation, social cohesion and economic progress are concerned (OECD, 2015; GEM, 2012).
8.2 Empirical contribution

The empirical contribution of this research will be discussed in relation to the sub-research questions being addressed.

Entrepreneurial competencies and firm performance (Research questions 1A and 1B)

This research makes a significant contribution as a response to the call for contextualising entrepreneurship research. Some (e.g. Molina-Azorín et al., 2012) have argued that incorporating the complexity, richness and uniqueness of different contexts can potentially contribute to the advancement of the field. By drawing significantly on qualitative research findings to give insights into quantitative findings, the current study demonstrates that established measures and approaches which originate from developed contexts are not adequate to investigate and understand non-industrially developed contexts. On the subject of entrepreneurial competencies for example, the study creates new knowledge on the under-researched area of entrepreneurial competencies by identifying a new set of competencies (i.e. personal competencies) perceived to be important to female entrepreneurs in Zambia. This set of competencies comprises the following attributes: patience, enthusiasm, hard work, determination, leadership and administration. The identification of these competencies suggests that different entrepreneurial qualities are relevant to contexts that differ in terms of their institutional environments, culturally and competitively. It opens up an avenue for the inclusion of these competencies in future investigations on entrepreneurial competencies in similar contexts, particularly the sub-Saharan African region.

This research further demonstrates that the relevance of entrepreneurial competencies in a particular context is contingent on the unique aspects of the business environment including institutional, economic, social-cultural, demographic and firm-specific factors. To illustrate, the current research found that while opportunity, commitment, organising and relationship competencies are relevant to the Zambian context, strategic and conceptual competencies are not. This finding extends literature (e.g. Ahmad, 2007) that suggests that although some entrepreneurial competencies can be applied universally, others are context-specific.

Some contextual factors identified to be linked to the lack of relevance of strategic and conceptual competencies in this context include the main objective behind the firm’s existence, firm size and nature of the industry. Strategic competencies are concerned with the long-term performance of a firm mainly through formal planning. However, the businesses sampled were generally necessity-driven, with the focus of the entrepreneur being to manage the business for survival and earning a livelihood now rather than for the long-
term. The small firm size (below 10 employees) also means that the entrepreneurs in question mostly employ informal management practices such as gut instinct or personal judgment to make decisions rather than sophisticated planning and control methods used in more established businesses. Conceptual competencies are concerned with the use of analytical skills to systematically develop solutions to complex problems, but the non-technological nature of the retail clothing industry means that it is not characterised by a high degree of complexity. This renders conceptual competencies irrelevant in this research context.

On the other hand, the findings show that opportunity competencies are of importance in the context of this research. While it is widely accepted that opportunity recognition and exploitation remain at the centre of the entrepreneurial process (De Koning, 2003), the dynamic nature of the industry in question (clothing) entails that it is especially crucial for entrepreneurs to be alert to changes in fashion trends and customer needs, and to respond effectively in order to achieve a competitive advantage.

Commitment competencies represent another set of relevant attributes for women entrepreneurs in the Zambian context. Strong commitment helps the entrepreneurs overcome the many challenges imposed by the business environment (e.g. intense competition from large foreign retailers and local street vendors, and also high import duty charges) and succeed at managing their businesses. These businesses are generally a livelihood for their families, and hence failure is not seen as an option.

The importance of organising competencies in the current research context can be linked to the need for women entrepreneurs to cope with challenges associated with mobilising financial resources in an environment where accessing formal credit represents a major constraint. This is mainly attributed to the high interest rates charged, a general perception that banks have a negative attitude toward lending to women entrepreneurs, failure by women entrepreneurs to meet collateral requirements due to lack of property ownership, lack of confidence on the part of women entrepreneurs to borrow from banks and ignorance about loan application procedures. As a result of these challenges most women entrepreneurs resort to informal sources of borrowing.

The finding that relationship competencies are relevant to the current context highlights the importance of relationship skills (e.g. negotiation, persuasion, communication) in an industry where high customer contact is the norm, competition is stiff and customers have high bargaining power. The relevance of relationship competencies is also reflective of Zambia’s collectivist culture, where loyalty to a particular group or company is considered
essential to social acceptance and therefore businesses benefit from building personal relationships of trust (Hofstede, 1984).

Moving to the impact of entrepreneurial competencies on firm performance, the current research extends knowledge on the subject by providing empirical evidence that entrepreneurial competencies are strong predictors of firm performance in small businesses owned and managed by women in Zambia. Furthermore, it extends earlier works on entrepreneurial competencies by showing the significant role they play in the performance of small firms.

**EO and firm performance (Research questions 3A and 3B)**

The current study extends the boundary of knowledge by challenging the general assumption that entrepreneurial orientation enhances firm performance and provides empirical evidence for the argument that this relationship is context-specific. Previous studies (e.g. Lumpkin and Dess, 1996; Covin and Slevin, 1991) have reported a positive relationship between the two constructs, leading to this assumption achieving broad scholarly acceptance in entrepreneurship literature. The results of the current study, however, show that within the context of this research, EO shares a negative relationship with firm performance.

Mixed or inconclusive results have also been achieved in other studies, and have been attributed to the influence of various factors including environmental dynamism (Frank et al., 2010), availability of financial resources (Eggers et al., 2013), firm age and firm size (Su et al., 2011; Hughes and Morgan, 2007; Li and Zhang, 2007), performance measures used (Soininen et al., 2012) and the firm’s stage of development (Hughes and Morgan, 2007). These findings therefore challenge the widely accepted view that EO improves firm performance and calls for this relationship to be viewed from a contingency perspective, where organisational context is considered. As argued by Slevin and Covin (1990), particular structural and market conditions do not always favour a high EO. Within the context of this research for example, the negative relationship between EO and firm performance could be associated with lack of adequate financial resources to support the proper implementation of EO strategies, which tend to be resource-intensive.

This research further challenges literature (e.g. Rauch et al., 2009; Covin and Slevin, 1989) that argues for the EO construct to be considered a unidimensional construct rather than a multidimensional construct (e.g. Lumpkin and Dess, 1996). The findings provide empirical evidence that individual dimensions of EO (i.e. innovativeness, risk taking and proactiveness) may have varying impact on firm performance and therefore firms should not
necessarily have to pursue all three dimensions of the construct. Within the context of this research, innovativeness is not significantly correlated with firm performance, risk taking shows inconclusive results evidenced by a negative non-significant correlation while proactiveness shows a significant positive correlation with firm performance. This interesting finding advances our understanding of EO and its dimensions, particularly risk taking in the context of women-owned small businesses. Contrary to the general assumption that a risk-taking approach is beneficial to business (Lumpkin and Dess, 1996), it appears to have negative implications for firm performance in the current context. A possible explanation of this finding could relate to the size and age of the businesses in question. For example, the findings indicate the entrepreneurs sampled generally use gut instinct or personal judgment to make business decisions rather than formal processes. This means they lack formal systems and routines that would enable them to carefully evaluate risky investments in light of possible outcomes before making them. As a result, resources are potentially misapplied, resulting in a negative impact on firm performance. Given that the majority of the firms in this study are young i.e. not more than 8 years old (Su et al., 2011), another explanation could be the liability of newness. Young firms are generally constrained in terms of resources and therefore implementing risky strategies may prove too costly for them. Risk taking therefore may be a strategy that firms of this size operating in this industry may not require to pursue. As noted by Ritter et al. (2006), EO is much needed in hostile and technologically sophisticated environments. A research question that emerges is at what firm age and stage of development does pursuing risky strategies improve firm performance? Also is there an optimal firm size that maximises the benefits of undertaking risks in small businesses? Going forward, future research could benefit from looking further into this relationship by examining it across different firm sizes (i.e. micro, small and medium) and industries (i.e. technology based and non-technology based firms).

Another contribution is that this research contributes to a better understanding of the relationship between entrepreneurial competencies and firm performance by providing empirical evidence that this relationship is partially mediated by EO. This result highlights the fact that entrepreneurial competencies not only have a strong direct effect on firm performance, but also an indirect effect through the mediating role of EO. Moreover, apart from providing insights into the significant role of entrepreneurial competencies as predictors of entrepreneurial behaviour and ultimately firm performance, this research shows that joint consideration of both entrepreneurial competencies and EO provides a more
realistic view of how the individual characteristics of the owner-manager interact with firm level factors to influence performance in small firms.

**Human capital, entrepreneurial competencies and firm performance (Research questions 2 and 4)**

This study extends knowledge by demonstrating that different human capital variables have varying effects on the development of entrepreneurial competencies. For example, while level of education is a strong antecedent of entrepreneurial competencies in the current research context, prior entrepreneurship training is negatively associated with entrepreneurial competencies. The negative relationship between prior entrepreneurship training and entrepreneurial competencies could indicate that the training offered to the women entrepreneurs is perhaps not effective at developing the relevant skills and knowledge needed to cope with constant changes in a dynamic industry. Future research could benefit from evaluating the effectiveness of the training programmes offered, to ensure that the content addresses the specific training needs of women entrepreneurs in this context.

Another contribution is that contrary to the general argument in the literature that previous work experience in the industry and entrepreneurship experience enhance firm performance respectively, this study found that both variables are negatively related to firm performance. This could be attributed to entrepreneurs tending to rely on business approaches that have worked for them in the past and failing to implement new routines and strategies to adapt to changes in their business environment. It may also suggest that every entrepreneurial business is unique and its successful management may require a different set of skills and knowledge on the part of the owner-manager.

**8.3 Managerial implications**

The findings of this research have important implications for female entrepreneurs and potential female entrepreneurs in the context of the Zambian clothing industry. Overall, they provide insights into the important role the business owner-manager plays in the performance of their firm, through their individual skills and capabilities, as well as their entrepreneurial behaviour.

This research demonstrates that possession of relevant entrepreneurial competencies by the owner-manager has strong positive implications for the performance of their business. The findings therefore provide owner-managers with knowledge of which skills and capabilities are beneficial to the performance of their businesses, representing an important first step towards developing behaviours that reflect those specific competencies. As suggested by
Sánchez (2011) and Keh et al. (2007), the fact that SMEs are generally constrained in terms of resources means that owner-managers must focus their attention on those activities that positively impact on firm performance the most. The owner-managers in this research context can therefore focus on practising behaviours which will have positive performance outcomes and/or seeking training that specifically addresses the development of such behaviours. For example, the findings indicate that organising and relationship competencies are important in the current context. Owner-managers would therefore do well to concentrate on developing behaviours relating to these competencies.

As highlighted in the previous section, this research found that level of education and previous entrepreneurship experience both have a significant positive effect on entrepreneurial competencies. The implication of this finding is that achieving a high level of education is beneficial for entrepreneurs in the current context. This is consistent with assertions in previous research (e.g. Man and Lau, 2005; Chandler and Jansen, 1992) that education enhances entrepreneurial competencies. Also, entrepreneurs with no previous entrepreneurship experience could benefit from the wisdom of those with more experience managing their own business, for example through mentorship programmes.

The next implication is linked to the finding that the overall impact of EO on firm performance is negative in the context of the current research. This finding enlightens owner-managers on the fact that the EO-firm performance relationship is not always beneficial in the context of small businesses. Supporting this argument, Lechner and Gudmundsson (2014, p. 52) argue that “being more entrepreneurial is not an objective per se for small firm managers.” Considering the EO dimensions individually suggests that owner-managers should focus their resources on instituting proactive strategies. By enabling the owner-managers monitor market trends, anticipate competitive moves from competitors and ultimately achieve first-mover advantage (Lechner and Gudmundsson, 2014), proactive strategies improve firm performance. On the contrary, investments in risky projects and innovative strategies should be considered very carefully because within the context of this research, innovativeness was found not to have a significant correlation with the performance construct while the relationship between risk taking and firm performance achieved inconclusive results.

8.4 Policy implications
The present study provides empirical evidence that has the potential to assist policy makers design interventions targeted at promoting female entrepreneurship in the Zambian context.
The first implication relates to the evidence that entrepreneurial competencies are strong predictors of firm performance in the current context. In view of this, support programmes and initiatives designed to improve performance in women-owned SMEs should focus on helping owner-managers develop and maintain the competencies identified to be associated with firm performance. The content of entrepreneurship training programmes should aim at addressing the specific competency needs of Zambian entrepreneurs, such as the ability to organise financial resources, investing in relationships with customers and other stakeholders and cultivating a culture of hard work and determination. The finding that previous entrepreneurship training has a negative impact on firm performance suggests that there is a possible mismatch between the training programmes offered to women entrepreneurs and training needs being addressed. The effectiveness of these training programmes therefore needs to be evaluated.

Second, the strong positive relationship demonstrated between level of education and entrepreneurial competencies calls for policy makers and educators to enlighten students on the benefit of achieving a high level of education not only when they seek to pursue a formal career but also when they choose to become entrepreneurs. This finding also signifies the need to adapt curricula on entrepreneurship to incorporate content that directly addresses the development of entrepreneurial competencies relevant to this context.

The results of this research indicate that operating capital is very important as far as business performance is concerned. However, it also emerged that accessing formal credit remains a significant challenge for the female entrepreneurs sampled. The implication for policy makers is to make formal credit more accessible to female entrepreneurs to promote their businesses. Initiatives could include partnering with financial institutions to facilitate the introduction of loan schemes specifically targeted at female entrepreneurs and ensuring that these are offered on more favourable terms than standard loans. Furthermore, it emerged from this research that female entrepreneurs are generally of the perception that banks are not willing to lend to them, and hence the majority are not confident enough to approach the banks for funding. Deliberate action should be taken to encourage female entrepreneurs to apply for formal credit e.g. through promotional campaigns and adverts. Moreover, in order to deal with the problem of women failing to meet collateral requirements as a major condition for obtaining a bank loan, there is need for the Zambian government to promote property ownership among women. One way would be to carry out country-wide campaigns with the aim of changing the cultural practice which generally favours property ownership by men. Deliberate policy could also be introduced which makes the purchase of land more
accessible to women. Other measures could be introduced by financial institutions such as establishing one’s credit worthiness based on their savings and remittance behaviour or conditioning new loans on successful repayments (Almeyda, 1996).

Apart from improving the entrepreneurs’ access to formal credit, policy makers could also help them manage their financial resources more effectively by offering relevant training and/or introducing mentorship programmes which allow less experienced entrepreneurs to learn from their more experienced colleagues as well as business experts.

Another important finding was that government initiatives such as the Citizen’s Economic Empowerment Commission aimed at supporting entrepreneurship in the country were overwhelmed with corrupt practices which resulted in a privileged few benefiting from the initiative. This sends an important message to policy makers on the need to ensure that financial support is given to entrepreneurs on merit by closely monitoring the operations of this and other related organisations, and putting in place checks and balances to curb corruption. There is need to also educate the general Zambian public on the cost of corruption to the nation and society at large as it results in a less economically efficient system.

A final implication for policy makers is to look into establishing a business registration system specifically for SMEs. The compilation of an official list of SMEs grouped according to business activity or industry and location of operation could aid the planning of initiatives aimed at promoting entrepreneurship in the country. It could also facilitate data collection for research projects such as the current one.

8.5 Limitations of the study

This research has undoubtedly made meaningful theoretical and practical contributions, however, it is not without limitations.

First, notwithstanding that the findings of this research may have wider relevance and applicability particularly in other developing contexts, the research is based on a sample drawn from a single country and single industry. Given that different contexts are characterised by different contextual factors such as economic conditions (Su et al., 2011), these results may not be apt for other contexts and their generalisability is therefore yet to be determined.

Another limitation concerns the use of self-reported data from single informants. This approach was necessitated by the nature of the information sought, which could best be obtained from owner-managers given the size of the businesses sampled. The approach has been recommended for use when measuring entrepreneurial competencies (Chandler and
Jansen, 1992). However, it may result in the introduction of common method bias. In order to assess this potential problem, the Harman’s one-factor test was employed. Furthermore, the fact that data relating to both independent and dependent variables were collected using the same survey instrument represents another potential source of common method bias. Three strategies were therefore employed to reduce and evaluate this potential problem including the use of multiple performance measures, conducting confirmatory factor analyses and using the Harman’s one-factor test. While these procedures revealed that common method bias was not a threat in the present study, it is the researcher’s suggestion that the research findings be interpreted in light of this limitation.

In addition, cross-sectional data were used in the present research. The limitation here concerns the argument in the literature (e.g. Zahra and Covin, 1995) that entrepreneurial orientation strategies have long-term consequences on firm performance. This suggests that a cross-sectional design may not fully explain the relationship between the two constructs and therefore a longitudinal approach may be preferable.

The study may also be criticised for using only subjective measures of firm performance. While the use of both objective and subjective measures of performance is widely recommended (Haber and Reichel, 2007), obtaining objective performance data remains a major challenge in small business research owing to unwillingness on the part of owner-managers to share sensitive information as well as the lack of a legal requirement to report financial information. Having said that, many studies investigating small firm performance and success (e.g. Brush and Chaganti, 1998; Chandler and Hanks, 1993) have used subjective performance measures.

Challenges associated with accessing potential respondents represent another limitation. Due to the absence of an official SME list in Zambia, it was extremely difficult for the researcher to identify and contact potential respondents. As a result, non-statistical techniques were employed to select the sample. Specifically, a pragmatic approach involving door-to-door visits to potential respondents was used to try and achieve a high response rate. This problem is not uncommon in studies conducted in non-traditional contexts, leading to scholars (e.g. Kriauciuunas et al., 2011) recommending that sampling frames and survey administration techniques should be context-specific. While the sample was sufficient to analyse the data using structural equation modelling, the challenges highlighted above together with geographic and financial constraints limited the study to the major cities of Zambia.
A final limitation is that there is a possibility that cultural biases relating to the main constructs under investigation may influence the results of the study. Their applicability to other contexts should therefore be considered with caution.

8.6 Directions for future research

Additional research is required to test the conceptual model developed and tested in the current study in other contexts, especially those sharing similar characteristics with Zambia. This would complement the current research, enhance the validity of its findings and establish their generalizability.

Future research could benefit from examining the relevance of personal competencies i.e. patience, enthusiasm, hard work, determination, leadership and administration to other contexts. For example, investigations could look at what environmental factors are linked to these qualities and whether the relevance of these qualities is related to the gender of the entrepreneur. The findings of the present research also point to the potential relevance of other qualities not covered within the scope of the current study. These qualities include energy, trust, family values, self-efficacy and co-operation. Their inclusion in future investigations of women-owned small businesses in non-industrially developed contexts represents a fruitful avenue for further research.

Next, the finding that some entrepreneurial competencies are relevant to the Zambian context while others are not calls for future research to examine the role of the business environment. For example, are these findings industry-specific? Does national culture play role? A comparative study could be conducted involving countries that share similar socio-economic characteristics with Zambia (e.g. Malawi, Zimbabwe) to examine the role of culture in the relationships tested in the current study. For example, Ayadurai and Ahmad (2006) argue that cultural values determine the relevance of entrepreneurial competencies from country to country. Similarly, Thomas and Mueller (2000) observe that entrepreneurs tend to be a reflection of the principal values characterising their national culture. Future research could also benefit from examining the applicability of the new set of competencies identified (i.e. personal competencies) in other research contexts.

The inconsistent results on the EO-firm performance relationship reported in the current research and other previous studies offers another avenue for future research to question the widely accepted knowledge that EO is good for SMEs. Future studies should consider looking further into this relationship by examining it across different firm sizes (i.e. micro, small and medium) and industries (i.e. technology based and non-technology based firms).
Possible research questions could include; is there an optimal level of EO at different stages of a firm’s development? What firm size maximises the benefits of EO? At what firm age does pursuing EO strategies improve firm performance? These questions could also be applied to investigations on the relationship between risk taking and firm performance.

Future studies are encouraged to adopt a longitudinal approach to examine the long-term effects of EO and entrepreneurial competencies on firm performance respectively. This would provide insights into how these relationships change over time. As argued by Zahra and Covin (1995), EO strategies have long term implications. The nature of competencies on the other hand entails that they are learnable and therefore change over time (Bird, 1995). Likewise, Cheng et al. (2005) argue that the demands of the industry may dictate that entrepreneurial competencies required by owner-managers change with time.

The next direction relates to evidence in the present research being based solely on a sample of female entrepreneurs. Future research could use a sample of both female and male entrepreneurs to examine how the relationships explored in this research vary across gender. For example, such an investigation would shed more light on why some human capital variables negatively impact entrepreneurial competencies and firm performance in the current study. Some questions that may be asked include; do human capital variables affect businesses owned by men in the same way? Do men receive the same entrepreneurship training as women?

Another interesting direction relates to performance measurement. While there is no consensus on how firm performance should be measured in small business research, there is wide acknowledgement that performance is a multi-dimensional construct whose measurement requires the inclusion of various factors (e.g. Simpson et al., 2012; Robb and Watson, 2012). Future research could therefore benefit from using both objective financial data and subjective data to measure firm performance.

8.6 Lessons about doing research in a developing sub-Saharan African country
The following are some lessons from conducting research in Zambia, which may apply to other similar contexts.

1) **Sampling frames and survey administration techniques should be context-specific**: While developed contexts tend to have reasonably dependable information to develop sampling frames, this is not the case in a developing context like Zambia. In the current study, the absence of an official register of SMEs or related database made it considerably challenging to develop a sampling frame or obtain credible
secondary data on SMEs. A combination of referrals from business associations, a snowball approach where entrepreneurs were asked to identify others like themselves and door-to-door visits at shopping centres to solicit responses proved useful to overcome this challenge. This process led to the realisation that sampling by way of referrals and snowballing is more effective in this context than randomly selecting respondents because of the element of trust. Respondents were generally more willing to participate in the study when the researcher was referred to them by someone they knew because they felt they could trust that person. Otherwise some questioned the motive of the research, fearing that information collected might be given to the tax authorities.

Another observation was that postal, web-based or telephone questionnaires were not practical given the weak infrastructure and the absence of contact details of potential respondents, leaving face-to-face administration as the most effective option. This approach also had the advantage that it gave the researcher the opportunity to gain the trust of potential respondents and encourage them to participate in the study in an environment where research is yet to achieve wide appreciation.

2) Established measures originating from developed contexts may not be adequate to investigate developing contexts: Some established constructs originating from developed contexts did not apply to the current research context due to contextual differences. For example, it was observed that rather than use sophisticated formal systems that are typical of established firms, the entrepreneurs generally used simple routines and informal processes such as personal judgment to make business decisions. Part of the reason for this could be that most of the businesses in question were a livelihood for the entrepreneurs hence their main objective was survival rather than long-term well-being. Certain constructs (e.g. strategic and conceptual competencies) were therefore found to be irrelevant to this context. Another observation was that some of the established measures used in the study needed to be modified to suit the needs of the research context. For example, the language used in certain measurement items proved too technical for some respondents and had to be simplified.

Finally, this research draws significantly on the qualitative findings to provide insights into the quantitative findings, demonstrating the importance of exploratory work when investigating non-industrially developed contexts.
References


Acocella, I. (2012). The focus groups in social research: Advantages and disadvantages. 
 *Quality and Quantity Journal*, 46, pp. 1125-1136.


OECD. (2004). Promoting SMEs for development. 2nd OECD Conference of ministers responsible for small and medium enterprises (SMEs). Istanbul, Turkey. 3-5 June.


Rowe, K. (2002). The measurement of latent and composite variables from multiple items or indicators: Applications in performance indicator systems. In Background paper prepared for keynote address presented for the Royal Melbourne Institute of Technology Statistics Seminar Series.


overview of women’s work and employment in Zambia – decisions for life MDG3 
project country report No. 4. University of Amsterdam.

strategy research: A comparison of approaches. *Academy of Management Review*, 


Watson, J. (2002). Comparing the performance of male-and female-controlled businesses: 

Watson, J. (2003). Failure rates for female-controlled businesses: are they any different? 


determinants. Doctoral dissertation, Erasmus University Rotterdam, Rotterdam.


ZCSMBA. (2009), Unlocking the Zambian MSME Sector: Constraints and Challenges, [Report], Lusaka: ZCSMBA

ZCSMBA. (2006), Sector Based Performance Monitoring of MSMEs, [Report], Lusaka: ZCSMBA

APPENDICES

Appendix A: Interview questions (Exploratory study)

PART 1: GENERAL UNDERSTANDING OF THE BUSINESS

1. Can you please briefly describe your business?
   Prompt: Who established it, when and how was it established?
   What kind of products/services do you offer?

2. What type of company is it?
   Prompt: Partnership, private company, single owner/sole proprietor

3. How many employees do you have?

<table>
<thead>
<tr>
<th>Employee status</th>
<th>Number of employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-time</td>
<td></td>
</tr>
<tr>
<td>Part-time</td>
<td></td>
</tr>
<tr>
<td>Paid family member</td>
<td></td>
</tr>
<tr>
<td>Unpaid family member</td>
<td></td>
</tr>
</tbody>
</table>

4. If you started the business, what motivated you to start it? (Get maximum 3 factors)
   Prompt: a. Is it something you had wanted to do for a long time?
   b. Why not be in formal employment instead?

PART 2: HUMAN CAPITAL

5. What was your occupation immediately before starting this business? (Get a single response)

6. Did you have any prior work experience related to this business or this industry when you started this business? If so, please provide details in terms of the type of experience and number of years of experience.

7. Have you managed your own business before the current one?

8. Did you undergo any specific entrepreneurship training to start up or improve this business? (If yes, please specify the nature of the training).

PART 3: ENTREPRENEURIAL COMPETENCIES

9. What are the qualities and skills that support your business?
   Probe: What do you think you are good at when it comes to managing the business?

10. Are there other qualities or skills lacking that you would like to have that would benefit your business?

11. What are you doing to understand your market or customers better?
    (Probe: what they want in terms of products, service etc…?)
12. Can you please describe a situation in which you identified an opportunity in the market, to improve your business?

13. How would you describe your relationship with your suppliers?

14. Do you have the need to change suppliers, and if so how often?

15. Apart from your suppliers, are there other people or groups of people you would say you are in a business relationship with? E.g. they give you information, assist you with resources, skills etc…? 
   1. ………………………………nature of relationship: ……………………………………
   2. ………………………………nature of relationship: ……………………………………
   3. ………………………………nature of relationship: ……………………………………

16. How do you manage the following issues regarding your employees?
   1. Employee recruitment: …………………………………………………………………
   2. Employee motivation: …………………………………………………………………
   3. Employee performance: …………………………………………………………………
   4. Workplace conflicts: …………………………………………………………………

17. Do you generally maintain the same set of customers over a long period of time or different customers every time? What do you think is the explanation for your answer?

18. Do you use a formal plan or business plan to run the development of your business?

19. How do you ensure that your business activities run smoothly on a day-to-day basis?

20. As business owner/manager, how do you exercise your control in the business?
   Prompt: Do you always stay in the company or do you hold regular meetings with your employees

21. Can you please describe your typical working day as business owner/manager?
   Prompt: You obviously have a lot of matters to deal with, how do you allocate your time?

22. What are the major difficulties you have experienced when it comes to managing your business and how did you handle these? (Maximum 3 difficulties)

23. Did you at any point in time consider quitting this business? If yes, please describe the situation.

24. Can you please talk about times (if any) when you introduced something new in your business e.g new product or service, new way of doing things, new technology etc…?

25. Did you at any point in time consider quitting this business? If yes, please describe the situation.

26. How often do you come up with new ideas and implement them in your business?

PART 4: FIRM CHARACTERISTICS

26. In your view, is your financial position as a business able to sustain your business operations?
   Probe: investing in required products/services, expanding the business when desired, payment of staff salaries, marketing, investing in required technology etc…..?

27. Are you satisfied with the quality of employees you currently have? Please give reasons for your answer.

28. How do you market or promote your products/services? (probe: are you personally involved in the marketing of your products/services)

29. How do you ensure that your customers prefer you to your competitors?

30. What technology have you invested in to help with your business operations?

31. What technology would you like to have that would help with your business operations?

32. How would you rate the quality of your products/services in relation to those offered by your competitors? (Probe: better, same, worse off). Please give reasons for your answer.
33. Is your business proving too costly to operate or do you feel that your costs are generally within reasonable limits?

PART 5: ACCESS TO FINANCIAL CAPITAL

34. How did you finance your business at the start? (Multiple response)
35. Have you borrowed money for the business in the last three (3) years?
   No (ask why)
   Yes (if yes then ask what the source was)

36. What problems did you face in borrowing money?
37. What has stopped or is stopping you from borrowing money for your business?
38. For what purpose would you borrow or did you borrow the money?
39. Do you think that being a woman is a constraint in getting formal finance?
   (If yes, explain how)
40. How would you describe the general attitude of formal credit sources towards lending to female small and medium business owners?

PART 6: ENTREPRENEURIAL ORIENTATION

41. Describe a situation where you took a risk which you believed could benefit your business?
   (Prompt: introduced a product that had never been sold in the market before)
42. Do you think that taking risks is an important part of your business?
   Yes (Please explain why)
   No (Please explain why)

43. Do you try new ways of doing things in your business?
   Yes (please give examples)
   No (please explain why)

44. How often do you introduce new products or services in your business?
45. In undertaking your business, do you initiate actions which other companies respond to, or do you usually respond to the activities of other companies?
46. In general, what do you do to ensure that you outperform your competition?
   Prompt: Do you actively compete with your competitors?

47. How are business decisions made in your company? Do you make them independently i.e without interference from any other party or through consultation with other parties (specify)
   Prompt: decisions relating to what tasks must be performed and how, what must be done in a particular business situation, what changes must be effected in the business etc…?

48. Are your employees allowed to act on their own if they think it to be in the best interests of the business or do they always have to consult with you?

PART 7: FIRM PERFORMANCE

49. How many employees did you have when you just started the business? ...........................
50. What is the value of your monthly sales on average? ....................................................
51. Value of productive assets – excluding land and building? (including raw material, stocks and machinery): ..............................................................
52. What is your average net income per month? .................................................................
53. Has your business grown (experienced a positive change in sales, employees etc…) in the past one (1) year?
   Sales..................................................................................................................
   Employees......................................................................................................
   Owner compensation.....................................................................................
   Market share.................................................................................................

54. Are you satisfied with the overall performance of your business (sales, profit, costs etc...)?
   Please explain...............................................................................................

55. What are the three (3) most important factors that positively affect the performance of your business?
   1: ..................................................................................................................
56. What are the three (3) most important factors that negatively affect the performance of your business?
1: ...........................................................................................................
2: ...........................................................................................................
3: ...........................................................................................................

57. Are there factors that positively/negatively affect the performance of your business that are specifically because you are a woman?
Yes (please explain) ....................................................................................
No.................................

58. What in your opinion could improve the performance of your business?.........................

PART 8: EXTERNAL ENVIRONMENTAL FACTORS

Government regulations
59. In what way do government laws or regulations affect the performance of your business?
60. Do you think that the present policy environment disadvantages women entrepreneurs? (Please give reasons for your answer).

61. What changes in the government policies are needed to promote women entrepreneurship?

Industry
62. Why did you choose to start your business in this particular industry? (maximum 3 reasons)
1: ...........................................................................................................
2: ...........................................................................................................
3: ...........................................................................................................

63. What do you consider to be the three (3) most important advantages of operating in this industry?
1: ...........................................................................................................
2: ...........................................................................................................
3: ...........................................................................................................

64. Which other industry sector(s) would you consider operating in and why?
1. .................................................. why..................................................
2. .................................................. why..................................................
3. .................................................. why..................................................

Culture:
65. Is your family supportive of you being a business owner?
Yes (in what way)?
No (what hindrances are you facing from your family)?

66. What are the social/cultural aspects that negatively affect your doing business in Zambia?
67. What are the social/cultural aspects that positively contribute to your doing business in Zambia?
68. How would you describe the general attitude of the people in the Zambian society toward women in business?

PART 9: DEMOGRAPHICS

69. Which age group are you?
0-25  1
26-35  2
36-45  3
46-55  4
Above 55  5

70. What is your marital status?
<table>
<thead>
<tr>
<th>Status</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td>1</td>
</tr>
<tr>
<td>Married</td>
<td>2</td>
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<tr>
<td>Separated</td>
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<tr>
<td>Divorced</td>
<td>4</td>
</tr>
<tr>
<td>Widowed</td>
<td>5</td>
</tr>
</tbody>
</table>

71. What is the highest level of education you attained? (Please specify discipline)

- PhD: 1
- Master: 2
- University Degree: 3
- College Diploma: 4
- College Certificate: 5
- Secondary School: 6
- Primary School: 7
- No formal education: 8
Appendix B: Consent form (Exploratory study)

<table>
<thead>
<tr>
<th>Name of Researcher:</th>
<th>Bernadette Mandawa (Ms)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupation:</td>
<td>PhD Candidate</td>
</tr>
<tr>
<td>Institution:</td>
<td>University of Manchester, Manchester Business School, Booth Street West, Manchester, M15 6PB, United Kingdom &amp; Coperbelt University, School of Business, Jambo Drive, Kitwe</td>
</tr>
<tr>
<td>Title of Research:</td>
<td>Enhancing the performance of women-owned SMEs in developing countries – A study of Zambia</td>
</tr>
<tr>
<td>Location of Research:</td>
<td>Zambia - Lusaka and Copperbelt Provinces</td>
</tr>
<tr>
<td>Contact details:</td>
<td>Email <a href="mailto:bernadette.mandawa@postgrad.mbs.ac.uk">bernadette.mandawa@postgrad.mbs.ac.uk</a>. Mobile: +26 0955754035</td>
</tr>
</tbody>
</table>

Dear Participant,

You are invited to participate in a study conducted by Ms. Bernadette Mandawa, a second year PhD candidate at the University of Manchester in the United Kingdom. The title of the research is “Enhancing the performance of women-owned SMEs in developing countries – A study of Zambia”. The study will aim at investigating factors affecting performance in women-owned SMEs in Zambia’s clothing (retail) industry. The research will seek to achieve the following objectives:

1. To identify what qualities and skills possessed by women SME owners in Zambia support their business.
2. To determine the characteristics of women SME owners in Zambia in terms of education and experience.
3. To identify what entrepreneurial competencies and entrepreneurial orientation qualities reported in other contexts are applicable to women entrepreneurs in Zambia.
4. To identify what factors relating to the business affect performance in women-owned SMEs in Zambia.
5. To identify what external environmental factors affect performance in women-owned SMEs in Zambia.
6. To have a general understanding of how women-owned SMEs perform in Zambia.

You were selected as a possible participant in this study because you have been identified as an Owner/Manager of an SME in the category mentioned above.

If you decide to participate, I will conduct an interview with you which will take approximately 1 hour, asking you about your business and your personal experiences as an entrepreneur. This may be inconveniencing on your part as you will have to take this time off your busy schedule. It may also be uncomfortable to talk about certain issues relating to your business.

However, I would like to advise that this study could contribute to improving the environment in which you are currently doing business, by influencing government policy. It could also be useful in taking your business
forward through the recommendations that will be made to entrepreneurs at the end of the study. I wish to further guarantee that any information obtained for this study and that you provide will remain confidential and will not be disclosed unless with your permission. If you give me your permission by signing this document, I plan to disclose the **general results** of the study to the Ministry of Commerce, Trade and Industry, the Zambia Development Agency and the Zambia Chamber of Small and Medium Business Associations. These organizations will be furnished with the results of the study in order that they may inform policy making as well as plans for the SME sector in the country. The results will also be disclosed to the University of Manchester for academic purposes. I wish to assure you that in disclosing these results, all the participants will remain **anonymous**.

Your decision whether or not to participate will not in any way affect your current or future relations with the organisations mentioned above. If you decide to participate, you are free to discontinue participation at any time or to refuse to discuss topics you do not wish to.

Your participation in this study would be greatly appreciated

If you have any questions, please do not hesitate to contact me on the details provided above.

**NOTE:** YOUR SIGNATURE INDICATES THAT YOU HAVE DECIDED TO PARTICIPATE, HAVING READ THE INFORMATION PROVIDED ABOVE.

Name & signature of participant: …………………………………… .................. Date…../……/........

Name & Signature of researcher: …………………………………………………. ….. Date…../……/........
### Appendix C: Research Questionnaire

#### SECTION 1: General Business Information

101. Business Name..............................................................................
102. Business Address.................................................................
103. Year of establishment............................................................
104. Products offered........................................................................

#### SECTION 2: Profile of Business Owner

<table>
<thead>
<tr>
<th>201 Gender</th>
<th>202 Marital status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Female</td>
<td>1 Single</td>
</tr>
<tr>
<td>2 Male</td>
<td>2 Married</td>
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<td></td>
<td>3 Separated</td>
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<td>4 Divorced</td>
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<tr>
<td>5 Widowed</td>
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</tr>
</tbody>
</table>

203 What is your age group?

| 1 25 and below | 4 46 to 55 |
| 2 26 to 35     | 5 Above 55 |
| 3 36 to 45     |            |

204a. What is the highest level of education you have successfully completed?

| 1 No Education | 6 University Degree |
| 2 Basic Education (grades 1 to 9) | 7 Master |
| 3 Secondary Education (Grades 10 to 12) | 8 PhD |
| 4 Trade School or College (certificate holder) | 9 Other (please specify):................................. |
| 5 College/university Diploma |                   |

204b Please specify your field of study (for example Accounting, Marketing, Hotel Management, Business Administration etc......) Field of study:

204c Have you attended any entrepreneurship training?

| Yes | No |

204d If YES, please indicate the type of training you have attended:

| 1. | 2. |
| 3. | 4. |

205a Did you have work experience before starting this company?

| Yes | No |

205b If YES, how many years?.........................

206a Did you work in this industry before starting this company?

| Yes | No |

206b If YES, for how many years? .........................

207a Did you own another business before starting this one?

| Yes | No |

207b If YES, how many? .................................

208a Do you currently own other businesses apart from this one?

| Yes | No |

208b If YES, how many? Number.........................

---

236
### SECTION 3: ENTREPRENEURIAL ORIENTATION

Please cross the box under the number that best represents the extent to which each of the statements below suits your opinion.

1 – Strongly Disagree, 2 – Disagree, 3 – Somewhat disagree, 4 – Neither Agree nor Disagree, 5 – Somewhat agree, 6 – Agree, 7 – Strongly Agree

<table>
<thead>
<tr>
<th>301 Risk taking</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>301a. I consider myself to be a risk taker</td>
<td></td>
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</tr>
<tr>
<td>301b. The term ‘risk taker’ is considered a positive quality for people in our business</td>
<td></td>
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</tr>
<tr>
<td>301c. People in our business are encouraged to take calculated risks with new ideas</td>
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<td>301d. Our business encourages looking for opportunities and trying them out</td>
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<table>
<thead>
<tr>
<th>302 Innovativeness</th>
<th>1</th>
<th>2</th>
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<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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</thead>
<tbody>
<tr>
<td>302a. We actively introduce improvements and new ideas in our business</td>
<td></td>
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</tr>
<tr>
<td>302b. Our business is creative in the ways of doing business</td>
<td></td>
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<tr>
<td>302c. Our business searches for new ways to do things</td>
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<table>
<thead>
<tr>
<th>303 Proactiveness</th>
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<th>2</th>
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<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>303a. My business is normally the first to introduce actions which competitors then copy or respond to.</td>
<td></td>
<td></td>
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<tr>
<td>303b. My business is usually the first business to introduce new products/services, and new ways of doing things</td>
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<tr>
<td>303c. In general, I am strongly in the habit of introducing new ideas and new ways of doing things in my business</td>
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</tbody>
</table>

### SECTION 4: ENTREPRENEURIAL COMPETENCIES

Please cross the box under the number that best represents the extent to which each of the statements below suits your opinion.

1 – Strongly Disagree, 2 – Disagree, 3 – Somewhat disagree, 4 – Neither Agree nor Disagree, 5 – Somewhat agree, 6 – Agree, 7 – Strongly Agree

<table>
<thead>
<tr>
<th>401 Opportunity Competencies</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>401a. I identify products or services which customers want</td>
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<tr>
<td>401b. I identify products or services which customers need but are not offered on the market</td>
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</tr>
<tr>
<td>401c. I actively look for products or services that provide real benefit to customers</td>
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<tr>
<td>401d. I identify good chances or opportunities to do business.</td>
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</tr>
<tr>
<td>401e. I carefully look at the advantages and disadvantages of business opportunities before investing in them.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>402 Relationship Competencies</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>402a. I supply customers with the goods or services they specifically want</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>402b. I make customers feel welcome by being friendly to them</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>402c. I encourage customer feedback and use it to improve our service</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>402d. I deal with customer complaints quickly</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>402e. I maintain regular communication with customers and employees</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>402f. I develop long-term trusting relationships with our customers and employees</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>402g. I negotiate with our customers e.g. prices</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>402h. I negotiate with our employees e.g. employment conditions, work targets etc</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>402i. I interact with our customers and build friendships with them</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>402j. I resolve conflict among employees</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
Please cross the box under the number that best represents the extent to which each of the statements below suits your opinion.
1 – Strongly Disagree, 2 – Disagree, 3 – Somewhat disagree, 4 – Neither Agree nor Disagree, 5 – Somewhat agree, 6 – Agree, 7 – Strongly Agree

### 403 Organising Competencies

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>403a</td>
<td>I plan the operations of the business</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>403b</td>
<td>I plan how different resources will be organised in the business e.g finances, staff</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>403c</td>
<td>I get resources and capabilities from inside and outside the firm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>403d</td>
<td>I organise employees to get work done</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>403e</td>
<td>I motivate our employees through bonuses, meals, transport money etc</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>403f</td>
<td>I give employees responsibilities and the right to make decisions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>403g</td>
<td>I maintain close supervision of employees to ensure they perform</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>403h</td>
<td>I organise resources for the business</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>403i</td>
<td>I take corrective actions to solve day-to-day problems and difficulties.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 404 Commitment Competencies

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>404a</td>
<td>I am determined to make the business work as much as possible</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>404b</td>
<td>I do not intend to quit this business</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>404c</td>
<td>I spend most of my time at the business</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>404d</td>
<td>I make large personal sacrifices in order to ensure the business succeeds</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>404e</td>
<td>I am dedicated to achieving long-term business goals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 405 Personal Competencies

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>405a</td>
<td>I have an outgoing personality</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>405b</td>
<td>I have patience when it comes to running my business</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>405c</td>
<td>I am enthusiastic about achieving my business goals</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>405d</td>
<td>In general, I consider myself to be hard working</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>405e</td>
<td>I am determined to make my business succeed</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>405f</td>
<td>My leadership skills help my business to do well</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>405g</td>
<td>My administration skills help my business to do well</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>405h</td>
<td>I have financial discipline in that I do not spend business finances on personal expenses</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

### SECTION 5: FIRM PERFORMANCE

501. How many employees do you have in this business? ________________________________
502. How many shops or outlets do you have? ________________________________
Please circle the option which best describes the growth of your business over the past 2 years based on the following statements:

### 503. How have the following changed in the last two years

<table>
<thead>
<tr>
<th></th>
<th>Decreased significantly</th>
<th>Decreased moderately</th>
<th>Remained the same</th>
<th>Increased moderately</th>
<th>Increased significantly</th>
</tr>
</thead>
<tbody>
<tr>
<td>503a. Sales</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>503b. Net profits</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>503c. Number of customers</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>503d. Number of employees</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>503e. Salary of business owner</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

### 504. In your opinion, how has the following changed in comparison to your competitors over the last two years

<table>
<thead>
<tr>
<th></th>
<th>Decreased significantly</th>
<th>Decreased moderately</th>
<th>Remained the same</th>
<th>Increased moderately</th>
<th>Increased significantly</th>
</tr>
</thead>
<tbody>
<tr>
<td>504a. Growth in sales</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>504b. Growth in profitability</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>504c. Growth in number of customers</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>504d. Growth in number of employees</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>504e. Ability to fund business growth from profit</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

### 505. Please indicate the extent to which you are satisfied with the performance of your business over the past 2 years by circling the number of your choice.

<table>
<thead>
<tr>
<th></th>
<th>Not satisfied at all</th>
<th>Somewhat dissatisfied</th>
<th>Neither satisfied nor dissatisfied</th>
<th>Somewhat satisfied</th>
<th>Very satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>505a. Current sales level</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>505b. Growth in sales</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>505c. Net profits</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>505d. Number of customers</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>505e. Salary of business owner</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>505f. The work of your employees</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>505g. General behaviour of your employees</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>505h. Overall Business performance</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

### 506. How often does your business have enough capital to cover the costs of running the business, for example buying new stock, paying employees, paying bills etc…?

1. Never
2. Rarely
3. Sometimes
4. Usually
5. Always

Name of participant………………………………………………………………………………………………………………………………………………

Contact number…………………………………………………………………………………………………………………………………………………………

Thank you very much for your participation
Appendix D: Exploratory factor analysis to check for Common Method Bias

### KMO and Bartlett's Test

<table>
<thead>
<tr>
<th>KMO and Bartlett's Test</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Kaiser-Meyer-Olkin Measure of Sampling Adequacy</td>
<td>.728</td>
</tr>
<tr>
<td>Bartlett's Test of Approx Chi-Square</td>
<td>549.389</td>
</tr>
<tr>
<td>Sphericity df</td>
<td>105</td>
</tr>
<tr>
<td>Sig.</td>
<td>.000</td>
</tr>
</tbody>
</table>

### Communalties

<table>
<thead>
<tr>
<th>Firm Age recoded into 2: 1: 0-3 years; 2: 4-30 years</th>
<th>Initial</th>
<th>Extraction</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.000</td>
<td>.004</td>
<td></td>
</tr>
<tr>
<td>Any training or workshops attended</td>
<td>1.000</td>
<td>.054</td>
</tr>
<tr>
<td>Previous work experience in the industry</td>
<td>1.000</td>
<td>.037</td>
</tr>
<tr>
<td>Previous business ownership</td>
<td>1.000</td>
<td>.003</td>
</tr>
<tr>
<td>Number of employees recoded into 2 categories</td>
<td>1.000</td>
<td>.001</td>
</tr>
<tr>
<td>Age group recoded into 2 groups; 1=35 yrs and below; 2 = above 35 years</td>
<td>1.000</td>
<td>.001</td>
</tr>
<tr>
<td>Highest level of education recoded into two groups; 1 = secondary education and below; 2 = College level and above</td>
<td>1.000</td>
<td>.224</td>
</tr>
<tr>
<td>Having sufficient capital recoded into 2 groups; 1 = never; rarely; sometimes, usually; 2 = always</td>
<td>1.000</td>
<td>.017</td>
</tr>
<tr>
<td>OPC1_w+OPC3_w+OPC4_w+OPC5_w+CC1_w+CC2_w+CC4_w+CC5_w</td>
<td>1.000</td>
<td>.538</td>
</tr>
<tr>
<td>PQ2_w+PQ3_w+PQ4_w+PQ5_w+PQ6_w+PQ7_w</td>
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<td>.261</td>
</tr>
<tr>
<td>RT1_w+RT2_w+RT3_w+RT4_w+IN1_w+IN2_w+N3_w+PR1_w+PR3_w</td>
<td>1.000</td>
<td>.471</td>
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<tr>
<td>PERFORMGS</td>
<td>1.000</td>
<td>.403</td>
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<tr>
<td>RC1_w+RC2_w+RC4_w+RC5_w+RC6_w+RC7_w+RC8_w+RC9_w+RC10_w</td>
<td>1.000</td>
<td>.109</td>
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<tr>
<td>OG1_w+OG2_w+OG3_w+OG6_w+OG7_w+OG9_w</td>
<td>1.000</td>
<td>.544</td>
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</table>

*Extraction Method: Principal Component Analysis.*
Total Variance Explained

<table>
<thead>
<tr>
<th>Component</th>
<th>Initial Eigenvalues</th>
<th>Extraction Sums of Squared Loadings</th>
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<tr>
<td></td>
<td>Total</td>
<td>% of Variance</td>
</tr>
<tr>
<td>2</td>
<td>1.708</td>
<td>11.389</td>
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<td>3</td>
<td>1.423</td>
<td>10.456</td>
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<tr>
<td>4</td>
<td>1.193</td>
<td>8.023</td>
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<tr>
<td>5</td>
<td>1.026</td>
<td>8.434</td>
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<tr>
<td>6</td>
<td>.942</td>
<td>6.278</td>
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<tr>
<td>7</td>
<td>.849</td>
<td>5.883</td>
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<tr>
<td>8</td>
<td>.726</td>
<td>4.837</td>
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<tr>
<td>9</td>
<td>.663</td>
<td>4.418</td>
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<tr>
<td>10</td>
<td>.609</td>
<td>4.058</td>
</tr>
<tr>
<td>11</td>
<td>.493</td>
<td>3.287</td>
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<tr>
<td>12</td>
<td>.497</td>
<td>3.249</td>
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<td>13</td>
<td>.456</td>
<td>3.054</td>
</tr>
<tr>
<td>14</td>
<td>.353</td>
<td>2.354</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis.

Component Matrix

<table>
<thead>
<tr>
<th>Firm Age recoded into 2: 1: 0-3 years; 2: 4-30 years</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any training or workshops attended</td>
<td>-.061</td>
</tr>
<tr>
<td>Previous work experience in the industry</td>
<td>-.231</td>
</tr>
<tr>
<td>Previous business ownership</td>
<td>-.193</td>
</tr>
<tr>
<td>Number of employees recoded into 2 categories</td>
<td>.056</td>
</tr>
<tr>
<td>Age group recoded into 2 groups, 1=35 yrs and below, 2= above 35 yrs</td>
<td>-.029</td>
</tr>
<tr>
<td>Highest level of education recoded into two groups: 1 = secondary education and below; 2 = College level and above</td>
<td>.473</td>
</tr>
<tr>
<td>Having sufficient capital recoded into 2 groups; 1 = never, rarely, sometimes, usually; 2 = always</td>
<td>.129</td>
</tr>
<tr>
<td>OPC1_w+OPC3_w+OPC4_w+OPC5_w</td>
<td>.733</td>
</tr>
<tr>
<td>CC1_w+CC2_w+CC4_w</td>
<td>.511</td>
</tr>
<tr>
<td>PQ2_w+PQ3_w+PQ4_w</td>
<td>.697</td>
</tr>
<tr>
<td>RT1_w+RT2_w+RT3_w+RT4_w+IN1_w+IN2_w+IN3_w+PR1_w+PR3_w</td>
<td>.635</td>
</tr>
<tr>
<td>PERFORMOG</td>
<td>.330</td>
</tr>
<tr>
<td>RG1_w+RG2_w+RG4_w</td>
<td>.738</td>
</tr>
<tr>
<td>OG1_w+OG2_w+OG3_w</td>
<td>.732</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis.

a. 1 components extracted.
Appendix E: Congeneric models entrepreneurial competencies
Commitment competencies

Computation of degrees of freedom (Default model)

- Number of distinct sample moments: 10
- Number of distinct parameters to be estimated: 8
- Degrees of freedom (10 - 8): 2

Result (Default model)

Minimum was achieved
Chi-square = .274
Degrees of freedom = 2
Probability level = .872

Regression Weights: (Group number 1 - Default model)

<table>
<thead>
<tr>
<th>Label</th>
<th>Estimate</th>
<th>S.E.</th>
<th>C.R.</th>
<th>P</th>
<th>Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC5 &lt;--- Commitment</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CC4 &lt;--- Commitment</td>
<td>1.100 (.100)</td>
<td>11.040 ***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CC1 &lt;--- Commitment</td>
<td>.717 (.087)</td>
<td>8.211 ***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CC2 &lt;--- Commitment</td>
<td>1.242 (.139)</td>
<td>8.948 ***</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Opportunity competencies

Computation of degrees of freedom (Default model)

Number of distinct sample moments: 10
Number of distinct parameters to be estimated: 8
Degrees of freedom (10 - 8): 2

Result (Default model)

Minimum was achieved
Chi-square = 3.351
Degrees of freedom = 2
Probability level = .187

<table>
<thead>
<tr>
<th>Estimate</th>
<th>S.E.</th>
<th>C.R.</th>
<th>P</th>
<th>Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPC5 &lt;--- Opportunity</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
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Organising competencies

Computation of degrees of freedom (Default model)

Number of distinct sample moments: 21
Number of distinct parameters to be estimated: 12
Degrees of freedom (21 - 12): 9

Result (Default model)

Minimum was achieved
Chi-square = 12.554
Degrees of freedom = 9
Probability level = .184

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Relationship competencies

Computation of degrees of freedom (Default model)

Number of distinct sample moments: 45
Number of distinct parameters to be estimated: 21
Degrees of freedom (45 - 21): 24

Result (Default model)

Minimum was achieved
Chi-square = 37.848
Degrees of freedom = 24
Probability level = .036

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Personal competencies

**Computation of degrees of freedom (Default model)**

- Number of distinct sample moments: 21
- Number of distinct parameters to be estimated: 13
- Degrees of freedom (21 - 13): 8

**Result (Default model)**

Minimum was achieved
Chi-square = 18.492
Degrees of freedom = 8
Probability level = .018

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Diagram: [Graph of personal competencies]
Appendix F: Estimates higher-order entrepreneurial competency construct

Asymptotically Distribution-free Estimates
Regression Weights: (Group number 1 - Default model)

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<td>OpportunityCompetencies &lt;- Competencies</td>
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Standardized Regression Weights: (Group number 1 - Default model)

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Variances: (Group number 1 - Default model)

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### Appendix G: Exploratory factor analysis – Firm performance construct

#### KMO and Bartlett’s Test

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#### Communalities

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<td>Satisfaction with number of customers</td>
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<td>Satisfaction with overall business performance</td>
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Extraction Method: Principal Component Analysis.

#### Total Variance Explained

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Extraction Method: Principal Component Analysis.
### Component Matrix\(^a\)

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Extraction Method: Principal Component Analysis.

a. 1 components extracted.
### Appendix H: Correlations between entrepreneurial competencies and entrepreneurial orientation

[DataSet1] C:\Users\Bernadette Mandawa\Documents\analysis\Fieldwork database.sav march 13 2015.sav

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<th>Innovativeness</th>
<th>Proactiveness</th>
<th>EO</th>
<th>Opportunity</th>
<th>Relationship</th>
<th>Organising</th>
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<td>0.700**</td>
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** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).
Appendix I: Firm age classified into categories 1 to 8 years and Above 8 years

RECODE FA (Lowest thru 8=1) (9 thru Highest=2) INTO FA_8.
VARIABLE LABELS FA_8 'Firm age recoded in 2 i.e. 1= 8 yrs and below; 2= above 8 yrs'.
EXECUTE.
FREQUENCIES VARIABLES=FA_8
/ORDER=ANALYSIS.

Frequencies

Statistics

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</tr>
<tr>
<td>Missing</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Firm age recoded in 2 i.e. 1= 8 yrs and below; 2= above 8 yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
</tr>
<tr>
<td>-----------</td>
</tr>
<tr>
<td>Valid</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Total</td>
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</tbody>
</table>
### Appendix J: Correlations between Firm performance and EO

**DATASET ACTIVATE DataSet1.**

**CORRELATIONS**

```plaintext
/VARIABLES=PERFORMGS RT INNOV PROACT EOrientation
/PRINT=TWOTAIL NOSIG
/MISSING=PAIRWISE.
```

<table>
<thead>
<tr>
<th></th>
<th>PERFORMGS</th>
<th>Total score on risk taking</th>
<th>Total score on innovativeness</th>
<th>Total score on proactiveness</th>
<th>RT1_w+RT2_w+RT3_w+RT4_w+IN1_w+IN2_w+IN3_w+PR1_w+PR3_w</th>
</tr>
</thead>
<tbody>
<tr>
<td>PERFORMGS</td>
<td>Pearson Correlation</td>
<td>1</td>
<td>-.033</td>
<td>.129</td>
<td>.218**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.627</td>
<td>.055</td>
<td>.001</td>
<td>.043</td>
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<td>220</td>
<td>220</td>
<td>220</td>
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<tr>
<td>Total score on risk taking</td>
<td>Pearson Correlation</td>
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<td>1</td>
<td>.391**</td>
<td>.028</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.627</td>
<td>.000</td>
<td>.680</td>
<td>.000</td>
</tr>
<tr>
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<td>220</td>
<td>220</td>
<td>220</td>
<td>220</td>
</tr>
<tr>
<td>Total score on innovativeness</td>
<td>Pearson Correlation</td>
<td>.129</td>
<td>.391**</td>
<td>1</td>
<td>.476**</td>
</tr>
<tr>
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<td>Sig. (2-tailed)</td>
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<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>220</td>
<td>220</td>
<td>220</td>
<td>220</td>
<td>220</td>
</tr>
<tr>
<td>Total score on proactiveness</td>
<td>Pearson Correlation</td>
<td>.218**</td>
<td>.028</td>
<td>.476**</td>
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</tr>
<tr>
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<td>Sig. (2-tailed)</td>
<td>.001</td>
<td>.680</td>
<td>.000</td>
<td>.000</td>
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<tr>
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<td>220</td>
<td>220</td>
<td>220</td>
<td>220</td>
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<tr>
<td>RT1_w+RT2_w+RT3_w+RT4_w+IN1_w+IN2_w+IN3_w+PR1_w+PR3_w</td>
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<td>220</td>
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<td>220</td>
</tr>
</tbody>
</table>

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

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

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