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# The impact of entrepreneur's human capital variables on access to funding

**Matshekga, Malose Jonas**

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# *The impact of entrepreneur's human capital variables on access to funding*


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**A research report submitted to the Faculty of Commerce, Law and Management, University of the Witwatersrand, in partial fulfilment of the requirements for the degree of Master of Management specialising in Entrepreneurship and New Venture Creation**

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# ABSTRACT

**SMMEs play an integral role in economic growth and development in both industrialised and developing countries by creating new jobs. It is therefore necessary to help them set up and expand their operations, develop new products, and invest in new staff or production facilities through allowing them access to finance. Access to funding remains a key aspect in SMME development and growth and in South Africa this still remain a problem. Small businesses, but particularly micro businesses, often do not fulfil the criteria to obtain the required amount of debt finance for longer-term growth. Typical problems are the lack of appropriate collateral, excessive outstanding debt and lack of proven business skills. For business people to obtain an unsecured loan solely on the strength of their character requires a major leap of faith on the part of the creditor. The Global Entrepreneurship Monitor (GEM) report of 2009 states that many entrepreneurs complain that there is lack of access to funding in South Africa. However, the country is no worse off with this issue than other developing countries. The report also mentions that often the entrepreneurs applying for funding are under prepared and do not provide sufficient relevant information. South Africa has a number of funding institutions and they include micro–financiers, banks, venture capitalists (VCs) and government–supported institutions which include Khula, the National Empowerment Fund (NEF) and the Industrial Development Council (IDC).**

**This study looked at the perceived impact of the human capital of the SMME's founder in accessing funding and if access to funding is perceived to have a positive impact on SMMEs' growth. The perceived impact of the human capital of knowledge, formal education and expertise in attracting external funding and enhancing the growth of SMMEs was explored using the human capital theory framework. This exploration was done by testing the attitudes of 68 entrepreneurs. Descriptive and inferential statistics were used to analyse the data and to test the hypotheses. The results indicated that accessing funding is positively related to the SMME's growth. In terms of human capital factors, the results indicated that knowledge, education and expertise are all perceived to be very important in accessing funding. Knowledge rated the highest in terms of the factors important in accessing funding. The study did not establish any relationship between the demographics of the SMME and the perceived importance of human capital factors in accessing funding. The study discusses the implications of the finding for funders and policy–makers. This study was simplistic in that it focused only on the perceived impact of human capital factors in accessing funding rather than all other factors as discussed in entrepreneurship theory.**

# DECLARATION

I, Malose Jonas Matshekga, declare that this research report is my own work except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements for the degree of Master of Management in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.

---

(Malose Jonas Matshekga)

Signed at ……

On the …….. day of …… 2012

# DEDICATION

**This research report is dedicated to the people who have made a difference in my life. To my late grandfather Lesetja Johannes Ledwaba for laying the foundation and raising the man that I am today. To my late grandmother, Maria Ramasela Ledwaba-Pheladi a boledi, I still wonder how a blind person takes a Four-day-old child to live with her. I will always love and cherish you. Thanks for the upbringing and everything you taught me in your blindness. Now I know that nothing can or should stop me to achieve what I want in life. Thank you mma.**

**To my late mother Mokgaetji Leah Matshekga-Mahlaaku, for dedicating all your life to making sure that I and my young brothers got the kind of education we have today and always believing in us. I hope that the Three of you will be proud of what I am about to achieve. To my uncle Abram Boy Ledwaba, thank you very much for being a Third father to me and always being there to help pick up the pieces. I love you.**

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Firstly, I would like to thank my Supervisor Professor Boris Urban for guiding me through the research process. Mrs Merle Werbeloff for your assistance and guidance in making sure that this study makes sense. I hope you will be proud of the effort and the work reproduced in this report.

To my syndicate group members with whom I worked in the three quarters of the programme thanks for the lessons that have made me grow.

To my friends, thanks for supporting me. A special mention to a brother and a true friend, Malefane Micah Mocoancoeng for always listening and advising me on everything. I love you moratho.

Also to my brothers, thanks for your help. I know we are all still in pain for losing our beloved mother BUT God will give us strength to keep carrying on. To my dad Alpheus Lesiba Matshekga (Motsoaledi) I hope you remain strong. God shall heal all of us.

Finally, to the most important people in my life. My daughter Mahlatse, my two sons Lotang-Leruo and Khutšo, I hope now you understand why daddy was always busy on his laptop. I love you very much. To my partner, the pillar of my strength, the mother of my three beautiful kids, Nthabiseng Hlophe, we made it. Thank you for loving and always supporting me. I love you very much.

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# CHAPTER 1: INTRODUCTION

Many studies have been conducted in order to investigate the popular belief that there is a lack of capital to fund start-up businesses, and this has been the subject of much research in recent years. Sub-optimal capital levels in new firms due to credit constraints may have a large impact on the economy (Astebro and Benhardt, 2005). However, many researchers acknowledge that while access to funding is a big problem for small-micro-and medium-size enterprises (SMMEs), it has not yet been fully established how large the problem is, if indeed it exists. In other researches done over the years, it is also cited that the amount of initial financial capital invested is positively related to new venture survival and growth. According to Chandler and Hanks (1998), this sort of finding is not a far-fetched conclusion because, in most cases, the firm with greater financial resources can invest more in product/service development, production, and marketing, and has a larger financial cushion to provide insulation against slow start-ups, market downturns, or managerial mistakes. Inadequate financial resources are often cited as a primary reason why emerging businesses fail (Rujoub, Cook, and Hay,1995) cited in Chandler and Hanks (1998).

For many firms, it is therefore important that they are able to utilise all the resources they have at their disposal. According to Cooper, Gimeno-Gascon and Woo (1994), the human capital provided by the founder's abilities is an important contributor to the success of the firm. Empirical analysis conducted by Astebro and Benhardt (2005) reveals that there is clear evidence that

entrepreneurs with high human capital have both greater financial wealth and greater levels of start-up capital, which points to the endogenous nature of credit constraints.

Bougheas, Mizen and Yalcin (2004) state that financial health is used as an indicator to determine firms' access to external funds and therefore, when monetary policy tightens, real variables such as employment, production, sales, investment and inventory accumulation are influenced not only by higher interest rates but also by contracting credit. The authors argue that the influence of information asymmetries can be understood by observing firm-specific characteristics that are good proxies for financial health.

Entrepreneurship has been an engine of sustained economic expansion in both developed and emerging economies (Le and Nguyen, 2009). Ahlstrom and Bruton (2006) also argue that one critical success factor for an entrepreneurial firm is gaining sufficient access to external sources of finance. Many SMMEs are still faced with challenges in accessing finance (Le, Nguyen and Vankatesh, 2006) and this is particularly due to constraints in such resources. Finding or accessing finance is a key challenge for many owners of small businesses. The SMME sector is globally regarded as the driving force in economic growth and job creation (Cook and Nixson, 2005). These businesses play a major role in creating jobs and wealth in any economy. According to Cook and Nickson (2005), the development of the SMME sector is central to the growth of an economy, which is the key to resolving many societal challenges, including

unemployment. SMMEs are often the first to offer new products in the market and they are more flexible than large organisations (Boone and Kurtz, 2006). This, therefore, means that SMMEs can meet and satisfy customers' or the population's needs better than bigger businesses that lack flexibility. In South Africa, the total economic output of SMMEs is estimated at approximately 50% of gross domestic product (GDP) and the sector employs in excess of 60% of the total labour force (Falkena, Abedian, Blottnitz, Coovadia, Davel, Madungandaba, Masilela and Rees, 2001). SMMEs play a more important role in developing economies than in the industrial countries, since they make a major contribution to socio-political stability.

The World Bank report (2006) on access to finance suggests that the literature on economic development and corporate finance consistently demonstrates that inadequacies in relation to finance are key barriers to firm growth. SMMEs' access to external sources of funding depends largely on the development of financial markets, the regulatory environment within which financial institutions operate and their ability to assess, manage and price the risks associated with loan products for SMMEs. These last functions take place within a particular socio-economic context, which is in fact determined by the historical patterns of financial intermediation. According to Gilbert, McDougall and Audretsch (2006), finance is one of the necessary resources required for entrepreneurial ventures to form and subsequently develop. Entrepreneurs have to make key decisions, which have implications for the business operations, risk of succeeding or failure, how the business performs, and its potential growth in future. Seghers, Manigart and Vanacker (2009) mention that according to Modigliani and Miller

(1958), traditional finance theory resorts to the framework of perfect capital markets. This framework assumes that information is free and directly available to all entrepreneurs, which allows entrepreneurs to make comprehensive finance decisions with wealth maximisation as their ultimate goal (Brealey and Myers, 2000). Seghers et al. (2009) suggest that according to this perspective, the supply and demand for finance is in equilibrium, which implies that all value-creating projects will find sufficient finance. Contrary to this image portrayed in traditional finance theory, entrepreneurial ventures are often confronted with financial constraints and are not able to raise sufficient outside finance necessary to conduct all their value-creating investment projects (Hubbard, 1998). As a result, the growth of entrepreneurial ventures is often restricted by internal finance (Carpenter and Petersen, 2002).

SMMEs often do not fulfil the criteria to obtain the required amount of debt finance for longer term-growth. Typical issues with accessing finance are often associated with the lack of appropriate collateral, excessive outstanding debt, and lack of proven business skills of the entrepreneur. In the early stages of the SMME, its development and financing are critically dependent upon the owners and individuals close to them. The capacity for SMMEs to fulfil their potential in an economy depends on the availability of finance (Whincop, 2001). According to Whicop (2001), finance in general and credit in particular are especially important for SMMEs, since they are unable to finance themselves through retained earnings or equity financing. Scholars studying financial constraints within entrepreneurial ventures have largely stressed supply-side arguments, thereby putting the decision making process of investors in the foreground

(Seghers et al., 2009). Within this perspective, prior research has mainly focused on the role of information asymmetries and transaction costs in explaining why investors may refrain from investing in value-creating entrepreneurial ventures (Berger and Udell, 1998). Seghers et al. (2009) argue that financial constraints may also be driven by demand-side factors and, more specifically, by the characteristics of entrepreneurs. Research on demand-side arguments, which puts the decision-making process of entrepreneurs in the foreground, is more limited but growing rapidly.

Entrepreneurs are the driving force of important decisions and entrepreneurial characteristics for this reason may play an important role in explaining finance decisions (Cassar, 2004). Entrepreneurs may be unwilling to raise outside equity because of fear of losing independence and control over their ventures (Sapienza et al., 2003). Moreover, the limited risk tolerance of entrepreneurs may preclude them from raising outside debt finance. Previous studies on the effect of human capital on survival have often employed an insufficient range of types of human capital or inappropriate proxies (Gimmon and Levie, 2009). Some of the studies that have considered human capital effects on external investment tend to have been conducted by asking investors what they look for when making decision on financing SMMEs (Levie and Gimmon, 2008).

This study intended to look at the impact of entrepreneur's human capital variables in accessing finance. Although a considerable number of research papers have mentioned that access to finance has been a major problem in the

SMME sector, a survey of the literature dealing with this area indicates there is a significant gap in knowledge of the determinants of access to finance by SMMEs in developing countries, including South Africa. A few studies have been undertaken that investigate the determinants of access to finance from the supply-side and these studies are limited as they do not investigate demand-side. Neither do these studies give an overall picture of determinants of access to finance. This study employed human capital theory in addressing the research topic, whose goal was to assess the impact of the entrepreneur's human capital variables in accessing funding for the SMME looking at knowledge, education, and work experience of the owner. The study also looked at whether those SMMEs that received funding were able to grow.

## 1.1 Purpose of the study

SMMEs play an integral role in economic growth and development in both industrialised and developing countries by creating new jobs. It is therefore necessary to help them set up and expand their operations, develop new products, and invest in new staff or production facilities through allowing them access to finance. According to the OECD report (2006), many small businesses start out as an idea from one or two people, who invest their own money and most probably turn to family and friends for financial help in return for a share in the business. For those who become successful, there comes a time when they need new investment to expand or innovate further. Their problems start mainly at this point, when they often run into difficulties because they find it much harder than larger businesses to obtain financing from banks,

capital markets or other suppliers of credit. Therefore, this study aimed to look at how human capital variables impact on access to finance and how successful SMMEs become once they have been given funding.

The focus is on the relationship between human capital variables and access to finance. In addition, the study looked at the relationship between access to finance and entrepreneurial growth or success. The human capital of founders and access to finance are often mentioned as two key drivers of the growth of SMMEs, especially in new technology-based firms (Colombo and Grill, 2009). These authors also mention that the mechanisms through which these two factors affect firm growth have not received sufficient attention in the extant literature. In this study, different theoretical approaches were examined in order to provide different explanations of why founders' human capital and venture capital investments enhance growth. In addressing the research problem, the study looked at assessing the relationship of human capital variables such as education, knowledge and entrepreneurial experience and how these influence access to finance for the SMME. The study also evaluated how access to finance influences an SMME's growth.

## 1.2 Context of the study

According to Falkena et al. (2001), small businesses, but particularly micro businesses, often do not fulfil the criteria to obtain the required amount of debt finance for longer-term growth. Typical problems are the lack of appropriate collateral, excessive outstanding debt and lack of proven business skills. For

business people to obtain an unsecured loan solely on the strength of their character requires a major leap of faith on the part of the creditor (Falkena et al., 2001). Usually, such unsecured credit is forthcoming only after some time has passed and against a proven track record of successfully operating one or more small-scale business undertakings for the business person's own account. At the earliest development stages, the finance of micro and small enterprises is critically dependent on the owners and individuals close to them. As successful SMMEs develop, they soon outgrow sources of internal equity and graduate to external capital, including venture capital, corporate investment and bank debt.

The Global Entrepreneurship Monitor (GEM) report of 2009 states that many entrepreneurs complain that there is lack of access to funding in South Africa. However, the country is no worse off with this issue than other developing countries. The report also mentions that often the entrepreneurs applying for funding are under prepared and do not provide sufficient relevant information. South Africa has a number of funding institutions and they include micro-financiers, banks, venture capitalists and government-supported institutions which include Khula, National Empowerment Fund (NEF) and Industrial Development Council (IDC).

## 1.3 Problem statement

### 1.3.1 *Main problem*

Determine the importance of access to funding for SMMEs' ability to grow, and the importance that entrepreneurs attribute to human capital elements in accessing this funding.

### 1.3.2 *Sub-problems*

1. The first sub-problem is to determine the extent to which entrepreneurs perceive access to SMME funding to be important for SMME growth.
2. The second sub-problem is to determine and compare the relative importance that entrepreneurs attribute to the human capital factors of knowledge, formal education and expertise in accessing SMME funding.
3. The third sub-problem is to determine whether differences in the extent to which entrepreneurs perceive access to SMME funding to be important for SMME growth is related to the demographics of the entrepreneurs.

### 1.3.3 *Detailed problem statement*

Access to finance is crucial to the sustainability and growth of SMMEs, which play an important role in the health of a country's private sector. According to Monks (2010), access to the necessary financial reserves has been identified as a critical factor in determining the success or failure of SMMEs both in developing and developed countries. Access to financial resources is often seen by many entrepreneurs as a critical determinant of how their SMMEs will grow. Adequate access to finance represents an important element of the ability of SMMEs to invest in productive assets and the latest technology that is

necessary for business expansion and to enhancing competitiveness (Monks, 2010).

GEM (2009) mentions that lack of finance is regarded as a major inhibitor to business development. According to GEM (2009), a lack of access to finance is the biggest single obstacle among the start-up and growth of small enterprises. South Africa has a low rate of entrepreneurial activity and lack of financing has been identified as a limiting factor, yet cash is available. According to the SEDA report of 2011, difficulty accessing finance also represents a major constraint to the creation of new SMMEs in South Africa. In this report it is stated that in 2006 only 2% of new small and medium enterprises (SMEs) in the country were able to access bank loans. Furthermore, as many as 75% of the applications for bank credit submitted by new SMEs in South Africa are rejected.

## 1.4 Significance of the study

SMMEs are a significant source of employment in South Africa and a driver of the economy. Government recognised the role that SMMEs play in our country in 1995 by formulating the White Paper for the development and promotion of small business in South Africa. This study set out to  further assist in providing information on the perceived human capital constraints SMMEs face in accessing finance and growth.

## 1.5 Delimitations of the study

The delimitation of the study is crucial to ensure that the report is of a manageable size and not too broad. The main research objective focused on the impact of human capital variables on accessing finance. The human capital variables considered are the entrepreneur's knowledge, education and expertise. The study was limited to SMMEs that had been in existence for a period of one year to five years and that had applied for funding through six big funders. A database of SMMEs applying for or that had applied for funding in the previous five years was obtained. The study was conducted between December 2011 and June 2012.

## 1.6 Definition of terms

| | |
|---|---|
| EDA | Exploratory Data Analysis |
| DTI | Department of Trade and Industry |
| GEM | Global Entrepreneurship Monitor |
| HC | Human Capital |
| IDC | Industrial Development Corporation |
| OECD | Organisation for Economic Co-operation and Development |
| SEDA | Small Enterprise Development Agency |
| SME | Small and Medium-sized Enterprises |
| SMMEs | Small-Medium-and Micro Enterprises |
| STASTICA | Data Analysis Software System |
| UNCTAD | United Nations Conference on Trade and Development |

VC Venture Capitalist

## 1.7 Assumptions

There are various assumptions that were made in this study that may have an impact on the outcome of the study. These assumptions were:

- The respondents were owners of the SMMEs and had sufficient knowledge of their business and were able to share information freely.
- The respondents were able to reflect their genuine view by being honest and truthful in their experience of applying for funding. Any biasness may have skewed the results and reduce validity.
- The respondents have a reasonable knowledge of the process and criteria used in funding SMMEs.

# CHAPTER 2: LITERATURE REVIEW

## 2.1 Introduction

Scholars studying finance constraints within entrepreneurial ventures have largely stressed supply-side arguments, thereby putting the decision-making process of investors in the foreground. Within this perspective, prior research has mainly focused on the role of information asymmetries and transaction costs in explaining why investors may refrain from investing in value-creating entrepreneurial ventures (Seghers et al., 2009). These authors argue that financial constraints may also be driven by demand-side factors and, more specifically, by the characteristics of entrepreneurs. Research on demand-side arguments, which puts the decision-making process of entrepreneurs in the foreground, is more limited but is growing rapidly. There is limited literature in the South African context and therefore most of the literature used in this study is based on research that took place in other countries.

In order to be able to come to a conceptual framework to help in defining the key hypothesis for the study, the literature reviewed was as follows:

- Firstly, as this study dealt with entrepreneurship, the literature reviewed entrepreneurship on a broader scale, and then narrowed down to entrepreneurship in emerging markets/economies. This process was followed in order to be able to make a comparison of the South African situation with what occurs in other similar countries.
- Then entrepreneurship was looked from a South African perspective and the foundation for the literature review was laid by referring to a study by GEM.

- The key subject of the study also centred on human capital factors as defined in many entrepreneurial studies. So in order to make sense of these human capital factors and be able to formulate a conceptual model, the literature review was based on the human capital theory. Human capital factors identified by the study were knowledge, education and expertise. Therefore, the literature review focused on these factors.
- Then the study focused on the literature on access to finance and SMMEs' growth where the focus is on entrepreneurial success.
- On the basis of all the aspects of the literature review, a conceptual model was formulated from which the hypotheses were derived.

## 2.2 Entrepreneurship in context

According to Lingelbach, de la Viña and Asel (2005), entrepreneurship is not a well-developed component of modern economic theory. Barreto (1989) argues that many neoclassical economists find it difficult to reconcile the requirements of rational decision-making with the functions ascribed to entrepreneurship co-ordination, arbitrage, innovation, and uncertainty bearing. Entrepreneurs have been described variously as bearers of risk, agents that bring together the factors of production, or organisers of innovation (Schumpeter 1942). Kantis, Ishida and Komori (2002) argue that any study of entrepreneurship implies the need to introduce profound changes in conventional economic approaches. Kantis et al. (2002) go further to suggest that this form of approach focuses either on the analysis of economic aggregates or on microeconomics grounded in a theory of the firm that views the organisation as a "black box" controlled by an "automatic pilot." Despite pioneering work by Schumpeter (1942) that

recognized the role of entrepreneurship as the motor of innovation and economic development, economists have traditionally tended to centre their analysis on the economic function of the entrepreneur, rather than on trying to understand and explain the process by which new firms emerge (Kantis et al., 2002). Against this backdrop, a body of knowledge began to develop under the name of “entrepreneurship” which includes different types of approaches and research.

Most economic, psychological and sociological research points to the fact that entrepreneurship is a process and not a static phenomenon (UNCTAD, 2004) and has been written about extensively. Pirich (2001) argues that entrepreneurship is more than just a mechanical economic factor and that it has a lot to do with change and is also commonly associated with choice-related issues. Barreto’s (1989) definitions of entrepreneurship relate to the functional role of entrepreneurs and include co-ordination, innovation, uncertainty bearing, capital supply, decision making, ownership and resource allocation (Friijs, Paulsson and Karlsson, 2002). According to the UNCTAD (2004) paper, there are three most frequently mentioned functional roles of entrepreneurs which are associated with major schools of thought on entrepreneurship: risk seeking: the Cantillon or Knightian entrepreneur is willing to take the risk associated with uncertainty; innovativeness: the Schumpeterian entrepreneur accelerates the generation, dissemination and application of innovative ideas; and opportunity seeking: the Kiznerian entrepreneur perceives and seizes new profit opportunities (Carree and Thurik 2002). Among other reasons why entrepreneurship is important is that it commercialises public knowledge and

contributes to employment growth and efficiencies in the economy (Ulijn & Brown, 2004).

One operational definition of entrepreneurship that successfully synthesises the functional roles of entrepreneurs is that of Wennekers and Thurik (1999): "the manifest ability and willingness of individuals, on their own, in teams within and outside existing organisations, to perceive and create new economic opportunities (new products, new production methods, new organisational schemes and new product-market combinations) and to introduce their ideas in the market, in the face of uncertainty and other obstacles, by making decisions on location, form and the use of resources and institutions." Entrepreneurs may exhibit these characteristics only during a certain phase of their career or only with regard to certain activities (Carree and Thurik, 2002).

Extensive research has gone into understanding entrepreneurship, from the entrepreneurial process (Baron and Shane, 2005; Kurantho and Hodgetts, 2007) to the entrepreneurial individual (Visser, De Coning and Smit, 2005). Some of the studies on entrepreneurship are focused more on the entrepreneurs and their characteristics. In 1961, McClelland characterised entrepreneurs fundamentally by their need to achieve. Entrepreneurs are found to have several characteristics, which include among others, their desire for independence, perseverance, conviction, and self-confidence. Entrepreneurs can be described as people who are capable of learning, who pursue their goals

despite failures and frustrations and, finally, who achieve success by breaking with old patterns of behaviour and creating their own order (Gilder, 1994).

Overtime entrepreneurship evolved to include the entrepreneurial process which focused on how new ventures are created. Shapero (1984) conceptualised the “entrepreneurial event” and explained it based on the existence of “displacement factors”. These factors were identified as the key drivers that cause a person to break with his or her previous life path and lean toward an entrepreneurial career, his or her propensity to act, the credibility of the options, and resource availability. Gibb and Ritchie (1982) classify a firm’s creation process into the following stages: identification of an idea, validation, access to and organisation of resources, negotiation, birth, and survival. According to these authors, the successful development of a venture depends on four key factors: the idea itself; availability and obtaining of resources; the abilities of the entrepreneur and his/her associates; and their level of motivation and commitment. Within these new approaches that centre on the process itself, it is possible to differentiate perspectives according to the emphasis placed on roles: the individual’s role as compared to the role of the socio-economic context and the entrepreneur’s networks (Johannisson, 1998).

Several other authors like Evans and Jovanovic (1989) have identified variables that explain why certain individuals embark on a new venture, and the distinct factors considered during the decision-making process. According to the entrepreneurial option model, there are individuals within consolidated firms

who have ideas for new products/business, and although they value their own ideas highly, their organisations do not value these new ideas (Kantis et al., 2002). Given uncertainty and asymmetrical information, these individuals may choose to assume the risk and begin their own firms because they believe that the market will respond favourably, and because they value their own ideas more highly than the firm that employs them (Audretsch, 1998).

Finally, the transaction costs approach explains the difficulties that new firms confront when launching themselves into the market and developing during the initial phases (Audretsch, 1998). According to this view, new and small firms pay much higher transaction costs proportionally than larger and established firms. According to Kantis et al., (2002) regulations and market imperfections translate into higher costs when seeking and accessing information, negotiating and signing contracts, and in terms of administrative costs.

## 2.3 Entrepreneurship in emerging markets

Entrepreneurship is receiving great attention from policy-makers and experts in developed and developing countries. This interest, as argued by Kantis et al. (2002), is based on evidence demonstrating the contribution of entrepreneurship to economic growth, increased productivity, and rejuvenated social and productive networks. Entrepreneurship has been shown to help revitalise regional identity, make the innovation process more dynamic, and create new job opportunities (OECD, 2001; Audretsch and Thurik, 2001). Audretsch and Thurik (2001) also emphasise the ability of entrepreneurship to

promote economic growth and have also presented evidence regarding the relationship between the level of entrepreneurial activity and economic growth rates. These authors point out that entrepreneurship generates economic growth because it is a vehicle for innovation and change and thus promotes the knowledge-sharing process (Kantis et al., 2002). At the same time, the entry of firms into new sectors of the economy and exit from industries in decline is a process that spurs improvements in productivity and facilitates modernisation of company structures, argue Kantis et al. (2002).

The study of SMME dynamics in the developing world, according to Gomez (2008) was inaugurated by a team at the University of Michigan (USA) led by Liedholm and Mead. A study conducted by Lingelbach et al. (2005) reveals that entrepreneurship in emerging markets is distinctive from that practised in more developed countries. It was established that a better understanding between these distinctions is critical to private sector development in developing countries. Emerging markets are more interested particularly in new and growth-oriented enterprises with high potential to create a sustainable economic growth than in micro-enterprises or long-established SMMEs with limited growth prospects. The distinctions between growth-oriented entrepreneurs in developing and developed markets are rooted in the inefficiency of markets in many developing countries, but the response of entrepreneurs to these inefficiencies is often surprising and counter intuitive (Lingelbach et al., 2005).

Dating back to the 1970s (Gomez, 2008), there has been a growing awareness of the importance of SMMEs and the role they play in their contribution to economies in terms of growth. They are seen as the engines of employment, alleviating poverty and improving equality. In the 1980s there was an intensification of interest in this sector, which resulted in the expansion of policy by many governments. This new focus and direction came through a discovery of widespread entrepreneurial activity in both developed and developing countries. In the developing countries, entrepreneurship developed largely among the poor, and enhancing SMMEs meant that they could effectively and rapidly fight poverty. SMMEs contribute to economic development in several ways: as an important channel to convert innovative ideas into economic opportunities; as the basis for competitiveness through the revitalisation of social and productive networks; as a source of new employment, and as a way to increase productivity (Kantis et al., 2002).

Some researchers have, however, argued that the evidence supporting the view that SMMEs are key drivers of economic growth is in fact not conclusive. Other researchers have found that in both developed and developing countries job creation and growth are highly concentrated. The great majority of SMMEs are not very growth prone (Gomez, 2008). According to a study conducted by Gomez (2008), it was established that the European Commission found that 50% of total net job creation in the SMME sector is created by a mere 4% of these firms. In Sub-Saharan Africa a similar pattern has been indicated. It has been established that the enterprises that significantly contribute to employment growth are in fact just 1% of the SMME universe (Mead, 1994). Liedholm and

Mead (1999) identify four types of entrepreneurial firms in developing countries: newly established, established but not growing, established but growing slowly, and graduating to a larger size. Gomez (2008) argues that that there are two categories in which SMMEs fall and they are a very large group which for various reasons will remain small forever and a small group, which will expand.

## 2.4 Entrepreneurship in South Africa contextualised

According to Turner, Varghese, and Walker (2008), South Africa has a remarkable level of SMME activity compared with similar economies. Entrepreneurship is a crucial factor in the development of any country, especially a developing country such as South Africa (Haasje, 2006). Since 1994, the South African government has been committed to developing entrepreneurship through its strategies and has put a large number of resources, financial support, as well as policies into the development of SMMEs (Ahwireng-Obeng, 2005). According to Henning (2003), SMMEs play an important role in creating job opportunities in South Africa. They can create stability, competitiveness, developing skills and ensuring economic growth.

Kroon (2002) argues that one of the priorities for success in entrepreneurial development in South Africa is the improvement of small business's support infrastructure, to build networks and to focus government policy on entrepreneurial development and small business development. After the democratic elections in 1994, the government, through the Department of Trade and Industry (DTI), launched the first attempt in South Africa to address SMME development as a matter of priority to alleviate unemployment and create

economic confidence. The National Small Business Act of 1996 was substituted with a range of entirely new institutions within the DTI group, including Ntsika

Enterprise Promotion Agency and Khula Enterprise Finance. Ntsika, which has since been merged under the Small Enterprise Development Agency (SEDA), was a government agency whose mission was to render an efficient and effective promotion and support service to SMMEs in order to contribute towards equitable economic growth in South Africa. Ntsika provided wholesale non-financial support service for SMME promotion and development (Ntsika, 2002).

The framework used for SMME development is the definition of the National Small Business Act 102 of 1996, which defines five categories of businesses (Abor and Quartey, 2010). The definition uses the number of employees per enterprise-size category combined with the annual turnover categories, and the gross assets excluding fixed property. The definitions for the various enterprise categories are given as follows:

- Survivalist enterprise: The income generated is less than the minimum income standard or the poverty line. This category is considered pre-entrepreneurial, and includes hawkers, vendors and subsistence farmers. (In practice, survivalist enterprises are often categorised as part of the micro-enterprise sector).
- Micro-enterprise: The turnover is less than the VAT registration limit (that is, R150 000 per year). These enterprises usually lack formality in terms

of registration. They include, for example, spaza shops, minibus taxis and household industries. They employ no more than five people.

- Very small enterprise: These are enterprises employing fewer than 10 paid employees, except mining, electricity, manufacturing and construction sectors, in which the figure is 20 employees. These enterprises operate in the formal market and have access to technology.
- Small enterprise: The upper limit is 50 employees. Small enterprises are generally more established than very small enterprises and exhibit more complex business practices.
- Medium enterprise: The maximum number of employees is 100, or 200 for the mining, electricity, manufacturing and construction sectors. These enterprises are often characterised by the decentralisation of power to an additional management layer.

**Table 1: Definitions of SMMEs given in the National Small Business Act– Source: Falkena et al. (2001)**

| **Enterprise Size** | **Number of employees** | **Annual Turnover** | **Gross assets, excluding fixed property** |
|---|---|---|---|
| Medium | Fewer than 100 to 200, depending on industry | Less than R4 million to R50 million, depending upon industry | Less than R2 million to R18 million, depending on industry |

| | | | |
|---|---|---|---|
| Small | Fewer than 50 | Less than R2 million to R25 million, depending on industry | Less than R2 million to R4,5 million, depending on industry |
| Very Small | Fewer than 10 to 20, depending on industry | Less than R200 000 to R500 000, depending on industry | Less than R150 000 to R500 000, depending on industry |
| Micro | Fewer than 5 | Less than R150 000 | Less than R100 000 |

GEM (2009) indicates that for much of the past decade, entrepreneurial activity in South Africa has been low in comparison to other middle-and low-income countries, both with respect to nascent activity (business start-ups) and established businesses. The vast majority of small and micro-enterprises in South Africa are informal, meaning the vast majority of businesses in South Africa are informal (Turner et al., 2008). The 2010 FinScope Small Business Survey estimates that there are 5 979 510 small businesses in South Africa. SEDA's (2011) report on the nature of SMMEs in South Africa suggests that there has been substantial growth in the number of small businesses operating

in the country in the last few years, with previous estimates suggesting that there were 1 079 627 SMMEs present in South Africa in 2003.

Evidence from GEM (2009) shows that 8.9% of adult South Africans are involved in what it describes as “early-stage entrepreneurship”. Generally, this percentage tends to be larger for less developed economies, and smaller for more developed ones. South Africa’s rate is fair, comparable with Turkey (8.6%), Pakistan (9.1%), and Mexico (10.5%), but far behind China (14.4%) and Brazil (17.5%). However, when established business ownership is considered, South Africa’s ranking falls precipitously. Established business ownership describes adults who are owner-managers of established businesses of 42 months or older. In South Africa, this applies to just 2.1% of the population. Across GEM’s (2009) entire sample of 83 countries, only Mexico scores significantly worse, at 0.4%. South Africa is comparable to Romania and Palestine, and it is far outdone by comparator countries such as Argentina (12.4%), Brazil (15.3%), China (13.8%), Columbia (12.2%), and Malaysia (7.9%). Even economies not noted for their entrepreneurial ethos, owing to statist or “rent-seeking” traditions, such as Russia and Saudi Arabia, do better.

GEM (2010) also highlights that the prevalence rate of individuals of working-age population that are engaged in entrepreneurial activity in South Africa is very low. Out of 59 countries, South Africa ranked in second last position in terms of established business activity – measured through the prevalence rate of established business owner-managers that are actively involved in business

start-ups or the phase spanning the first three and a half years after the birth of a firm. This finding means that South Africa recorded a rate of 2.1%, which was well below both the GEM average for all countries (8.6%) and efficiency-driven countries (7.6%) in 2010.

In a survey by FinScope in 2010, some of the reasons provided for entrepreneurial activities ranged from seeing a business opportunity or being interested in a particular product or service, to starting a business “to use my skills”, because it “makes me happy” or to “be my own boss”. More broadly, GEM (2009) has found that approximately twice as many South Africans were driven to start their businesses based on a desire to capitalise on particular opportunities rather than out of necessity. This finding clearly indicates that a low level of entrepreneurial activity remains a significant challenge in the South African context.

## 2.5 South Africa’s entrepreneurial culture

GEM (2009) highlights that despite the presence of a relatively low level of entrepreneurial activity in the country, particularly in the black African and coloured populations as well as among women, a handful of positive aspects of the country’s prevailing entrepreneurial culture have been highlighted in previous studies. These include the following:

- South African youths tend to possess an inherent “culture of creativity”;
- There has been an improvement in attitudes and perceptions around entrepreneurship, particularly among black Africans in the country; and

- There remain relatively few barriers to entry for budding entrepreneurs in comparison to barriers to other careers, particularly in terms of skills, education and capital requirements.

GEM (2009) also noted that South Africans “lack confidence in their ability to perceive, as well as to exploit, potentially lucrative opportunities”, thereby stunting entrepreneurial activity in the country. At the same time, it has been argued that South Africa is plagued by a culture of short-term investment as a consequence, at least in part, of the country’s strict financial regulations (Endeavour, 2011). This lack of access to finance is said to have affected the ability of entrepreneurs to source venture capital and private equity investments during the start-up phases of their business and, at the same time, has generated a preoccupation with immediate profits as well as unrealistic expectations and a culture of entitlement.

A report by SEDA (2010) on the SMME landscape identified the presence of “disabling mind-sets” in South Africa, which are said to undermine the potential for new entrepreneurs to succeed in the country. The disabling mind-sets were classified as,

- Preoccupation with the accumulation of wealth and status rather than an appreciation of the difficulty involved in starting a business;
- Difficulties faced by individuals in shifting from the mind-set of an employee to that of a business owner;
- A tendency among entrepreneurs to project feelings of inadequacy with the aim of soliciting pity from others;

- A preoccupation with short-term gains rather than long-term goals; and
- Negative thinking whereby entrepreneurs adopt a “can’t do” and “don’t know” mentality rather than a positive mind-set, thereby affecting independence and business acumen among entrepreneurs.

The report also concluded that these problematic aspects of the prevailing culture of entrepreneurship in South Africa are exacerbated by a variety of environmental obstacles to entrepreneurial activity in the country, which include among other things a burdensome regulatory environment and bureaucratic red tape, limited niche opportunities, limited access to finance and working capital and difficulty unlocking funding opportunities, a lack of mentorship, a lack of business skills (school-leavers, in particular, lack skills and experience to become entrepreneurs), a high level of competition for limited markets and high levels of crime and corruption.

## 2.6 Human capital theory

The theory of human capital is rooted in the field of macroeconomic development theory (Schultz, 1993). Becker’s (1993) classic book, “Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education”, illustrates this domain. Becker (1993) argues that there are different kinds of capitals that include schooling, a computer training course, and expenditures on medical care. In their paper, Marimuthu, Arokiasamy and Ismail (2009) established that from the perspective of classical economic theory, human capital considers labour as a commodity that can be traded in terms of

purchase and sale. According to these authors, this classical theory focuses much on the exploitation of labour by capital. It is suggested that, unlike the meaning traditionally associated with the term ‘labour”, the term “human capital” refers to the knowledge, expertise, and skill one accumulates through education and training. Becker (1993) emphasises the social and economic importance of human capital theory and notes that the most valuable of all capitals is the investment in human beings. Becker (1993) distinguishes firm-specific human capital from general-purpose human capital. This form of human capital includes expertise obtained through education and training in management information systems, accounting procedures, or other expertise specific to a particular firm. Human capital is knowledge gained through education and training in areas of value to a variety of firms such as generic skills in human resource development. Regardless of the application, Becker (1993) considers education and training to be the most important investment in human capital.

Many studies have been carried out on human capital and have identified it as the primary source of economic growth (Barreira, 2011). According to Barreira (2011), education, as one of human capital’s primary components, has been found to have a direct relationship with economic growth. Some studies suggest that the concept of entrepreneurial human capital is implicit in the survival chances of new businesses, both in the domain of organisational ecology and in economics. Mincer (1974) established that the positive impact of human capital on employee performance is well accepted. Several other researchers such as Van Praag and Cramer (2001) made a first attempt to formalise this impact for the case of the business founder. Other authors,

including Cooper, Gimeno-Gascon and Woo (1994), Pennings, Lee and Van Witteloostuijn (1998), Van Praag (2003) as well as De Wit and Van Winden (1989), have put forth empirical support for the theoretical foundation. Unger, Rauch, Frese and Rosenbusch (2009) suggest that human capital theory was originally developed to estimate employees' income distribution from their investments in human capital. Researchers have employed a large spectrum of variables — all signifying human capital: formal education, training, employment experience, start-up experience, owner experience, parent's background, skills, knowledge, and others.

However, Zarutskie (2008) mentions that the classic measurements of human capital elements are education level, education speciality, work background (experience) and tacit knowledge. Following the definition by Becker, Unger et al. (2009) defines human capital as skills and knowledge that individuals acquire through investments in schooling, on-the-job training, and other types of experience. Stone (2008) describes human capital as the knowledge, skills and abilities of employees in an organisation. According to Schultz's (1993) formulation, entrepreneurship is the ability to adjust, or reallocate resources, in response to changing circumstances. As such, entrepreneurship is an aspect of all human behaviour, not a unique function performed by a class of specialists. "No matter what part of the economy is being investigated, we observe that people are consciously reallocating their resources in response to changes in economic conditions" (Schultz, 1979).

In his finding, Schultz (1979) also conceives entrepreneurial ability as a form of human capital. Like other forms of human capital, this ability can be increased

through education, training, experience, health care, and so on. While education and other human capital investments also lead to improvements in technical and allocative efficiency, Schultz (1979) argues that efficiency improvements cannot account for all of the effects of education on economic performance, particularly in agricultural communities during periods of modernisation.

Increased abilities to adjust to change, for instance by adopting new technology and organisational practices, explain at least part of the returns of education. Brüderl and Schüssler (1991) argue that the profit and productivity of the firm is driven by entrepreneurial human capital. The greater the human capital of an entrepreneur the greater the possibility for the firm's survival and the lower the probability of an early exit. Higher productivity of the founder means the business owner is more efficient in organising and managing operations or is able to attract more customers, negotiate better contracts with suppliers and raise more capital from investors (Karaöz and Baptista, 2006). Rastogi (2000) states that human capital is an important input for organisations, especially for employees' continuous improvement in knowledge, skills, and abilities. Thus, the definition of human capital is referred: "the knowledge, skills, competencies, and attributes embodied in individuals that facilitate the creation of personal, social and economic well-being" (OECD, 2001: 18).

A learning theoretical perspective specifies the processes by which human capital attributes affect venture outcomes (Unger et al., 2009). Davidson and Honig (2003) also argue that even though learning processes have been

acknowledged from the onset of human capital theory, human capital researchers have paid little attention to the psychological processes and mechanisms that lead to human capital effects. Central to such a learning approach are acquisition and transfer of human capital (Unger et al., 2009). Human capital theory maintains that knowledge provides individuals with increases in their cognitive abilities, leading to more productive and efficient potential activity (Davidson and Honig, 2003). The knowledge and skills that the entrepreneur has are due to their ability to transform the learning process that they have acquired. Experience should not be equated with knowledge because experience may or may not lead to increased knowledge (Sonnentag, 1998). Therefore, human capital investments may or may not lead to outcomes of human capital investments (Davidson and Honig, 2003). This kind of investment may then require a different process of knowledge acquisition and require a distinction between human capital investments and the outcomes of human capital investments.

Human capital theory simply states that human capital investments “improve knowledge, skills, or health, and thereby raise money or psychic incomes” (Becker, 1993). Davidson and Honig (2003) also argue that from a learning theoretical point of view, human capital has to be successfully transferred to the business owner’s situation to increase success. According to Barreira in Barreira, Botha, Oostheizen and Urban (2011), human capital in essence evokes upper echelon theory, a fundamental theory that entrepreneurial or top management teams have great influence on firm performance. Human capital also has a strong influence on the resources of the company. Zarutskie (2008),

as Barreira (2011) suggests, argues the resource-based notion from the point of view that education, experience and knowledge as human capital variables are skills that are costly to acquire and, as a result, should better the company's performance.

Human capital as mentioned earlier includes all other elements such as social and emotional capital and Becker (1964) argues that from a broad perspective, labour market experiences, as well as specific vocationally oriented experience are theoretically predicted to increase human capital. Although empirical results have been mixed (Davidson and Honig, 2003), there are studies showing labour-market experience, management experience, and previous entrepreneurial experience as significantly related to entrepreneurial activity, particularly when controlling for factors such as industry and gender. In their study, Segal, Borgia and Schoenfeld (2011) demonstrate that the human capital of entrepreneurs figures significantly in the performance of their firms. It was found that entrepreneurs who possess the potent synergistic combination of education with industry managerial experience have the competencies and capabilities to manifest better results.

Other authors such as Pennings, Lee and van Witteloostuijn (1998) argue that the firm-level aggregates of human capital explain organisational dissolution, particularly in the context of professional service markets such as the accounting industry. These author's argument is that the success of professional service organisations like accounting firms hinges on their ability to

deliver high-quality services (production capability) and to attract and retain clients (selling capability). According to Maijoor and Van Witteloostuijn (1996), in order to produce and deliver high-quality services, professionals should have adequate knowledge and skills as part of their human capital. Brüderl, Preisendorfer and Ziegler (1992) argue that greater entrepreneurial human capital enhances the productivity of the founder, which results in higher profits and, therefore, lower probability of an early exit. Brüderl et al.'s (1992) argue that the higher the productivity of the founder, the more efficient the business owner will be at organising and managing operations. Such business owner will be able to attract more customers, negotiate better contracts with suppliers, and raise more capital from investors.

It is therefore argued that entrepreneurial human capital increases efficiency of the organisation and plays a key and central role in the market selection process and business environment. Baptista and Karaöz (2006) take their cue from Jovanovic's (1982) model of market selection and argue that it is also possible to claim that entrepreneurs with greater human capital will be less uncertain about their efficiency and will be able to learn faster about market conditions, adjust capacity and, therefore, reduce the probability of exit. On the basis of higher earnings and more prestigious professional status as employees, people with higher human capital are in a position to raise more capital and set up larger and better equipped businesses (Colombo et al., 2004). These people with higher human capital are able to detect profitable market opportunities that are still unexplored and to obtain relevant information about market conditions and, as a result, reduce uncertainty about their own

efficiency. In contrast, people with few human capital resources are often forced into self-employment (Baptista and Karaöz 2006). According to Dunne et al. (1989), one of the findings of the literature that has examined the survival of new businesses is that the effects of the determinants of survival are different depending on whether entry is attempted by a new or by an already established firm. Being owned by an already existing firm or being started by an entrepreneur who already owns one or more firms may give the new venture several types of advantage and such people are less likely to suffer from lack of financial resources to start the firm. The constantly changing business environment requires firms to strive for superior competitive advantages via dynamic business plans, which incorporate creativity and innovativeness (Marimuthu et al., 2009). Human resource input plays a significant role in enhancing firms' competitiveness (Barney, 1995). In the meantime, there is a significant relationship between innovativeness and firm performance according to human capital philosophy (Lumpkin & Dess, 2005).

Swanson (2001) developed a model that he used to explain the human capital theory. According to the model, the human capital theory is an important agent for boosting firm performance and the continuum represented is assessed using return-on-investment analysis or cost-benefit analysis. (See Figure 1.)

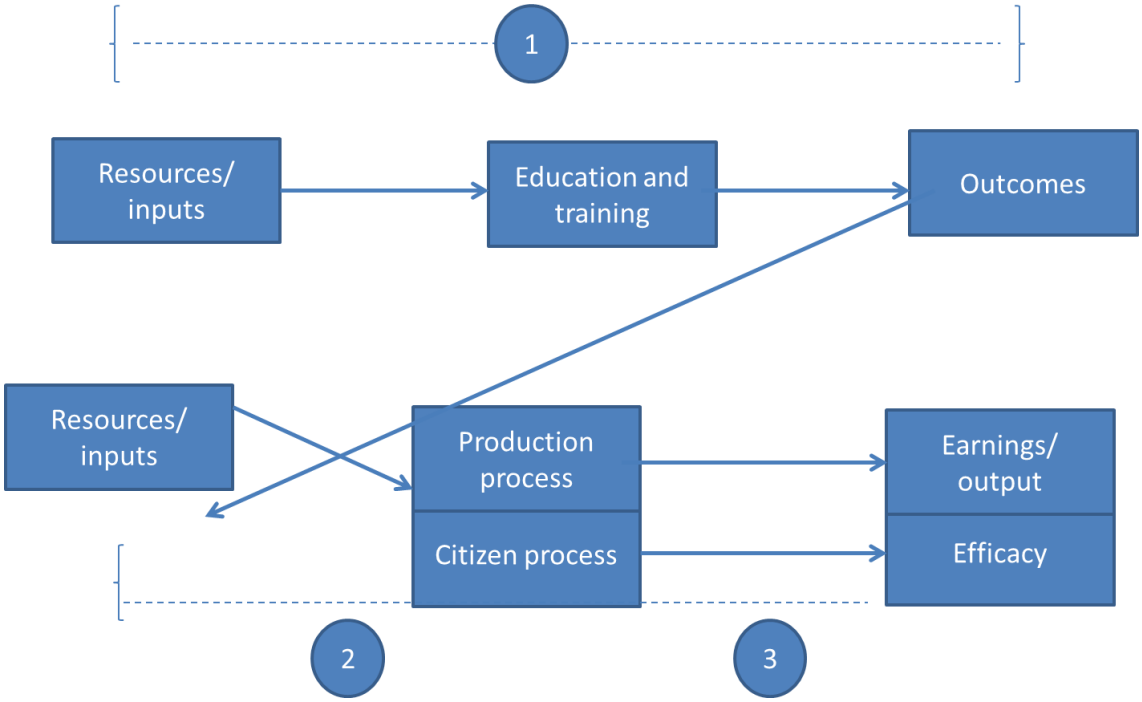


**Figure 1: A Model of Human Capital Theory (Swanson, 2001: 110)**

Relationship 1 in Figure 1 represents the concept of production functions as applied to education and training. The key assumption underlying this relationship is that investment in education and training results in increased learning.

Relationship 2 in Figure 1 represents the human capital relationship between learning and increased productivity. The key assumption underlying this relationship is that increased learning does, in fact, result in increased productivity.

Relationship 3 in Figure 1 represents the human capital relationship between increased productivity and increased wages and business earnings. The key assumption underlying this relationship is that greater productivity does, in fact, result in higher wages for individuals and earnings for businesses. In

conclusion, then, human capital does contribute to the organisational advantages and profits according to Swanson (2010).

## 2.7 Entrepreneurial success

Entrepreneurial success can be defined in many ways. In the work of Makhbul (2011), it is mentioned that the easiest definition is through tangible elements such as revenue or a firm's growth, personal wealth creation, profitability, sustainability, and turnover (Amit, MacCrimmon, Zietsma, and Oesch, 2000). Dafna (2008) associates entrepreneurial success with continued trading. Entrepreneurial failure, conversely, is linked to unrewarding or ceased trading. Harada (2002) challenges this view by stating that some entrepreneurs would prefer to remain in their businesses despite facing difficulty and loss due to their high determination characteristics.

Following up on the research conducted by Hisrich (2000), Barreira (2004) found that entrepreneurial success is driven on two dimensions: economic success and entrepreneur's satisfaction. According to Wiklund and Shephered (2003), a small firm's growth may be an area where volitional control is of particular interest. The same study also suggests that there is reason to believe that the personal motivation of the small business manager is linked to growth outcomes. Wiklund and Shephered (2003) also mentioned that growth implies radical changes of the business characteristics and suggested that these changes may run counter to the founder's initial goals–for instance, personal independence.

Gilbert, McDougall and Audretsch (2006), Koeller and Lechler (2006), Baum, Locke and Smith (2001) describe growth in new ventures in their studies. These authors establish that new ventures often pursue growth because of their liability of newness, which puts pressure on the firm to grow in order to sustain itself. Research on new ventures is also dedicated to understanding which factors were critical to the success of a firm that has experienced rapid growth (Angelis, Sriramachandramurthy, Miller and DeMartino, 2009). Wiklund, Davidsson and Delmar (2003) argue that entrepreneurs may be reluctant to embark on a growth track because they fear adverse effects from growth or because they are not sure of their capacity to manage growth.

Many entrepreneurs wish to grow and be sustainable but in many cases lack the resources or the skills, such as managerial abilities, to do that. Angelis et al. (2009) investigated small businesses that may have been viable for years without a growth focus but are in the process of re-evaluating that stance as resources, profitability, or management evolve over time. In their findings Angelis et al. (2009), established that the businesses surveyed proved their commitment to growth via sending member(s) from the top management team to a special course in strategic growth. According to Gilbert et al (2006), a firm must select whether it can experience growth by maintaining the status quo. It must determine if it wants to grow by selling the same products or services to existing customers or increase its risk by attracting a new market segment and/or offering a new product or service.

Rose, Kumar, and Yen (2006) conducted a study aimed at investigating the formal and informal attributes of founding entrepreneurs that contributed to venture growth. The study found a significant relationship between venture growth and entrepreneurs with high personal initiative and that focused on specific competency areas within operations, finance, marketing and human resources. It was also established that in operations, founding entrepreneurs are concerned with equipment selection, quality of products and services, competitive strategies planning and the improvement of product and services (Rose et al., 2006). Many entrepreneurs are concerned with financing growth but they are prioritise things like marketing, promoting the company and its products and services, and understanding market needs and customer feedback.

Other studies such as the one conducted by Robison and Sexton in 1994 identified that entrepreneurs' personality traits impact on organisational performance. Personality traits such as locus of control and ambiguity tolerance influence the business success directly and the business process indirectly (Entrialgo, Fernandez and Vazquez, 2000). Frese and Fay's (2001) study conducted on a group of employees revealed that those with higher personal initiative performed significantly better in the workplace.

According to Aidis, Mickiewicz, and Sauka (2008), in their study of "why optimistic entrepreneurs are more successful?" it was established that entrepreneurs, who expected to expand their businesses and indeed did expand, achieve the best financial performance as captured by profits. In addition the study established that entrepreneurs who expected growth that,

however, did not materialise perform significantly better (in terms of profits) than those who are ‘surprised’ by growth (in terms of sales) they did not expect. Aidis et al. (2008) also found that the successful optimist-realist performs better than the optimist, who in turn performs significantly better than the pessimist. Characteristics related to human capital–specifically, education and experience–are important elements of entrepreneurial capacity (Sexton and Upton, 1985) and these have a positive influence on firm survival, growth (Aidis and Mickiewicz, 2006) and entrepreneurial performance (Cooper and Gimeno-Gascon, 1992; Chandler and Hanks, 1998). According to Aidis et al. (2008), other studies have found a significant and positive relationship between venture growth and higher levels of education and work experience.

Wiklund and Shepherd (2003) conducted an empirical study on entrepreneurial growth and achievement, where it was established that the relationship between aspirations and growth appears more complex. These authors argued that the relationship depends on the level of education and experience of the small business manager, as well as the dynamism of the environment in which the business operates. Education, experience and environmental dynamism magnify the effect that one’s growth aspirations have on the realisation of growth (Wiklund and Shepherd, 2003). The extent to which performance along one dimension affects the other should be tested, as argued by Wiklund (1999). It should also be established if the growing company is experiencing financial growth. Umoren (2010) mentions the work of Kumar (2004), in which entrepreneurial success is associated with active interactions between the individual entrepreneur and the environment based on a construct incorporating

cognitive complexity, threat to identity, and status inconsistency. In the same study Umoren (2010), mentions a study by Majundar (2008) that ties entrepreneurial success to one of three propositions. The first is that the attitudes and vision of the entrepreneurs drive the growth of small organisations. The second is that entrepreneurs of small organisations conduct an early search for strategic fit in the market and the environment. The third and final proposition is that entrepreneurs of small organisations persist in their search for better fit in the market. Umeron (2010) found that at every stage of business development, an entrepreneur requires the directional input that a strategic plan provides for a business. In the findings of Umeron (2010), some of the strategies that are fundamental for enhancing business development and growth are managerial and financial.

In support of Umeron's (2010) findings on entrepreneurial success, Swiercz and Lydon (2002) argue that entrepreneurs need two types of leadership competencies in order to succeed. These two types are functional and self-competencies. These authors suggest that functional competencies consist of four performance subsystems (i.e., operations, finance, marketing, and human resources) while self-competencies include intellectual integrity, promoting the company rather than the individual leader, utilising external advisors, and creating a sustainable organisation. According to Cutting and Kouzmin (2009), successful entrepreneurs are good leaders who have a clear mission, purpose and values (Thompson, 1999) to be shared and sold to others.

Makhbul (2011) investigated the relationship between entrepreneurial factors and entrepreneurial success in a study that looked at entrepreneurs with at least three years of business operations. This study confirmed that several entrepreneurial factors are significantly related to the entrepreneur's success. The entrepreneurial factors in this investigation included the ability of entrepreneurs to access information, their leadership styles, and their support from others. Makhbul (2011) also argued that entrepreneurs' ability to seize relevant information is found to be the most significant factor contributing to their success. However, in contrast, Hodgetts and Kuratko (1992) established that characteristics such as being creative and having good interpersonal, mental and technical skills contribute to an entrepreneur's success. Nandram (2002) found that being goal-oriented, pragmatic, determined, flexible, and self-confident are distinguished attributes that add value to entrepreneurs.

A study by Aldrich and Martinez (2001) found that another important factor contributing to successful entrepreneurs is knowledge that is gained from various sources such as training or personal experience through formal or informal education. Being knowledgeable can help an entrepreneur to be innovative and trigger new ideas, which in turn enables entrepreneurs to seize opportunities emerging from their environment (Ward, 2004). Wiklund (1999) mentions also that entrepreneurial success also depends on access to financial capital. Access to finance allows the firm to innovate.

## 2.8 Access to finance

Since the late 1980s, a large number of empirical studies have addressed the issue of financial constraints, mainly in order to study the relation between firm investment and the availability of internal funds. Large and convincing evidence exists to show that when a standard investment equation is augmented with cash flow availability the fit of the equation improves (Musso and Schiavo, 2007). With perfect capital markets, internal and external sources of financial funds are perfectly substitutable (Modigliani and Miller, 1958), so that the availability of internal funds should not affect investment decisions.

Many academic contributions on access to finance focus on more macroeconomic issues such as the existence of a banking lending channel of monetary policy transmission. González, Lopez and Saurina (2007) argue this point and suggest that the primary reason why macroeconomists were drawn to the topic is that the availability of external financing varies with changes in the business cycle conditions and with changes in monetary policy. However, in their theory, Modigliani and Miller (1958) postulate that firms' financing and real investment decisions are taken independently of each other. These authors' analysis was based on perfect markets where there are no taxes, no transaction costs and no other market frictions. This kind of analysis could be interpreted as suggesting that there is no relationship between financial markets and corporate real investment decisions.

On the other hand, corporate finance theory suggests that market imperfections such as an underdeveloped financial system may constrain firms' ability to fund investments and will invariably affect firms' investment decisions (Bokpin and Onumah, 2009). According to these authors, the theory indicates that the development of financial markets and instruments results in a reduction in transaction and information costs, influencing saving rates and investment decisions. In examining the impact of monetary policy on a firm's financing mix in the United States, Kashyap, Stein and Wilcox (1993) found that between the 1960s to late 1980s firms showed that monetary policy contractions led to a concurrent reduction in their (firms') access to bank loans and an increased issuance of commercial paper.

According to González et al. (2007), some authors such as Oliner and Rudebusch (1995, 1996a, 1996b) extended this analysis in two directions. Gertler and Gilchrist (1994) argued that firm size was an important factor in examining the impact of monetary policy on firms' financing choices and since small firms have little access to the commercial paper market, these authors included in their analysis other non-bank sources of external financing, such as trade credit and accounts payable. From their empirical results Gertler and Gilchrist (1994) concluded that a bank lending channel was unlikely to exist since its (bank) financing mix variable was not impacted by monetary policy changes. However, they also concluded a broad lending channel did exist since small firms had significantly reduced access to external financing during monetary contractions (González et al., 2007).

Several other studies of established market economies suggest that entrepreneurs are liquidity constrained (Evans and Jovanovic, 1989; Blanchflower and Oswald, 1990; Holtz-Eakin, Joulfaian and Rosen, 1994a, b.; Lindh and Ohlsson, 1994; Van Praag and Van Ophem, 1995). These authors argue that becoming an entrepreneur depends crucially on personal wealth. Insufficient funds prevent one from starting up as an entrepreneur or generate a start at a sub-optimal asset level. In the context of asymmetric information the latter generates lower growth rates and shorter survival rates, as recently shown by Brito and Mello, (1995). Stiglitz and Weiss (1981) established that capital market imperfections, due to asymmetric information, limit the possibilities of obtaining external finance. Because entrepreneurial quality and effort are not easily observed and measured by banks, nor the profitability of a business plan, credit rationing tends to prevail, in which case a debt-gap emerges (Bilsen and Mitina, 1999). Consequently, firms might be restricted in their investments and in their growth.

In their study González et al. (2007) also found that according while Kashyap et al. (1996) argued with several elements of this analysis, their conclusion that “there is probably much more to be learned from careful analysis of a variety of micro data, at the level of individual banks and individual firms” corresponded with an alternative avenue of research into firms’ access to external finance that was based on firm-level data. Another researcher, Whited (1992), also found that financial constraints and, hence, a diminished ability to access external financing, directly impacted firms’ capital investment plans. Atanasova and Wilson (2004) examined financially constrained firms, where financing here was

defined as access to internally generated funds, bank lending and accounts payable (or trade credit), using a disequilibrium model of lending. These authors' empirical analysis suggests that firm total assets, as a proxy for available collateral, is an important determinant of bank loan availability. With respect to monetary policy factors, González et al. (2007) mention that Atanasova and Wilson (2004) found that tight monetary conditions lead to increased demand for bank financing, but a reduced supply.

González et al. (2007) also established that although trade credit was the least desirable funding option, firms tend to have a higher rate of substitution between loans and trade credit than between loans and internally generated funds. These authors' conclusion was that trade credit plays a special role in alleviating credit rationing since firms switch from bank credit to trade credit when faced with borrowing constraints.

Bougheas, Mizen and Yalcin (2006), in their study on firms' access to external finance using data from U.K. manufacturing firms over the period from 1989 to 1999, used external financial measures such as the ratio of a firm's short-term debt to total external debt. In the study, these authors assume that debt is a measure of bank financing, and the ratio of a firm's total external debt to its total liabilities closely tracks overall access to external financing. These authors found that several firm-specific characteristics, such as size, collateral, riskiness, age and profitability were, important determinants of access to short-

term and long-term credit. In addition, they found monetary policy conditions had a greater impact on smaller, riskier and younger firms.

Cleary, Povel and Raith (2007) mention in their theory of the U-shaped investment curve that when firms face capital market imperfections, they are forced to pay a premium for externally raised over internally generated funds. Capital market imperfections may be the result of a variety of agency and asymmetric information problems, and they are typically less severe if a firm has more internal funds available. As a result of this, firms that are financially constrained in terms of capital market conditions or its available internal funds will invest less.

Clearly et al. (2007) argue that when the firm's internal funds are high but insufficient to finance the first best investment scale, the firm will borrow a small amount, and thus face a small expected liquidation loss to invest at a slightly lower scale. When a firm has minimal funds internally, it invests less, but at the same time requires a larger loan and faces a higher risk of default and liquidation. There is also existing evidence that shows the impact of financial constraints on firm-level fluctuations in employment (Sharpe, 1994), inventories (Kashyap, Lamont, and Stein,1994), pricing strategies (Chevalier and Scharfstein, 1996), investment (Oliner and Rudebusch, 1996), sales, and short-term borrowing (Bernanke, Gertler, and Gilchrist, 1996). Financial health is used as an indicator to determine firms' access to internal and external funds, so that when monetary policy tightens, real variables are influenced by higher interest

rates and by contracting credit supply (Fazzari, Hubbard and Petersen, 1998). In general, access to credit is determined by firm characteristics and, therefore, the effect of monetary tightening is unlikely to be uniform across firms.

## 2.9 Conceptual framework

The study linked human capital theory to build the hypotheses on human capital variables (education, work experience and knowledge) and access to finance. The view of the study is that if these variables are to be a useful predictor of future performance of an SMME to potential investors then they should be recognised by funders. Gimmon and Levie (2010) mentioned that this idea was originally developed by Spence (1974) as an explanation of how job seekers' investments in building human capital through gaining educational qualifications served as "costly" observable characteristics and, therefore, honest signals of their value to prospective employers. Gimmon and Levie (2010) also established that there are clear parallels with funding of entrepreneurial ventures, and signalling theory has been employed in this domain by many researchers (Elitzur and Gavious, 2003; Janney and Folta, 2003; Busenitz et al., 2005; Higgins and Gulati, 2006; Hsu, 2007; Kleer, 2008).

Since human capital is measured in terms of knowledge, skills, and behaviour that prove valuable to a particular firm, Harding (2002) suggests that human capital has a direct effect on the ability of the entrepreneur to secure financial capital for the new business venture. The literature review demonstrates the importance of human capital variables in accessing funding to fund on SMME. It is also clear from the above mentioned arguments the critical role of all the

variables of human capital theory and how they could positively and negatively relate to the entrepreneurs' ability to access financing. Colombo and Grilli (2005a) argue in their study on new technology-based firms that the distinctive capabilities of an SMME are closely related to the knowledge and skills of their founders and, thus, to their human capital endowment. It was also established that while the business environment has uncertainties, for the individual identifying a new business opportunity the only available advantageous option is starting a new firm because of the idiosyncratic and non-contractible nature of entrepreneurial judgment (Alvarez and Barney, 2002). In order to successfully exploit this new business opportunity, complementary context-specific knowledge such as knowledge relating to complementary technology, marketing, and managerial knowledge among different individuals should be combined and integrated.

Individuals who have greater educational attainments, greater work experience, especially in the same sector as the new firm (i.e. industry-specific human capital), and greater entrepreneur-specific human capital developed either through a managerial position in another firm or in prior self-employment episodes, are likely to have better entrepreneurial judgment and more specialised knowledge than other individuals. So, they are in a better position to seize neglected business opportunities and take effective strategic decisions crucial for the success of the new firm (Colombo and Grilli, 2010).

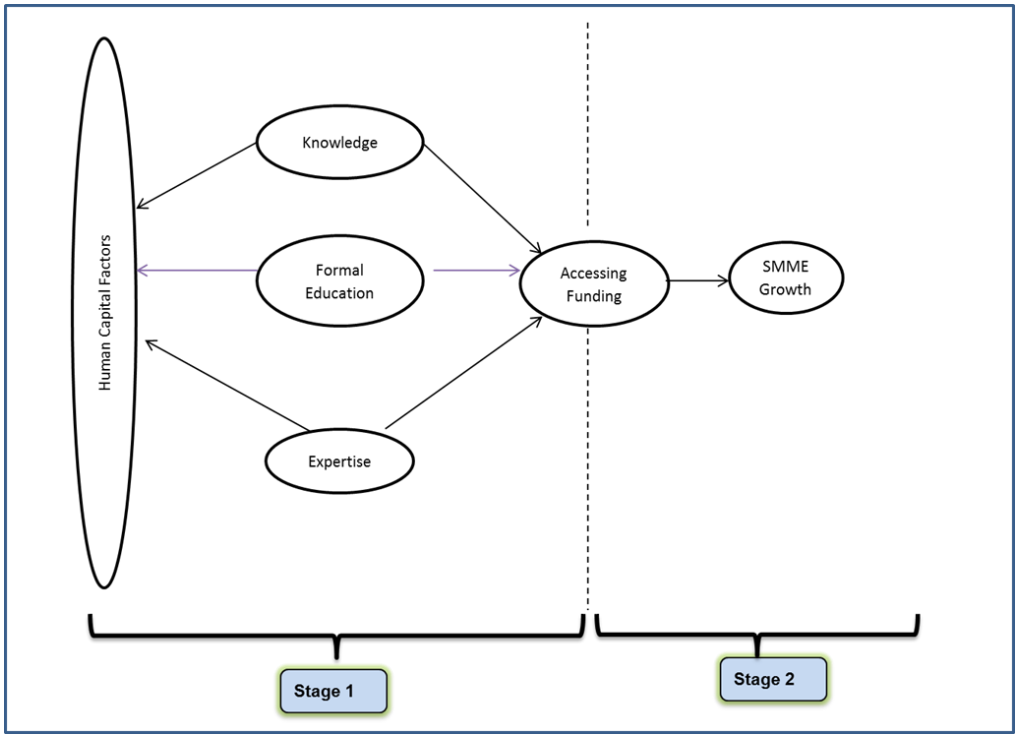


**Figure 2: Conceptual theoretical model – Source: Own (Adapted from Colombo and Grilli)**

Conceptual theoretical model in Figure 2: The relationship between human capital and access to funding and perceived SMME Growth. SMME growth is directly related to access to funding, and access to funding is perceived as directly related to the three human capital factors of knowledge, formal education and expertise. Stage 1: Here the relationship between human capital factors (knowledge, formal education and expertise) and access to funding is assessed. Several items that make up the three factors are used in assessing the importance of the factors in accessing SMME funding. Stage 2: At this stage it will be determined if access to SMME funding is perceived to be positively related to SMME growth. Several items which are indicators of SMME growth are used in determining the extent to which accessing funding influences SMME growth.

Several authors argue that resources and assets (both tangible and intangible) are accumulated throughout entrepreneurial careers (Pisano and Shuen, 1997). Hart, Greene and Brown (1997) argue that some of the resources accumulated in this process include human, social, physical, financial and organisational capital. A link between entrepreneur's human capital and the probability of venture failure, survival and / or success was detected. For instance, Chandler and Hanks (1994) found that ventures with higher levels and broader varieties of resources tended to grow faster and were larger in size. Colombo and Grilli (2010) established that in accordance with the evidence provided by previous studies, inspired by the competence-based perspective (e.g. Cooper and Bruno, 1977; Feeser and Willard, 1990; Colombo and Grilli, 2005a) firms founded by individuals with selected human capital characteristics (i.e. greater university-level education in management and economics and greater prior work experience in technical functions in the sector in which the new firm operates) can leverage the distinctive capabilities associated with the knowledge and skills of their founders to grow larger than other firms. So founders' human capital has a direct positive effect on firm growth.

It also has an indirect positive effect mediated by access to finance and the dramatic positive impact on firm growth of external investments, as suggested by the entrepreneurial finance literature.

External financial investments are attracted by the perceived management competence of a firm's founding team, proxied by the presence in the entrepreneurial team of one or more individuals with prior managerial experience. The university-level education in management and economics of founders also has a positive effect on the likelihood of receiving finance. Many studies have shown that external funders look for founders with relevant experience (Maidique, 1986; Hall and Hofer, 1993; Kaplan and Strömberg, 2004). According to Hsu (2007), the most powerful human capital signal for funders is previous start-up management experience.

According to Gimmon and Levie (2010), some researchers have also found that managerial and leadership experience is an important criterion for external funders in their decision-making process (Zacharakis and Shepherd, 2005). Muzyka, Birley and Leleux (1996) investigated the trade-offs made by European professional venture capitalists in investment decisions and found that management criteria were ranked highest – higher than criteria related to functional capabilities, or product-market, fund or deal criteria. Colombo and Grilli (2009) also found that in a study of 439 surviving new technology-based Italian firms, 10.5% of which had received venture capital, that industry-specific technical expertise had a large direct effect on predicted firm size in their model, but no indirect effect through venture capital funding.

## 2.10 Human capital and access to finance

While entrepreneurs are key decision makers shaping the entrepreneurial strategy within their ventures, the literature exploring the relationship between entrepreneurial characteristics and finance strategies in entrepreneurial ventures is only slowly emerging (Seghers et al., 2009). Entrepreneurial human capital is largely acquired on an individual basis and consists of a combination of skills, knowledge and resources that distinguish an entrepreneur from his or her competitors (Rwigema, Venter and Urban, 2008). Piazza-Georgi defines human capital as “a stock of personal skills that economic agents have at their disposal”. According to Urban et al (2008), the ability to act entrepreneurially is related to such human capital variables as education, work experience, entrepreneurial experience, prior knowledge, prior knowledge of customers’ problems and experiential knowledge.

Becker, in Colombo, Delmastro and Grilli (2005) differentiated between generic and specific human capital. According to Colombo et al. (2005), generic human capital relates to the general knowledge acquired by entrepreneurs through both formal education and professional experience. Specific human capital consists of the capabilities of individuals that can directly be applied to the entrepreneurial job in the newly created firm; it is very much related to the industry-specific skills that founders learned in the organisation by which they were formerly employed and to the leadership experience gained either through a managerial position in another firm or in prior self-employment episodes (Colombo et al., 2005).

According to Marshall and Oliver (2005), there are many studies that have been conducted to determine the impact of human capital factors, particularly industry experience and general human capital, on the success of entrepreneurs in firm foundation. These authors argue that the importance of education as a form of general human capital has been demonstrated in several studies. It has been found that higher education levels indicate an increased likelihood to participate in a business start-up and demonstrate a significant impact on the performance of the new venture (Marshall and Oliver, 2005). Although education as an indicator of human capital has been shown to be relevant in start-up participation, previous work experience has not been shown to be a statistically significant factor in predicting participation in a start-up or in predicting start-up success (Davidsson and Honig, 2000).

Prior research also demonstrates how human capital and finance strategies are linked (Seghers et al., 2009). According to Seghers et al. (2009), human capital is positively related to the wealth of entrepreneurs. Hence, entrepreneurs with more human capital can use more of their personal funds to mitigate their venture's finance constraints (Xu, 1998). Secondly, the human capital of entrepreneurs serves as a quality signal, which is valuable in an environment with high levels of information asymmetry (Hallen 2008). Both effects explain why ventures established by entrepreneurs with higher human capital generally have less binding capital constraints (Astebro and Bernhardt 2005). Seghers et al. (2009) argue that the human capital of entrepreneurs may not only be associated with their personal wealth and quality signals, but also with their knowledge of finance alternatives.

According to human capital theory, the ability to accumulate new knowledge provides individuals with superior cognitive abilities, which makes them more productive and efficient in a range of activities (Becker 1964; Schultz 1980). The ability to accumulate new knowledge is positively related to the existing stock of knowledge (Cohen and LevinthaL, 1990), including both knowledge formally acquired through education and knowledge tacitly acquired while accumulating experience in a particular domain (Dimov and Shepherd, 2005). Seghers et al. (2009) proposed that entrepreneurs with higher levels of generic human capital will experience a lower knowledge gap of finance alternatives than their peers with lower levels of generic human capital. It is expected that there will be a positive association between the level of education of entrepreneurs and their knowledge of finance alternatives. Highly educated entrepreneurs are expected to have a higher knowledge base, enabling them to easily acquire specific knowledge of finance alternatives. Furthermore, entrepreneurs with higher levels of prior experience may also have a greater knowledge of finance alternatives.

In their studies on human capital of founding entrepreneurs, Colombo and Grill (2005) emphasised capital market imperfections to propose that founders with greater human capital have access to greater financial resources; this they termed the “wealth effect” of founders’ human capital.

## 2.11 Derivation of hypotheses

This section formulates hypotheses derived from the literature to test whether a statistically significant relationship exists between the theoretical constructs of human capital and access to funding. These hypotheses focus on the constructs that have been associated with access to finance as set out in the literature.

### 2.11.1 *Entrepreneurial knowledge*

While some researchers argue that the subjectivity or socially constructed nature of opportunity makes it impossible to separate it from the individual, others contend opportunity is an objective construct visible only to the knowledgeable and attuned individuals (Acs, Braunerhjelm, Audretsch, and Carlson, 2009). Acs and Audretsch (2005) also argue that while these two cases exist, in either of them a set of weakly held assumptions appears to dominate this debate, leaving the fundamental nature of opportunity vague and unresolved. Urban et al. (2011) mention that according to Gnywali and Fogel (1994) the ability to be entrepreneurial is due to technical and business capabilities an entrepreneur requires for starting and successfully managing a business. Acs et al. (2009) argue that while a generation of scholars spent the better part of a half-century trying to figure out the relationship between the entrepreneur, product development and technological innovation (Shane and Ulrich, 2004), a new generation of scholars was able to explain where opportunity itself came from. Vesper, as mentioned in Urban et al. (2011), mentions that sources of entrepreneurial knowledge comes from three

elements, which are imitation and copying, previous work experience, and advice from experts.

Azoulay and Shane (2001) and Archibald, Betts and Johnston (2002) argue that new knowledge contributes to technological opportunity and also spills over for use by third party firms, often new ventures. Acs et al. (2009) also suggest that there is a prevalent view in the entrepreneurship literature that opportunities are exogenous. However, the most prevalent theory of innovation in the economics literature suggests that opportunities are, in fact, endogenous. In 1979 Griliches formalised a model based on knowledge-production function and it was assumed that firms exist exogenously and then engage in the pursuit of new economic knowledge as an input into the process of generating endogenous innovative activity (ACS et al., 2009).

Other scholars have also found that for entrepreneurs to be successful they need a thorough understanding of the environment and the ability to do environmental scanning, selecting opportunities, and formulating strategies for exploitation of opportunities, as well as organisation, management, and leadership. These characteristics are the results of entrepreneurial knowledge (Shane and Venkatraman, 2000).

According to Gimeno et al. (1997), owners with high task-related human capital possess better knowledge of customers, suppliers, products, and services within the context of their business. Zingales (2000) and Pisano (2010) argue

that high-level knowledge capital is the “critical resource,” and it is impossible to separate the roles of the “inventor” who generates the underlying scientific idea and the “innovator” (entrepreneur) who must implement it in the production process. Timmons, in Urban et al. (2011), mentions that entrepreneurs need a sound foundation in traditional management skills in functional areas (such as marketing, finance, production and operations) and also cross-functional areas (administration, law and taxation).

The entrepreneur’s capacity to gain new knowledge and abilities during the start-up process is seen as critical for new venture success and this knowledge is essential to control and apply to resources and may lead to superior performance (Urban et al., 2008). It would be expected that funders would be attracted by entrepreneurs who have business management expertise, financial knowledge and general technical expertise.

### 2.11.2 *Entrepreneur’s education level*

Past research has also found a positive relationship between higher educational qualifications and business growth (Oksoy and Ozsoy, 2006). Education affects the entrepreneur’s motivation (Smallbone and Wyer, 2000). Furthermore, education helps to enhance the exploratory skills and improves communication abilities and foresight (Dobbs and Hamilton, 2007).These enhanced skills are positively related to presenting a plausible case to a banker for a loan at the time of preparing a loan proposal and in convincing the banker during the client interview.

Research has explored how managerial education affects the access to credit. For example, Kumar and Fransico (2005) found a strong effect of education in explaining access to financial services in Brazil. The most recent research done by Irwin and Scott (2010) using a telephone survey of 400 SMMEs in the UK also found that graduates had the least difficulties in raising finance from banks. Researchers have given three interpretations for this finding. Firstly, more educated entrepreneurs have the ability to present positive financial information and strong business plans. They have the ability to maintain a better relationship with financial institutions compared to less educated entrepreneurs. Secondly, the educated managers/owners have the skills to manage the other functions of the business such as finance, marketing, human resources, and these skills results in high performance of the business, which helps these firms to access finance without any difficulty. The third reason stems from the supply side, where the bankers value higher education level of the owner/manager in the loan approval process as an important criterion (Irwin and Scott, 2010).

Han (2008) found that entrepreneurs with undergraduate degrees are more likely to be less financially constrained than those without a formal education background. Han (2008) believes the reason to be that better educated entrepreneurs normally own and manage large businesses, which are less likely to be constrained by finance. It can be also assumed that educated entrepreneurs are likely to have better managerial skills and are better equipped to go through difficult administrative procedures in the credit system, increasing their standing in lenders' eyes.

Le (1999) argues that managerial ability and outside options are the two different channels through which the level of education might influence the propensity to become self-employed. Some studies have argued that education as a key element of human capital would enhance the individual's managerial ability, which in turn increases the probability of entrepreneurship. Mincer (1974) developed a model that suggested that education has a positive impact on worker productivity, an idea that can be extended to productivity in entrepreneurship. Mincer's model has been applied in a number of studies of the impact of education on entrepreneurial profits. In a meta-analysis of studies performed by van der Sluis, van Praag and Vijverberg (2005), which looked at the relationship between education on entry into and performance in entrepreneurship in developing countries, it was found that an added year of schooling increases profits by 5.5 per cent across studies. Wiig and Kolstad (2011) argue most of these studies do not take into account the endogeneity of education and, therefore, do not identify causal effects. Recent studies suggest that returns on education may be substantially higher (van der Sluis, van Praag, and van Witteloostuijnet, 2007; Kolstad and Wiig, 2010).

Education provides the knowledge base and analytical and problem-solving skills to more effectively deal with the demands of entrepreneurship (Barreira et al., 2011). Bird (1989) and Ronstadt (1984) in separate studies found inconsistencies with regard to the impact of education on entrepreneurship and that there is no positive relationship between education and entrepreneurial success. However, Cooper and Gimeno-Gascon (1992), concluded in a meta-

analysis of studies that there is significantly positive relationships between education and performance.

According to Haber and Reichel (2005), other studies have concluded that management skills of entrepreneurs were conducive to business performance and growth. Many scholars have argued that successful entrepreneurs are typically able to employ a host of skills in various areas such as financial management, accounting and marketing (Hood and Young, 1993). Studies in service industries, such as tourism and hospitality, offer some insight into identifying firm resources capable of generating sustainability, including proper communication and co-ordination skills, behavioural performance skills, information exchange skills and speed of transaction-management competency (Haber and Reichel, 2005). Lerner and Haber (2001) found that good managerial skills were critical for good performance of the small tourism venture. In other studies, Sapieza and Grimm (1997) argue that through university education, entrepreneurial skills such as research skills, foresight, imagination, computational skills and communication skills are enhanced. In Barreira et al. (2011), it is mentioned that Barringer, Jones and Neubam (2005) concluded that specific forms of knowledge-intensive education give the recipient entrepreneurs of education an advantage if they start up a firm that is related to their area of expertise.

The characteristics of the firm's founders, notable years of schooling and work experience were found to be significant determinants in the success of an entrepreneurial firm (Barreira et al., 2011).

### 2.11.3 *Entrepreneur's experience and access to finance*

Researchers have found positive relationships between previous management experience and business growth (Dahlquist, Davidsson and Wiklund, 1999). Storey (1994) explained that the positive relationship between previous management experience and business growth was due to the desire of owner-managers to exceed the wage level they sacrificed in becoming self-employed. Dobbs and Hamilton (2007) emphasise the positive effect of past experience on small business growth by proposing that owner-managers with previous experience are more likely to avoid costly mistakes than those with no prior experience. Urban et al. (2008) also suggest that in undertaking new ventures, potential entrepreneurs must ensure that they can demonstrate business knowledge and work experience to possible stakeholders and they should be able to prove that they have supplemented their general qualifications with industry-specific experience, as well as functional education and experience. The broader knowledge base of entrepreneurs with a business education further enables them to more easily acquire other relevant knowledge. Further, entrepreneurs with previous work experience in accountancy or finance are more likely to have a broader and deeper knowledge of finance alternatives than entrepreneurs without experience in accountancy or finance have (Seghers et al., 2009).

Entrepreneurial experience typically comes from normal working life–that is, work done in order to support oneself (Metzger 2006). Reuber and Fischer (1999) argue that there are two ways in which a founder's previous experience impacts firm performance: First, it leads to the development of experientially acquired skills or expertise which will lead in turn to more knowledgeable actions and decisions. Second, as founders are inclined to start businesses that are similar (e.g. in terms of industry, geographic area) to organisations with which they are familiar, experience influences the start-up characteristics. Some researchers such as Ucbasaran, Wright and Westhead (2003) also argue that human capital, particularly prior business-ownership experience, can have an impact on the ability to identify business opportunities. Prior business ownership experience can be associated with assets like extended networks, increased expertise or a good reputation with financiers, customers and suppliers (Metzger, 2006).

Brüderl et al. (1996) found that professional experience increases the probability of survival in the world of entrepreneurship. However, later on it was established in the same study that professional experience decreases growth of employment and turnover due to the correlation between professional experience, age, and a cautious attitude. In Brüderl et al.'s (1996) study, the only human capital variable having a positive effect on all three performance indicators is experience in the sector of the current business. Self-employment experience does not appear to have an influence on any performance indicator and the same is true for work experience in a leading position (Brüderl et al.,

1996). Colombo et al.'s (2004) also found similar results which corroborate what Brüderl et al. found in their study. According to Colombo et al. (2004), human capital specific to entrepreneurship, as well as managerial and entrepreneurial experience and work experience in the same sector, increases initial firm size. Åstebro and Bernhardt (2002) observe that education, general work experience and prior ownership experience have a positive effect on start-up capital. Sorensen (2007), Kaplan and Schoar (2005), Gompers, Kovner, Lerner and Scharfstein (2008), and Hochberg, Ljungqvist, and Lu (2007) also established that companies that are funded by more experienced (top-tier) venture capital firms are more likely to succeed. Gompers et al. (2008) suggested that this success could be because top-tier venture capital firms are better able to identify high-quality companies and entrepreneurs, or because they add more value to the firms they fund.

Vesper (1980) indicated that work experience may be more important when it is necessary to rely on inside industrial information and in highly competitive businesses. Chandler and Jansen (1992) reported some significant relationships between a founder's experience and venture growth and profitability. Besides, the founding entrepreneurs could have the competencies to perform equally well as professional managers (Willard, et al., 1992). Gompers, Kovner, Lerner and Scharfstein (2006) conducted a study in which they rejected the Kihlstrom and Laffont hypothesis that entrepreneurs are just efficient risk bearers in favour of the view, emphasised by Schumpeter (1947), that skill is an important component of entrepreneurship. In the same study the authors present evidence that suppliers of capital are not just efficient risk

bearers in the entrepreneurial process, as Schumpeter (1947) suggests, but rather bring their own set of capabilities to identifying skilled entrepreneurs and helping them build their businesses.

Gompers et al. (2006) tried to answer the question which looked at whether successful entrepreneurs are more likely to succeed in their next ventures than first-time entrepreneurs and entrepreneurs who previously failed. Gompers et al.'s (2006) empirical model indicated that entrepreneurs who succeeded in a prior venture have a 30% chance of succeeding in their next venture. This finding was in contrast with the finding that first-time entrepreneurs have only an 18% chance of succeeding and entrepreneurs who previously failed have a 20% chance of succeeding (Gompers et al., 2006). The study argues that entrepreneurial performance as a component of success in entrepreneurship is attributable to skill. Another piece of evidence in support of the entrepreneurial skill is that when previously successful entrepreneurs raise funding for their next venture, they are able to do so when the company is younger and at an earlier stage of development (Gompers et al., 2006).

The ability for the entrepreneur to successfully raise funds is probably because venture capital firms perceive a successful track record as evidence of skill. MacMillan, Zemann and Subbanarasimha (1987) and Shane (2003) emphasise the importance of knowledge and previous managerial experience for venture performance. According to Yusuf (2002), tacit knowledge sometimes can be

taught through guided experiences, and courses in entrepreneurship try to do just that, at least to some extent.

Contrary to the notion that tacit knowledge can be taught, when comparing novice entrepreneurs (entrepreneurs without any prior business ownership experience), serial entrepreneurs (entrepreneurs with prior business ownership experience who have sold or closed the prior business), and portfolio entrepreneurs (entrepreneurs who currently own two or more independent businesses), Westhead and Wright (1998) did not find any significant performance differences between the businesses with respect to levels and changes in sales revenues, levels and changes in profitability, or changes in employment. Higher levels and changes in sales revenue for serial and portfolio entrepreneurs as compared with novice entrepreneurs were observed in a study conducted by Westhead et al. (2003). It was established here that the difference in the businesses' performance is significantly larger between portfolio entrepreneurs and novices than between serial entrepreneurs and novices.

Eesley and Roberts (2006a) used data from a survey of alumni of the Massachusetts Institute of Technology to show that entrepreneurial experience increases the likelihood of success (as measured by firm revenues). Kaplan and Stromberg (2003), who studied the contractual terms of venture capital financing found that serial entrepreneurs receive more favourable control provisions than first-time entrepreneurs, including more favourable board control, vesting, liquidation rights, and more upfront capital. It could be the case

that their higher success rates make it less important for venture capitalists to protect themselves with tighter control provisions (Gompers et al., 2006).

A number of other studies have concluded that relevant previous experience affects the success of the new business (Cooper et al., 1994). Entrepreneurial experience has also been found to be conducive to business performance (Ronstadt, 1988). According to Chandler and Hanks (1994), founders' skills moderate the relationship between the abundance of opportunity in the economic environment of the venture and venture performance. Yusof (2006) mentions that in the service industries, the quality and experience of the service personnel is frequently viewed as an inimitable resource that contributes to the competitive advantage of the venture. Studies also show that prior experience of an entrepreneur is a good predictor of re-venturing and can contribute to a successful venture path (Ronstadt 1988). Van Praag (2003) suggests that experience in the same industry as the business venture gives better chances of success, and so does experience within the same occupation.

Reynolds (2007) identified the following primary factors that affect founding success: start-up activities to produce a good or service; start-up activities to develop a presence for the new firm; business experience, particularly in the same industry; start-up activities to create a financial and organisational structure; the start-up team’s financial commitments; and the concentration of resources and speedy completion of start-up activities. Panda (2008) writes that previous experiences lead to the success of the entrepreneurs. Lee and

Denslow (2005) in their study have found that lack of capital and lack of experience were two of the major factors affecting entrepreneurial success. Other evidence from research also showed that education and entrepreneurial experience have a positive impact on performance (Cooper and Gimeno-Gascon, 1992).

Chatterji (2005) showed that industry experience also increases the likelihood of success. Honig and Davidson (2000) and Reuber, Dyke and Fischer (1990) did other related works on the entrepreneur's previous experience. Reuber and Fischer (1994) provide evidence that expertise mediates the relationship between founder experience and venture performance, with expertise in such key areas as strategic planning, globalisation, financing, and strategic-alliance formation having more consequences for performance than expertise in back office functions. The previous experience of founders is likely to be most influential when initial start-up decisions are being made and how the venture is being funded.

### 2.11.4 *Access to finance and growth*

Numerous studies have mentioned that SMMEs are financially more constrained than large firms and are less likely to have access to formal finance (Beck and Demirguc-Kunt, 2006). Both in the developing and developed world small firms have been found to have less access to external finance and to be more constrained in their operation and growth (Berger and Udell, 1998; Galindo and Schantiarelli, 2003). Availability of external financing for SMMEs

depends on the wider institutional environment. Lack of funds constraints SMMEs' growth and is one of the more important business obstacles they have to overcome. Access to finance contributes to firm entry, growth, and innovation, amongst other things. Small and new firms are affected the most by financing constraints, yet they also benefit the most as financial systems develop and financing constraints consequently ease.

Empirical evidence suggests that it is through improving access for enterprises that financial-sector development makes an important contribution to economic growth (World Bank, 2006). The World Bank (2006) also states that firms finance their operations and growth in many different ways and their financing choices are influenced by the preferences of the entrepreneurs and, more importantly, by the options that are available to them. In what form, from whom, how successfully and at what cost firms are financed thus depends on a wide range of factors both internal and external to the firm. The internal financial resources available to the firm's entrepreneurs and other insiders are, of course, important. External financing also depends on the entrepreneurs' own ability to project a credible financing proposal, their willingness to share control, the nature of their business plan and the uncertainties and risks involved in implementing it (Beck, Demirgüç-Kunt, and Maksimovic, 2005). The credibility of the proposal depends not only on the substance of the business plan, but on how the firm is governed and on the transparency of its operations and financial condition.

According to Beck and Demirgüç-Kunt (2006) efforts targeted at the SMME sector are often based on the premises that SMMEs are the engine of growth, but market imperfections and institutional weaknesses impede their growth. In their study, Ayyagari, Demirgüç-Kunt, and Maksimovic (2007) exploited the responses of some SMMEs in several countries to the questions on enterprise innovation. These authors did this exercise by taking an average of each firm's responses to innovation-related questions and assembling a range of variables likely to be associated with firm innovation, including information about the structure of each firm's financing. Despite the inclusion of the other control variables and even after controlling for reverse causality by using instrumental variable techniques, Ayyagari et al. (2007) found that the firms' use of external finance was associated with more innovation. This finding was even more strongly evident when access to finance was from foreign banks (Ayyagari et al., 2007).

Access to and use of finance, and the institutional underpinnings that are associated with better financial access, favourably affect firm performance along a number of different channels. If entry, growth, innovation, equilibrium size and risk reduction are all helped by access to and use of finance, it is almost inescapable that aggregate economic performance will also be improved by having stronger financial systems (Levine 2005; World Bank 2001). From the change-in-amount perspective growth can be measured with a range of different indicators, the most frequently suggested being sales, employment, assets, physical output, market share and profits (Wiklund, 1998).

## 2.12 Conclusion of literature review

Access to finance is a topic of great interest to both academics and practitioners. A considerable number of studies in the past have mentioned that access to finance has been a problem in this sector. There are few studies with regard to investigating the determinants of access to finance for SMMEs, especially from the demand side. Hence, this study examined the impact of the human capital of the entrepreneur in accessing finance in South Africa. Prior reasoning, and an overview of the literature, suggests a number of factors that are likely to be associated with access to credit. In this study, the explanatory variables selected are entrepreneur's knowledge, entrepreneur's education and expertise and based on these variables four main hypotheses have been derived for testing. H1 and H2 (H2a, H2b and H2c) are descriptive hypotheses, and that H3 and H4 are relational hypotheses (Cooper and Schindler, 2011)

**H1: Entrepreneurs perceive access to SMME funding to be important for SMME growth**

**H2: The human capital factors of SMME founders are perceived by entrepreneurs as important for the business in accessing external funding specifically:**

**H2a: Entrepreneurs perceive knowledge as an important factor for accessing funding.**

**H2b: Entrepreneurs perceive formal education as an important factor for accessing funding.**

**H2c: Entrepreneurs perceive expertise as an important factor for accessing funding.**

**H3: Entrepreneurs rate differently the importance of knowledge, formal education and expertise for accessing SMME funding.**

**H4: The extent to which entrepreneurs perceive human capital factors to be important for access to SMME funding is related to the demographics of the entrepreneurs.**

# CHAPTER 3: RESEARCH METHODOLOGY

The term “Research methodology” refers to the way in which data is gathered and research conducted. The term refers to the method of collecting data and measuring and analysing data in order to meet the objectives of the study. This study was empirical study and consisted of questions that were structured to obtain particular results. The study was conducted through a structured questionnaire, which was quantitative in nature, in order to gain insight and understanding into how the human capital of an entrepreneur is perceived to impact on the ability of an SMME to obtain funding.

## 3.1 Research methodology/paradigm

A quantitative research design was used for the purpose of this study. Quantitative research attempts to measure something as it uses numerical representation and manipulation of observations for the purpose of describing and explaining the phenomena that those observations reflect (Cooper and Schindler, 2011). According to Saunders, Lewis and Thornhill (2003), in quantitative research, its designs relies heavily on numbers when reporting results, sampling and provisions of estimated instruments, reliability and validity. The design involves obtaining data from a large group of respondents and uses descriptive statistics to quantify data and generalise the results from the sample to the population of interest. This research method is used to describe variables; to examine relationships among variables; and to determine cause-and-effect interactions between variables (Burns & Grove 2005).

## 3.2 Research Design

Cooper and Schindler (2011) argue that there are many ways of defining "research design" as no single definition imparts the full range of important aspects. These authors define research design as the plan and structure of an investigation so conceived as to obtain answers to research questions. The plan is the overall scheme or programme of research and includes an outline of what the investigator will do from writing hypotheses and their operational implications to the final analysis of data (Cooper and Schindler, 2011). This study looked at the perceived relationship between human capital factors (in terms of their importance) and access to funding in Stage 1 of the research and then in the second stage looked at the perceived importance of the relationship between access to funding and SMME growth.

This study attempted to determine how an entrepreneur's knowledge, education and expertise as independent variables and access to funding as a dependent variable are linked or related. The study set out to establish whether there is an association between the independent variables and the dependent variable and if that relationship is causal or explanatory. The research conducted was descriptive. Salkind (2001) describes the purpose of descriptive research as describing the characteristics of an existing phenomenon. The variables meant to be researched in this study cannot be easily manipulated as its aim is to describe a particular phenomenon, which is seen as the process of accessing funding as perceived by SMMEs. The most appropriate unit of analysis is SMMEs as represented by their founders. The study therefore measured the

perceptions of SMME founders and this measurement was done through a web-based survey. The human capital factors were operationalised and then measured by a 7-point Likert scale.

## 3.3 Population and sample

### 3.3.1 *Population*

For the purpose of the research, the target population comprised entrepreneurs from SMMEs who had been operational for a period of one to five years. These SMMEs employ between zero to 50 people and have a maximum turnover of approximately R10 million per annum.

### 3.3.2 *Sample and sampling method*

The study used a non-probability method called “judgement sampling”. This approach is used when a sample is taken based on certain judgements about the overall population. When using this method, the researcher must be confident that the chosen sample is truly representative of the entire population (Cooper and Schindler, 2011). The population sample used in this study was obtained from a database from Shanduka Black Umbrellas incubators, Wits Business School Centre of Entrepreneurship, and Royal Fields Finance (an SMME funding company). The sample comprised SMME founders who had been running and operating their own businesses for a period of between one to five years. A list of 740 SMMEs was obtained from the above-mentioned organisations and was obtained in the form of email addresses which were currently active on their system. In using this kind of sampling there are

shortcoming, as the underlying assumption is that the investigator will select units that are characteristic of the population. Judgement sampling is subject to the researcher's biases and therefore, there is a greater risk of bias in the sample which could distort the results of the study. However, in judgement sampling and other non-probability sampling techniques, the probability of selecting population elements is not known (Cooper and Schindler, 2011). The respondents met the conditions of entrepreneurship and their company sizes and company age met the criteria as discussed earlier.

## 3.4 The research instrument

Data was collected through a self-administered questionnaire which was distributed online. A self-administered questionnaire is a form containing a set of questions, usually presented to the respondents by an interviewer or a person in an official capacity that explains the purpose but does not actually complete the questionnaire (Cooper and Schindler, 2011). This technique reduces interviewer bias and also saves money and time. The questionnaire was divided into different sections, which will address the hypotheses set out in the study. The questionnaires used closed-ended questions which helped in gathering information. The questionnaire consisted of three sections, namely:

- Section A – Demographics

The demographic section of the questionnaire measured different variables which included the:

  - Gender: split into male and female

- Age of the founding member: range from 21 years to above 60 years
- Race: split into black, white, coloured and Asian
- Highest qualification: split into Matric, school incomplete, certificate/diploma, Bachelor's degree, postgraduate degree, tertiary education incomplete or other
- Turnover of the business. The range was from less than R1 million to R10 million
- The demographics section of the questionnaire included the number of employees the business employed, where the entrepreneur learned business skills and work experience in years.

- Section B – Human capital questions

In Section B, the measurement constructs used were knowledge, education and expertise. Each construct had several items which were used to measure the perceived importance of these constructs in relation to access to funding. Knowledge had eight items as informed by the theory on human capital discussed extensively in Chapter 2. Education and expertise comprised four and six items respectively.

- Section C – SMME growth questions

In order to determine the perceived importance of access to funding for SMME growth, five items that are related to SMME success and growth were measured.

The constructs were measured using a 7-point Likert scale. The participants were asked to rate the constructs that they perceived as very important or unimportant.

### 3.4.1 *Measures of constructs*

The literature on entrepreneurship was used to derive the hypotheses outlined in Chapter 2. A conceptual framework was formulated on the basis of the literature review and it was used to formulate the constructs and eventually the questionnaire. All the variables were measured using 7-point Likert scale. The human capital variables (knowledge, education and expertise) were measured first with several items in Stage 1 of the model and then SMME growth was measured with its own items (the items were constructed by the researcher) in Stage 2 of the model. Human capital factors were identified as knowledge, education and expertise. Knowledge was measured by eight items, education measured by four items and expertise was measured by six items based on the extensive literature of entrepreneurship set out extensively in Chapter 2. SMME growth was measured by five items in Stage 2 of the conceptual framework.

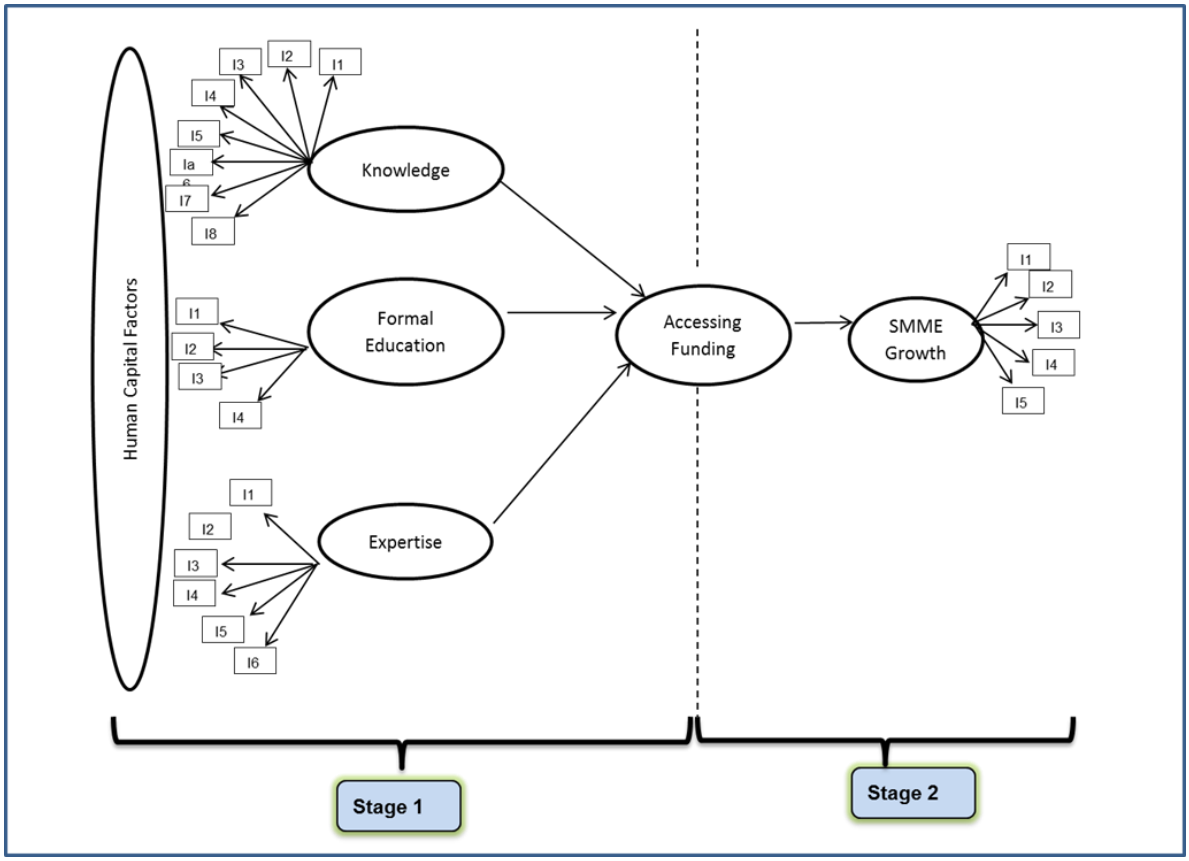


**Figure 3: Conceptual theoretical model – Source: Own (Adapted from Colombo and Grilli)**

The conceptual model shown in Figure 3 was used to formulate the hypotheses of the study, which looked at the relationship of human capital factors and access to funding in Stage 1 and then the relationship of access to funding and SMME growth in Stage 2. The respondents were asked to measure their perceived importance of knowledge, education and expertise as represented by different items and illustrated in Table 2.

**Table 2: Conceptual framework items/variables for human capital factors**

| Conceptual Framework Items |
|---|
| **Knowledge Items** |
| I1: Entrepreneur's managerial knowledge and the ability to demonstrate good business knowledge |
| I2: Entrepreneur's ability to read and interpret financial statements (ability to perform financial analysis) |
| I3: Entrepreneur's good financial knowledge |
| I4: Good market analysis and competitor's assessment |
| I5: Entrepreneur's ability to manage and control business costs |
| I6: Entrepreneur's ability to define the organisational goals and set their business objective clearly |
| I7: A track record of running previous businesses |
| I8: Entrepreneur's ability to show knowledge of his/her business, products and services offered |
| **Formal Education Items** |
| I1: Entrepreneur's formal education importance in accessing funding |
| I2: Entrepreneur's ability to write a comprehensive business plan |

| |
|---|
| I3: Entrepreneur’s confidence in managing the business |
| I4: Good market analysis and competitor’s assessment |
| **Expertise Items** |
| I1: Entrepreneur’s managerial expertise |
| I2: Entrepreneur’s general business skills |
| I3: A track record of running previous businesses |
| I4: Entrepreneur’s previous work experience |
| I5: Good networking abilities |
| I6: Entrepreneur’s ability to manage risk |
| **Growth Items** |
| I1: Availability of finance allows the company ability to be innovative and creative |
| I2: External finance enables the company to grow revenue and profit and be sustainable in future |
| I3: Access to finance enables the company to hire more employees with relevant experience |
| I4: Access to finance enables the company to improve its organisational capabilities and competence |

| |
|---|
| I5: Access to finance enables the company to focus on growth strategies |

## 3.5 Procedure for data collection

Data was collected through a structured self-administered questionnaire which consisted of different sections that were meant to answer the research problem. The questionnaire was developed on the basis of key concepts from the research problem and the hypotheses of the study. Prior to data collection, the questionnaire was checked by the researcher's supervisor for validity purpose. The questionnaire was distributed through an online survey called Qualtrics. Qualtrics is a professional survey instrument licensed by the University of the Witwatersrand.

## 3.6 Data analysis and interpretation

The findings of this study were analysed and presented in a format that addresses each study question using exploratory data analysis (EDA). According to Cooper and Schindler (2011), in EDA the researcher has the flexibility to respond to the patterns revealed in the preliminary analysis of the data. Data analysis consists of running various statistical procedures and tests on the data (Barrow, 1999). There are two major components of the discipline of statistics: descriptive and inferential statistics. Rosnow and Rosenthal (1999) define descriptive statistics as condensing large volumes of data into a few summary measures while inferential statistics is defined as the area of statistics that extends the information extracted from the sample to the actual

environment in which the problem arises. Data was coded for computer handling and analysed using STATISTICA (data analysis software system), version 10.

Firstly, the results obtained for the demographic section were analysed using frequency analysis and supporting graphics. Thereafter, the reliability of the scales was examined, and then data was analysed and presented in different sections to test each hypothesis.

### 3.6.1 *Statistics employed*

Descriptive statistics used in the study included the numbers, tables, charts, and graphs used to describe, organise, summarise, and present raw data. The bar charts represented the frequency distribution of the respondents in percentages. Frequency tables were used to arrange data with counts and percentages and the charts helped with relative comparisons of nominal data (Cooper and Schindler, 2011). The frequency analysis was presented in the form of pie graphs for the categorical variables of gender, age, race, entrepreneurs' qualification and age of company and with bar graphs for those categorical variables with several levels–that is turnover, where respondents learned business skills and years of working experience.

As the reliability of a scale is a necessary condition for it to be valid (Cooper and Schindler, 2011), reliability measures were computed for the scales of attitudes towards the importance of the human capital factors of knowledge, formal education and expertise for accessing funding. Reliability is the consistency of measurement, or the degree to which an instrument measures the same way

each time it is used under the same condition with the same subjects. In short, it is the repeatability of the measurement (Babbie and Mouton, 2001). In this study, reliability of the scales was considered in the form of the internal consistency of the scales by computing Cronbach's alpha coefficient, which assesses the extent to which the scale items are inter-correlated or homogeneous (Cooper and Schindler 2011). Cronbach's alpha values range from 0 to 1 and values between 0.60 and 0.70 are deemed low but acceptable. As Cronbach's alpha values are correlated with the number of items in the scale, the average inter-item correlations were also presented as an additional measure of the internal consistency of the scales, and were checked to ensure that they exceeded the accepted lower limit of 0.30 (Hair et al., 2010).

The hypotheses of the study were then examined. Hypotheses 1, 2 and 3 are all considered to be descriptive as they state that entrepreneurs' attitudes towards the perceived importance of human capital factors (knowledge, formal education and expertise) in accessing funding are positive. Cooper and Schindler (2011), state that a descriptive hypothesis states the existence of size, form or distribution of some variables.

For each of these hypotheses in turn, stacked bar graphs were used to show the relative percentages of responses to each item of the scale to which it belonged, categorised as strongly positive for scores of 7 on the 7-point Likert-type scale, positive for scores of 5 and 6, and not positive for scores of 1 to 4. This categorisation was considered appropriate in view of the tendency of respondents to agree or strongly agree with the importance of the various factors considered. This analysis also highlighted the potential areas considered

by the respondents to be most and least important for growth and access to funding. Thereafter, the frequency distributions of the averaged summated scores at the scale level were presented using frequency distributions to show the number of respondents with scores ranging from 1 to 7, and Box and Whisker plots were used to show the values of the median, quartiles and ranges. The other summary measures tabulated were the mean and standard deviation and measures of the shape of the distributions, using the skewness and kurtosis measures. Skewness refers to measures of the symmetry of a distribution; in most instances the comparison is made to a normal distribution (Hair et al, 2010: 36). According to Hair et al. (2010), a positively skewed distribution has relatively few large values and tails off to the right, and negatively skewed distribution has relatively few small values and tails off to the left. Skewness values falling outside the range of -1 to +1 indicate a substantially skewed distribution (Hair et al., 2010). Kurtosis measures the peakedness or flatness of a distribution when compared with a normal distribution (Hair et al, 2010: 35). A positive value indicates a relatively peaked distribution and a negative value indicates a relatively flat distribution (Hair et al, 2010).

While the frequencies of positive attitudes at the item level of each scale, and negatively skewed distributions and high values for the mean and median at the overall scale level were considered as support for the corresponding hypotheses, the mean scale values were checked further for significance relative to the neutral scale midpoint of 4 on the 7-point Likert-type scales.

The researcher used a directional single group t-test comparing the mean against the midpoint scale of 4 in order to test for hypotheses 1 and 2. Directional tests, or one-tailed tests, are hypothesis tests where the alternative hypothesis is stated as greater than (>) or less than (<) a value stated in the null hypothesis (Cooper and Schindler (2011) and Hair et al (2010)). Hence, the researcher is interested in a specific alternative from the null hypothesis. The P value of the t- test should be able to provide an answer to the question, “If the data were sampled from a Gaussian or normal population with a mean equal to the hypothetical value entered, what is the chance of randomly selecting N data points and finding a mean as far from the hypothetical value (or further) as observed here?” (Motulsky,1999). The parametric t-test was tested at a significance level of 0.05 and this is the mostly used level according to Cooper and Schindler (2011).

For Hypothesis 3 that involved a comparison of the mean perceived levels of importance of knowledge, formal education and expertise, a repeated measure analysis of variance was used to measure the effect of the size of their variability. The purpose of this kind of test is to control individual-level differences that may affect the within-group variance (Hair et al., 2010). Furthermore, the post hoc Scheffe test was computed to identify which pairs of differences are significantly different. Post hoc tests are designed for situations in which the researcher has already obtained a significant F-test based on three or more means and additional exploration of the differences among means is needed to provide specific information on which means are significantly different from each other (Hair et al., 2010)–that is differences between the importance

of knowledge versus formal education; knowledge versus expertise and formal education versus expertise. Finally, an additional nonparametric test was computed to check the results of the parametric analyses as the score distributions were skewed. Although the parametric t tests were used based on the Central Limit theorem that assumes the sampling distribution of the mean to be normally distributed with a large sample size (Cooper and Schindler, 2011), the results were validated using the nonparametric equivalent Wilcoxon test. The Wilcoxon test evaluates differences between paired scores, either repeated or matched. The variables for the Wilcoxon test have multiple possible scores, with the focus on whether the median of the variables differs significantly (Cooper and Schindler, 2011).

Hypothesis 4 stated that the differences in the extent to which entrepreneurs perceive human capital factors as important for access to SMME funding are related to the demographics of the entrepreneurs. As several demographic variables needed to be considered relative to perceptions of importance of the three human capital factors, the approach used was to compute a multivariate analysis to cluster the respondents on their perceptions to all three factors simultaneously, and to compare the resultant clusters of respondents who were internally homogeneous in perceptions on the various demographic variables. Thus the study employed k-means cluster analysis to generate groups of respondents according to their similar views on the importance of human capital for accessing finance. K-means cluster analysis is a procedure that attempts to identify relatively homogeneous groups of cases based on selected characteristics (Cooper and Schindler, 2011). Furthermore a graphic display

comparing the means of the clusters on the three human capital factors was also produced.

Once the clusters were determined, they were evaluated for differences on the categorical demographic variables of the respondents of gender, age, qualifications, source of learning of business skills, and years of work experience using the Pearson Chi-square test. Similarly, the clusters were compared for differences on the categorical demographic variables of the SMMEs of age of the business and turnover. The Pearson Chi-square test was performed to test for the significance of relationships between variables cross-classified by the clusters. For these tests, the levels of the categorical variables were combined where necessary to satisfy the assumptions of the Chi-square test of the minimum expected frequency of five (Hair et al, 2010). A non-significant Chi-square result was interpreted as insufficient evidence of a relation between the corresponding demographic variable and perceptions of the importance of human capital in accessing funding.

## 3.7 Limitations of the study

Since all research has its own limitations, this research was not an exception.

- The population of the study was SMMEs that had been in business between one and five years and, therefore, it may be difficult to generalise the findings. The entrepreneurs who did not manage to find funding may not have had a voice in the research.

- The participation method was voluntary and, therefore, some entrepreneurs may not have deemed it necessary to complete the questionnaire.
- The online format prescribes that the questionnaire be quite tightly structured, excluding the opportunity for probing from an interviewer and so limiting the depth of information that can be obtained.
- The study was simplistic and as a result not all the determinants of access to funding were considered, which might cause specification error.

## 3.8 Validity and reliability of research

### 3.8.1 *Validity*

Statistical validity can be described as the degree to which observed results, such as the difference between two measurements, can be relied upon and not attributed to errors in sampling and measurement. In the present study, each hypothesis was tested for significance, thereby evaluating the criterion-related validity of the measures–that is whether the three human capital factors of knowledge, formal education and expertise can be used to predict access to funding and whether access to funding predicts SMME growth.

In terms of the external validity of the research–that is the generalisability of the results of the study to other settings–the research is considered moderately externally valid as the sampling frame that the researcher used was composed of all the main groups of entrepreneurs. However, the response rate was low,

thus negatively affecting the external or population validity of the research (Cooper and Schindler, 2011). As the research was simplistic in that it focused only on human capital elements as predictors of access to funding and did not look at numerous other factors, there could have been a specific error committed. Specific error refers to the omitted predictors that account for some unique proportion of the total variance criterion but are not included in the analysis (Kline, 2011).

### 3.8.2 *Internal validity*

Finally, the internal validity of the conclusions is weak as no cause-effect relations can be claimed. Internal validity refers to the confidence placed in the cause-and-effect relationship. According to Babbie and Mouton (2001), internal validity addresses the question “to what extent does the research design permit us to say that the independent variable causes a change in the dependent variable”. The researcher did not claim that there is a causal effect between human capital factors and accessing funding, and accessing funding and SMME growth but merely that there is a relation between them.

# CHAPTER 4: PRESENTATION OF RESULTS

## 4.1 Introduction

This chapter presents the research findings of the study. The data was obtained using a questionnaire that was designed in two sections. Section A measured the demographic profile and Section B was subdivided to measure human capital factors and growth questions. The findings of this study were analysed and presented in a format that addresses each study question using EDA. The questionnaire was sent via email using a Qualtrics web link. The population sample was obtained from a database from Shanduka Black Umbrellas incubators (380 respondents), Wits Business School Centre of Entrepreneurship (220 respondents) and Royal Fields Finance (140 respondents). Altogether, 129 questionnaires were returned and only 83 of these were completed. This translated to a response rate of 17.4%. Three responses were omitted because they reflected firms with more than 100 employees and did not meet the sampling criteria. Forty-three others were incomplete and were also omitted. There were thus 68 usable responses and these amounted to a 9.2% usable response rate. Data was coded for computer handling and analysed using Statistica software and the demographic results are presented in graphic format in this chapter.

Firstly the results obtained for the demographic section were analysed and are shown in pie charts and bar charts. The bar charts represent the frequency distribution of the respondents in percentages.

## 4.2 Demographic profile of respondents

The demographic variables of the respondents analysed were gender, age, race, education level, their company's size in revenue and number of employees, where the respondents learned business, the age of the company, and the years of experience of the entrepreneur before starting the business.

### 4.2.1 *Gender*

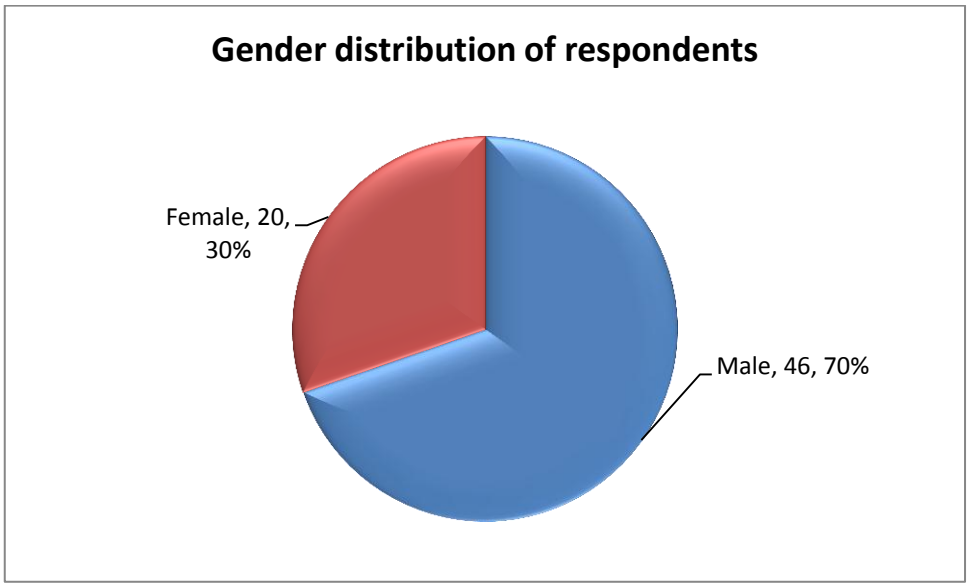


**Figure 4: Gender distribution of respondents (composition: n=68)**

The questionnaire was addressed to the founding members of the SMMEs. Figure 4 shows a split of the respondents in terms of gender. It represents a number of male and female respondents. Two respondents did not provide their gender. The gender split of the sample surveyed was 70% male and 30% female.

### 4.2.2 *Age*

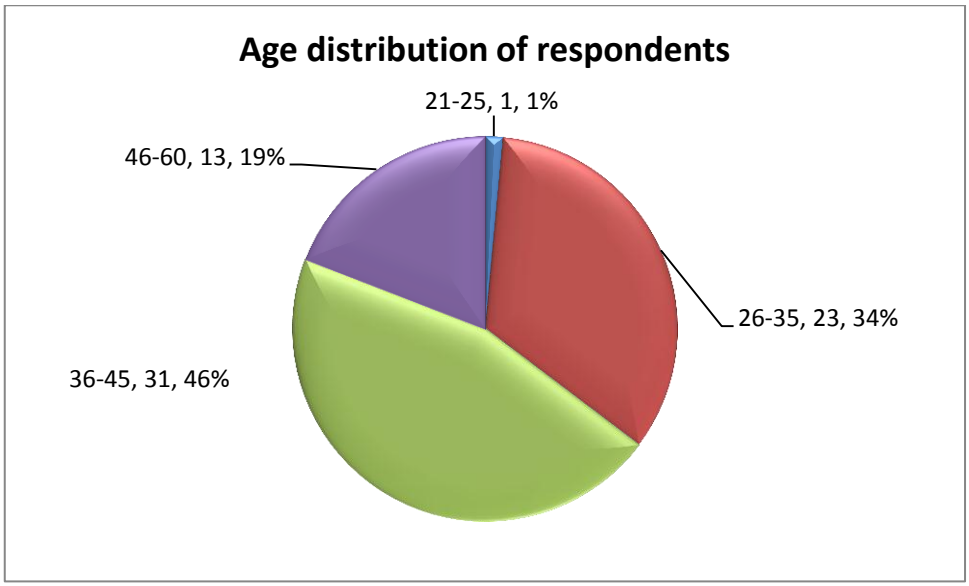


**Figure 5: Age distribution of respondents**

Figure 5 presents respondents' age distribution. The age groups surveyed ranged from 21 years to over 60 years. The highest number of respondents was from the age group between 36 and 45 years and they represented 46% of the sample's population.

### 4.2.3 *Race*

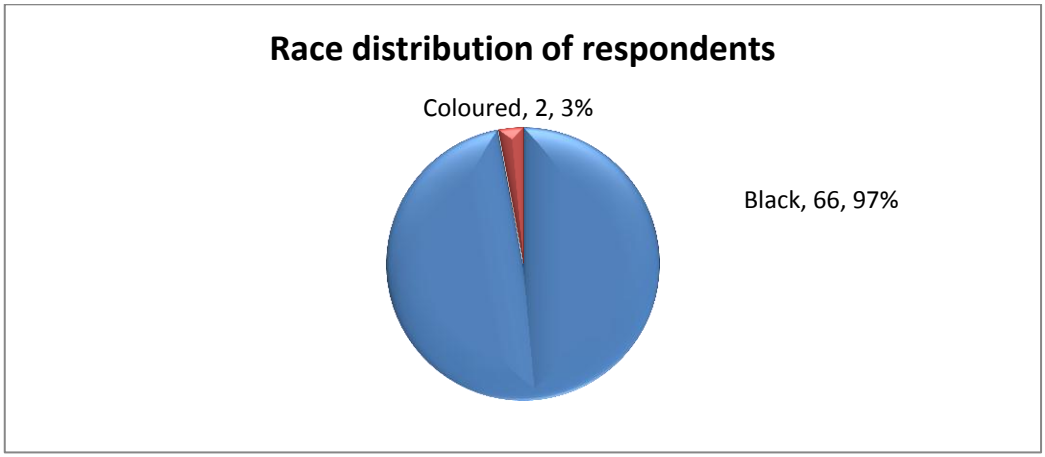


**Figure 6: Race distribution of respondents (n=68)**

The chart in Figure 6 shows a split in terms of race from a total number of all who responded to the survey. All but one respondent, i.e. 97% of the respondents, were black; only 2% were from the coloured race.

### 4.2.4 *Education*

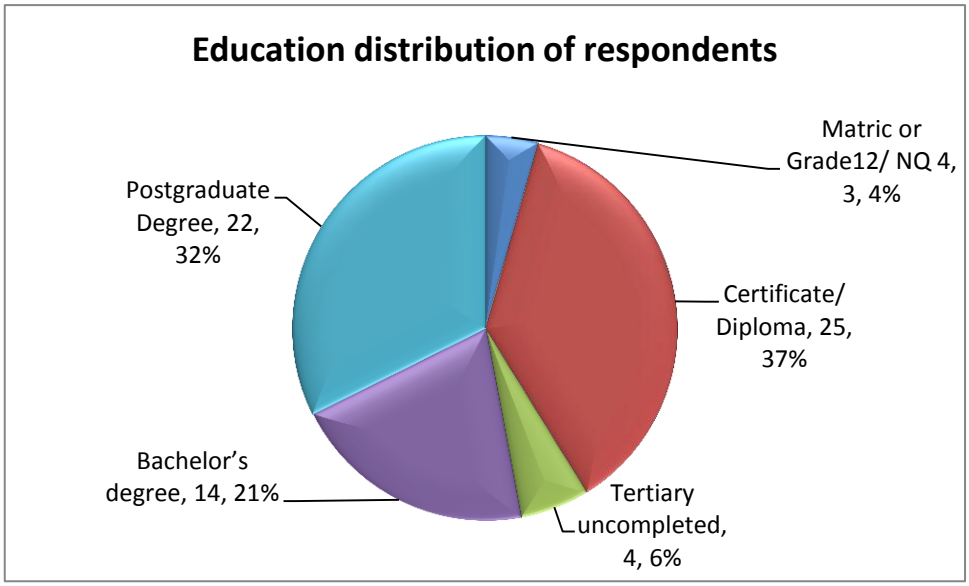


**Figure 7: Education distribution of respondents**

The chart in Figure 7 represents the highest education levels of the respondents. Generally speaking, the majority of the respondents had a post-matric level of education. Over half (53%) had some form of post-matric qualification (bachelor or postgraduate degrees) and 37% had obtained a certificate or a diploma.

### 4.2.5 *Age of company*

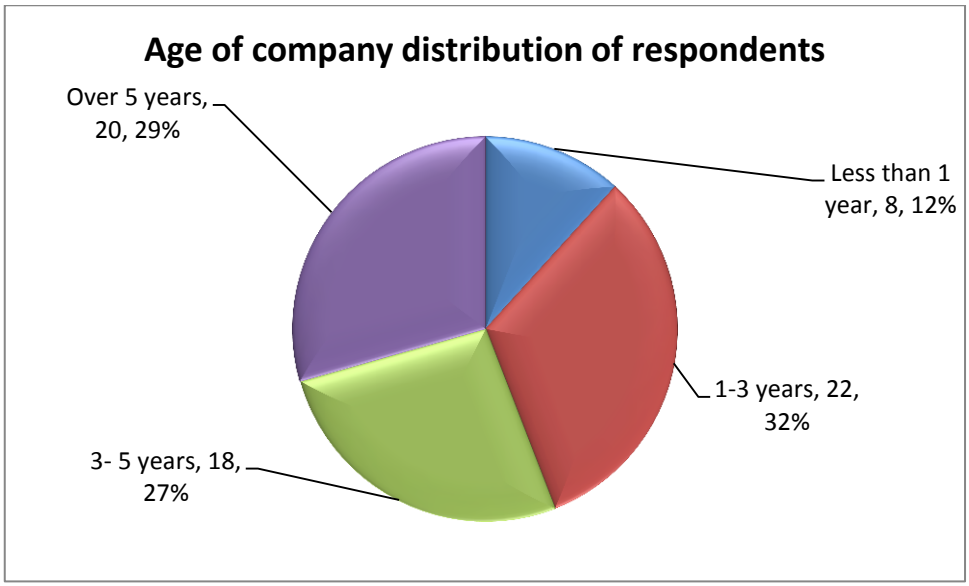


**Figure 8: Age of company distribution**

Figure 8 represents the age of the companies of the respondents. Only 12% had been in business for under a year, a third (32%) had existed for one to three years, and 27% had existed from three to five years. This breakdown illustrates that a large number of companies surveyed had been in business for substantial period of time.

### 4.2.6 *Turnover*

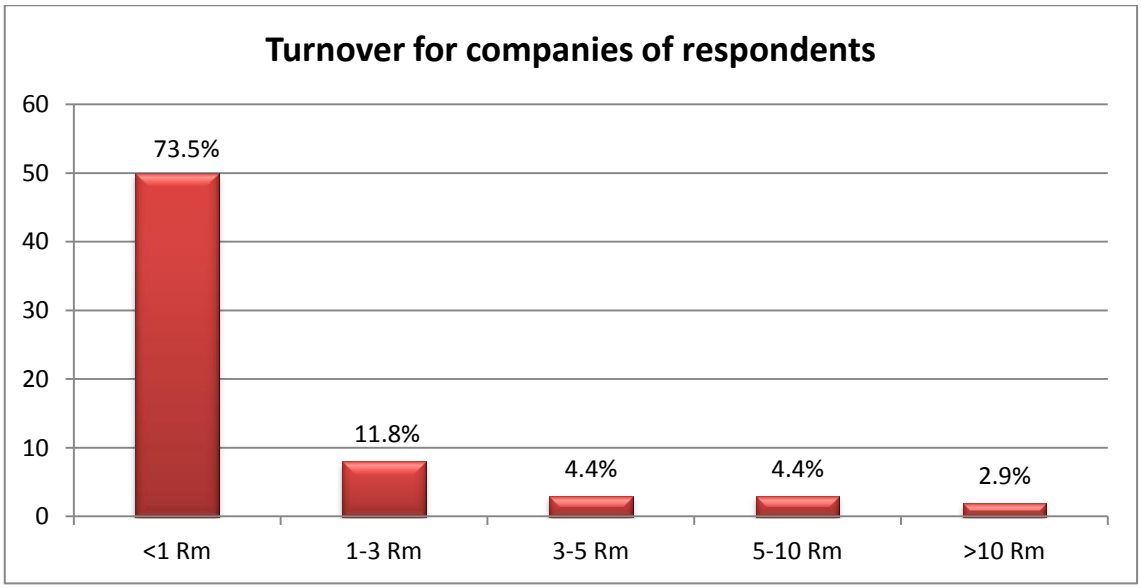


**Figure 9: Turnover for companies**

Almost three-quarters (73.5%) of the businesses have a turnover of less than R1 million as illustrated in Figure 9.

### 4.2.7 *Where respondents learned business skills*

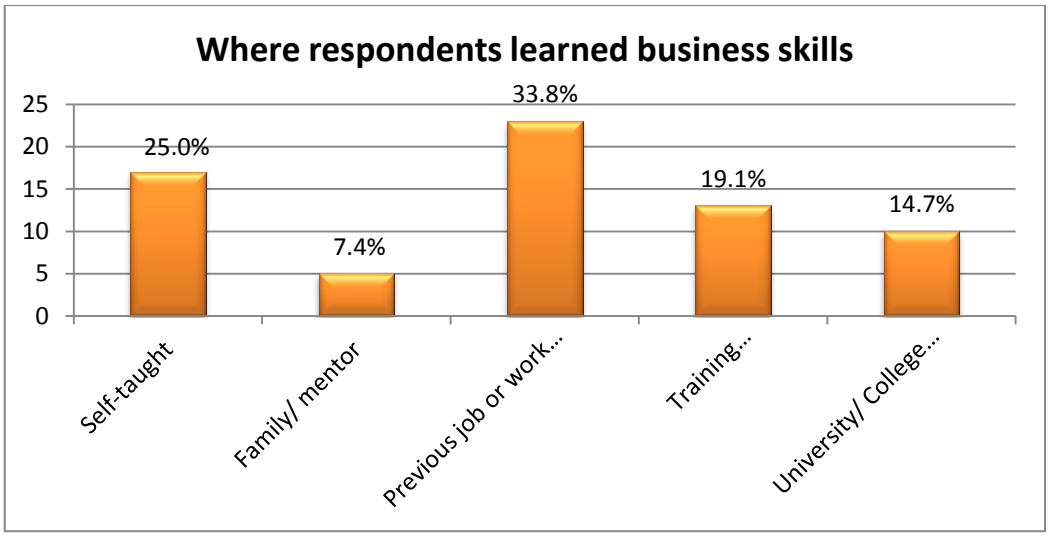


**Figure 10: Where respondents learned business skills**

A majority of the respondents at 33.8% learned to run their businesses from their previous job or work experiences as illustrated in Figure 10.

### 4.2.8 *Years of work experience before starting business*

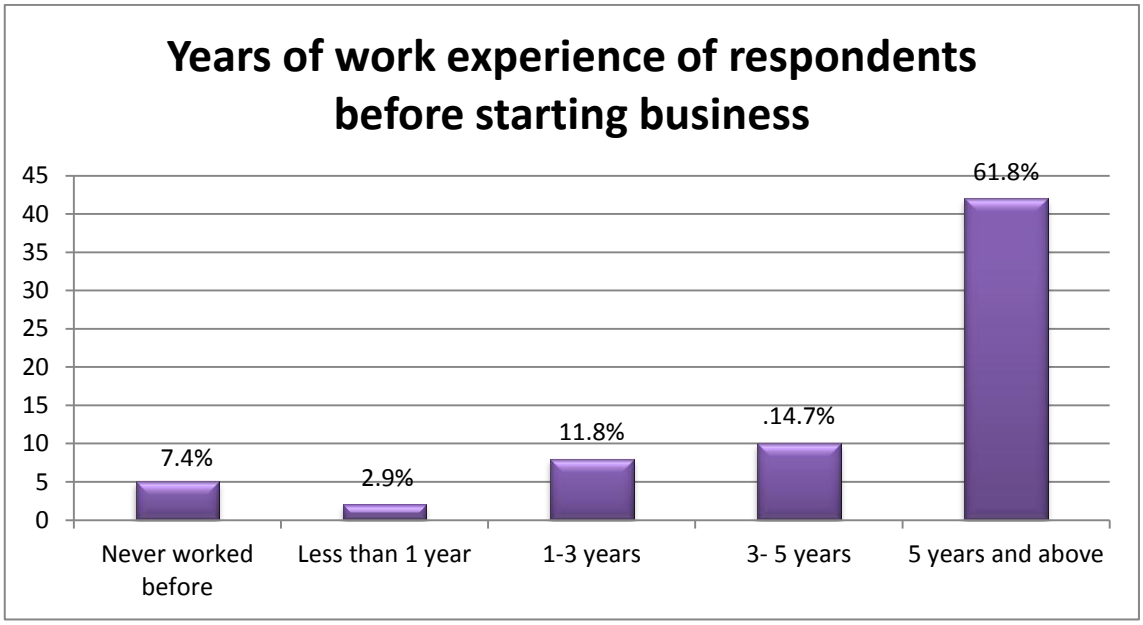


**Figure 11: Years of work experience of respondents before starting business**

Most (93%) of the respondents had worked before starting their businesses. Figure 10 shows that approximately 34% of respondents had learned their business-running skills from their previous work experience and many (at least 62%) of them had been employed for five years and above as illustrated in Figure 11.

## 4.3 Scales of reliabilities

Prior to analysing the responses of the respondents on the scales of knowledge, formal education, expertise and growth, the scales were evaluated in terms of their reliabilities.

The internal consistency reliabilities were evaluated using Cronbach's alpha coefficient and the average inter-item correlations, as the latter are independent of the number of items in the scale considered (Table 3). The results show satisfactory to good scale reliabilities on both criteria, as the values for Cronbach's alpha all exceeded 0.7 and average inter-item correlations all exceeded 0.3.

### Table 3: Reliabilities and correlation results for the research

| Scale | Number of Items | Cronbach's Alpha | Average inter-item correlation |
|---|---|---|---|
| Knowledge | 8 | 0.857 | 0.482 |
| Formal Education | 4 | 0.789 | 0.524 |
| Expertise | 6 | 0.796 | 0.432 |
| Growth | 5 | 0.94 | 0.774 |

Having established the reliability of the scales, the scale scores and their underlying items were then analysed in order to test the four hypotheses of the research.

## 4.4 Hypothesis 1: Entrepreneurs perceive access to SMME funding important for SMME growth

The perceptions of the respondents are first considered at the item level of the scale in order to identify specific aspects of access to funding that may be judged as important for SMME growth (Figure 12).

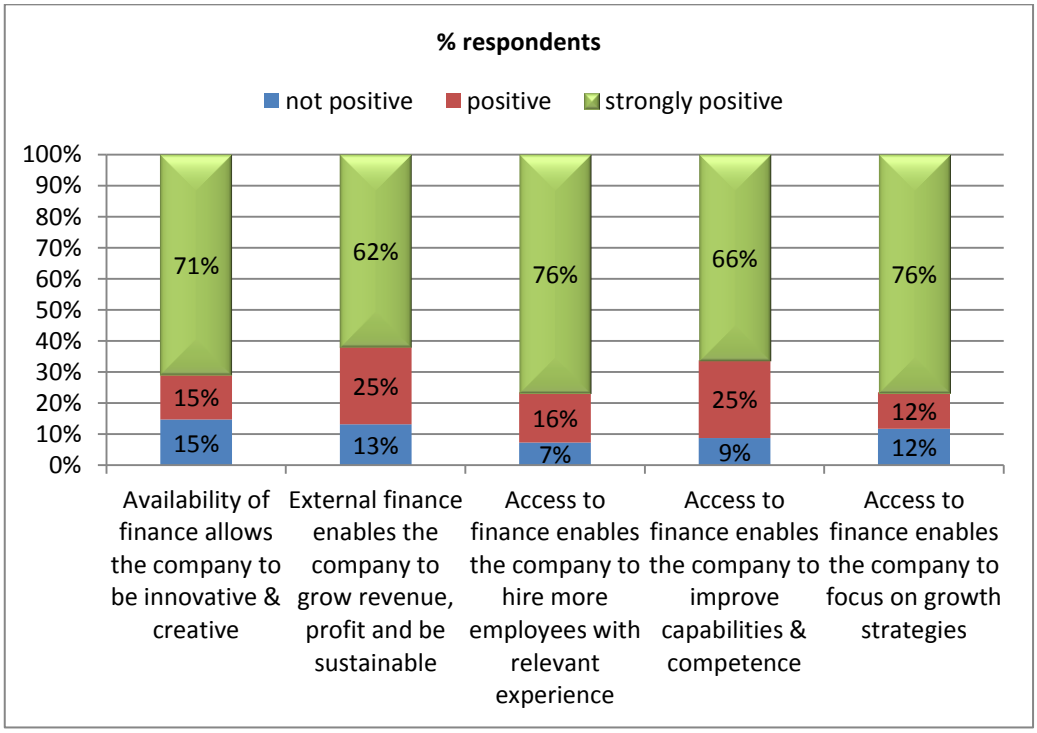


**Figure 12: Percentage of respondents' attitudes towards the importance of access to funding for SMME growth**

In Figure 12, responses have been grouped into three categories in terms of strongly positive (scores of 6 and 7), positive (scores of 5) and not positive (scores of 1 to 4). Thus the bar chart in Figure 12 represents the percentages of responses to the questions on the importance respondents perceived access to funding has for SMME growth. There were overall strong positive perceptions, with three-quarters (76%) of the respondents perceiving that accessing external

funds will enable their companies to hire more employees with relevant experience and also to focus on growth strategies for the business. Access to funding is not seen as very important in enabling the company to grow revenue, profits and be sustainable nor was is seen to be very important for enabling the company to improve capabilities and competence. Both scored in the region of 60%, as compared to the other three items which scored over 70%.

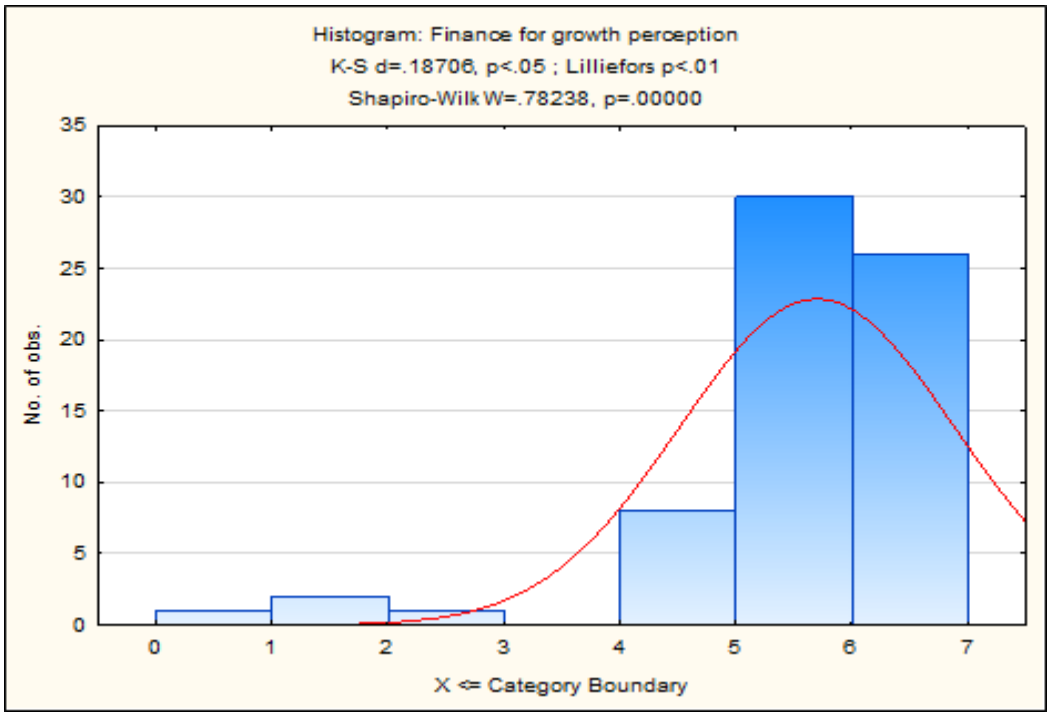


**Figure 13: Histogram – importance of access to funding to SMMEs growth**

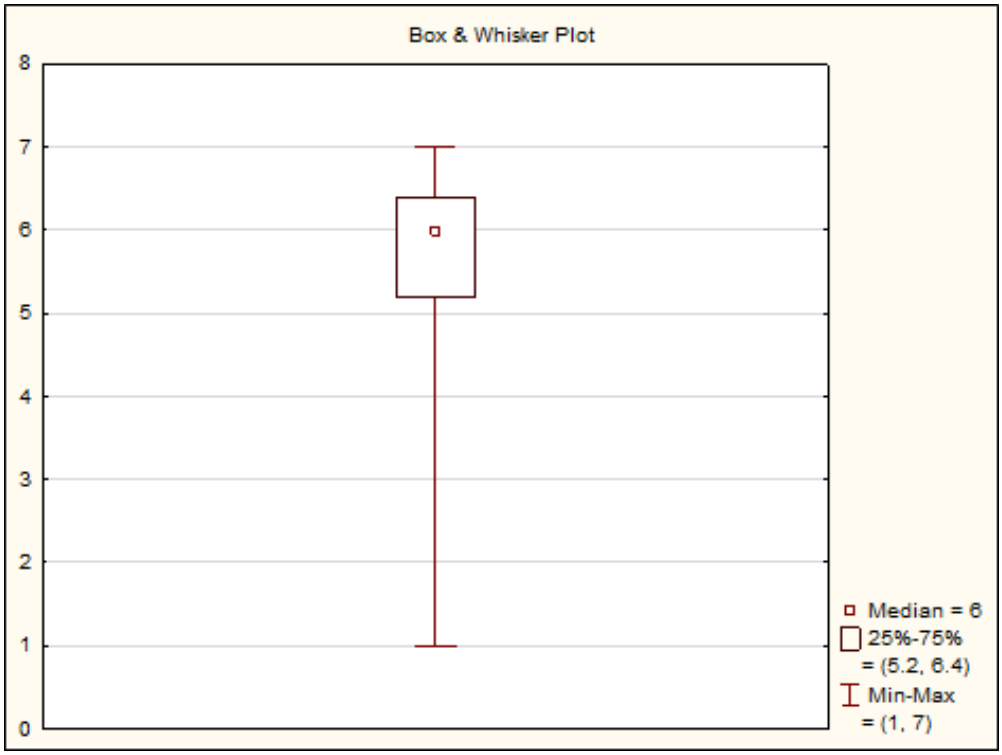


**Figure 14: Boxplot for mean scores of perceived importance of accessing to funding to SMME growth**

**Table 4: Descriptive statistics for SSME growth**

| | Valid N | Mean | Std.Dev. | Skewness | Kurtosis |
|---|---|---|---|---|---|
| Finance for growth perception | 68 | 5.702 | 1.186 | -2.157 | 5.667 |

Figure 13 presents a histogram of the mean scores of the items on the perceived importance of access to funding to SMME growth with the normal distribution fitted. The histogram shows that the majority of the scores were

distributed on the high end of the Likert-type scale, and as a result, the normal curve is skewed to the left. The Shapiro-Wilks test which calculates the levels of significance for the departure from normality ($p<0.001$) indicates that the actual degree of departure from normality is significant. Figure 14 is the box plot, which confirms that the majority of scores are positive: the median of 6 confirms that there are larger values with fewer small ones, which indicates that this group of respondents perceive access to funding to be very important to SMME growth.

Table 4 shows the descriptive statistics for SMME growth, and it shows a Kurtosis of 5.66 which is a distinct peak near the mean of 5.7 confirming departure from normality.

**t- Test**

## Table 5: t- test for means: statistically significant at 95%

| | Mean | Std.Dv. | N | Std.Err. | t-value | df | p |
|---|---|---|---|---|---|---|---|
| Finance for growth perception | 5.703 | 1.187 | 68 | 0.143 | 11.833 | 67 | p < 0.01 |

The research used a directional single group t-test comparing the mean against the midpoint scale of 4, referring to neutral in Table 5, to gain additional support for the hypothesis that stated that entrepreneurs rate the importance of funding for growth positively. Thus, all these results jointly are a test for positive attitudes or perceptions. As described in the methodology, this test was used

assuming the central limit theorem, which assumes the sampling distribution of the mean to be normally distributed with a large sample size. The results in Table 5 indicate that the mean response is statistically positive: t (68) =11.833; $p < 0.01$.

The results of the study provide support for Hypothesis 1.

## 4.5 Hypothesis 2: The human capital factors of SMMEs founders are perceived by entrepreneurs as important for the business in accessing external funding

In order to test H2, the hypothesis was subdivided into H2a, H2b and H2c to test if there was a perceived importance of knowledge (as human capital), education and expertise in accessing funding.

### 4.5.1 *Hypothesis 2a: Entrepreneurs perceive knowledge as an important factor for accessing funding*

The perceptions of the respondents were first considered at the item level of the scale in order to identify specific aspects of knowledge that may be judged as important for accessing funding (Figure 15).

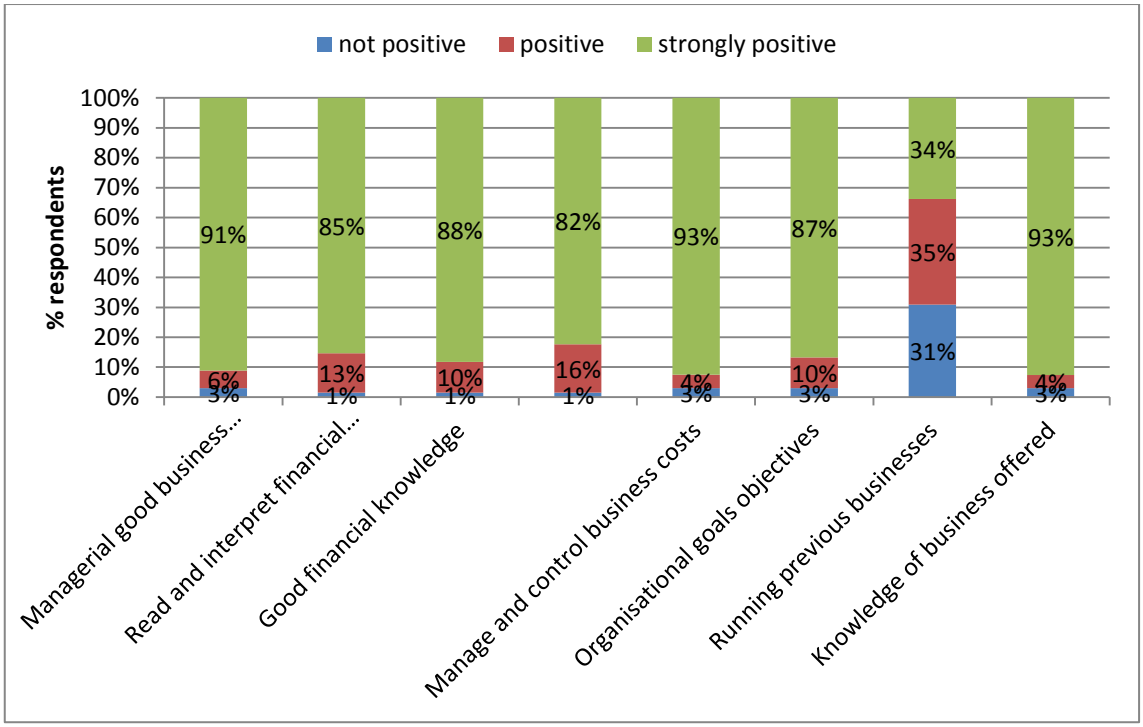


**Figure 15: Respondents perceived importance of knowledge (as a human capital factor) towards the business accessing SMME finance**

The bar chart in Figure 15 represents the percentages of respondents' perceived importance of knowledge (human capital factor) variables towards accessing finance. Once again, the responses were grouped in three categories in terms of how positively or not the respondents though that knowledge variables were important in helping them access finance. The respondents did not deem running previous businesses as an important determinant in accessing finance, as only 34% of them thought it was strongly positive. The majority of respondents, at 93%, perceived that the ability to manage and control costs as well as the knowledge of the business they are involved in are strongly important in accessing SMME finance.

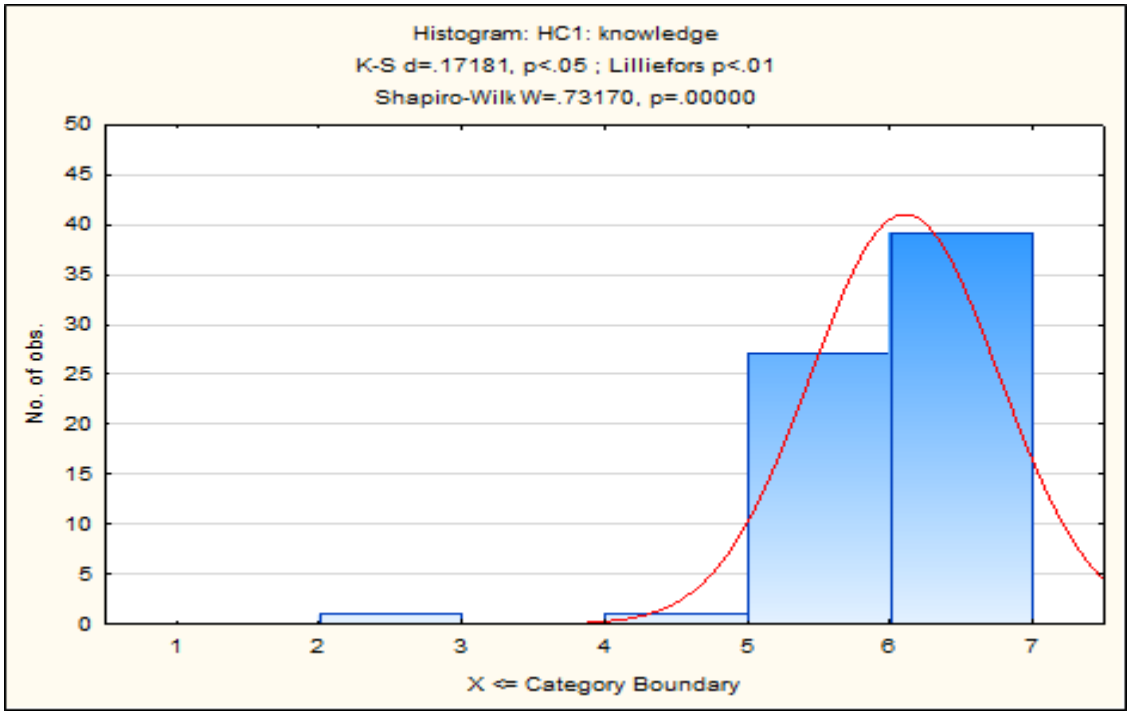


**Figure 16: Histogram – perceived importance of knowledge towards accessing SMME finance**

**Table 6: Descriptive statistics for importance of knowledge on accessing SMME finance: statistically significant at 95%**

| | Valid N | Mean | Median | Std.Dev. | Skewness | Kurtosis |
|---|---|---|---|---|---|---|
| HC1: knowledge | 68 | 6.106 | 6.125 | 0.660 | -3.370 | 19.225 |

The histogram in Figure 16 shows the distribution of the 68 participants on how importantly they perceived knowledge to be for SMME finance. Once again, the distribution is not symmetric as it shows the majority of the scores are more

concentrated towards the higher scores with high negative skewness of -3.37. The median value of 6.12 is slightly bigger than a mean value of 6.10 as illustrated in Table 6. Further, the Shapiro-Wilks test (p=0.00), which calculates the levels of significance for the departure from normality, also indicates that the actual degree of departure from normality was significant.

**t- Test**

## Table 7: t-test for knowledge: statistically significant at 95%

| | Mean | Std.Dv. | N | Std.Err. | t-value | df | p |
|---|---|---|---|---|---|---|---|
| knowledge | 6.107 | 0.661 | 68 | 0.080 | 26.287 | 67 | p<0.001 |

The research used a directional single group t-test comparing the mean against the midpoint scale of 4 referring to neutral in Table 7 to gain additional support for the hypothesis that the entrepreneurs in the study perceived knowledge as an important factor for accessing funding. Thus, all these results jointly are a test for positive attitudes or perceptions. As described in the methodology, this test was used assuming the central limit theorem that assumes the sampling distribution of the mean to be normally distributed with a large sample size. The results in Table 7 indicate that the mean response was statistically positive: $t(68) = 26.287$; $p < 0.001$.

The results of the study provide support for Hypothesis 2a.

### 4.5.2 *Hypothesis 2b: Entrepreneurs perceive formal education as an important factor for accessing funding*

The perceptions of the respondents were first considered at the item level of the scale in order to identify specific aspects of formal education that may be judged as important for accessing funding (Figure 17).

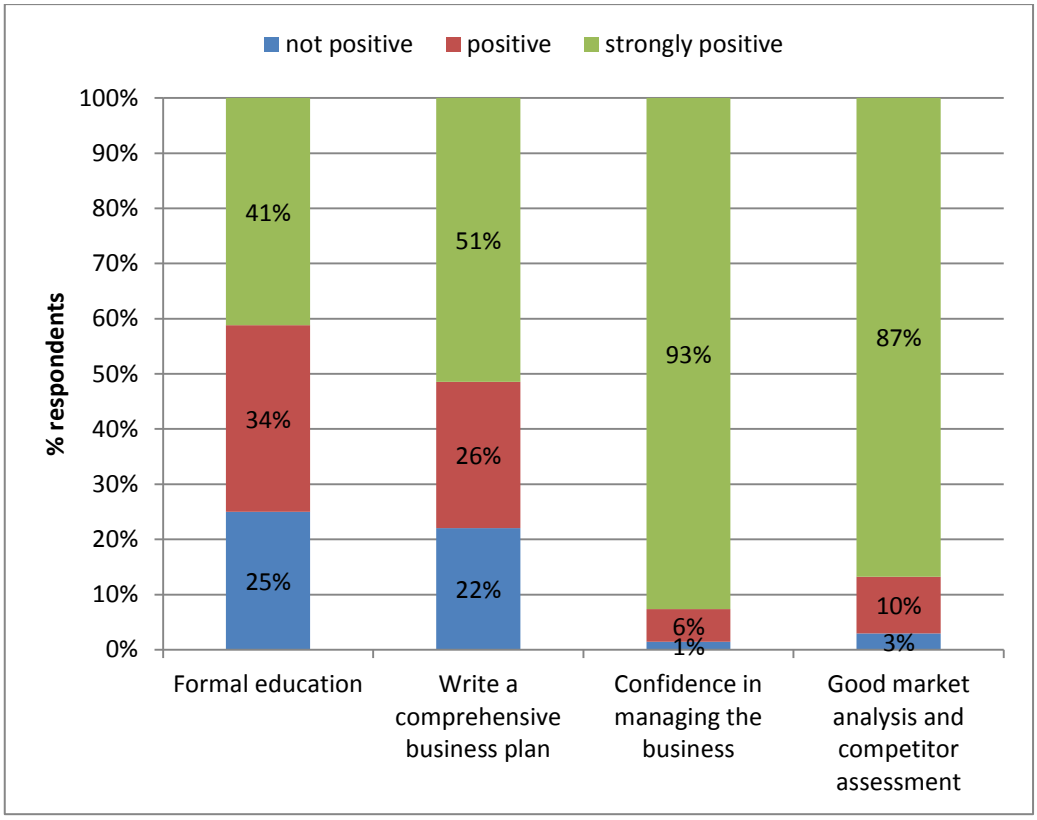


**Figure 17: Percentage respondents on perceived importance of formal education towards access to finance**

The bar chart in Figure 17 represents the percentages of responses categorised on the perceived importance of formal education (human capital factor) variables towards accessing finance. The responses were grouped in three categories in terms of how positively or not the respondents thought that formal education variables were important in helping them access finance. Entrepreneur's formal education level scored lowest, although it was still

considered important, as 75% of respondents regarded its importance as positive or strongly positive in accessing finance. The most positive element perceived was the entrepreneur's confidence in managing the business. Writing a business plan was perceived the least important with a score of 51%.

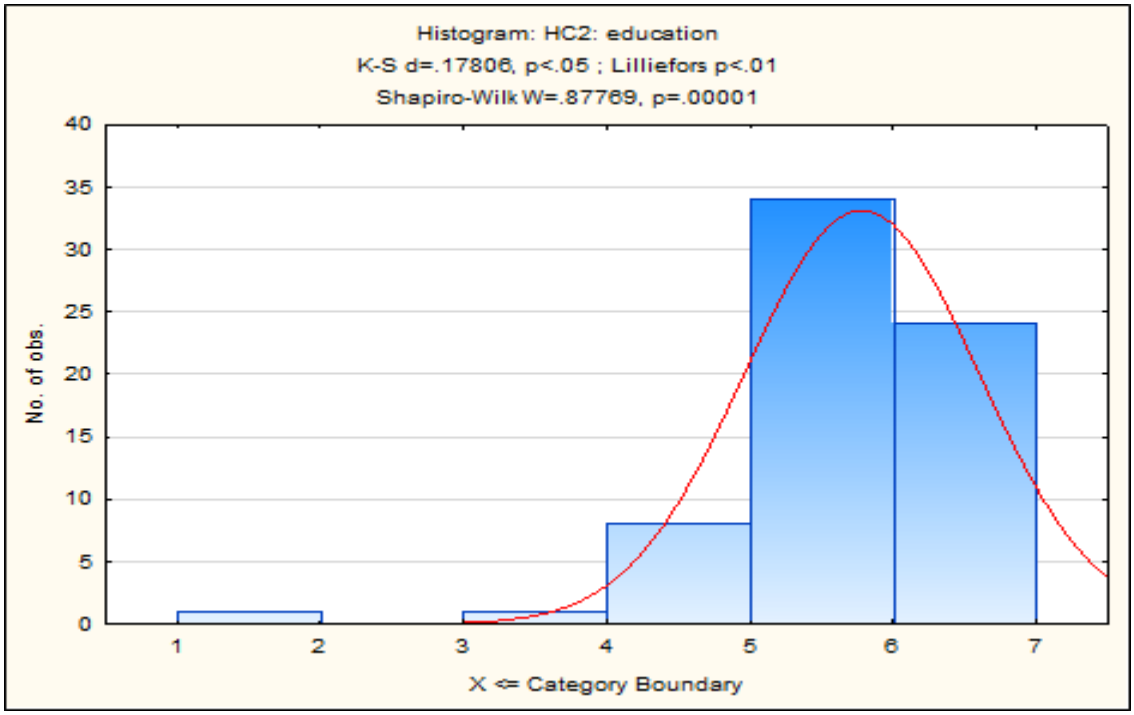


**Figure 18: Histogram – perceived importance of formal education towards accessing SMME finance**

**Table 8: Descriptive statistics for importance of formal education on accessing SMME finance: statistically significant at 95%**

| | Valid N | Mean | Median | Std.Dev. | Skewness | Kurtosis |
|---|---|---|---|---|---|---|
| HC2: Formal education | 68 | 5.783 | 6 | 0.818 | -1.681 | 5.864 |

The histogram in Figure 18 shows the distribution of the mean scores across the four education-related items of the 68 participants on how they perceived formal education to be important for SMME finance. The distribution is not symmetric as it shows the majority of the scores are more towards the higher scores but it is peaked, with negative skewness of -1.68. Further, the Shapiro-Wilks test (p=0.00001), which calculates the levels of significance for the departure from normality, was significant.

**t-Test**

**Table 9: t- test for formal education: statistically significant at 95%**

| | Mean | Std.Dv. | N | Std.Err. | t-value | df | p |
|---|---|---|---|---|---|---|---|
| Formal Education | 5.783 | 0.818 | 68 | 0.0992 | 17.969 | 67 | p<0.001 |

The research used a directional single group t-test comparing the mean against the midpoint scale of 4 referring to neutral in Table 9 to gain additional support for the hypothesis that entrepreneurs perceived formal education as an important factor for accessing funding. Thus, all these results jointly are a test for positive attitudes or perceptions. As described in the methodology, this test was used assuming the central limit theorem that assumes the sampling distribution of the mean to be normally distributed with a large sample size. The results in Table 9 indicate that the mean response was statistically positive: $t(68) = 17.969$; $p < 0.001$.

The results of the study provide support for Hypothesis 2b.

### 4.5.3 *Hypothesis 2c: Entrepreneurs perceive expertise as an important factor for accessing funding*

The perceptions of the respondents were also considered at the item level of the scale in order to identify specific aspects of expertise that may be judged as important for accessing funding (Figure 19).

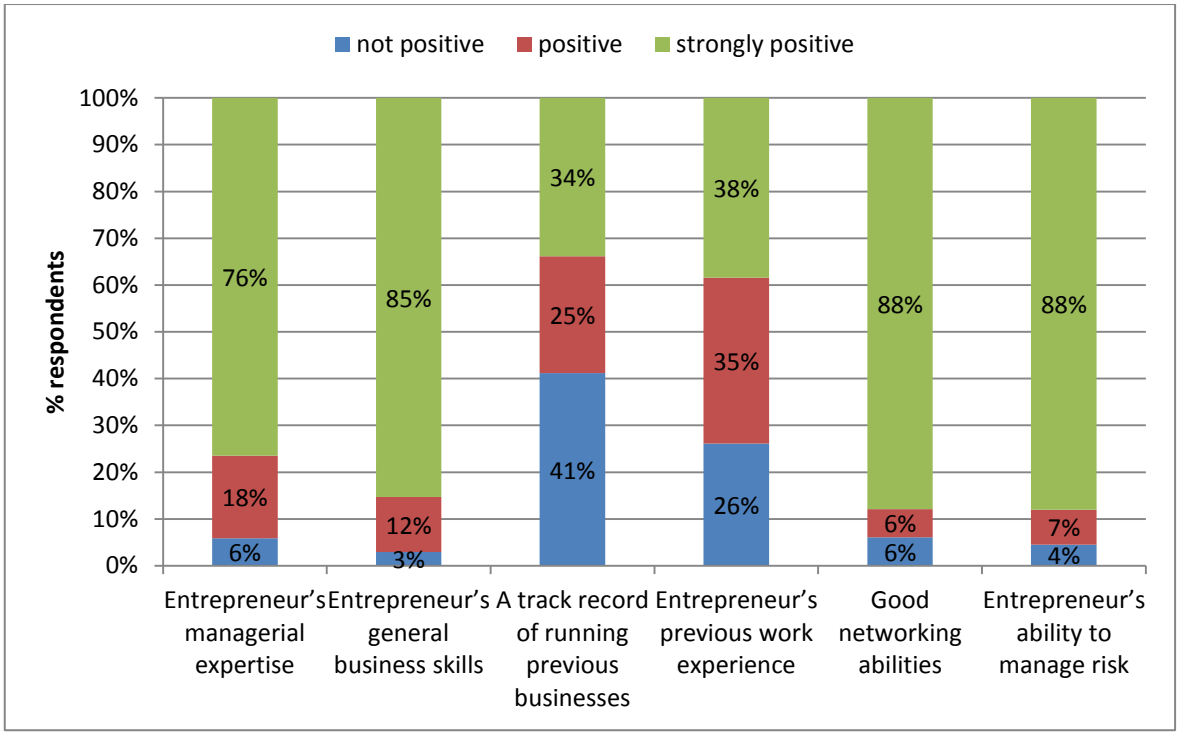


**Figure 19: Percentage respondents on perceived importance of expertise towards access to finance: statistically significant at 95%**

The bar chart in Figure 19 represents the percentages of respondents by their perceived importance of expertise (human capital factor) variables towards accessing finance. The responses were again grouped in three categories in terms of how positively or not did the respondents thought that expertise variables were important in helping them access finance. Entrepreneur's track record of running previous businesses and previous work experience were perceived to have a less strong positive relationship with accessing finance and they were scored at 34% and 38% respectively. The majority of respondents at 88% on both variables perceive entrepreneurs' good networking abilities and entrepreneur's ability to manage risk as having a strong positive relationship with access to finance.

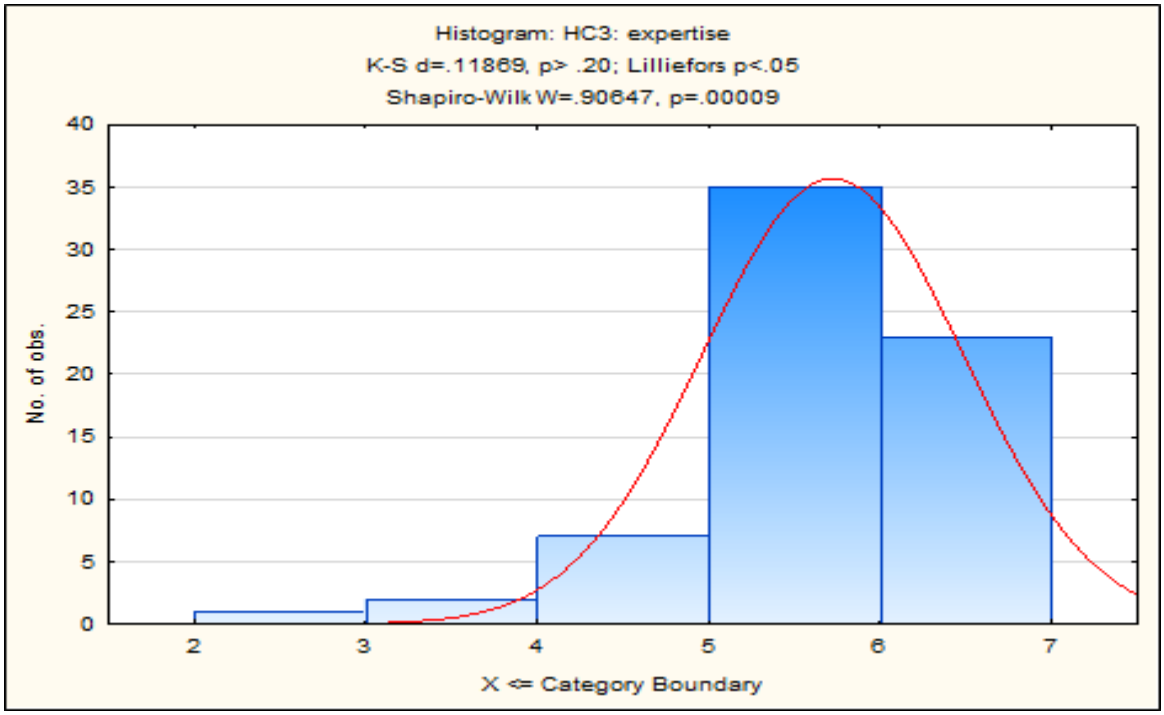


**Figure 20: Histogram – perceived importance of expertise towards accessing SMME finance**

**Table 10: Descriptive statistics for importance of expertise on accessing SMME finance: statistically significant at 95%**

| | Valid N | Mean | Median | Std.Dev. | Skewness | Kurtosis |
|---|---|---|---|---|---|---|
| expertise | 68 | 5.725 | 5.666 | 0.760 | -1.379 | 3.682 |

The histogram in Figure 20 shows the distribution of the mean scores across the four expertise-related items of the 68 participants on how they perceived expertise to be important for SMME finance. The distribution is not symmetric as it shows the majority of the scores were more towards the higher scores, with negative skewness of -1.37 as illustrated in Table 10. Further, the Shapiro-

Wilks test (p=0.00009), which calculates the levels of significance for the departure from normality is significant.

**t-Test**

## Table 11: t- test for expertise: statistically significant at 95%

| | Mean | Std.Dv. | N | Std.Err. | t-value | df | p |
|---|---|---|---|---|---|---|---|
| Expertise | 5.725 | 0.760 | 68 | 0.092 | 18.714 | 67 | p<0.001 |

Also here the research used a directional single group t-test comparing the mean against the midpoint scale of 4 referring to neutral in Table 11 to gain additional support for the hypothesis that entrepreneurs perceive expertise as an important factor for accessing funding. Thus all these results jointly are a test for positive attitudes or perceptions. As described in the methodology, this test was used assuming the central limit theorem that assumes the sampling distribution of the mean to be normally distributed with a large sample size. The results in Table 11 indicate that the mean response was statistically positive: $t(68) = 18.714$; $p < 0.001$.

The results of the study provide support for Hypothesis 2c.

## 4.6 Hypothesis 3: Entrepreneurs rate differently the importance of knowledge, formal education and expertise for accessing SMME funding

In order to test H3, firstly the means of the three human capital factors of knowledge, formal education and expertise were compared.

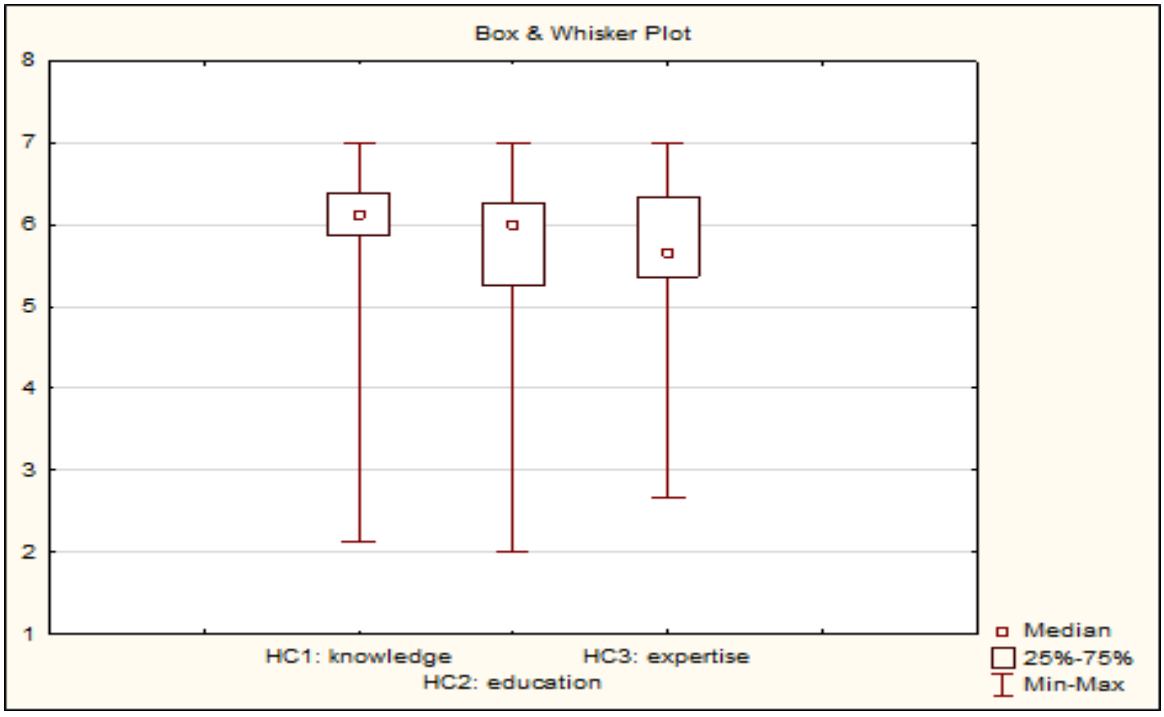


**Figure 21: Box and whisker plots of knowledge, formal education and expertise**

The boxplot in Figure 21 shows descriptive statistics for the perceived importance of human capital factors (knowledge, formal education and expertise) in accessing finance. Median values rather than means are presented in view of the high negative skewness of the three distributions and the bias of the means. Figure 21 shows that the median score for knowledge

was the highest, followed by education and then by expertise, although these values were all high on the 7-point Likert scale. Furthermore, their means were all higher than the midpoint or neutral value on the scale of 4. With such high scores concentrated around point 6 of the scale, there is an indication that the respondents perceived all the human capital factors to be important for access to funding. The distributions comparing the means and standard deviations of the perceived importance for accessing finance of the three human capital scores are displayed in Figure 22. This finding of positive perceptions of the importance of these variables for funding is supported by the statistical tests performed individually on the scales when Hypotheses 2a to 2c were tested against the scale midpoint of 4, confirming that the respondents were positively disposed to the importance of the three human capital factors for accessing finance.

The results of the three-directional single group t-tests comparing the respective means against the midpoint scale of 4 indicated that the means were statistically positive at $t(68)=26.287$; $p < 0.001$ for knowledge, $t(68)=17.969$; $p < 0.001$ for formal education and $t(68) =18.714$; $p < 0.001$ for expertise.

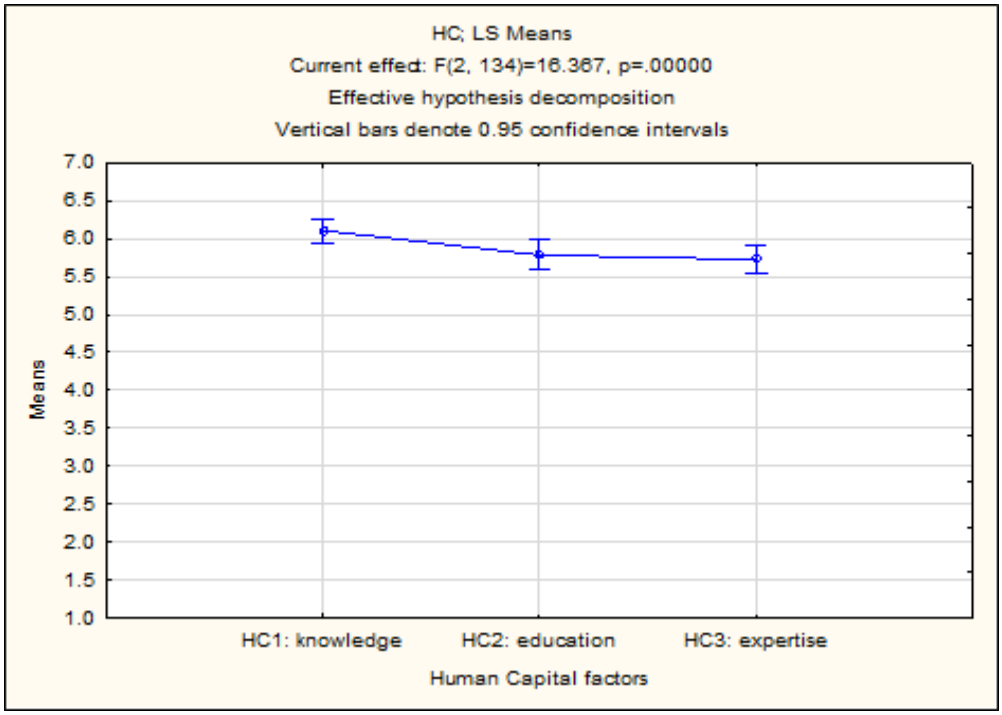


**Figure 22: Boxplot for comparing of mean scores in order of importance**

A repeated measures ANOVA test for related groups was computed to compare the mean perceptions of the respondents on the scales of knowledge, formal education and expertise (Table 12), followed by the post hoc Scheffe test to identify which pairs of differences were significantly different (Table 13). In addition, the results were validated using the results of the nonparametric equivalent Wilcoxon test in view of the severe skewness in the score distributions (Table 14).

**Table 12: Repeated measures analysis of variance with effect sizes and powers**

| | SS | Degr. of Freedom | F | p | Non-centrality | Observed power (alpha=0.05) |
|---|---|---|---|---|---|---|
| Intercept | 7033.356 | 1 | 5273.891 | 0 | 5273.891 | 1 |
| Error | 89.352 | 67 | | | | |
| HC | 5.740 | 2 | 16.367 | p<0.001 | 32.734 | 0.999 |
| Error | 23.498 | 134 | | | | |

**Table 13: Scheffe post hoc test: Error: within MSE=.17536, df=134.00**

| HC | HC1: knowledge | HC2: education | HC3: expertise |
|---|---|---|---|
| HC1: knowledge | | p<0.001 | p<0.001 |
| HC2: education | p<0.001 | | p>0.05 |
| HC3: expertise | p<0.001 | p>0.05 | |

**Table 14: Wilcoxon matched pairs test: marked tests are significant at p <.05**

| | Valid N | T | Z | p-value |
|---|---|---|---|---|
| knowledge & HC2: education | 57 | 345.5 | 3.821 | p<0.001 |
| knowledge & HC3: expertise | 67 | 392.5 | 4.663 | p<0.001 |
| education & HC3: expertise | 64 | 952.5 | 0.585 | p>0.05 |

The results of the Scheffe post hoc test showed a significant difference between knowledge and expertise and knowledge and formal education. The results of repeated measure of analysis of variance in Table 12 indicate $F(2,134)=16.372$, $p < 0.001$ and therefore conclude that the null hypothesis is rejected. However, because of skewness in the distribution of the variables, the parametric analysis were repeated using a non-parametric analysis with the Wilcoxon matched pairs as represented in Table 14. The result for this analysis turned out to be the same as the results of the Scheffe post hoc test. In other words, knowledge was significantly higher than formal education and expertise but formal education and expertise are also regarded as important factors for accessing finance. Therefore, the researcher concludes that knowledge was perceived to be relatively more important than the other two human capital factors of formal education and expertise in accessing funding, although all three factors are considered important.

## 4.7 Hypothesis 4: The extent to which entrepreneurs perceive human capital factors to be important for access to SMME funding is related to the demographics of the entrepreneurs

As several demographic variables needed to be considered relative to the perceptions of importance of the three human capital factors, the approach used was to compute a multivariate analysis to cluster the respondents on their perceptions to all three factors simultaneously, and to compare the resultant

clusters of respondents who were internally homogeneous in perceptions on the various demographic variables.

A k-means cluster analysis was used to generate groups of respondents according to their similar views on the importance of human capital for accessing finance. All the score distributions were standardised so as not to bias the derivation of the clusters to one rather than another of the three human capital factors' distributions. The analysis revealed two clusters that differed significantly on the importance of all three perceptions of knowledge, formal education and expertise in accessing funding (Table 15). The standardised means of the clusters are presented in Figure 23. Cluster 1 comprised 72% of the respondents (49 respondents) and this cluster considered human capital factors more relatively more important for accessing funding than the 28% of respondents in Cluster 2.

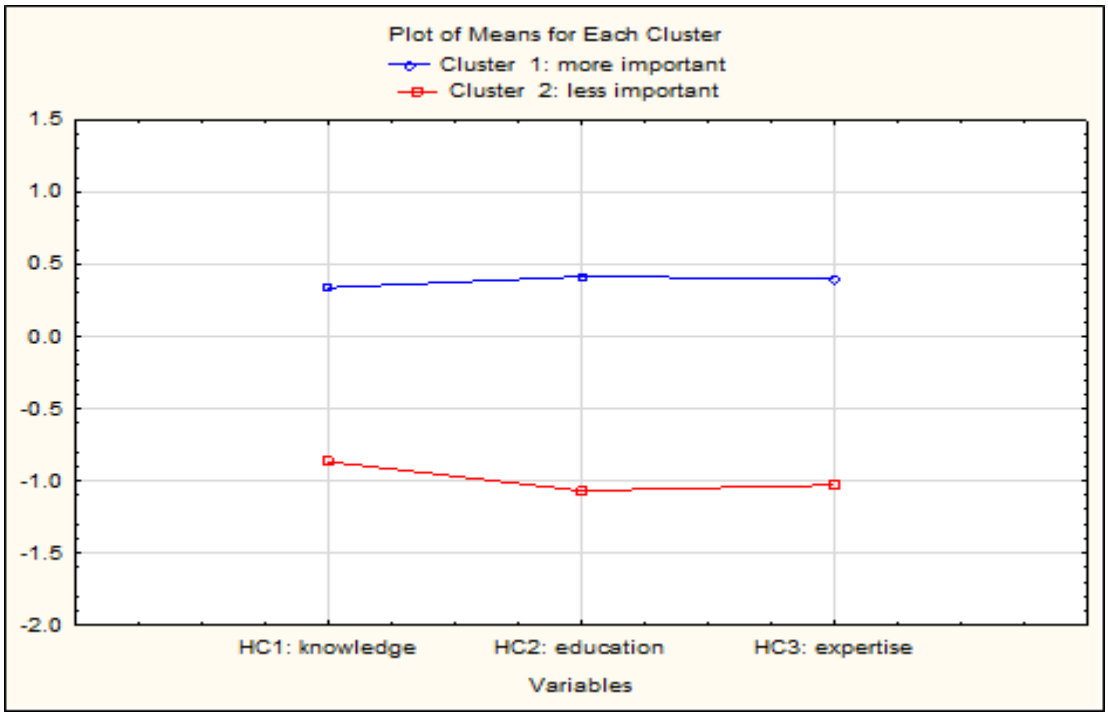


**Figure 23: Standardised means of Cluster 1 and Cluster 2**

## Table 15: Analysis of variance (ANOVA) for clusters

| | Between SS | df | Within SS | df | F | signif. p |
|---|---|---|---|---|---|---|
| Knowledge | 19.875 | 1 | 47.13 | 66 | 27.83461 | p<0.001 |
| Education | 30.162 | 1 | 36.84 | 66 | 54.0392 | p<0.001 |
| Expertise | 27.993 | 1 | 39.01 | 66 | 47.36507 | p<0.001 |

In order to test the hypothesis that the extent to which entrepreneurs perceive human capital factors to be important for access to SMME funding is related to the demographics of the respondents (gender, age, qualifications, source of learning of business skills, years of work experience) tested using the Pearson Chi-square test. Similarly, the clusters were compared for differences on the categorical demographic variables of the SMMEs (age of the business and turnover of the entrepreneurs) (Table 16).

As none of the Chi-square results are significant as indicated in Table 16, it is concluded that there is not sufficient evidence that the extent to which entrepreneurs perceive human capital factors to be important for access to SMME funding is related to the demographics of the entrepreneurs.

## Table 16: Demographics Pearson Chi-Square results

| | CLUSTER | CLUSTER | Row | | | |
|---|---|---|---|---|---|---|
| | more important | less important | Total | Pearson Chi-square | df | |
| Gender : Male | 66.7% | 77.8% | 69.7% | | | |
| Gender : Female | 33.3% | 22.2% | 30.3% | | | |
| Gender : Total | 72.7% | 27.3% | 100.0% | 0.765217 | 1 | p=.381 |
| under 36: under 36 | 65.3% | 63.2% | 64.7% | | | |
| under 36: 36 or older | 34.7% | 36.8% | 35.3% | | | |
| under 36: Total | 72.1% | 27.9% | 100.0% | 0.027667 | 1 | p=.867 |
| Degree : Degree | 49.0% | 63.2% | 52.9% | | | |
| Degree : no degree | 51.0% | 36.8% | 47.1% | | | |
| Degree : Total | 72.1% | 27.9% | 100.0% | 1.10473 | 1 | p=.293 |
| <3 years: 3 years or older | 59.2% | 47.4% | 55.9% | | | |
| <3 years: less than 3 years | 40.8% | 52.6% | 44.1% | | | |
| <3 years: Total | 72.1% | 27.9% | 100.0% | 0.775246 | 1 | p=.378 |
| Turnover <1 Rm: Turnover <1 Rm | 75.5% | 76.5% | 75.8% | | | |
| Turnover <1 Rm: Turnover 1 Rm or more | 24.5% | 23.5% | 24.2% | | | |
| Turnover <1 Rm: Total | 74.2% | 25.8% | 100.0% | 0.006339 | 1 | p=.936 |
| Where / did you learn skills to run a business: Self-taught | 22.4% | 31.6% | 25.0% | | | |
| Where / did you learn skills to run a business: Family/ mentor | 10.2% | 0.0% | 7.4% | | | |
| Where / did you learn skills to run a business: Previous job or work experience | 30.6% | 42.1% | 33.8% | | | |
| Where / did you learn skills to run a business: Training programmes/courses | 22.4% | 10.5% | 19.1% | | | |
| Where / did you learn skills to run a business: University/ College (Tertiary Education) | 14.3% | 15.8% | 14.7% | | | |
| Where / did you learn skills to run a business: Total | 72.1% | 27.9% | 100.0% | 3.96901 | 4 | p=.410 |
| Family/self: experience/ education | 67.3% | 68.4% | 67.6% | | | |
| Family/self: family/ self | 32.7% | 31.6% | 32.4% | | | |
| Family/self: Total | 72.1% | 27.9% | 100.0% | 0.007217 | 1 | p=.932 |
| Education: education | 36.7% | 26.3% | 33.8% | | | |
| Education: not education | 63.3% | 73.7% | 66.2% | | | |
| Education: Total | 72.1% | 27.9% | 100.0% | 0.663991 | 1 | p=.415 |
| 0-4 yrs starting a business: | 33.3% | 47.4% | 37.3% | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| under 5 years | | | | | | |
| 0-4 yrs starting a business: 5 years or more | 66.7% | 52.6% | 62.7% | | | |
| 0-4 yrs starting a business: Total | 71.6% | 28.4% | 100.0% | 1.14633 | 1 | p=.284 |
| Years of work experience before starting a business: 3-5 years | 12.5% | 21.1% | 14.9% | | | |
| Years of work experience before starting a business: 5 years and above | 66.7% | 52.6% | 62.7% | | | |
| Years of work experience before starting a business: 0-3 years | 20.8% | 26.3% | 22.4% | | | |
| Years of work experience before starting a business: Total | 71.6% | 28.4% | 100.0% | 1.27759 | 2 | p=.527 |

# CHAPTER 5: DISCUSSION OF THE RESULTS

## 5.1 Introduction

This chapter discusses the results of the study. The results were analysed with the use of descriptive and inferential statistics. Descriptive statistics are used to describe the basic features of the data in a study (Cooper and Schindler, 2011). The descriptive statistics used to analyse the data helped in providing simple summaries about the sample and the measures. Inferential statistics were used in this study to make judgments of the probability that an observed difference between groups is a dependable one or one that might have happened by chance in this study. Thus, inferential statistics were used to make inferences from the data to more general conditions, while the descriptive statistics were used to describe what is going on in the data. A thorough interpretation of the finding is conducted in this chapter. Firstly the demographic results were discussed and then followed by interpretation of the hypotheses test integrated with literature on entrepreneurship and human capital theory.

## 5.2 Demographic profile of respondents

As highlighted in Chapter 4 the demographics used were distributed in terms of gender, age, race, education level, the company's size in revenue and number of employees, where the respondents learned business, age of the company and years of experience of the entrepreneur before starting the business.

The ages of the respondents spanned 21 years to 60 years, both male and females. Males were dominant in number as they constituted 70% of the

respondents. At 46%, the respondents between the ages of 36 and 45 were in the majority. Most of the respondents were black and represented 97% of the sample surveyed. There was a fair representation of education among the respondents as at least 90% of them had some form of a qualification in the form of a certificate/diploma or postgraduate degree. Many (32%) businesses were in their infancy as they had been in operation between one and three years. Seventy-four per cent of the businesses had a turnover of less than R1 million and that is justified by the fact that many business had been operational for a period of one to three years. A large (34%) number of the entrepreneurs who took part in the study mentioned that they had learned to run their businesses from previous employment or work experience. This assertion is in line with the entrepreneurship theory, which suggests that many businesses are formed by people with prior work experience.

According to Singer (1995) as mentioned by Barreira et al (2011), prior work experience is one of the most consistent predictors of future entrepreneurial performance. Industry-specific experience impacts on a new firm's performance and this is due to the founding entrepreneur's experience in task and skills learned in prior industries in which the entrepreneur worked, rather than skills learned directly from tasks managing start-ups (Barreira et al, 2011). A study by Macmilland and Day (1987), as established by Barreira et al. (2011), also concluded that entrepreneurs with experience in the same industry as their current venture will have a mature network of industry contacts and will have a better understanding of the subtleties of their respective industry.

## 5.3 Discussion pertaining to Hypothesis 1

In H1 it was predicted that entrepreneurs perceive that access to funding will allow the business to grow. Several measures were used to establish the perceived relationship between access to funding and SMME growth. The growth measurements used to assess this relationship were that if the SMME manages to access funding, it will be able to innovate and be creative, can grow its profit and revenue and become sustainable, can hire more people with relevant industry experience and also focus on growth strategies.

From the immediate results compiled on the 68 respondants, it is clear that the majority of them have a strong positive association of access to funding with SMME growth. All the measured constructs of growth variables tended to have high positive scores. As shown by the results in Figure 12, 76% of respondents had strong positive attitudes that access to funding would allow the SMMEs to grow in terms of allowing the hiring new employees with relevant experience and also allowing the business to focus on key growth strategies. Innovation was rated second, as 70% of respondents perceived that access to funding would enable the companies to innovate and be creative. This sort of attitude is in line with what a study conducted by Ayyagari et al (2007) established. In these authors' study in which the responses of some SMMEs to the questions on enterprise innovation were exploited, Ayyagari et al (2007) found that the firms' use of external finance was associated with more innovation and this finding was even more strongly evident when access to finance was from foreign banks. Berger and Udell (1998) also established that small firms are

seriously constrained in their operations and growth by lack of or limited access to funding. This kind of finding justifies why accessing SMME finance is perceived to be more important for SMME growth. A t-test was done using a directional single group t-test comparing the mean against the midpoint scale of 4 to test H1. The study obtained statistical results of $t(68) = 11.833$; $p < 0.05$. On these sort of statistical results, the null hypothesis was rejected in favour of the stated hypothesis. In Chapter 2 it was established through the literature review that access to funding contributes to firm entry, growth, and innovation, amongst other things. Colombo and Grilli (2010) in a study of growth drivers of high-tech start-ups established that previous studies that have analysed the effects of venture capital investments on firm growth have generally highlighted a positive relation, even though there are some exceptions. In another study by Engel (2002) a positive relationship between access to funding and a firm's growth was established. This positive relationship was established by comparing venture capital-backed companies and those that were not backed.

A correlation analysis was done for this hypothesis and the results were very low at 0.238.This low result could have a lot to do with the sample. However, a study by Gimmon and Levie (2010), which was similar to this study but had a large sample of 193 founders of high-technology export-targeted start-ups in Israel founded between 1991 and 2001, also had low correlations between the variables. Gimmon and Levie's (2010) study was also conclusive on the relationship between access to finance and SMME growth. Based on the evidence provided in this discussion and previous studies, the results obtained by this study are fair to suggest that access to funding is perceived to be more positively important for SMME growth, as it will enable them to innovate, hire

more employees with relevant experience, be competent in the market and also focus on key growth strategies. A high percentage of respondents supported this notion.

## 5.4 Discussion pertaining to Hypothesis H2, H2a, H2b and H2c

When testing for H2, it is predicted that the relationship between the variables is positive. H2 predicted that human capital factors are perceived to be important for the business in accessing funding. The hypothesis had three sub-hypotheses, which also predicted that knowledge, education and expertise would be positively perceived to be important to accessing funding.

On the knowledge variables measured, all of them were perceived to be important for accessing funding, with the exception of the extent to which the respondents had run businesses previously. All these variables had high scores of over 80%. Ninety-three per cent of the respondents attached importance to knowledge of the business offered by the SMME and the ability of the entrepreneur to manage and control costs. Furthermore, 91% of the respondents perceived that good managerial skills were an important factor in accessing funding.

Formal education and expertise were also found to be perceived as important factors for accessing funding. Ninety-three per cent of respondents perceived that formal education provides entrepreneurs with confidence to manage the business, which in turn is seen as an important aspect in accessing funding. Expertise helps entrepreneurs create networking, which is also seen to be

important. According to Courthard and Loos (2007), as mentioned by Fatoki and Odeyemi (2010), networking is described as the ability of the entrepreneur to build and manage personal relationships with particular individuals in their surroundings. Many other researchers have agreed that networking can be used to reduce the information asymmetry in creditor/debtor relationships.

In order to test these hypotheses the histogram and the t-test statistics were used. The histograms indicated that there was a departure from normality in the data and, therefore, the results are all negatively skewed, with skewness coefficients less than zero. In addition, the median scores were higher than the mean scores and were more towards the high end of the scale and this also confirms a departure from normality. Only expertise showed some form of normality, with Shapiro-Wilks test score of p=.00009.

The t-tests for H2, H2a, H2b, and H2c show that the level of significance (p) is less than zero. The researcher concludes that at $t(68)=26.28$; $p<0.05$ for knowledge, $t(68)=17.96$; $p<0.05$ for formal education and $t(68)=18.71$; $p<0.05$ for expertise, the results are significant for rejecting the entire null hypothesis and accepting H2 at 5% level of significance.

The results of the importance of human capital factors are similar to what several other studies have found previously, which indicated that human capital is indeed essential to the success of entrepreneurs and their ability to attract external funding or venture capital funding. In this study, the respondents perceived human capital factors to be more important in accessing funding. All three human capital factors–education, knowledge and expertise–were found to

be statistically significant at the 5% level. Colombo and Grilli (2010) argue that the results of their study on the relationship between the human capital of founders and access to external finance confirmed that companies established by individuals with greater human capital have distinctive capabilities that cannot be replicated by other firms and, as a result, have better chances of obtaining funding. Sheperd, Ettenson and Crouch (2000) in their study confirmed evidence that the general management competencies and industry-specific experience of firms' founders are important selection criteria for investors. The descriptive statistics results with p values less than 0.005 are also consistent with what other researchers have found. In a study by Fatoki and Odeyemi (2010) it was established that SMMEs managed by owners with high education and related business experience are more likely to be successful in their application for trade credit.

The p values for knowledge, education and expertise were less than 0.05, indicating that the perceived importance of these human capital factors is significant in accessing funding. Therefore the sample provided sufficient evidence that the human capital factors are perceived to be important for the businesses in accessing funding.

## 5.5 Discussion pertaining to Hypothesis H3

H3 predicted that entrepreneurs rate differently the importance of knowledge, formal education and expertise for accessing SMME funding. The results revealed different mean scores for knowledge, education and expertise.

Knowledge had a mean score of 6.11 while education and expertise had mean scores of 5.78 and 5.73 respectively. Such high scores are a clear indication that the three human capital factors are perceived to be important in accessing funding by the sample. According to human capital theory, the well-being of a society is a function not only of the traditional stocks of financial capital, labour and natural resources, but also of the knowledge and skills of individuals. The theory, according to Crocker (2006), predicted that increased knowledge and skill will yield improved economic outcomes for both individuals and societies, especially in modern societies, where it is widely held that knowledge and skill convey a greater economic and social premium than in the past. Even though many studies never differentiate the three human capital factors in terms of importance and rate them, Crocker (2006) argues that education is a key element of human capital theory because it is viewed as the primary means of developing knowledge and skill. It could also be argued that the mean result also contradicts Mincer's human capital earnings function, which predicts that earnings are a function of educational attainment and work experience.

A post hoc Scheffe test for related groups was performed to compare the mean perceptions. The result for the post hoc Scheffe indicated significant differences between knowledge: education and knowledge: expertise with no significance between education and expertise. The results are consistent with human capital theory, which predicts that increased knowledge and skill will yield improved economic outcomes for both individuals and societies. Davidsson and Honig (2000) also argue that even though education as an indicator of human capital was shown to be relevant in start-up participation, previous work experience,

was not shown to be a statistically significant factor in predicting participation in a start-up or in predicting start-up success. This sort of argument can also be used to justify the findings in this study.

In order to validate the results a Wilcoxon matched pairs test was performed and the results showed differences in the z-score. For paired test for knowledge and education, $z=3.821$, $p=.0001$, the null hypothesis is rejected and it was concluded that there is significant importance attached to knowledge. For the paired test for knowledge and expertise the result was $z=4.633$, $p<.005$, therefore the null hypothesis is rejected. The researcher concludes that there is significant importance attached to knowledge as compared to expertise. For the paired test on education and expertise the result $z=0.585$, $p=0.558$ ($p>0.05$). Therefore, this result provides good evidence for the null hypothesis and as a result it is accepted. This means that there is no significant difference in the importance of expertise and knowledge in accessing funding. Therefore, it is argued in this study that even though many studies suggests that education is the key factor of human capital, knowledge seemed to be perceived to be more important by the respondents in this study. This argument is in line with the prediction made by human capital theory, which predicts that increased knowledge and skill will yield improved economic outcomes for both individuals and societies.

## 5.6 Discussion pertaining to Hypothesis H4

H4 predicted that the extent to which entrepreneurs perceive human capital factors to be important for access to SMME funding is related to the demographics of the entrepreneurs. The Pearson Chi-square for different demographics was calculated to test for independence and to discover whether there is a relationship between two clusters. For gender Chi-square (1) .766, p=0.381. This result reveals that there is no statistically significant association between gender and perceived importance of human capital factors for SMME funding; that is, both males and females equally think that human capital factors are important for SMME funding. For entrepreneur's age Chi-square (1)=.027, p= 0.867. This result reveals that there is no statistically significant association between entrepreneur's age and perceived importance of human capital factors for SMME funding; that is, respondents of different ages thought that human capital factors were important for SMME funding. Age of business had Chi-square(1)=.775, p=0.378; turnover Chi-square(1)=.006, p=0.936; education level Chi-square(1)=1.104, p=0.293; where respondents learnt business Chi-square(4)=3.969, p=0.410*;* years of work experience before starting business Chi-square(1)=1.277, p=0.527. These results show that the null hypothesis should be accepted as there is no statistically significant difference between the demographic variables and the perceived importance of human capital factors in accessing SMME funding. The results are consistent with findings from Fatoki and Odeyemi (2010), who found that the demographics of the founder, especially gender, were not a significant factor in funding approval. The results are also consistent with studies by Blumberg and Letterie (2002) and Akarro (2009) in Fatoki and Odeyemi (2010) which found that the gender of the owners

of SMMEs is not a significant influencing factor with respect to availability of credit to SMMEs. Furthermore, in the very same study, Fatoki and Odeyemi (2010) found that access to funding is related to the size of the firm as incorporated firms are more likely to be successful in their credit applications compared to unincorporated firms.

## 5.7 Conclusion

The findings in this study indicated that there is a perceived importance of human capital factors in accessing SMME funding. The results indicated that knowledge, education and expertise are all regarded as important in accessing funding. Furthermore, there was a reasonable indication that access to funding is perceived to be important in determining some form of SMME growth. There was an indication that access to funding allows the company to be innovative and creative, hire more employees with relevant skills and, moreover, it helps the business to focus on key business strategies that will help the business to grow. In order for SMMEs to access funding the founders should ensure that they have good managerial competences (knowledge), a reasonable level of education, and critical work experience (expertise).

# CHAPTER 6: CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

## 5.8 Introduction

This chapter explores the results and conclusions of the study and provides implications and recommendations for further study. In addition, the limitations of the research are addressed and future research directions are suggested.

## 5.9 Conclusions of the study

Human capital factors are key elements of entrepreneurship, entrepreneurship theory and are also key in accessing funding, as this study established. In this study, the perceived importance of human capital factors in accessing funding was examined. A sample of SMMEs was surveyed. All the human capital factors were found to be significantly important in accessing funding. The findings in this study are consistent with the evidence provided by previous studies on human capital and the availability of SMME funding. Evidence provided by previous studies showed that founders with selected human capital characteristics (i.e. greater university-level education in management and economics and greater prior work experience in technical functions in the sector in which the new firm operates) can leverage the distinctive capabilities associated with the knowledge and skills of their founders to grow larger than other firms (Colombo and Grill, 2010). In the same study by Colombo and Grilli (2010) it was further found that founders' human capital has a direct positive effect on firm growth and an indirect positive effect mediated by access to venture capital and the dramatic positive impact on firm growth of venture

capital investments, as suggested by the entrepreneurial finance literature. Knowledge seemed to be rated high compared to education and expertise even though they are all seen as important in accessing funding.

While many studies attach too much importance to formal education, in this study it was established that knowledge rated the highest when comparing the three human capital factors. Therefore, the researcher views this kind of finding to be substantially extending the understanding of the effects of the human capital of founders on access to funding and the growth of the SMME. Furthermore, the researcher shares the same sentiments with Colomo and Grilli (2010) in their argument that while there is agreement in the extant entrepreneurship literature that these factors (education and expertise) are two fundamental drivers of growth, the mechanisms through which they positively influence growth deserve a more careful scrutiny so as to better assess their relative importance. To a certain extent this study has done that and it was established that knowledge is perceived by SMME owners to be more important.

As access to funding still remains a key issue for SMMEs, many studies done have focused more on the funders to establish what they want than what entrepreneurs would prefer. As Seghers et al. (2009) indicate, while it is widely acknowledged that financial resource acquisition is a key process in the start-up and growth of new businesses, our understanding of this process is largely rooted in economic theories emphasising wealth maximisation as an overarching goal, the rational behaviour of all actors and information asymmetries. Theories building on the existence of information asymmetries

typically assume that (potential) investors are informationally constrained, which influences their selection processes.

## 5.10 Implications and recommendations

The study will go a long way in helping resolve the question asked in the GEM Report which queried whether indeed there are so many funders and related institutions and why access to funding remains a key challenge for SMMES. Furthermore, as the South African government is embarking on many of projects related to SMME development, the finding in this study will go a long in assisting the government and provide direction on policy for enterprise development to be more focused and move away from the “one size fits all” mentality. The study will also help the banks and funders in their evaluation of small businesses and may resolve the issue of availability or lack thereof of funding. Furthermore, the study will also provide guidelines in formulating funding decisions based on human capital criteria. Investors are well advised to carefully choose from the pool of available human capital indicators.

## 5.11 Suggestions for further research

Future studies could build on the distinctions of human capital to directly assess incremental validities of different types of human capital. Research on what are the determinants used by suppliers of credit has been done extensively but there is still a gap in what the demand side would prefer in order for SMMEs to obtain access to funding. Another opportunity for future research is to check to what extent banks and funders rely on entrepreneurship theory when they make investment decisions.

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# APPENDIX A- LETTER TO RESPONDENTS

Dear Respondent

I am inviting you to be part of a survey I am conducting in order to gather information related to perceived importance of knowledge, education and work experience when applying for funding.

I conduct this study as a professional student undertaking my Master's Degree in Entrepreneurship and New Venture Creation at the Wits Graduate School of Business Administration. It should not take longer than 15 minutes. I understand you are extremely busy your agreement to contribute to my research is greatly appreciated.

Please be assured that your responses will be held in the upmost of confidence. And if the results of this study were to be written for publication, no identifying information will be used.

The potential benefits of this study are to help get better and easier way for SMMEs to access funding. Should you have any questions about this study, or wish to ascertain the results of the findings, please contact the investigator below:

Mr M. Matshekga

Graduate School of Business Administration

Wits Business School

2 St Davids Place

# APPENDIX B- QUESTIONNAIRE

**This questionnaire will take approximately 15 minutes to complete. It would be highly appreciated if you could take time to answer the questionnaire. This questionnaire is aimed at the founder (owner) or managing member. Please note that all the answers will be treated confidentiality and will solely be used for the purpose of this research. No individual information will be used or forwarded to any external organisation.**

**Section A**

**Demographics: General information of the business**

1. Gender:

| | | | |
|---|---|---|---|
| Male | | Female | |

2. Age of the founder or managing member:

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 21 – 25 | | 26 – 35 | | 36-45 | | 36-45 | | 46-60 | | 60 plus | |

3. Race

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Black | | White | | Coloured | | Asian | |

4. Education: Highest Qualification

| | |
|---|---|
| Matric or Grade12/ NQ 4 | |
| School incomplete | |
| Certificate/ Diploma | |

| | |
|---|---|
| Bachelor's degree | |
| Postgraduate Degree | |
| Tertiary uncompleted | |
| Other | |

If other please specify ……..

5. Business Sector: Type of business

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Manufacturing | | Business Service | | Tourism | | Other | |

6. If other specify your business activity……

7. Age of company: When was the company established?

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Less than 1Year | | 1-3 Years | | 3- 5 Years | | Over 5 years | |

8. Number of employees ……

9. Company's turnover

10. Where did you learn skills to run a business: Please choose one

| | |
|---|---|
| Self-taught | |

| | |
|---|---|
| Family | |
| Whilst managing the business itself / on the job | |
| Previous job or work experience | |
| Training programmes/courses | |
| University/ College (Tertiary Education) | |
| Mentor/ Advisor | |
| Spouse | |

**Section B**

1. Please indicate a number of years of work experience you had before starting a business. (Please tick one)

   ☐ Never worked before ☐ Less than 1Year ☐ 1-3 Years ☐ 3- 5 Years ☐ 5 years and above

2. How many years of experience to you have in the following business areas? Please tick the appropriate box

| | |
|---|---|
| Finance | |
| Marketing | |
| Human Resources | |

| | |
|---|---|
| Information Technology | |
| Legal | |
| Manufacturing/operations | |

3. Please indicate if you started a business in the same field as your previous employ?

☐ Yes ☐ No

**4. Business Knowledge Questions**

**On a scale of 1 to 7, please indicate the level at which you think the following impacts on an entrepreneur's ability to access external finance. (1- Not at all important, 2- Very unimportant, 3- Somewhat unimportant, 4- neutral, 5- Somewhat important. 6- Very Important, 7- Extremely important). Please tick the appropriate box**

4.1. Entrepreneur's managerial knowledge and the ability to demonstrate good business knowledge ☐☐☐☐☐☐☐

4.2. Entrepreneur's ability to read and interpret financial statements (ability to perform financial analysis)☐☐☐☐☐☐☐

4.3. Entrepreneur's good financial knowledge

☐☐☐☐☐☐☐

4.4. Good market analysis and competitor's assessment

☐☐☐☐☐☐☐

4.5. Entrepreneur's ability to manage and control business costs



4.6. Entrepreneur's ability to define the organisational goals and set their business objective clearly 

4.7. A track record of running previous businesses



4.8. Entrepreneur's ability to show knowledge of his/her business, products and services offered. 

**5. Education Questions**

**On a scale of 1 to 7, please indicate the level at which you think the following impacts on an entrepreneur's ability to access external finance. (1- Not at all important, 2- Very unimportant, 3- Somewhat unimportant, 4- neutral, 5- Somewhat important. 6- Very Important, 7- Extremely important). Please tick the appropriate**

5.1. Entrepreneur's formal education importance



5.2. Entrepreneur's ability to write a comprehensive business plan



5.3. Entrepreneur's confidence in managing the business



5.4. Good market analysis and competitor's assessment



**6. Work Experience Questions**

**On a scale of 1 to 7, please indicate the level at which you think the following impacts on an entrepreneur's ability to access external finance. (1- Not at all important, 2- Very unimportant, 3- Somewhat unimportant, 4- neutral, 5- Somewhat important. 6- Very Important, 7- Extremely important). Please tick the appropriate box**

6.1. Entrepreneur's managerial expertise



6.2. Entrepreneur's general business skills



6.3. A track record of running previous businesses



6.4. Entrepreneur's previous work experience



6.5. Good networking abilities



6.6. Entrepreneur's ability to manage risk



**7. Growth Section**

**On a scale of 1 to 7, please indicate the level at which you think the following impacts on an entrepreneur's ability to access external finance. (1- Not at all important, 2- Very unimportant, 3- Somewhat unimportant, 4- neutral, 5- Somewhat important. 6- Very Important, 7- Extremely important). Please tick the appropriate box**

7.1. Availability of finance allows the company ability to be innovative and creative 

7.2. External finance enables the company to grow revenue and profit and be sustainable in future 

7.3. Access to finance enables the company to hire more employees with relevant experience 

7.4. Access to finance enables the company to improve its organisational capabilities and competence 

7.5. Access to finance enables the company to focus on growth strategies 

# APPENDIX C – RESULTS

## List of Figures

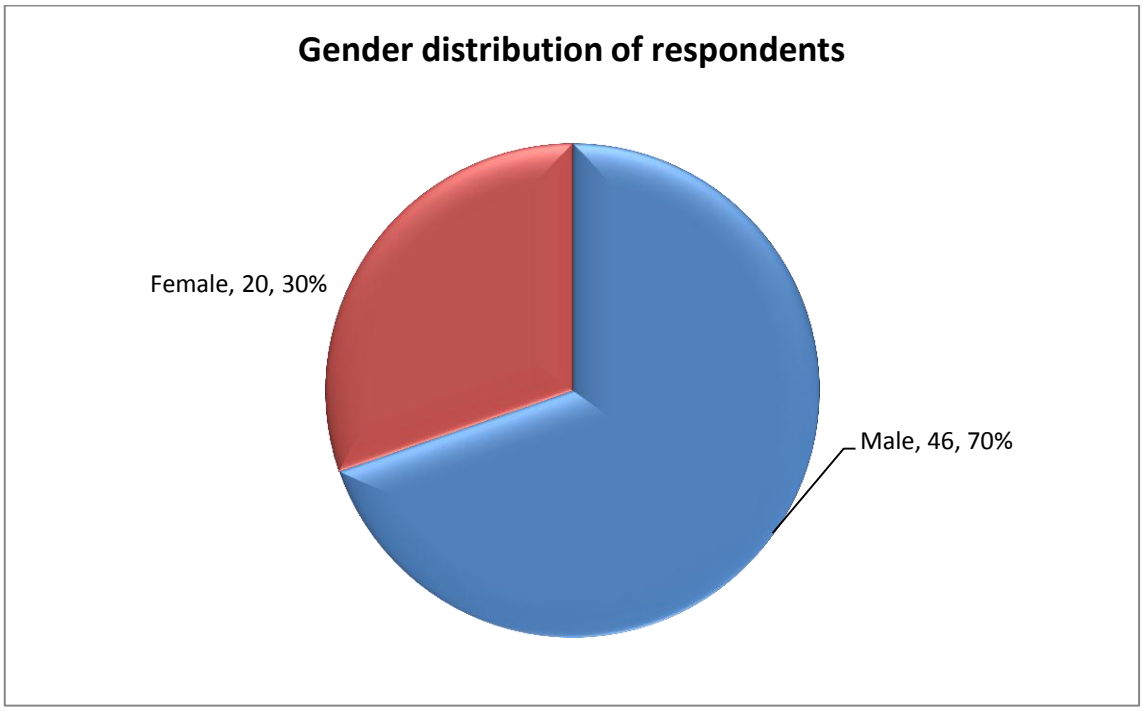


Figure 4: Gender distribution of respondents

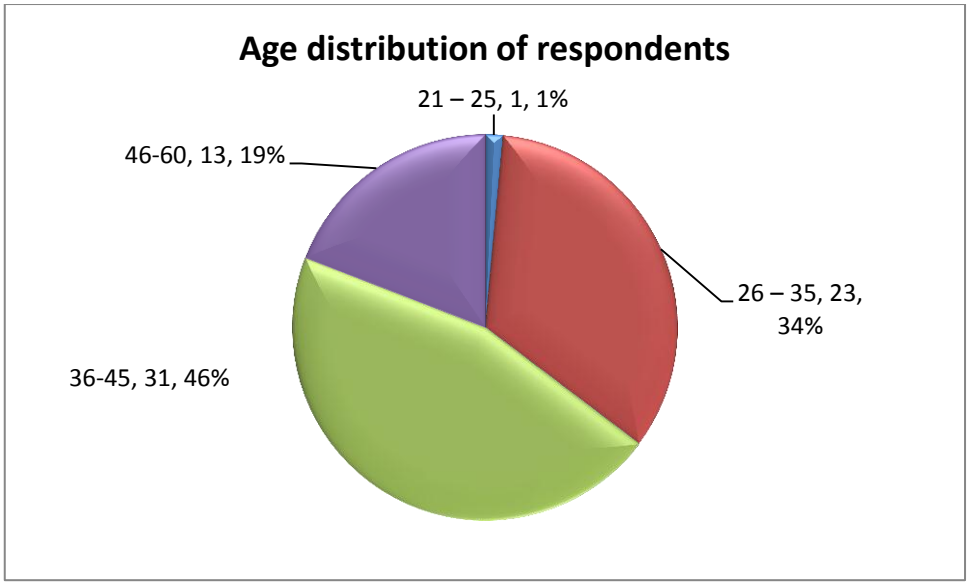


Figure 5: Age distribution of respondents

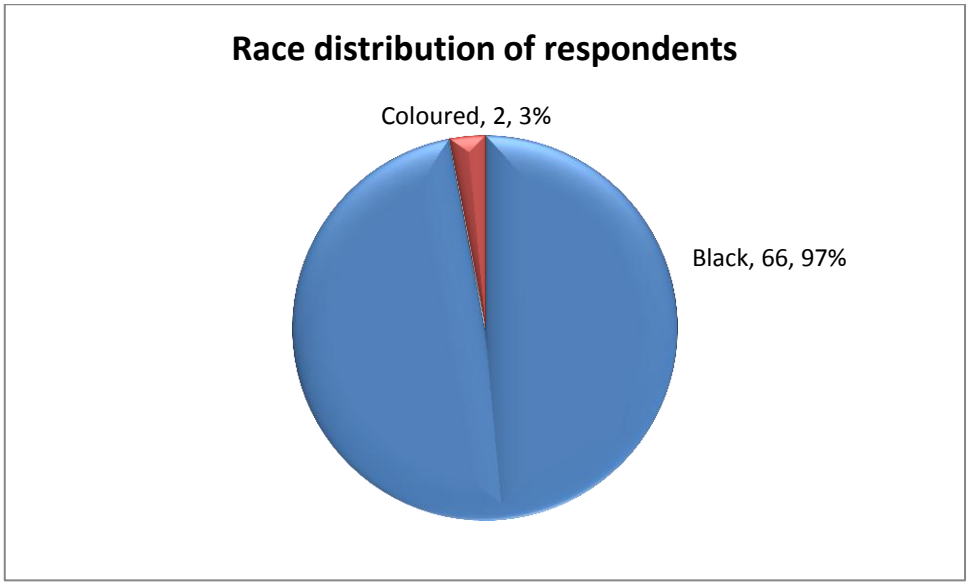


Figure 6: Race distribution of respondents

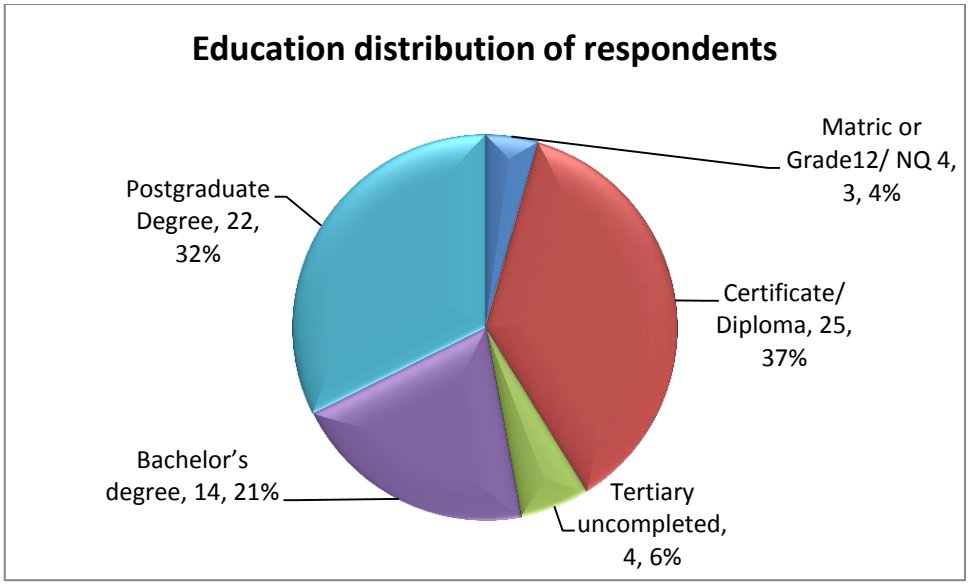


Figure 7: Education distribution of respondents

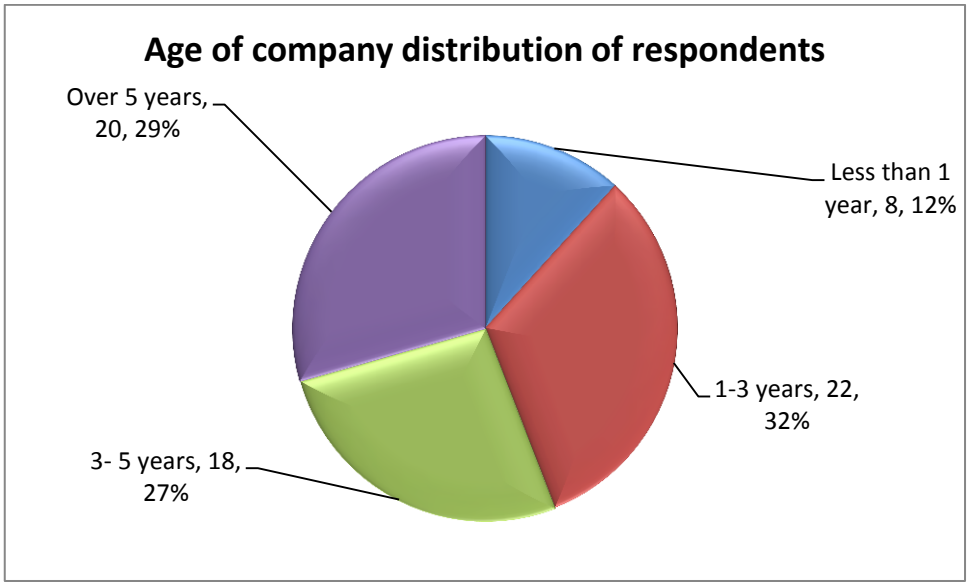


Figure 8: Age of company distribution

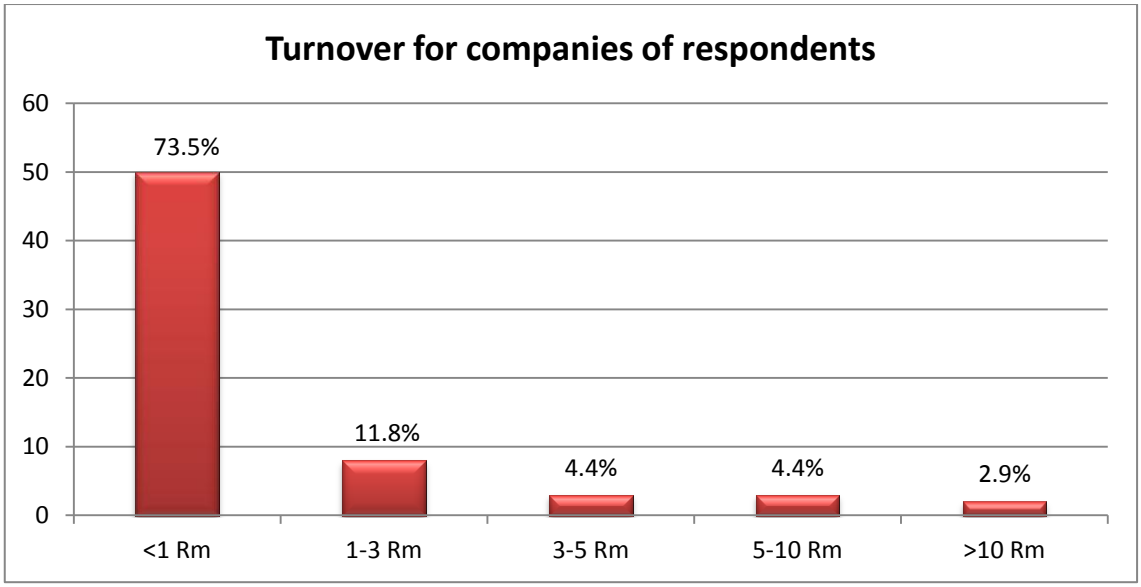


Figure 9: Turnover for companies

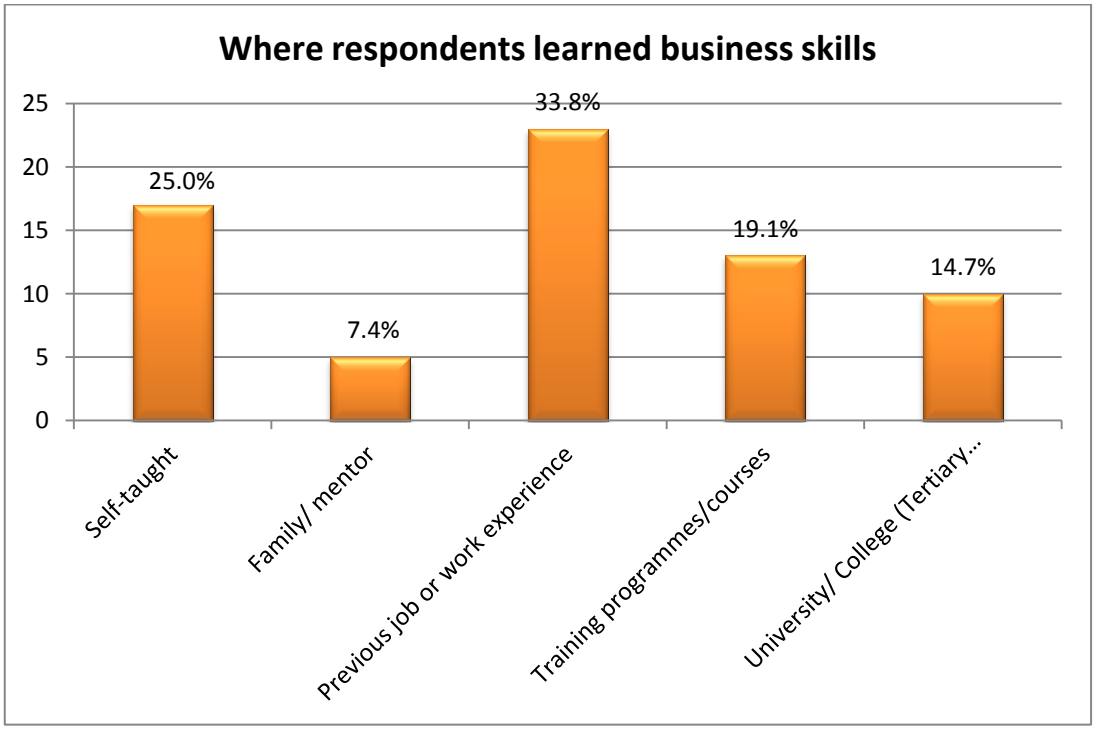


Figure 10: Where respondents learned business skills

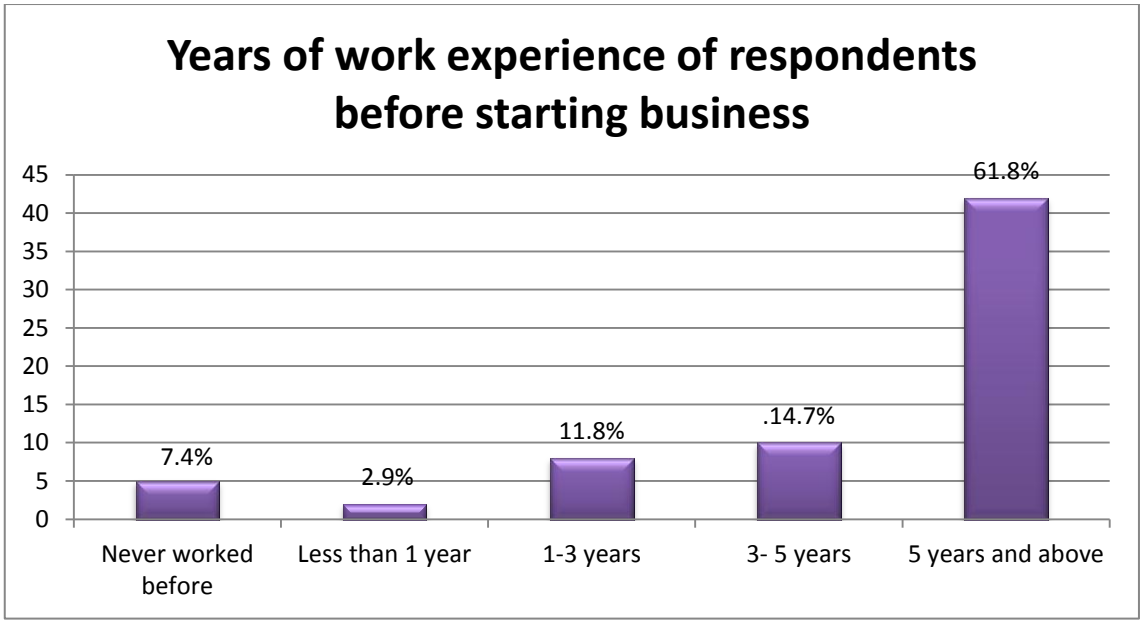


Figure 11: Years of work experience of respondents before starting business

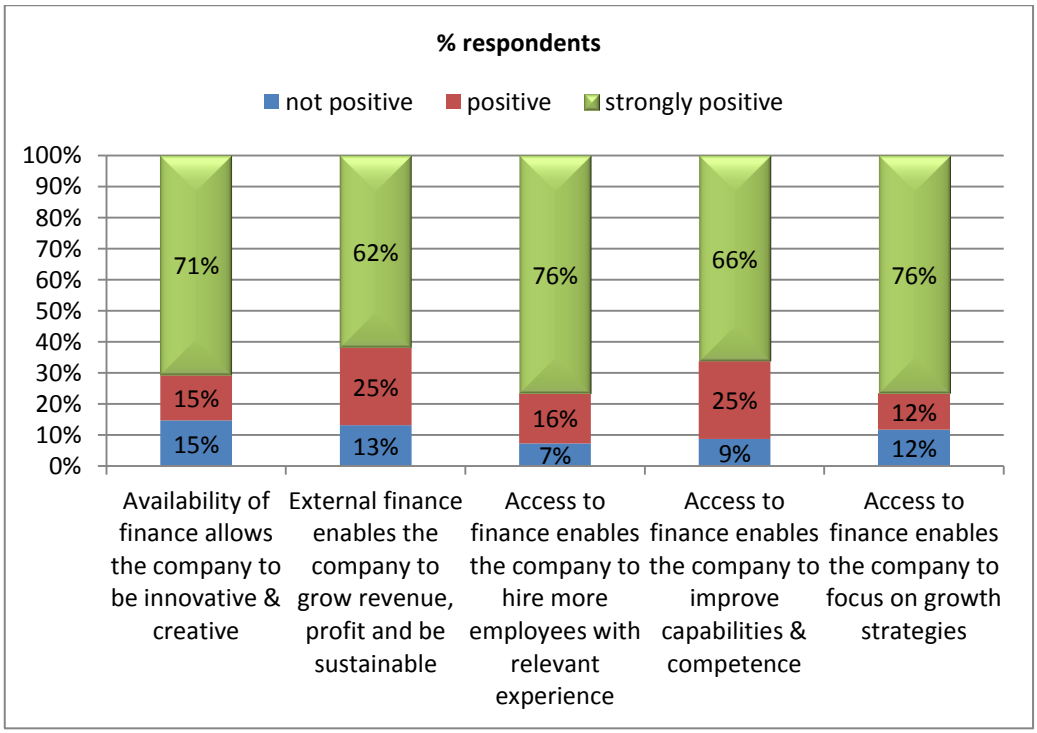


Figure 12: Percentage of respondents' attitudes towards the importance of access to funding for SMMEs growth.

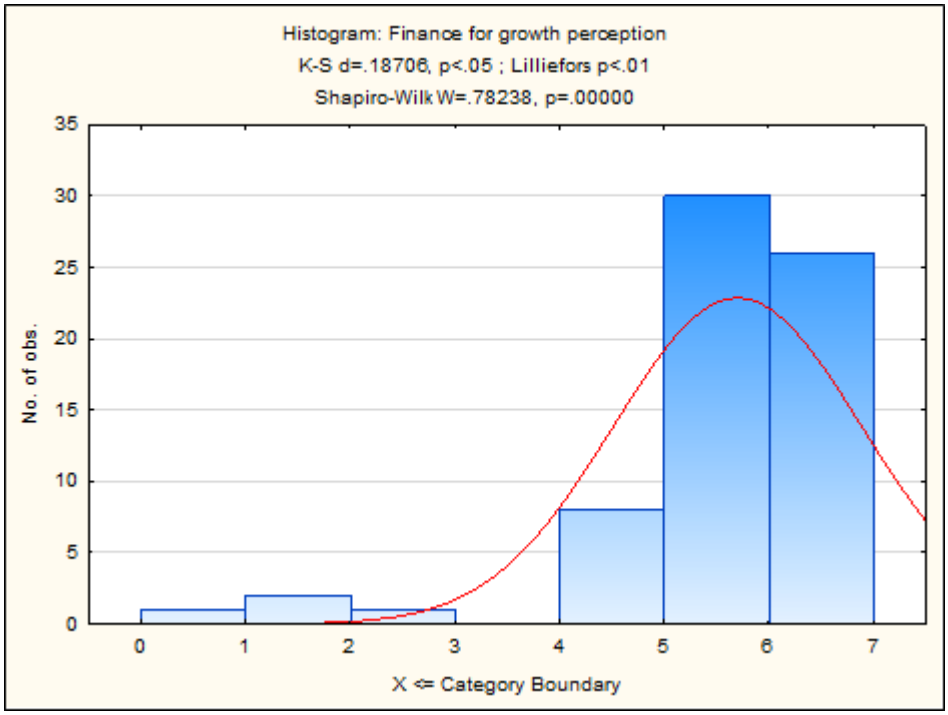


Figure 13: Histogram- importance of access to funding to SMMEs growth

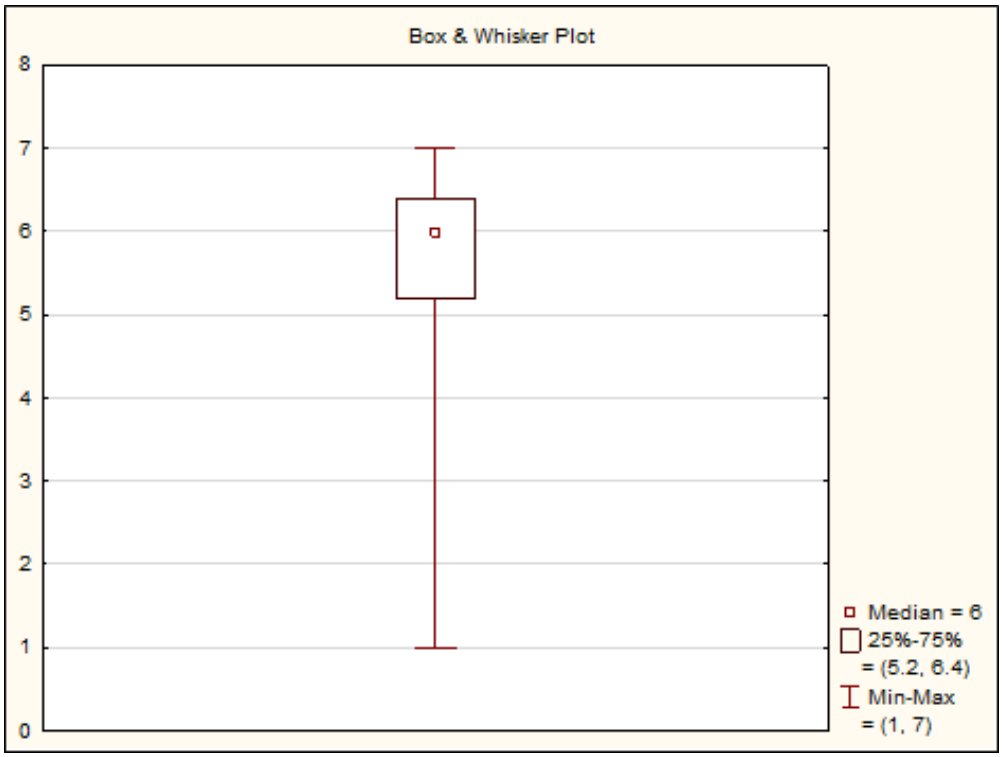


Figure 14: boxplot for mean scores of perceived importance of accessing to funding to SMME growth

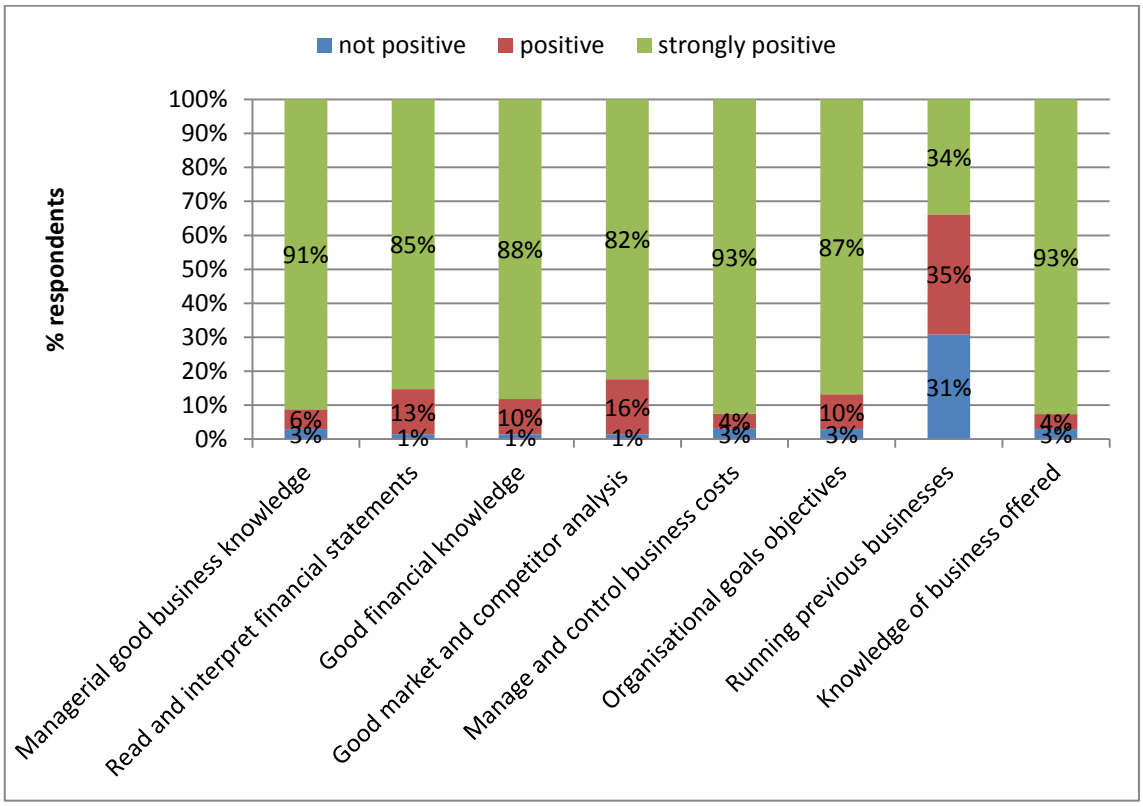


Figure 15: Respondents- perceived importance of Knowledge (as a human capital factor) towards the business accessing SMME finance

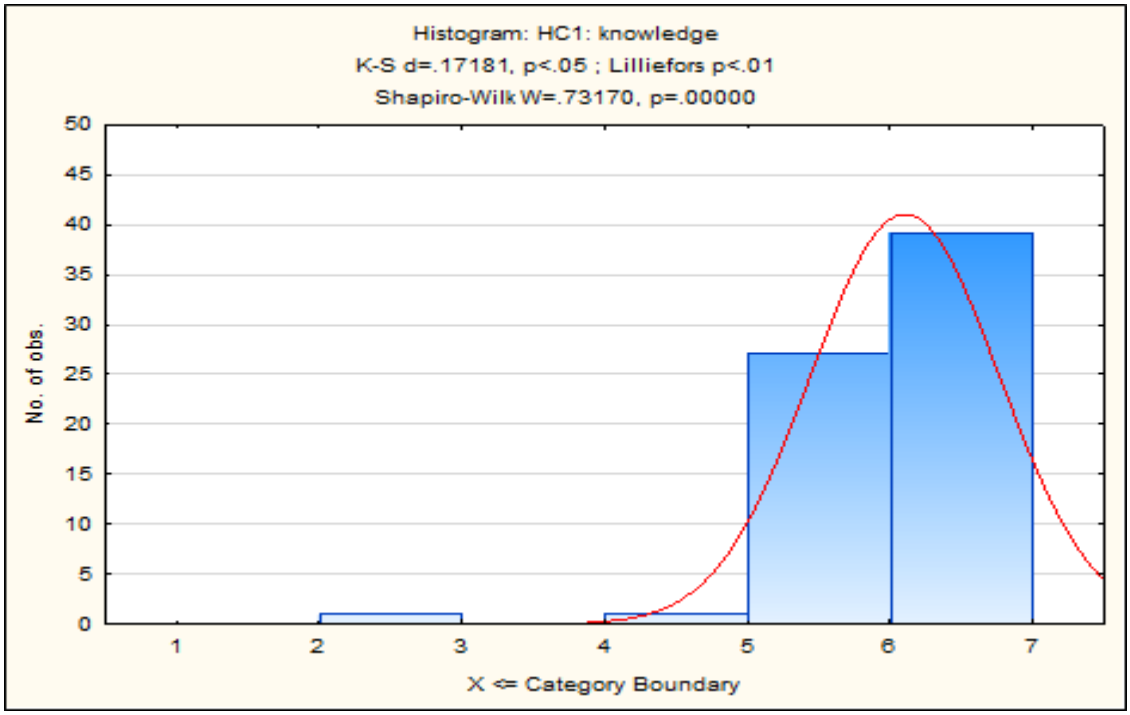


Figure 16: Histogram- perceived importance of knowledge towards accessing SMME finance

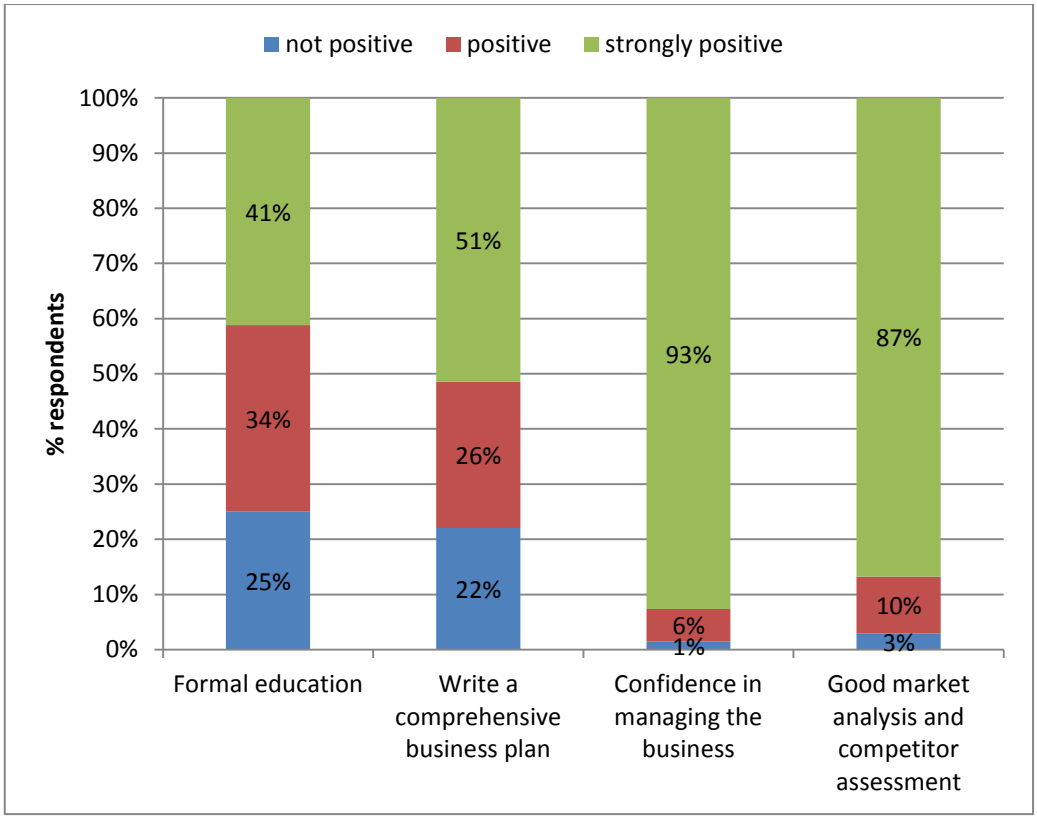


Figure 17: percentage respondents on perceived importance of formal education towards access to finance

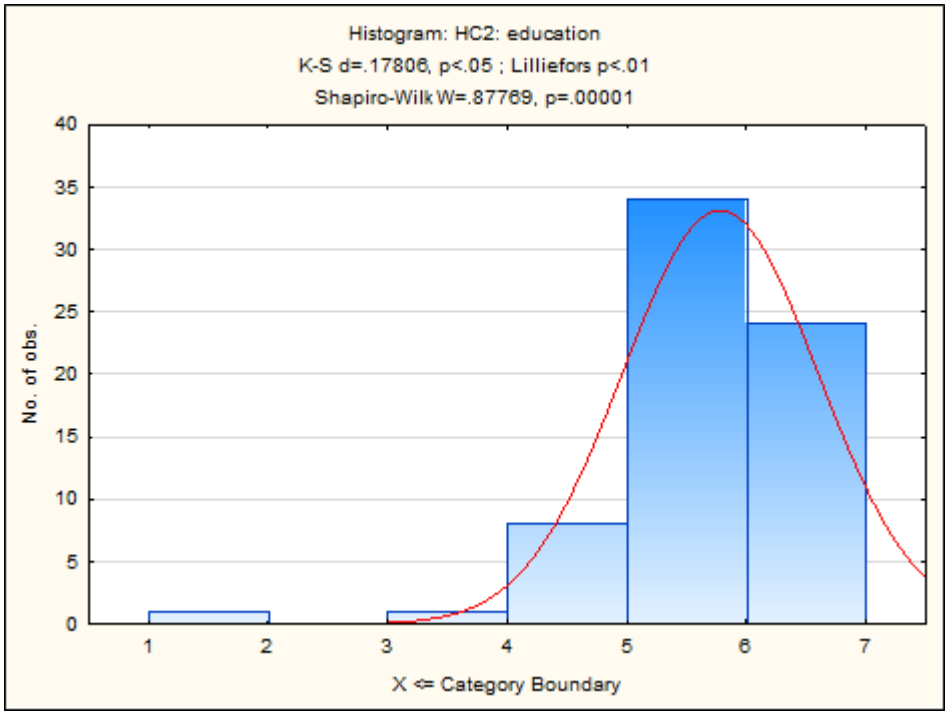


Figure 18: Histogram- perceived importance of formal education towards accessing SMME finance

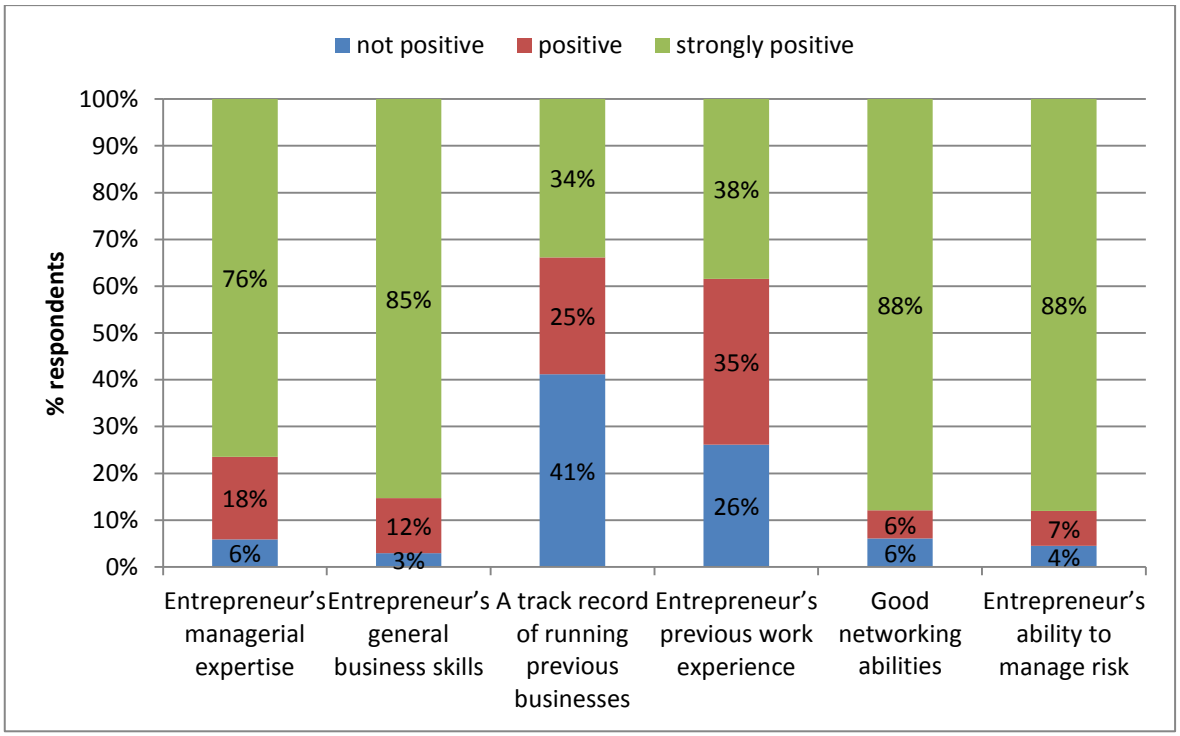


Figure 19: % respondents on perceived importance of expertise towards access to finance

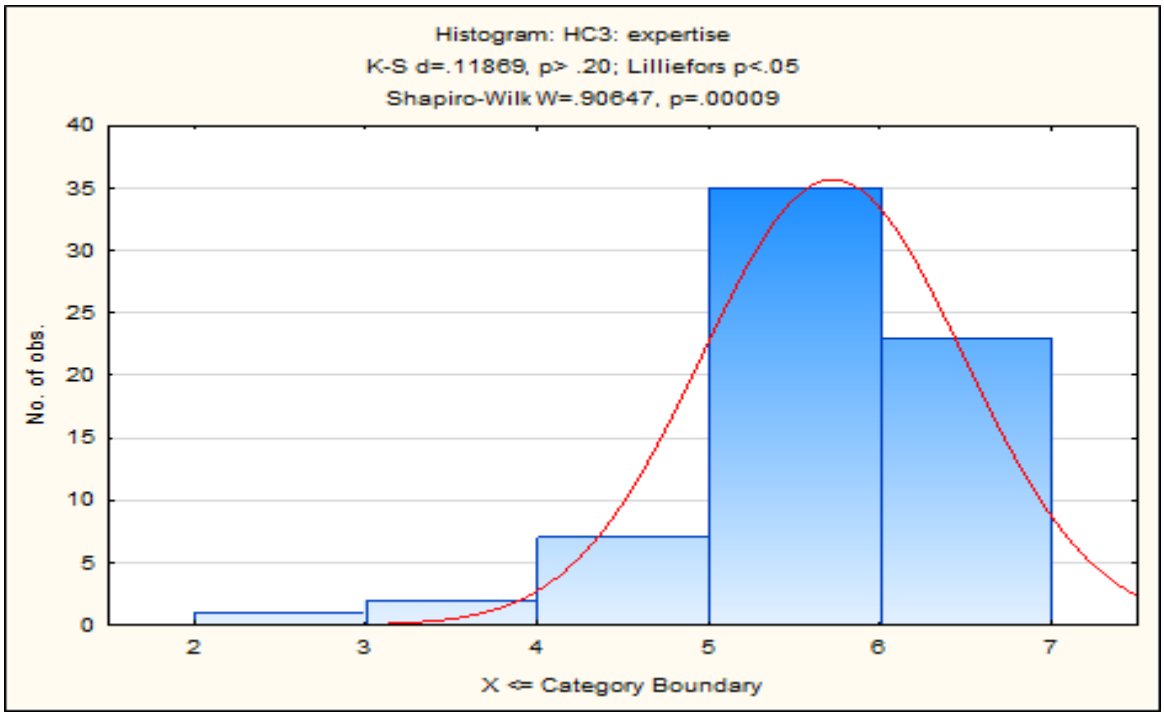


Figure 20: Histogram- perceived importance of expertise towards accessing SMME finance

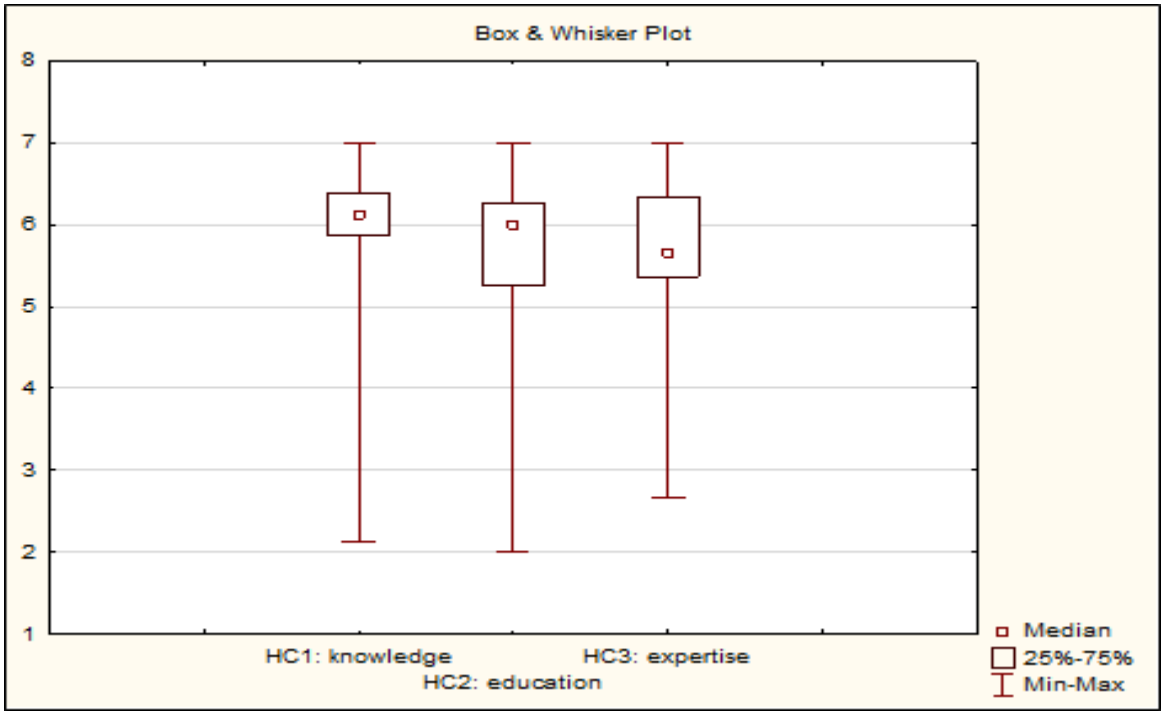


Figure 21: Box and whisker plots of Knowledge, formal education and expertise

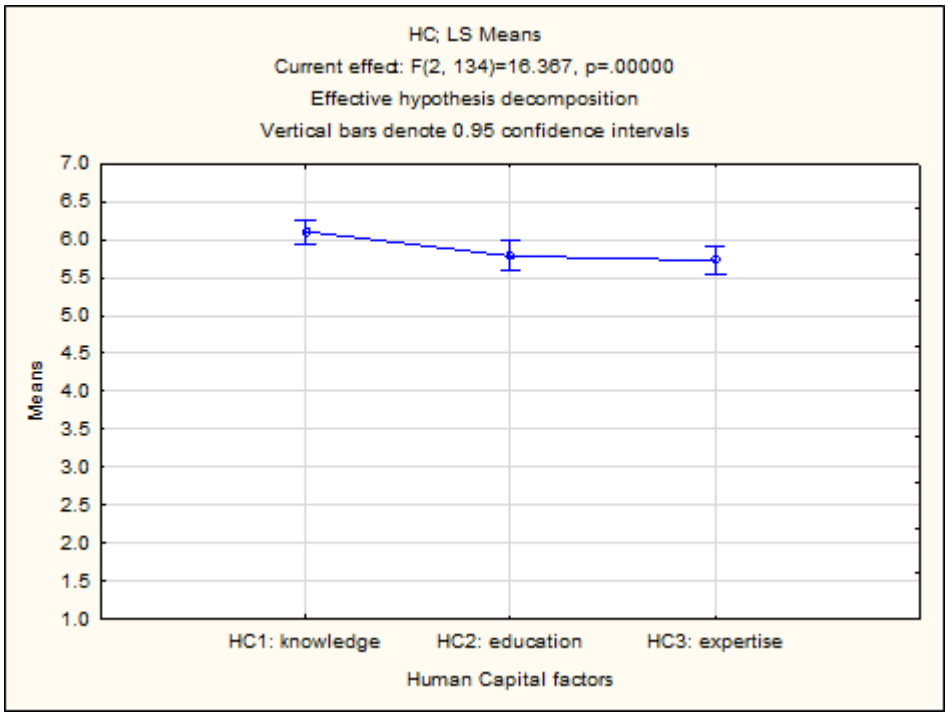


Figure 22: boxplot for comparing of mean scores in order of importance

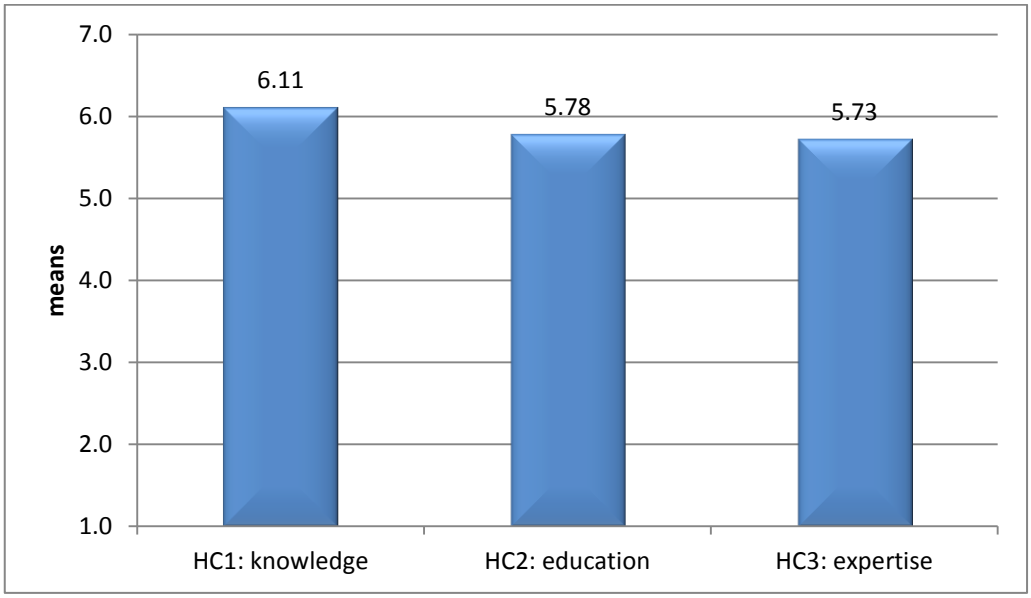


Figure 23: Human capital factors mean scores

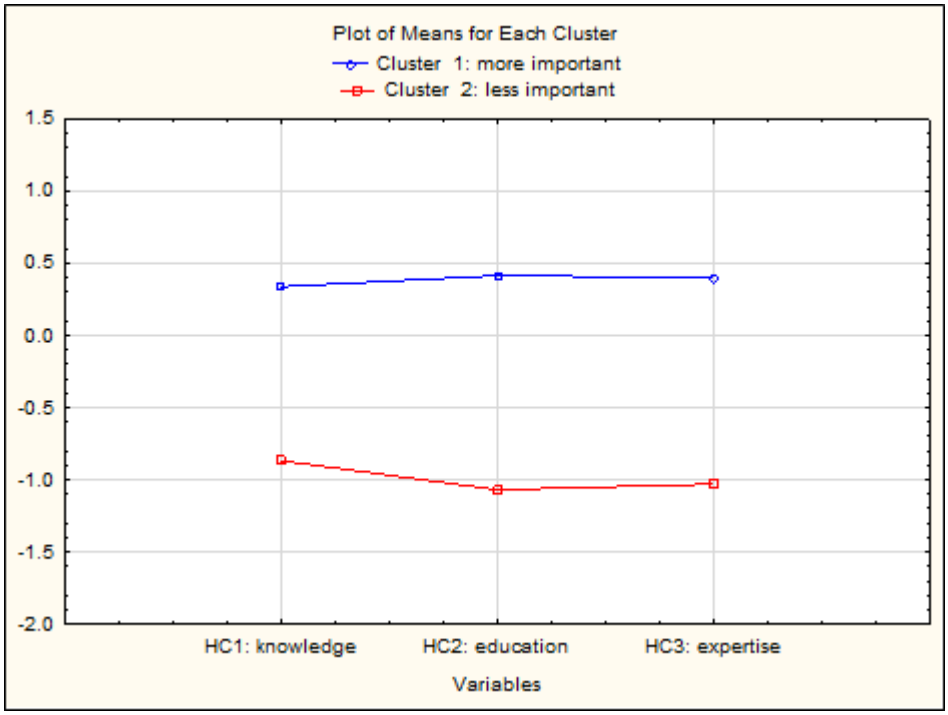


Figure 23: plot of means of cluster 1 and cluster 2

## List of Tables

Table 3: Reliabilities and correlation results for the research

| Scale | Number of Items | Cronbach's Alpha | Average inter-item correlation |
|---|---|---|---|
| Knowledge | 8 | 0.857 | 0.482 |
| Formal Education | 4 | 0.789 | 0.524 |
| Expertise | 6 | 0.796 | 0.432 |
| Growth | 5 | 0.94 | 0.774 |

Table 4: Descriptive statistics for SSME growth

| | Valid N | Mean | Std.Dev. | Skewness | Kurtosis |
|---|---|---|---|---|---|
| Finance for growth perception | 68 | 5.702 | 1.186 | -2.157 | 5.667 |

Table5: t- test for means of finance for growth: statistically significant at 95%

| | Mean | Std.Dv. | N | Std.Err. | t-value | df | p |
|---|---|---|---|---|---|---|---|
| Finance for growth perception | 5.703 | 1.187 | 68 | 0.143 | 11.833 | 67 | p < 0.01 |

Table 6: Descriptive statistics for importance of knowledge on accessing SMME finance: statistically significant at 95%.

| | Valid N | Mean | Median | Std.Dev. | Skewness | Kurtosis |
|---|---|---|---|---|---|---|
| HC1: knowledge | 68 | 6.106 | 6.125 | 0.660 | -3.370 | 19.225 |

Table 7: t- test for knowledge: statistically significant at 95%

| | Mean | Std.Dv. | N | Std.Err. | t-value | df | p |
|---|---|---|---|---|---|---|---|
| knowledge | 6.107 | 0.661 | 68 | 0.080 | 26.287 | 67 | p<0.001 |

Table 8: Descriptive statistics for importance of formal education on accessing SMME finance: statistically significant at 95%

| | Valid N | Mean | Median | Std.Dev. | Skewness | Kurtosis |
|---|---|---|---|---|---|---|
| HC2: Formal education | 68 | 5.783 | 6 | 0.818 | -1.681 | 5.864 |

Table 9: t- test for formal education: statistically significant at 95%

| | Mean | Std.Dv. | N | Std.Err. | t-value | df | p |
|---|---|---|---|---|---|---|---|
| Formal Education | 5.783 | 0.818 | 68 | 0.0992 | 17.969 | 67 | p<0.001 |

Table 10: Descriptive statistics for importance of expertise on accessing SMME finance: statistically significant at 95%

| | Valid N | Mean | Median | Std.Dev. | Skewness | Kurtosis |
|---|---|---|---|---|---|---|
| expertise | 68 | 5.725 | 5.666 | 0.760 | -1.379 | 3.682 |

Table 11: t- test for expertise: statistically significant at 95%

| | Mean | Std.Dv. | N | Std.Err. | t-value | df | p |
|---|---|---|---|---|---|---|---|
| Expertise | 5.725 | 0.760 | 68 | 0.092 | 18.714 | 67 | p<0.001 |

Table12: Repeated Measures Analysis of Variance with Effect Sizes and Powers

| | SS | Degr. of Freedom | F | p | Non-centrality | Observed power (alpha=0.05) |
|---|---|---|---|---|---|---|
| Intercept | 7033.356 | 1 | 5273.891 | 0 | 5273.891 | 1 |
| Error | 89.352 | 67 | | | | |
| HC | 5.740 | 2 | 16.367 | p<0.001 | 32.734 | 0.999 |
| Error | 23.498 | 134 | | | | |

Table 13: Scheffe Post hoc Test:  Error: Within MSE = .17536, df = 134.00

| HC | HC1: knowledge | HC2: education | HC3: expertise |
|---|---|---|---|
| HC1: knowledge | | p<0.001 | p<0.001 |
| HC2: education | p<0.001 | | p>0.05 |
| HC3: expertise | p<0.001 | p>0.05 | |

Table 14: Wilcoxon Matched Pairs Test: Marked tests are significant at p <.05

| | Valid N | T | Z | p-value |
|---|---|---|---|---|
| knowledge & HC2: education | 57 | 345.5 | 3.821 | p<0.001 |
| knowledge & HC3: expertise | 67 | 392.5 | 4.663 | p<0.001 |
| education & HC3: expertise | 64 | 952.5 | 0.585 | p>0.05 |

Table 15: ANOVA for clusters

| | Between SS | df | Within SS | df | F | signif. p |
|---|---|---|---|---|---|---|
| Knowledge | 19.875 | 1 | 47.13 | 66 | 27.83461 | p<0.001 |
| Education | 30.162 | 1 | 36.84 | 66 | 54.0392 | p<0.001 |
| Expertise | 27.993 | 1 | 39.01 | 66 | 47.36507 | p<0.001 |

Table 16: Demographics Pearson Chi- Square results

| | CLUSTER more important | CLUSTER less important | Row Total | Pearson Chi-square | df | |
|---|---|---|---|---|---|---|
| Gender : Male | 66.7% | 77.8% | 69.7% | | | |
| Gender : Female | 33.3% | 22.2% | 30.3% | | | |
| Gender : Total | 72.7% | 27.3% | 100.0% | 0.765217 | 1 | p=.381 |
| under 36: under 36 | 65.3% | 63.2% | 64.7% | | | |
| under 36: 36 or older | 34.7% | 36.8% | 35.3% | | | |
| under 36: Total | 72.1% | 27.9% | 100.0% | 0.027667 | 1 | p=.867 |
| Degree : Degree | 49.0% | 63.2% | 52.9% | | | |
| Degree : no degree | 51.0% | 36.8% | 47.1% | | | |
| Degree : Total | 72.1% | 27.9% | 100.0% | 1.10473 | 1 | p=.293 |
| <3 years: 3 years or older | 59.2% | 47.4% | 55.9% | | | |
| <3 years: less than 3 years | 40.8% | 52.6% | 44.1% | | | |
| <3 years: Total | 72.1% | 27.9% | 100.0% | 0.775246 | 1 | p=.378 |
| Turnover <1 Rm: Turnover <1 Rm | 75.5% | 76.5% | 75.8% | | | |
| Turnover <1 Rm: Turnover 1 Rm or more | 24.5% | 23.5% | 24.2% | | | |
| Turnover <1 Rm: Total | 74.2% | 25.8% | 100.0% | 0.006339 | 1 | p=.936 |
| Where / did you learn skills to run a business: Self-taught | 22.4% | 31.6% | 25.0% | | | |
| Where / did you learn skills to run a business: Family/ mentor | 10.2% | 0.0% | 7.4% | | | |
| Where / did you learn skills to run a business: Previous job or work experience | 30.6% | 42.1% | 33.8% | | | |
| Where / did you learn skills to run a business: Training programmes/courses | 22.4% | 10.5% | 19.1% | | | |
| Where / did you learn skills to run a business: University/ College (Tertiary Education) | 14.3% | 15.8% | 14.7% | | | |
| Where / did you learn skills to run a business: Total | 72.1% | 27.9% | 100.0% | 3.96901 | 4 | p=.410 |
| Family/self: experience/ education | 67.3% | 68.4% | 67.6% | | | |
| Family/self: family/ self | 32.7% | 31.6% | 32.4% | | | |
| Family/self: Total | 72.1% | 27.9% | 100.0% | 0.007217 | 1 | p=.932 |
| Education: education | 36.7% | 26.3% | 33.8% | | | |
| Education: not education | 63.3% | 73.7% | 66.2% | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Education: Total | 72.1% | 27.9% | 100.0% | 0.663991 | 1 | p=.415 |
| 0-4 yrs starting a business: under 5 years | 33.3% | 47.4% | 37.3% | | | |
| 0-4 yrs starting a business: 5 years or more | 66.7% | 52.6% | 62.7% | | | |
| 0-4 yrs starting a business: Total | 71.6% | 28.4% | 100.0% | 1.14633 | 1 | p=.284 |
| Years of work experience before starting a business: 3-5 years | 12.5% | 21.1% | 14.9% | | | |
| Years of work experience before starting a business: 5 years and above | 66.7% | 52.6% | 62.7% | | | |
| Years of work experience before starting a business: 0-3 years | 20.8% | 26.3% | 22.4% | | | |
| Years of work experience before starting a business: Total | 71.6% | 28.4% | 100.0% | 1.27759 | 2 | p=.527 |