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Human Capital and entrepreneurial success in the context of South African Informal Economy

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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

Johannesburg, 2017

DECLARATION

I, *Tshikani Derrick Ntuli* 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.

Tshikani Derrick Ntuli

Signed at 680 Bungeni Village, Elim Hospital, 0960

April 2017

ABSTARCT

Existing literature indicates a positive relationship between human capital and entrepreneurial capital. This has been a dominant supported view for ages. Among other scholars, Unger, et al. (2011); Davidson and Honig (2003); still uphold the view that human capital influence entrepreneurial success to a certain magnitude. However, contemporary studies argue that although the relationship has been demonstrated for decades, some assumptions to the perception should be questioned as the world evolves over time. Unger (2011); Martin, et al. (2013), and more other scholars identify the modification of the traditional assumptions. In terms of these scholars, uncertainty remains over the magnitude of this relationship and the circumstances under which human capital is more or less strongly associated with entrepreneurial success. Consideration of fragmentation in today's study with regard to conceptualization of human capital, the choice of success indicators, the context of study provide some critical challenges to the traditional perception of consistent relationships. All these aspects provide some open gaps to be filled by research. Oostebreek, et al. (2010) sees a questionable relationship between human capital factors and entrepreneurial success, which in terms of Unger, et al. (2011) give rise for the consideration of a moderator approach to study the effects of human capital on business success in order to efficiently determine whether the stated relationships exist or not. Resourced-Based Theory (RBT) was used as theoretical framework to this study. Three main constructs and five sub-constructs have been used to formulate the conceptual model from which three hypotheses were developed and tested. Empirical studies was conducted among selected informal traders in Limpopo Province – focusing in three districts. 257 unregistered small business owners were potential respondents. A quantitative methodology was employed to collect and analyse data through survey research design. The Structural Equation Modelling (SEM) along with AMOS 23, SPSS were used as descriptive statistical tools to test the validity of the hypotheses. Both theoretical and applied implications will assist the knowledge-base of researches. Policymakers will also find the implications useful in industrial policymaking. This study provides recommendations which may assist further research and other related enquiries of academic nature.

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1 CHAPTER 1: INTRODUCTION

Scholars from all parts of academia with respect to entrepreneurial studies have evaluated the concept of human capital. In their quest to understand what could be the real variables influencing entrepreneurial success. Dimov & Shepherd (2005) hold that organizations are made up of heterogeneous bundles of mobilized resources, of which human capital is one. In terms of this assertion, it is also postulated that the Human Capital concept encapsulates formal qualifications, skills and experiences, education and training, which is defined as a compendium of all [innate] traits and abilities that make human beings economically productive in a society. In their studies, Unger et al, (2011) prescribe variations on how the concept of human capital is employed, namely, general human capital, and specific human capital. All these are regarded as competencies that constitute human capital. The anatomy of these variations cite aspects such as a person's formal education and prior work experience, industry-specific components, entrepreneur-specific components, previous experience and family background.

Venter, Urban and Rwigwema (2008) allude to the same sentiment in regarding human capital as knowledge which increases the cognitive and productive abilities of individuals (entrepreneurs). In the light of the above dimensions, a score of arguments suggest a positive relationship between human capital factors and entrepreneurial performance (success). Unger, et al. (2011) point to the uncertainty which remains over the magnitude of this relationship and the circumstances under which human capital is more or less associated with success. In this case, a meta-analytical approach to the study of the relationship, the recognition of a moderator approach, and fragmentation of the study is thus acknowledged as overcomers of a static (orthodox) view of human capital.

In terms of the GEM Report (2001) on *Human capital development in South Africa,* South Africa's human capital base for entrepreneurship has been deemed weak. According to of this finding, coupled with Venter, et al. (2008), two types of entrepreneurs exist, namely, opportunity and necessity, the former being *high growth* and the latter being *survivalists* or micro-entrepreneurs. South Africa is found to be filled with necessity entrepreneurs

whose chances of economic independence are minimal. Among this group, unemployment is rife and real. Pretorius and Van Vuuren (2002) indicate that the ability for micro-entrepreneurs to grow is restricted by among other factors: scarcity of skills, business knowledge, and resources, all which culminate towards human capital variables to be discussed in the study. One supposition in this study is that a dichotomy between the types of entrepreneurs is recognized. However, a continuum approach between necessity and opportunity entrepreneurship is regarded as a transformational and convincing base to understanding the dichotomy (differences). Smallbone & Welters (2003) argue that even well educated people may resort to entrepreneurship due to lack of attractive employment opportunities.

Studies have been conducted indicating the preponderance of entrepreneurs to engage in the informal economy (William & Nadin, 2010; Devey & Valodia, 2012). It is job scarcity, given the high rate of unemployment in the country which currently stands at 27, 1%. South Africa is a country which is currently experiencing one of the highest reported unemployment rates in the world (Gandhi & Knight 2001; Ingrid, et al. 2000). This trend has been found to affect other areas of the continent, and to some degree the whole globe. Quoting the ILO (2002b), Willian and Nadin (2010) find that some 48% of non-agricultural employment in North Africa is in the informal economy, 51% in Latin America, 65% in Asia, and 72% in sub-Saharan Africa. Jutting and Laiglesia (2009) make reference to a recent OECD report to propose that given a working population of some 3 billion, around 1.8 billion (two-thirds) work in the informal sector.

According to Levinsohn (2007), the 1994 transition has left many South Africans destitute in terms of securing employment, and as such, the government policies were ineffective to solve the crisis. In this regard, it is acknowledged that South Africa has set in place good policies which are unfortunately, not implemented properly or not implemented at all. The study by Levinson (2007) further reports that there was a huge influx of mostly under-educated African women into the labour market just as the demand for less skilled workers declined.

Given all the sides of the challenges facing the South African economy and the labour market in particular; entrepreneurial activities have emerged on a large scale. This form of 'economic operation', that has been neglected and deregulated, has attracted even the majority of citizens with proper education. Research has proven the necessity of education as a possible incubator of entrepreneurial initiative. Accordingly, the study sought to establish whether there is a relationship between human capital factors and entrepreneurial success in the context of the South African informal economy.

1.1 Purpose the study

The purpose of this research is to establish the relationship between human capital factors and entrepreneurial success in the context of the South African informal economy.

1.2 Context of the study

The stability of the South African economy has been inconsistent for some years. The current GDP report revealed by Statistics South Africa reveals that the manufacturing sector continues to occupy a significant share of the South African economy, despite its relative importance declining from 19 percent in 1993 to about 17 percent in 2012 in real economic terms. The financial sector, business services and real estate have shown an improvement of 24% in 2012. These two sectors and a few more are an important part of the South African growth story since the dawn of democracy. Many countries, including South Africa, experienced the global economic crisis. This has affected economic growth in South Africa over the past four years, prompting a decline in the rate of GDP. South Africa experienced an average growth rate of approximately 2%per cent in real terms between 2008 and 2011 as a result of the global economic recession. Of the nine provinces in South Africa, three economic power houses are outstanding, namely: Gauteng, Kwazulu-Natal (KZN) and Western Cape collectively contribute a significant portion to the country’s value added, reported at over 60% (Statistics South Africa, 2015).

In terms of economic development theories, however, the informal economy has been neglected due to non-consideration of their input in the aggregation of economic performance. The informal sector remains a crucial contextual concern in relation to human capital variables as one of the determinants of factors affecting the sector's entrepreneurial progress. Davies and Thurlow (2010) however, reason that South Africa's high unemployment and small informal economy has been attributed to barriers to entry in informal labour markets.

Research findings reveal that one aspect of the informal economy is poverty, affecting both urban and rural inhabitants mostly among African people. As a result of poverty, these communities find themselves starting small informal businesses in order to survive. Research has revealed that at least 72% of the total workforce in Sub-Saharan Africa is estimated to be informal - an estimate which grows annually and underlines the inability of the state and industries to provide sustainable employment.

Table 1.1: Informal Employment in non-agricultural Employment, by gender, 1994/2000

Region	Informal Employment as a % of Non-agricultural Employment	Women's Informal Employment as % of Women's Non-Agricultural Employment	Men's Informal Employment as a % men's Non-Agricultural Employment
North Africa	48	43	49
Sub-Saharan Africa	72	84	63
Latin America	51	58	48
Asia	65	65	65

Source: ILO (2002, p.19)

In terms of Devey and Valodia (2012), South Africa is characterized by a dual economy, namely, first and second economies, to which the Labour Force Survey has linked. Also, it is established that poverty is not located within the main stream of the first economy, but the marginalized economy (the second economy). According to this approach to understanding the economic boundaries of South Africa, the first economy is limited to the formal economy, whereas the second economy refers to the informal economy that has been given a score of linguistic labels by authorities, scholars, businessmen and the community at large. The multiple of register references include, among other terms, such as unregistered (Statistics South Africa, 2012), off-the-books traders, undeclared, shadow, unincorporated, own-account operators, first, second, unregulated, sweatshop-like trade, underground, cash-in-hand, hidden economy (Devey & Valodia, 2012 cites Evans, et al. 2006; Katungi, et al. 2006; Chutney, et al. 2004; OECD, 2000; Renoy, et al. 2004, & Venkatesh, 2006).

It is crucial to indicate that the policy focus in the South African presidency and the strategic framework indicates the structural separation of the economy into two concepts (dualism) as informed by the ANC policies (Zuma, 2008). However, other researchers see an alternative and critical view to the existence of the dual economy concept. Chen et al. (2004) argue that an economy should be viewed as a single entity. In terms of this

finding, while formal work gets significant attention, informal and difficult-to-categorise employment is often neither undervalued nor omitted from conceptualisation and measurement of the value of employment (Chuene, et al., 2004). Adler (2007) reveals that Marxists, on the other hand, argued against the exploitative relationship between the mainstream (formal) and the periphery (informal economy) as well as the labour process in general. Naidoo, et al. (2004); Devey & Valodia (2004) classify informal economy according to sector, namely: mining, manufacturing, construction, trade, trade, business services, agriculture, finance, electricity, gas and water, and others. It was stated in the introductory remarks that the preponderance of entrepreneurs to engage in the informal economy is job creation, given the high rate of unemployment and poverty in the country.

In the context of this background, one may ask what really characterizes this sector. In terms of Williams & Nadin (2010), informal entrepreneurs are clustered in lower-income population groups, lower quintile household, and higher-income population groups, high quintile households who conduct part of their businesses on informal terms, a marginalised population excluded from the labour market, and entrepreneurs in formal employment, engaged in informal trading as a second job. All these groups populate both ends of the income spectrum. Research theories expose different views on how the informal economy is perceived by different academics world-wide. Given the controversial dynamics of the informal sector, it becomes clear that the exclusion of the sector from the radar screen of the state is at the expense of the very same state. Using the *value added approach* (McConnell, et al. 2011), the cost to Gross Domestic Product (GDP) cannot be underestimated and or ignored. According to data drawn from Statistics South Africa's national accounts, Budlender, et al. (2001) provide estimates of value added in the informal economy and the total economy.

Table 1.2: Theoretical Perspectives of the evolution of Informal economy

Perspective	Assumption/Brief overview
Modernization perspective	Informal economy was not regarded as part of the formal economy but underdeveloped (William & Nadin 2010; Packard, 2007).
Neo-liberal perspective	Informal entrepreneurs are viewed as heroes rejecting the bureaucratic shackles of an over-regulated state by voluntarily exiting from the formal economy (Biles, 2009)
Structural perspective	Characterized by bureaucratic structures, informal entrepreneurs are seen as unwilling and unfortunate pawns in an exploitative global economic system, cast out into the informal economy because of their inability to find work (Charmes 2009; Valenzuela 2001; ILO ,2002)

Source: Williams and Nadin (2010, p. 368)

However, applying the output-input model, Naido, et al. (2004) provide estimates of informal and formal aggregate output for the South African economy. Comparatively, the total formal production amounts to R581 084 000 (Naidoo, et al., 2004), whereas the informal economy production amounts to R50 347 000 which is not subjected to taxation of any form (Stiglingh, et al. 2009; Professional Tax Handbook, 2010). The production estimate is also not part of GDP computations.

Table 1.3: Contribution of Informal Economy to Value Added, in (R million)

Industry	Informal (in Million)	Total (in Rmil)	Informal as % of total
Mining	89	44, 186	0,2
Manufacturing	4,782	135, 952	3,5
Construction	3,893	21,263	18,3
Trade	25,019	95,159	26,3
Transport	3,311	71,340	4,6
Business services	8,967	141,928	6,3
Community services	3,801	21,119	18,0

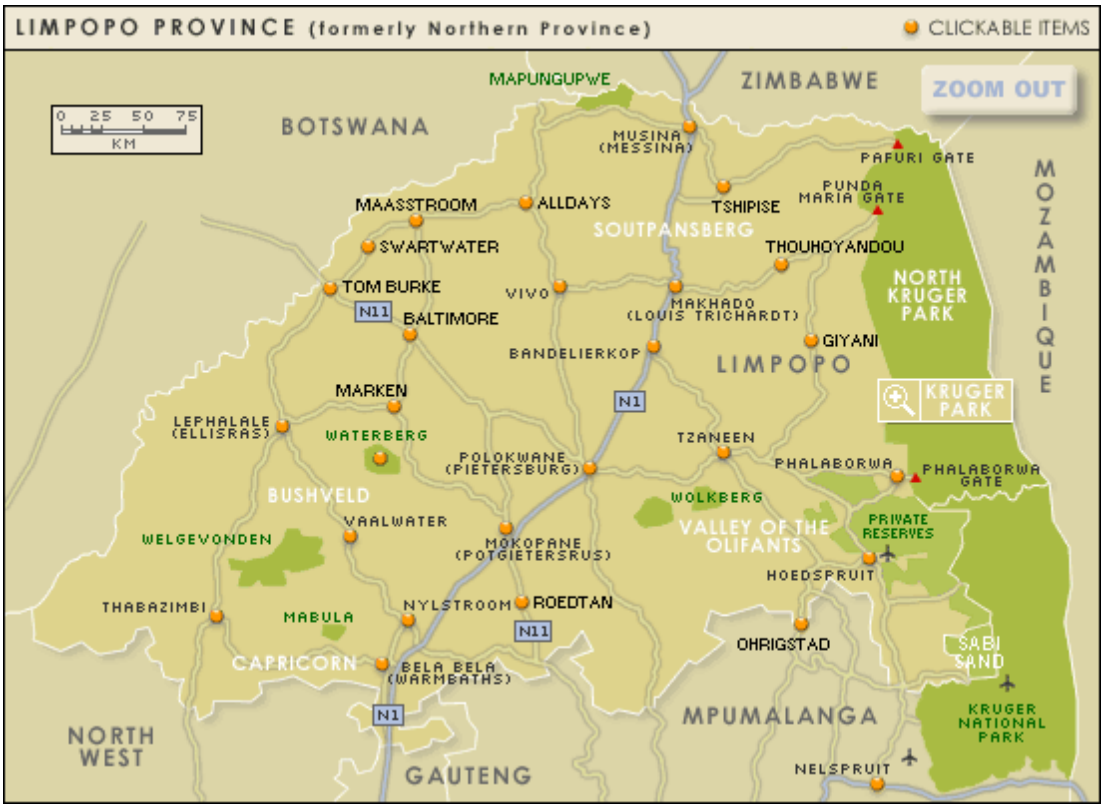
Source: Budlender, et al, (2001) in Valodia and Devey (2012)

It is, however, crucial to indicate that South Africa comprises nine provinces, namely Limpopo, Gauteng, North West, Kwazulu Natal (KZN), Western Cape, Eastern Cape, Northern Cape, Free State and Mpumalanga.

Geographically, Limpopo is South Africa's northernmost province, lying within the great curve of the Limpopo River. It is a region of contrasts, from true bushel country to majestic mountains, primeval indigenous forests, unspoilt wilderness and patchworks of farmland. The foot of the Soutpansberg mountains; and Musina, with its thick-set baobab trees. (Limpopo Environmental Outlook Report, 2015). All its entrepreneurial and political activities take place within the area of 125 755 square kilometers. The participation of the Limpopo provincial government in the total formal economy of the country is at 2, 9% in terms of provincial average growth in the economy from 2002-2012.

However, poverty and inequality within the population remain key challenges within the local economy. This challenge is the other side of the unemployment coin. It is reported that in 2014, approximately 42% of Limpopo population was living in poverty; with 16, 9% of the population unemployed (Statistics South Africa; Quarterly Labour Force Survey, 2015).

Figure 1.1: Map of Limpopo



Source: SA Venues (2017)

From the reports, it is clear that the economic condition is not that favorable, and to a large extent, mimics the national trend. As a result the majority of the inhabitants of Limpopo find themselves on streets as vendors.

1.3 Problem statement

1.3.1 Main problem

Existing literature indicates a positive relationship between human capital and entrepreneurial capital. This has been a dominant view for many years. The trend has been supported by scholarly literature. Among other scholars, Davidson and Honig (2003), Unger, et al. (2011), still uphold the view that human capital influences

entrepreneurial success to a certain degree. However, contemporary studies argue that although the relationship has been demonstrated for decades, some adjustments to the perception should be effected as the world evolves on a daily basis. Unger, et al (2011), Martin, et al. (2013) & Oosterbreek, et al. (2010) identify the modification of the traditional assumptions of constant relationships. In terms of these scholars, uncertainty remains over the size of this relationship and the circumstances under which human capital is more or less strongly associated with entrepreneurial success. Consideration of fragmentation in today's study with regard to conceptualisation of human capital, the choice of success indicators, the context of the study, provide some critical challenges to the traditional perception of consistent relationships.

All these aspects provide some gaps to be filled by research. Oostebreek, et al. (2010) and some other scholars, for example, see a questionable relationship between human capital factors and entrepreneurial success, which in terms of Unger, et al. (2011) give rise to the consideration of a moderator approach to study the effects of human capital on business success. In order to further enhance this relationship, when studying entrepreneurship, researchers need to consider the dynamics of all these emerging perspectives. Therefore, what remains the major problem of this study, which is to investigate and establish thoroughly whether there is a relationship between human capital and entrepreneurial success in the context of the South African informal economy - an economy which has been sidelined by authorities as an unofficial economy not contributing to the GDP of the country.

1.3.2 Sub-problems

1.3.2.1 Sub-problem 1

To establish whether there is a positive relationship between education and entrepreneurial success in the informal economy.

1.3.2.2 Sub-problem 2

To establish whether there is a positive relationship between industry experience and entrepreneurial success in the informal economy.

1.3.2.3 Sub-problem 3

To establish whether there is a positive relationship between knowledge and entrepreneurial success in the informal economy.

1.4 Significance of the research study

In South Africa, numerous challenges facing small business enterprises have been identified from various perspectives. Valodia & Devey (2012) pinpoint challenges facing the informal business sector, such as underdevelopment, little contribution to GDP (Gross Domestic Product), and deemed disconnected from both the first and the global economy.

The study thus establishes the extent to which relations can be forged between human capital variables to determine the success of enterprises in the context of South African informal sector (economy). Accordingly, the study benefits both business and government organizations engaged with entrepreneurial development endeavors. In terms of private business, the study assists their human resource departments to recognize and appreciate the value of providing the necessary knowledge, skills and experience which will in turn, enable the institution to improve performance. In addition, government authorities could use the study to develop and/or improve the necessary curriculum policies with regard to entrepreneurship training at both secondary and tertiary institutions. Also, the envisaged policies provide an 'enabling environment' for prospective entrepreneurs within the informal economy of South Africa.

1.5 Delimitations of study

The focus of the study is only limited to entrepreneurs predominantly operating in the informal sector. Resource Based theorists provide other dimensions of factors which are related to the success of enterprises, such as capital, social, finances and technology. All these other variables are, for the purpose of the study, ignored. Also, the informal sector in question is only South Africa, although some comparisons with regard to other states may be made as remarks in passing, as a benchmark or to derive some practical lessons.

With regard to context of study, this research has excluded all informal and illicit goods and services of the broader criminal economy (Williams & Nadin, 2010) such as drug and human trafficking, gun-running, prostitutes and pimps, hookers and all black market transactions.

1.6 Definition of terms

1.6.1 Entrepreneurship

Davidson & Honig (2003) cite Shane & Venkataraman, (2000) to provide contemporary definitions of entrepreneurship or delineations of entrepreneurship research which focus on emerging entrepreneurs. The suggestion is that entrepreneurship research should deal with early stage phenomena, such as how opportunities are detected and acted upon, or how new organizations come into being. Shane & Venkataraman (2000) emphasize that entrepreneurship consists of two related processes, discovery of entrepreneurial opportunities and exploitation of such opportunities. This perspective is adopted in in the present research. Shane & Venkataraman (2000) define entrepreneurship as an activity that involves the discovery, evaluation and exploitation of opportunities to introduce new services and, ways of organizing markets, processes, and raw materials through efforts that previously had not existed.

1.6.2 Entrepreneurship success

Kumar (2007) defines entrepreneurial success as all expectations in the process of determining overall business performance to indicate success. Accordingly, the entrepreneur makes use of performance indicators that are relatively measurable among other things, personality and behaviour, opportunism, outcome of collective process, chance all becomes determinants of a successful entrepreneur; all which have been summed up by Bandura (2001), Sarasvathy (2008) as Effectuation and self-efficacy.

1.6.3 Human capital

According to Davidson and Honig (2003), human capital theory maintains that knowledge provides individuals with increases in their cognitive abilities, leading to more productive and efficient potential activity. Therefore, if profitable opportunities for new

economic activity exist, individuals with more or higher quality human capital should be better at perceiving them. Once engaged in the entrepreneurial process, such individuals should also have superior ability in successfully exploiting opportunities. Following Unger et al. (2011) human capital is defined as skills and knowledge that individuals acquire through investments in schooling, on the job training, and other types of experience.

This section describes the four main approaches in Gartner's framework – the individual, the environment, the process and the organisation, – in more detail. Approaches that concern the individual can be divided into two types of variables: human capital and psychological individual differences. Human capital variables include knowledge, education, skills and experience, all of which is linked to human capital theory outlined by Martin, et al. (2009).

Human capital variables are likely to influence the development of a business idea and the organisation of resources. For example, start-up experience provides the nascent entrepreneur with learning opportunities that can be exploited; whereas work experience provides skills that might function in the accomplishment of the many tasks that setting up a business entail; industry experience can be helpful in the perception and valuation of new business ideas. Psychological individual differences concern differences in personality characteristics, cognitive characteristics, and motivational patterns. Research on personality characteristics relates dispositions such as risk-taking, locus of control, and need for achievement to the emergence and the success of entrepreneurship (Martin, et al. 2009).

1.6.4 Human capital factors

All the acquired variables demonstrate the ability to act entrepreneurially, such as education, work experience, entrepreneurial experience, prior knowledge of customers' problems, and experiential knowledge (Venter, et al., 2008).

1.6.5 Informal economy/sector

In terms of the 15th International Conference of Labour Statisticians (ICLS), Valodia & Devey (2012) recommended that the informal sector/economy be defined in terms of the following criteria:

- non-registration of the enterprise in terms of commercial legislation such as taxation.
- non-registration of the enterprise in terms of labour legislation.
- small size of the enterprise in terms of the numbers of people employed.

1.7 Assumptions

The focus of the study is only limited to entrepreneurs predominantly operating in the informal economy. The word "sector" is equivalent to the word "economy", Therefore, the two words are used interchangeably. The latest survey of the employed (formal) and self-employed (informal) South Africans by Statistics SA shows the informal sector's contribution to gross domestic product has remained at about 5% from 2001 to 2013. Its contribution to employment has declined by one percentage point, to 15.8%, over the same period (Visser, 2014). In the light of this statistical background, the study focuses on entrepreneurs labouring in the context of the informal economy in South Africa who are able to respond well to the questions provided in the research instrument.

1.8 Chapter outline

Chapter 2 provides the literature reviewed and provides research findings on the relationship between human capital factors and entrepreneurial success in the context of the informal economy in South Africa. The main purpose thereof is to establish a theoretical basis from which a research tool can be developed to measure the relationship. Chapter 3 discusses the development of hypotheses in order to provide

tentative answers to the stated relationships. In this chapter, a conceptual model for the study is outlined. In chapter 4, Research methodology and design is discussed in detail. This is followed by a data analysis and presentation of results which is discussed in chapter 5. Finally, chapter 6 provides a discussion of results, conclusions, limitations and recommendations for future research.

1.9 Conclusion

In this chapter, the introduction and background to the study was given. The purpose and context of study was then discussed. This was followed by the discussion of the main problem to the study. Sub-problems were stated. In addition, the significance or rational for this study was also discussed. Delimitation of the research also formed part of this chapter. In this chapter, different concepts were briefly defined. Towards concluding the chapter, several assumptions of the study were provided. Finally, each subsequent chapter was briefly outlined.

2 CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

The literature reviewed provides research findings on the relationship between human capital factors and entrepreneurial success in the context of the informal economy in South Africa. The main purpose thereof is to establish a theoretical basis from which a research tool can be developed to measure the relationship. First, the theoretical background to the study is discussed in details, and the theory is applied to empirical study (the practical research findings). The theory consists of the discussion of the main constructs, namely; education, industry experience and knowledge. The five sub-constructs which shows the relationship between variables are discussed as opportunity recognition, innovation, management, risk taking, and financial management and control.

2.2 Theoretical background

Brush, et al. (2001) hold that organizations are made up of heterogeneous bundles of mobilized resources, of which human capital is one. In terms of this assertion, it is also postulated that the human capital concept encapsulates formal qualifications, skills and experiences, education and training, which is defined as a compendium of all [innate] traits and abilities that make human beings economically productive in a society (Kumar, 2007).

Empirical knowledge of all sorts is underpinned by some theory. According to Mohr et al. (2008), theory involves [a scientific] simplification of, or abstraction from reality in order to make sense of an extremely complicated world by focusing on the most important factors of a phenomenon/a problem being studied. Entrepreneurship in the context of the given topic is not an exception to the aspects of this description. Brush, et al, (2001) has initially stated from the theoretical standpoint that organizations are made up of heterogeneous

bundles of mobilized resources, of which human capital is one. In terms of this assertion, it is also postulated that Human capital concept encapsulates formal qualifications, skills and experiences, education and training, which is defined as a compendium of all [innate] traits and abilities that make human beings economically productive in a society (Catherine, 2014). However, in terms of Unger et al, (2011) human capital theory states that human capital investments improve knowledge, skills, or health and thereby raise money or psychic income. Accordingly, people [entrepreneurs] attempt to receive compensation for their investment in human capital by maximizing their economic benefits. Human capital theory advocates the proper conceptualization of human capital and its attributes.

Firstly, a clear distinction must therefore be made between human capital investments, the outcome of human capital investments, and task-related human capital. The advocates of these suppositions argue that experiences, such as education and work experience that may or may not lead to knowledge and skills are the products of investment in human capital. On the one hand, acquired knowledge and skills is tantamount to outcomes of human capital investments. Task-related human capital, on the other hand, addresses whether or not human capital investments and outcomes are related to a specific task, such as running a business venture (Unger, et al., 2011). A few examples of task-related human capital include owner experience, start-up experience, industry experience, environmental scanning, selecting opportunities, strategy formulation, management and leadership. High levels of task-relatedness of human capital are achieved if these are process and content specific as advocated by West and Noel (2002).

This argument is concluded by outlining the significance of distinguishing the qualities of human capital which have long been ignored by the traditional conceptualisation of this construct. The importance is nothing more than strengthening the supposition behind the conceptualisation, namely; to theoretically dismantle cause and effect [causal relation] of human capital, and to theoretically derive moderators of human capital-success

relationship (Unger, et al., 2011). In terms of this analysis, the moderator is thus seen as a sort of leverage tool which aids the refinement of the conceptualisation of the attributes.

Secondly, theory uncovers the role played by psychology, in conceptualizing human capital. In their observation, Davidson & Honig (2003) notice the extent to which orthodox human capital researchers have paid little attention to the psychological processes and mechanisms that lead to human capital effects. This observation is with respect to the following aspects: acquisition and transfer of human capital. Acquisition and transfer of human capital refers to the transformation from experience to knowledge and skills. Experience is not equated with knowledge because it may or may not lead to increased knowledge and skills (Sonntag & Freeze, 2002)

Transfer of human capital concerns itself with the application of knowledge acquired in one situation to another (Housen & Nelson, 2005). Human capital has to be successfully transferred to the business owners' situation to increase success. Educational psychologists maintains that successful transfer of human capital is easier in situations where new knowledge is similar to the task that need to be performed (Unger et al. (2011). According to this differentiation, central and core to the heart of the matter is transformation, application, knowledge improvement, and task-related human capital.

In the third place, there are theoretical arguments that dissect the human capital and success relationship. Cassa (2006); Can˜ibano; and Marr (2005), reason that individuals in entrepreneurship ventures who have invested more in human capital, strive for growth and more profits than those with lower investments, because higher compensation for their investment is expected. Opportunity recognition is one aspect of Entrepreneurial Self-efficacy. Shane and Venkatraman (2000); Chandler & Hanks (1994) argue that the human capital attribute, such as prior knowledge, increases the capabilities and alertness of owners to perform generic entrepreneurial tasks of discovering and exploiting business opportunities. Baum et al. (2001); Frese et al. (2007) pinpoint the positive relationship that exists between human capital, planning and venture strategy, which in turn, impacts success positively. In terms of Bush, et al. (2001), knowledge is for acquiring utilitarian

resources, such as financial and physical capital, deemed a major critical constraint by many entrepreneurial firms. Hunter & Ackerman (2001) regard human capital as a prerequisite for further learning that assists in the accumulation of new knowledge. The moment an entrepreneur accumulates new knowledge, innovation is then taking place as analysed by Venter, Urban and Rwigema (2007).

Finally, while the traditional analysis of human capital has been waning and dwindled over time; context as a moderator of the human capital-success relationship was becoming a famous meta-analytical approach to understanding human capital dimensions. In terms of contingency theory, Rauch et al, (2005), postulate that the predication of performance is higher if predictors are correctly aligned with certain key variables, such as industry conditions and organisational processes. However, Reynolds et al. (2002), hold that knowledge and valid information reduce uncertainty associated with innovation and dynamic environments as well as the creation of competitive advantage [particularly in the developing economies where this study places much emphasis.]. There are noted different measures of success, also emanating from the conventional study of human capital. As a multidimensional construct, according to Combs, et al. (2005), three common types of performances aligned with success are given cited as financial (profitability), operational (growth) and the size of the firm.

2.3 The influence of human capital factors on entrepreneurial success

Different theories of entrepreneurship, from diverse backgrounds and economies, agree on the value which human capital plays in developing a potential and successful entrepreneur. Quoted in Martin, et al. (2013: p. 212); Shane and Venkataraman (2000), & Kurato (2005), assert that entrepreneurship education and training (EET) is growing rapidly in tertiary institutions throughout the world; and governments are supporting this directly and indirectly through funding major investments to potential entrepreneurs in order to derive improved economic growth and eliminate unemployment.

However, Unger et al. (2011) argues as well from a theoretical perspective of understanding human capital influence by revealing that those entrepreneurs who have invested more in human capital are likely to strive for more growth and profits in their business compared to individuals who have invested less in human capital investments. The typical investments referred to in this context is education, experience, and a significant amount of knowledge.

In the context of this research, it was established that most street vendors do not need solid education to start a new venture, but start-up capital and a corner in the city, town and village streets. In terms of frequency analysis, 9, 6% indicated the necessity and relevance of qualifications prior to starting a successful business. This correlates with the 29% of the respondents which indicated the less value attached to qualifications. Majority of the respondents indicated that the poverty situations in which they find themselves in becomes the drive for establishing small business ventures. Regardless of the low percent of respondents who are not in support of qualifications as useful route to success, the study has established the value which basic education can assist small businesses in managing the ventures as well as taking calculated risks (Alice de Koning., 2003). The challenge which most respondents have cited is, however, the access to education.

According to the findings, 11, 2% of the respondents have no schooling, 15, 2% dropped out, and only 21% have some high school certificates. Unfortunately 4% of the entire respondents have a bachelor's degree from university. Almost all the respondents with a degree obtained a non-relevant qualification – non-business related. The same applied to industry experience. The results from part analysis shows that the relationship between Entrepreneurial Success - Innovation and Work experience ($\beta = 0.02$, $t=0.473$, p-value = 0.636) is not significant since the p-value was greater than 0.05. Consequently, work experience is not positively related to entrepreneurial success. According to the research results, only 3% of the respondents have little experience across the major fields of business like marketing, finance, production and other. This implies that almost 97% of the respondents do not have some related industry experience. This validate the

hypothesis which infers the negative relationship between industry experience and entrepreneurial success.

The study acknowledges the effort of various researchers who have strongly argued in favour of this paradigm. It is argued that the entrepreneurial success relationship is higher for the outcomes of human capital investments than for human capital investments. In this case, human capital is regarded as an indirect indicator of human capital, while knowledge and skills are direct indicators of human capital (Unger, et al. 2011). In this case, investment without outcomes may otherwise prove futile.

The success relationship is based on the outcomes of the business venture. It is worth mentioning that in terms of Sarasvathy (2008), effectuation becomes an inevitable behavioural factor determining entrepreneurial success. At the same time, the psychology of entrepreneurial behavior emerges. The construct of self-efficacy is then entangled to this paradigm. Covin et al, (2006) further validates the suggestion made by various researchers with regard to the magnitude to which organisational processes influence strategic decisions taken by entrepreneurs. The whole process of entrepreneurial orientation (EO) also becomes entangled in the psychology of entrepreneurial activities to demonstrate how success is linked to the conceptualisation of EO (See figure 2.1). Critical variables of interest in the study in this regard is innovation, risk taking, proactiveness, autonomy, profitability, growth, and size of the enterprise.

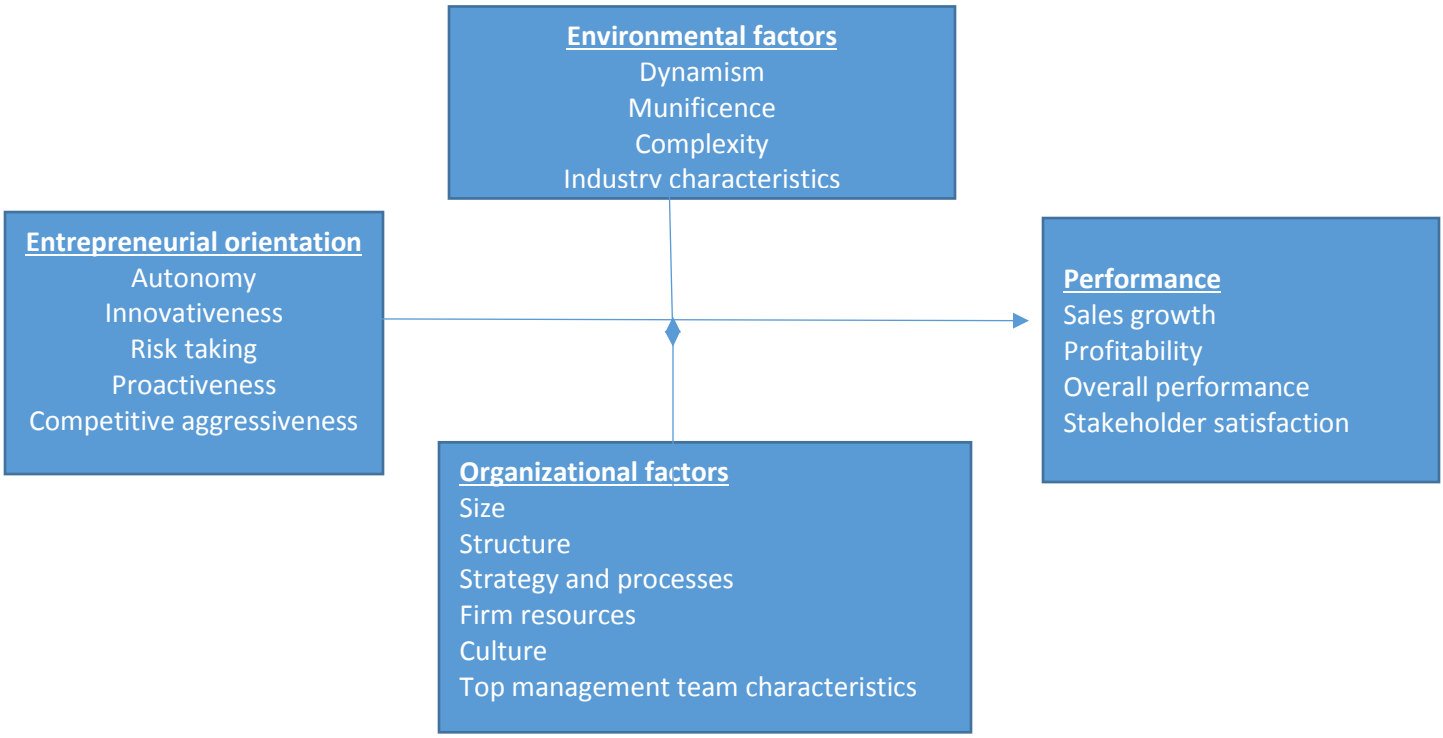


Figure 2.1: Conceptual framework of Entrepreneurial Orientation

Source: Lumpkin & Des (2005)

Bandura (2001) points out that a motivational construct which influences individual choice, goals, emotional, reactions, effort copying and persistence is central to the construct of self-efficacy. It cannot be underestimated that the existing literature study of entrepreneurship did not consider a moderator approach to study the effects of human capital on success/performance. Although there seems to be radical research on the antithesis position refuting the positive relationship between human capital and success, a positive view is maintained throughout this study. One of the radical scholars includes, Oosterbeek, et al. (2010) who found a negative relations between education, knowledge, skills, self-efficacy and entrepreneurial intentions (Martin, 2013).

In terms of the findings, it has been established that the majority of the respondents do possess some psychological variables in terms of self-efficacy and entrepreneurial

orientation (EO). Although the percentages of these variables seem low, the fact that some entrepreneurial initiatives have been embarked on signify that majority of the vendors are risk takes who can recognize and exploit opportunities on a limited scale.
On aggregate, the Squared Multiple Correlations for the three major variables show that education, knowledge and work experience explains 11.3% of financial control, 2% of innovation, 0.9% of variation in Risk Taking, 0.7% of opportunity recognition and 0.3% of Management. Each construct is discussed separately on the subsequent paragraphs.

2.3.1 Education

Kongo (2014) & Barreira (2004) hold strongly that education is a component of human capital. However, Davidson and Honig (2003) quoted in Venter, Urban and Rwigema (2008) theorized that education is an investment that yields higher wage compensation in return for an individual's variation of skills training and experience. With regard to these claims, a lesson can be drawn from the international statistics supporting education as a potential driver of entrepreneurial success. In high-income countries, such as the United States of America, the United Kingdom and Australia, at least 57% of entrepreneurs have a post-secondary education, as compared to the status of poor countries with 23% (Venter, Urban & Rwigema, 2008).

In the South African context where informal traders operate, a low percentage of informal entrepreneurs have formal qualifications. The research findings reveal that only 9% of the respondents have bachelor's degrees, with postgraduate qualifications dropping down to 4, 6%. At least 5, 6 % have diplomas and 11, 2% did not attend school. However, 165 of the respondents have certificates, the majority of which is not related to entrepreneurial education or business management. This implies that South Africans are still lagging behind in terms of attaining relevant qualifications to aid enterprise development.

Based on research findings by Barreira and Urban (2007), the international example cited above may equally apply in the South African context in terms of exposure to an

entrepreneurial intervention. Whether an entrepreneur is in or out of the country's spatial zones, it is established without doubt that there is a relationship between entrepreneurial success and education even within the context of the informal economy. In terms of Dickson, Solomon & Weaver (2008), similar relations are derived from a conclusion that: in both developing and industrialized countries there is evidence to support a positive and significant relationship between the level of general education and entrepreneurial performance, whether performance is measured as growth, profits or earning power of the entrepreneur".

Relationships between the two variables are forged as follows:

First, formal education is deemed as one component of human capital that may assist in the accumulation of explicit knowledge that may provide skills useful to entrepreneurs. Second, empirical research has demonstrated a range of results regarding the relationship between education, knowledge, entrepreneurship and success, with education frequently producing nonlinear effects in supporting the probability of becoming an entrepreneur, or in achieving success (Davidson & Honig, 2003).

In the normal cause of enterprising as a process, some enterprises fail, whereas some succeed on a proportional basis. From the successful viewpoint, successful firms spent more time planning (237) hours) than unsuccessful firms (85 hours), employees with diversified skills and abilities, undertake market research, emphasize high levels of communication supported by strong networks and or social capital (Sorensen and Chang, 2006). Enterprise failure is one of those challenges faced by large and small businesses world-wide. Upon careful scrutiny of the above elements of a successful entrepreneur, it is revealed that without proper educational qualifications, efficient planning will not take place. Upon careful scrutiny of the research findings, 36, 5% of informal traders are challenged by financial sourcing, whereas 32% feel threatened by non-possession of proper qualifications.

Also, without some entrepreneurial education, market research, sound communication, and skills diversity will not appear. During the process of data collection, respondents were asked whether education is relevant in assisting enterprise development and success. On aggregate, this research indicate that 71, 5% of the respondents regard education as an instrument with which success can be enhanced.

At the opposite extreme of business failure, fewer entrepreneurs without proper education have been recorded as successful. According to research findings, 29% of the respondents indicate that education is not a relevant factor to determine the success of a business enterprise.

On the other hand, the results of the analysis performed by Sudarsanam and Sorwar (2005) reveal that the relative profit tends to be high when an entrepreneur has more education and experience in the line of business. However, the profitability tends to be low when the entrepreneur has only start-up, managerial and high-growth experience without an educational background. According to the research results, the profit percentages are low for most street vendors. Approximately 68, 1% earn between the threshold of R20 - R60 000 per annum as profit share. This is coupled with lack of business skill and training as postulated by Venter, et al. (2008). A lower number of respondents with undergraduate and postgraduate qualifications share the remaining low percent earning between R60 - R100 000 profits per annum and therefore supporting the claim with regard to the role education plays in developing entrepreneurial talent.

It was further hypothesized by Peterman and Kennedy (2001) & Unger et al. (2011), that "the relationship between years of formal education and success of the self-employed, as well as the general population will be positive and significant and was quantitatively supported using the “Beta” coefficients in a “Probit” regression model, (Unger et al. (2011), indicating that self-employment and wage and salaried earnings increase significantly for each year of education". In order to expand the above suppositions, the researchers understand this effect at both macro and micro levels. In this case, job

creation, profitability and market share and penetration are famous terms related to the former, whereas creative spirit, increased entrepreneurial awareness and contribution to the special qualities of an entrepreneur all relate to the latter.

In order to strengthen the above discourse, education also plays a major role across the genders. A number of studies have found that, for men, returning to education is conditional on both the industry and higher levels of education, such as college or graduate studies, whereas for female entrepreneurs, education seems to be particularly important (Honig, 2003). However, Unger et al. (2011), Peterson and Kennedy (2001) have found that Self-employed entrepreneurs have more years of formal education than those who do not work for themselves; and it was confirmed with the years of education for the self-employed being 14.57 years for all workers, 14.71 years for males, and 14.13 years for female workers. Wage and salaried workers came in nearly one full year lower with: 13.58 years for all worked, 13.73 for male workers, and 13.40 for female workers.

Entrepreneurship education has been proven to play a significant role among the graduate entrepreneurs and/or youth in the world (South Africa inclusive). In terms of Matlay (2006) and Sobel (2008), it was established that the primary variable in question is the rate of self-employment among those aged 16-25 years and 16-30 for robustness sake. All self-employment data was reported in the 2000 census. The full sample included 2171 country level observation for self-employed entrepreneurs between the ages 16-25 and 2543 observations for workers between the ages of 16-30. In terms of the findings, the empirical results suggest that education programs increase the rate of youth entrepreneurship, the results of which also hold some correlation for both age groups 16-25 and 16-30 - incorporated and non-incorporated respectively (Sobel, 2008). Studying growth and profitability as part of entrepreneurship is strongly linked to performance and success factors.

The study also discovered the influence of proper education with regard to these variables which is discussed separately. In this scenario, Lee and Tsang (2001), Peterman and Kennedy (2003) postulate that education level is positively related to profitability rather

than venture growth. In a study of 48 new start-up firms in Korea, education was found to be only positively correlated with profitability, but not with growth" (Lee and Tsang, 2001).

However, in spite of the contradictory findings, Lee and Tsang (2001) tend to believe that, in general, education has a positive impact on the growth of a firm because it equips an individual with analytical and technical skills, which are essential for managing a business, in the given context of the informal economy - which directs this study,

2.3.2 Industry experience

The concept of industry experience is often treated as an equivalent vocabulary of work experience. Experience was included as a variable because of its close tie to education. Unger et al. (2011) define work experience as the number of years an individual has been able to work after completing his or her education. Two assumptions upon which this variable must depend are (1) most people will have spent the time since completing their education in productive pursuits, either employed or self-employed, and (2) people tend to learn through those productive pursuits.

The first assumption analysed by researchers is purely related to the economic concept of trade-off and opportunity cost (McConnell, Bruce & van Rensburg (2011). In terms of Barreira (2004); citing Baum, et al, (2001), the aspect of work experience stretches to include technical and industry specific competencies, prior knowledge, whereby formal education coupled with training brings about the necessary experience in order to integrate knowledge. In terms of the research results, for example, most informal entrepreneurs who formed a large portion of the respondents do not have much of industry experience. Respondents with marketing experience for 1-3 years is at 3%. However, respondents with some finance background is at 5% and have some 1-3 years' experience. This low percentage applies equally to production, operations, and technology and business law skills. Research reveals various components of work experience distinguished in terms of lessons derived from Chinese experience.

Generally speaking, an entrepreneur's experience consists of three main components: entrepreneurial, industrial and managerial. Entrepreneurial experience refers to the number of previous new venture involvements and the level of the management role played in such ventures. Industrial experience refers to experience in the industry, in which the venture is to be found. Managerial experience is the total experience in management regardless of the industry (Lee & Tsang (2001). In the case of industrial experience, it is logical to associate the concept of intrapreneurship as part of the component.

Intrapreneurship is thus the practice of innovation by developing new products, processes or services while one is part of the organization (Venter, Urban & Rwigwema, 2008,). The concept of revitalization embedded explicitly, implies 'experience which the venture is in' as analysed above. It is unfortunate that most small business within the informal economy are not involved in large scale innovative processes. Consequently, the scoring with regard to innovation is low, with 65% of respondents either agreeing or disagreeing to possessing such quality. Although the other remaining percent agree fully or partially to innovation, in practice chances are slim that such entrepreneurs can be involved in the process as it is often a corporate entrepreneurship practice.

In terms of the typical profile of working women emabarked on entrepreneurship, Neidermeyer and Edelman (2008) established that at least more than three quarters of the entrepreneurs acquired work experience before they started their business but some had never worked before. By implication, the probability of success to these women might be higher than 50%, given the amount of industry-specific experience accumulated.

Furthering the argument, managerial and industrial experience can be analysed from another angle. Peterman & Kennedy (2003) analyzed that an entrepreneur's experience can influence performance positively or negatively. For example, prior experience can be a stumbling block when drastic strategic change is called for. In Lee & Tsang (2001) study, managerial experience affected performance negatively, whereas industrial experience

had a good influence on overall performance. Most studies, however, reported a positive relationship between prior experience and venture performance. For instance, (Lee & Tsang (2001). reported a positive effect from managerial experience. Robinson and McDougal (2001); Phelan and Adler (2003) have also reported a positive effect from both managerial and industrial experience. Sorenson and Chang (2006) (used the concept of 'breadth of managerial experience', which combined managerial and industrial experience, and found that combined experience had a significant effect on venture successes. Therefore, the existing evidence generally supports a positive relationship between an entrepreneur's experience and performance.

Lee and Tsang (2001); & Jo and Lee (1996) argue that experience and education is positively related to venture growth. The linkage is inferred in terms of certain personal characteristics such as extroversion, self-reliance, need for achievement, and partnerships or networks, to mention a few. The argument is based insights from the existing literature evidence, some of which has already been cited (See Figure 2.1).

Research has proved that prior experience in starting new ventures also increase the probability that a person will exploit an entrepreneurial opportunity successfully (Shane. 2000). In this case, work experience becomes an indispensable variable which may result in the success of an entrepreneur in any given context of entrepreneurial adventure. Venter, et al. (2008) refer to such experiential domains such as marketing, obtaining finance, general management and revenue generation. Categorically, a list is prescribed in terms of functional and cross-functional domains, namely; finances, and production, in terms of the former and administration, tax and law, in terms of the latter. Skills associated with each of the categories, such as financial management skills are deemed relevant criteria for the success of an entrepreneur.

The impact of managerial experience on performance has been found to be significant. Quoted in Peterman and Kennedy (2003), Phelan & Alder (2006) surveyed numerous venture capitalists and identified the more important investment decision criteria. When they examined the characteristics, which, if lacking, would lead to rejection of a potential

investment, they found that five of the ten essential factors had to do with entrepreneurs themselves. Thus, they demonstrated the venture capitalist's strong dependence on the entrepreneur's personality and experience and lesser dependence on the market, product, and strategy. It therefore appears that the high levels of managerial experience were obtained in entrepreneurial activities (Peterman & Kennedy (2003).

However, Sorensen and Chang (2006) reason that leading entrepreneur possess a broad range of managerial experiences. Peterman and Kennedy (2003), & Munish (2007) analysed success factors beyond those discussed earlier. This did not only include experience, but also a variety of experience in different functional areas and prior entrepreneurial experience. In this case, even failures is deemed an indicator of better performance emanating from experience (Munish, 2007). Team building, either within the new venture or through building a network of advisers and connections was a desirable characteristic, and added up to 'expert knowledge' as noted by Barreira (2004). Accordingly, all these dimensions add up to work experience as a significant variable.

Robinson and McDougal (2001), Unger, et al. (2011) assume that the relationship between experience and self-employment success is positive and significant, but weaker than the impact of education which was also supported. All self-employed workers (entrepreneurs) both male and female, had over two years more experience than their wage and salaried counterparts. There is a strong positive relationship between self-employment and both experience and earnings with the exception of self-employed females, whose experience did not significantly impact their earnings.

2.3.3 Knowledge

A discussion about knowledge and its constituencies is a debate within education, philosophy and psychology as interdisciplinary disciplines. In entrepreneurship research, the same argument ensues, but within the parameters and guidelines of the humanistic disciplines. Barreira (2004**)** proposed a pluralistic position towards the issue of knowledge creation. They defined entrepreneurial knowledge embracing both induction

and deduction as methods of knowledge, and acknowledged both objective reality and subjective experience as sources of knowledge, recognizing both explicit and implicit types of knowledge. On the other hand, Zoltan et al, (2009) recognizes tacit knowledge as part of the aspect. Sources of entrepreneurial knowledge are described by Barreira (2004); Minniti & Bygrave (2001) to come from three likely sources: previous work experience, advice from experts, imitation and copying.

Human capital theory views knowledge as an evolutionary process which interacts with the other factors. Unger et al. (2011) postulates that acquisition is the transformation from experience to knowledge and skills. This means that industry or work experience determines the level of knowledge which an entrepreneur can derive and apply in the venture to succeed regardless of the context of operation. It can be argued, therefore, that knowledge is an independent variable.

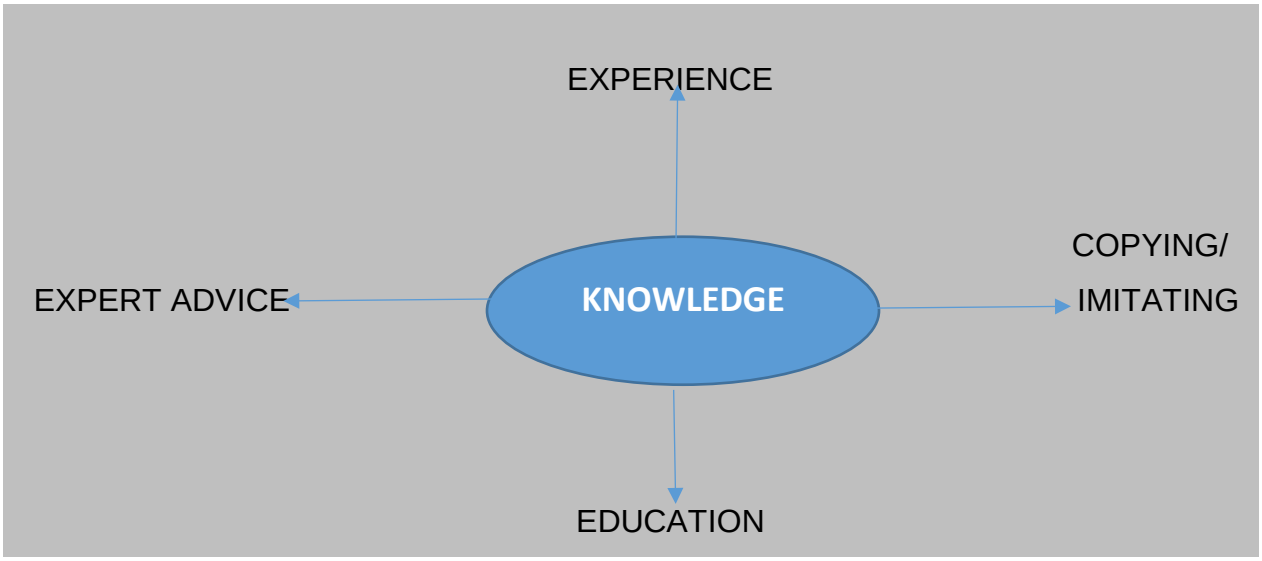


Figure 2.2: Aspects of knowledge

Source: Author's own.

De Clerc and Arenius (2006) & Venter et al (2008), emphasizes that knowledge may lead to competitive advantage and superior performance. This is a positive relation between human capital and entrepreneurial success. The evolutionary process in this regard is,

according to Venter, et al. (2008), and Minniti & Bygrave (2001): work experience, education, expert advice, imitation and copying which can be explicit (know-what) or tacit (know-how), management, technical and financial knowledge suffice as good examples.

Previous knowledge plays a critical role in intellectual performance. It assists in the integration and accumulation of new knowledge, as well as integrating and adapting to new situations (Neergaard, Ulhøi, 2003). In terms of Unger et al, (2011), Know-*what* type of knowledge consists of the explicit type of information normally conveyed in procedures, processes, formal written documents and educational institutions. Solving complex problems and making entrepreneurial decisions utilizes an interaction of both tacit and explicit knowledge, as well as social structures and belief systems. Thus, individuals may be able to increase their knowledge as a result of formal education, such as university education, informal education, such as work experience and non-formal education, such as adult education - one of the imperatives of the South African education system. In the context of this study, the respondents have scored a low level of managerial knowledge indicated by 2, 5%. It makes sense to conclude that this trend is coupled with the vendors' high levels of illiteracy as observed in the preceding sections. Nevertheless, 68% of respondents have a sound technical knowledge of the products in the market of their operation. This means that they understand their products' operation well. This finding implies that as long as informal entrepreneurs are technically wise, success will no longer be measured by educational attainment, but by the ability to recognize the opportunity and then seize the risk. The results support this implication. In terms of the findings, 84% of the respondents have the ability to recognize opportunities, while 74% are able to take calculated risks.

One microeconomic theory holds that knowledge can be diffused and spilled over during the process of its creation. According to Braunerljelm, et al. (2009), the following principles are maintained: First, instead of treating opportunities as exogenous, the economic growth theory regard them as endogenous. Second, economic growth depends on knowledge accumulation (a diffusion process).

Last, knowledge created endogenously results in knowledge spillovers, which allow entrepreneurs to identify and exploit them. In terms of this model, agents with new economic knowledge endogenously pursue the exploitation of such knowledge, implying that the existing stock of knowledge yields spillovers; and further suggests a strong relationship between such knowledge spillovers and entrepreneurial activity (Zoltan, et al., 2009).

Clerq & Arenius (2006), point that a related dimension of regarding knowledge as a crucial variable lies in the demarcation of knowledge by researchers, namely: existing and external knowledge. The endogenous and exogenous perspectives have been dealt with in the discussion of the microeconomic perspective above. The level of individuals' existing knowledge base is positively related to the likelihood to engage in business start-up activity.

According to Minniti & Bygrave (2001), human capital may be developed through formal training and education as well as work-related experiences. More generally, it has been suggested that one's human capital, defined as the level of skills and abilities, may be an important source of competitive advantage to individuals, organizations and societies (Ireland & Webb, 2007). In the context of our study, the notion of human capital pertains to existing knowledge that is potentially relevant and applicable to enterprise formation and development. In terms of the research results, what challenges most micro-entrepreneurs operating in the informal economy is competition. Statistics revealed that 36% (which is the highest in the cluster) of participants are threatened by competition which is followed by restrictive government policies rated at 24%. More specifically, it is reasoned that individuals may be more inclined to choose a career as an entrepreneur if they have the confidence to be successful in this choice, based on their current knowledge and skills, and on their exposure to others who can provide them with useful knowledge (Madsen, Neergaard, & Ulhøi, (2003).

To this effect, however, scholarship has acknowledged the role played by external knowledge in entrepreneurial activities. This is the concern of sociological philosophy,

and in our context, social entrepreneurship is inextricably bound with networking theory. Accordingly, research on social entrepreneurship is based on the knowledge base of entrepreneurship (Urban, 2008; Wiklund & Shephered, 2003).

A central proposition in this research is that contact with others may constitute, or lead to, a rich external knowledge that can be used for the good of the individual or the collective. For instance, at the individual level, Casson & Giusta (2007) point that social capital has been defined as the resources embedded in one's relationships with others, and researchers have examined the role of weak versus strong ties (relational embeddedness) and dense versus sparse networks (structural embeddedness). Davidsson & Honig (2003) has on the other hand argued, and empirically found, that networking may foster new business activity through membership in multiple organizations, because this membership increases one's exposure to useful sources of information.

2.3.4 Entrepreneurial success

This section provides an initial discussion of theoretical work followed by the informal sector application where each individual construct is later checked against the practical outcomes of the study. Measuring entrepreneurial success may sound a challenging task like perhaps defining the construct itself. Also when measuring entrepreneurial success, the effectuation construct may equally apply to the construct of self-efficacy, which is behavioural and personality oriented. Venter, et al. (2008), argues that self-efficacy (as compatible to the entrepreneurial success measure), refers to the individual's convictions about their abilities, competencies and, consequently, an important set of cognitions is self-efficacy or beliefs about one's capacity to perform at designated levels. Similarly to the stated entrepreneurial success factors, the following variables are deemed high ESE in terms of Venter, et al. (2008) & Sarasvathy (2008). Assessment of the environment more as opportunistic, rather than fraught with risks; believe in their ability to influence achievement of goals; perceive a low probability of failure. Having been proved reliable and valid, these variables have been used by researchers as good indicators of ESE (and

are thus adapted to measure Entrepreneurial success in this study), namely; Opportunity recognition, innovation, management, risk taking, and financial control.

The success factors as proposed above are interwoven into the extant approaches suggested by various researchers. In terms of the framework provided by Munish (2007); Sorenseg & Chang, 2006) provide four common approaches are described, viz; the individual, the environment, the process and the organisation. In more detail, approaches that concern the individual can be divided into two types of variables: human capital and psychological individual differences. As outlined previously in the study, human capital variables include knowledge, education, skills and experience (Bosma, et al., 2005). Psychological individual differences concern differences in personality characteristics, cognitive characteristics, and motivational patterns. Research on personality characteristics relates to dispositions such as risk-taking, locus of control, and need for achievement to the emergence and the success of entrepreneurship
(Gelderen, Thurik, & Bosma, 2005)

Freuch & Rauch (2000) present a general model of entrepreneurial success which is supported by the following assumption that there is no success without actions. Actions are mainly determined by the goals and by the strategies. Thus, the concept of action is central to this model and the strategies and tactics of actions is the bottleneck through which all of entrepreneurial success is accomplished or not accomplished". This concurs with the findings by Barreira (2004) & Venter, et al. (2008). In terms of the findings, entrepreneurial success depends largely on these skills namely marketing, financial management/bookkeeping, operational, human resources, legal, communication, political and strategic planning, leadership and persuasive skills and the skills needed to set up a proper business plan.

Determining entrepreneurial success can also be understood from the genetic approach. Thorough research has been conducted in this regard whereby an enquiry was made with respect to who performs better across genders; thus, a quantitative analysis of who is more successful between male and female entrepreneurs. This is coupled with findings

that there is a higher prevalence of male entrepreneurship than that for women given similar backgrounds (Langowitz & Minniti (2007). Even among a successful group of small business owners, women generate lower sales volumes and derive less income than their male counterparts (Paludi, 2008).

The gender difference is, Zhang (2009), robust across cultures and their national boundaries. For example, among Israeli working women, approximately 5, 1% are self-employed-entrepreneurs, compared to 15% of Israeli working men. Higher prevalence of men's entrepreneurship was also found in Singapore. South Africa is not an exception to this international trend. Viljoen (2006) cites Scarborough & Zimmerer (2000) to indicate the extent to which women are discriminated against in the workforce. In terms of this study, women represent more than 50% of the South African population, but own approximately 33% of existing businesses. Among other challenges, the study conducted by Viljoen (2001) identifies special problems in obtaining finance such as lack of collateral, no credit record, discrimination against women, inability to qualify for loans due to stringent bank criteria, and lack of business and management experience. In his discourse, Nissanke (2001) has emphasized the magnitude to which these common challenges suffocate small, and medium size businesses, including street vendors operating within the informal economy.

Zhang et al. (2009) have discovered that a large number of studies demonstrate the extent to which women are discriminated against at various stages of entrepreneurship practice. This is deemed a common phenomenon believed to have been observed even in large companies when women managers were evaluated. In addition, the vast majority of research suggest that women from most races face more difficulties than their male counterparts in the venturing process (Nijkamp, et al., 2003).

Contrasting women's challenges between the two genders, the following findings were observed: 1) women entrepreneurs are less likely to seek start-up capital and angel funding (Becker-Blease & Sohl, 2007). 2) Women entrepreneurs have less financial and human capital invested in their enterprises (Lowrey, 2006 & Paludi, 2003). 3) Women

entrepreneurs have less access to business clients beyond their traditional household's clientele (Bates, 2002). 4) Women entrepreneurs are asked more collateral requirements or charged higher interest rates by financial organizations (Frasers, 2005). A good exceptional example to elucidate this phenomenon is the attempt by the Indian banker, Yunus, who was successful in averting the plight of women in Bangladesh. Yunus conceived of the Grameen Bank, and demonstrated that it was possible to lend to the poor (in particular women) without collateral" (Todaro, et al., 2009).

As a result of the above findings, several large-scale studies on multiple nations (including South Africa), revealed that female entrepreneurs are less successful in terms of objective success measures including lower sales, low growth and lower profits (Smalbone, et al., 2004). Other arguments advanced by Marlow & Patton (2005); Purcell (2002) point to gender stereotypes and environmental influences contributing to this inequality.
Regardless of the contribution made by the 'character approach' to entrepreneurial success, some scholars pose a critical challenge to the study which is made as a remark in passing - perhaps to aid future research into the study.

Wiklund, Davidsson, & Federic (2003) critique that the problem of the attitude approach theory in entrepreneurship may pose the following fundamental challenges: (1) research methodologies based on the personality approach were not developed for or specifically intended to be used in measuring entrepreneurship. They were borrowed from psychology and applied to the area of entrepreneurship, sometimes inappropriately and often ineffectively (Mat & Mansor, 2010) and in all cases, they carried with them the theoretical and metatheoretical assumptions of the theory from which they came. Yet it can be argued that these theories have played a critical role in revealing the value of personal characters (Haynie & Shephered, 2009) in developing entrepreneurial spirit; and of course through proper application

The following factors form part of the conceptual model and are discussed to demonstrate the relationship between Human Capital and Entrepreneurial Success.

2.3.4.1 Opportunity recognition

A successful entrepreneur is determined by his/her ability of identifying and selecting the right opportunities for new enterprises. There are several definitions of opportunity recognition in literature. Perhaps the word "opportunity" should be defined prior to opportunity recognition. According to Ardichvilia, Cardozob, & Rayc (2000), an opportunity may be the chance to meet a market need (or interest or want) through a creative combination of resources to deliver superior value**.** Citing Schumpeter, (2003) Ardichvilia, Cardozob, & Rayc (2000) say that opportunities describe a range of phenomena that begin and become more developed through time.

Following a resource based theory (Firkin, 2000; Alvareza & Busenitz (2001), entrepreneurial recognition is defined as the recognition of opportunities and opportunity seeking behaviour as a resource. Therefore, it follows that, what most literature in entrepreneurship calls ‘‘opportunity recognition’’ appears to include three distinct processes: (1) sensing or perceiving market needs and/or underemployed resources, (2) recognizing or discovering a ‘‘fit’’ between particular market needs and specified resources, and (3) creating a new ‘‘fit’’ between heretofore separate needs and resources in the form of a business concept (De Koning, 2003). These processes represent, respectively, perception, discovery, and creation (Ardichvilia, Cardozob, and Rayc, 2000). This process is embedded in the proposed theoretical units of theory of Dubin as enlisted by De koning, (2003) namely: opportunity, opportunity development, opportunity recognition, perception, discovery, opportunity evaluation, social networks; personality traits, including risk-taking, optimism and self-efficacy, and creativity.

The concept of entrepreneurial alertness cannot be divorced from the parameters of defining opportunity recognition. Accordingly to schorlarly findings, the term ‘‘alertness’’ was used as early as the 1970s by Kirzner (Kirzenian system) to explain entrepreneurial recognition of opportunities. Given the widespread usage of the concept, Ardichvilia, Cardozob & Ray (2003) argued that any recognition of opportunity by a prospective entrepreneur is preceded by a state of heightened alertness to information. They called

this state entrepreneurial awareness (EA), and defined EA as ‘‘a propensity to notice and be sensitive to information about objects, incidents, and patterns of behavior in the environment, with special sensitivity to maker and user problems, unmet needs and interests, and novel combinations of resources (Klein, 2008; Ardichvilia, Cardozob, & Rayc 2003).

Numerous models of opportunity recognition and/or development have been presented in recent years. These models are based on different assumptions borrowed from a range of disciplines, ranging from cognitive psychology to economics looks at the cognitive processes involved in opportunity recognition) on the social study network context (De koning, 2003), while Shane (2003), Ardichvilia, Cardozob, & Rayc 2000).
focus on the prior knowledge and experience necessary for successful recognition.

In 1978, Dubin developed a theory building framework to propose a theory of the opportunity identification process is shown in Figure 2.2.

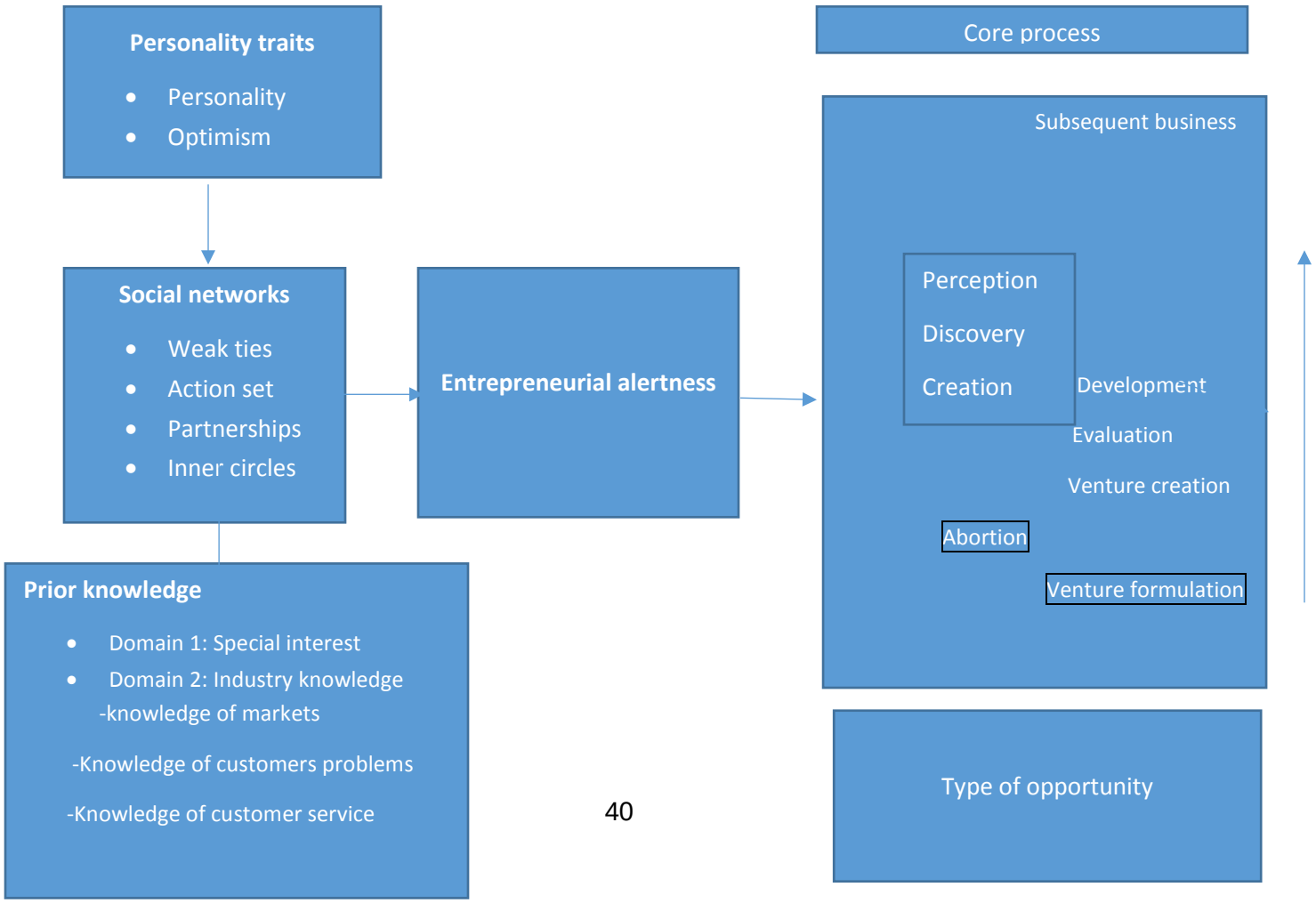


Figure 2.3: The Dubin model and units for the opportunity identification and development theory.
Source: Ardichvilia, Cardozob, and Ray (2003)

Dubin provides a comprehensive methodology for theory building that is particularly relevant for applied fields such as management, marketing, and organisation theory. The eight phases of Dubin's theory building are: (1) units (i.e., concepts) of the theory, (2) laws of interaction (among the concepts), (3) boundaries of the theory (the boundaries within which the theory is expected to apply), (4) system states of the theory (conditions under which the theory is operative), (5) propositions of the theory (logical deductions about the theory in operation), (6) empirical indicators (empirical measures used to make the propositions testable), (7) hypotheses (statements about the predicted values and relationships among the units), and (8) research (the empirical test of the predicted values and relationships (Ardichvilia, et al., 2000).

However, the concept of opportunity recognition has often been associated with the self-efficacy construct which demonstrates a close relationship between psychological processes and entrepreneurial success. According to Krueger, et al. Self-Efficacy and Entrepreneurial Behaviour are linked to initiating and persisting at behaviour under uncertainty, to setting higher goals, and reducing threat-rigidity and learned helplessness .This is important because opportunity recognition depends on situational perceptions of controllability and self-efficacy (Krueger, et al., 2000).

Alongside the concept of opportunity recognition and behavioural theories, other models are influential in revealing the extent to which this concept is linked to individual intentions. Krueger, Reilly & Carsrud (2000) analysed that Shapero model of the 'Entrepreneurial event' (SEE) is implicitly an intention model, specific to the domain of entrepreneurship. According to this model, intentions to start a business derive from perceptions of desirability and feasibility and from a propensity to act upon opportunities. Krueger, Reilly & Carsrud (2000) assumes that inertia guides human behaviour until something interrupts or "displaces" that inertia. Figure 2.3 indicates the development of the process of

opportunity recognition as part of a theory-driven model of intentions, and self-efficacy construct.

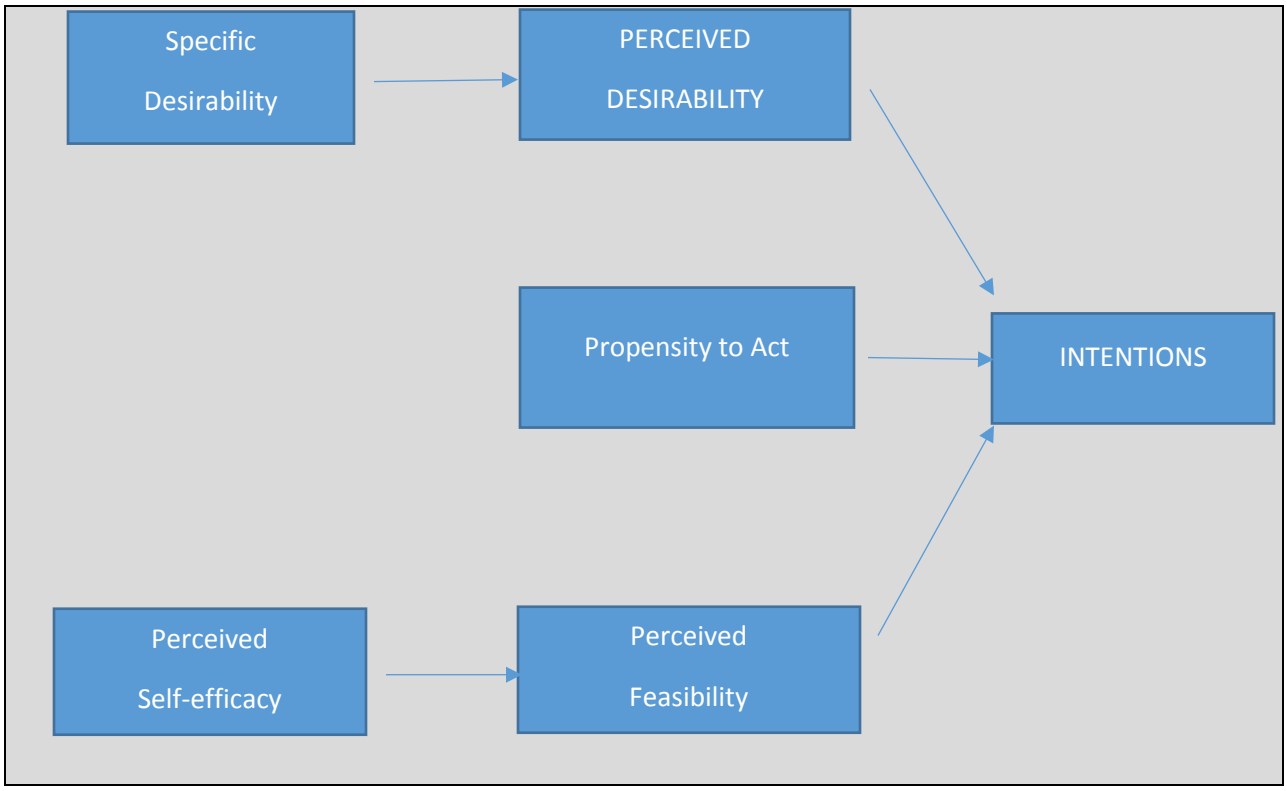


Figure 2.4: Shapero-Kruger Model

Source: (Krueger, et al., 2000)

According to the research findings, the Squared Multiple Correlations shows that education, knowledge and work experience explains 0.7% of opportunity recognition in terms of the ability of the respondents to set and meet market goals, set and meet sales goals, establishing a position in the market place and conducting market analysis. The results thus show the negative relation between success and this variable although it has been argued that some form of recognizing opportunities has been noted among informal traders in Limpopo.

2.3.4.2 Innovation

Most scholars agree that innovation is an influential component of Entrepreneurial Orientation (E0). In various attempts to define the concept, innovativeness reflects a firm's tendency to engage in and support new ideas, novelty, experimentation, and creative processes that may result in new products, services, or technological processes (Harms et al, 2010). It is thus characterized by a basic willingness to depart from existing technologies or practices and venture beyond the current state of the art as noticed by Harms, et al (2010).

There are different categories of innovation. Drucker (2014) provide various classes of innovation, for example: product-market and technological innovation. Contemporary research puts more emphasis on technological innovation "which consists primarily of product and process development, engineering, research, and emphasis on technical expertise and industry knowledge (Gans & Sterns, 2003). However, product-market innovativeness "suggests an emphasis on product design, market research, and advertising and promotion (Harms, 2010; Gans and Sterns (2003).

In terms of the given conceptual framework and classification, innovation can as well be quantified to suit some research requirements. Versloot and van Praag (2007) argue that to quantify a firm's innovativeness, researchers have focused on, firstly, the firm's Research and development expenditures (R & D); second on the number of patents it produces, and third, the number of products or technologies introduced. Looking into the assessment of innovativeness of firms, it has been established by research that small businesses tend to assess their own innovative behaviour as a less important contributor to economic value creation (Versloot & van Praag, 2007).

The performance which innovation provides for small business entrepreneurs is regarded as less or declining on a pro rata scale. According to observations by Versloot & van Praag (2007) supported by Kortun & Lerner (2000), the likelihood of turning innovations

into high volume sales is lower for entrepreneurs; hence investment in innovation is deemed no more or less if it exists (Harms, 2010).

The Squared Multiple Correlations reveals that Education, Knowledge and work experience explains 2% of innovation in terms of the respondents' ability to develop new business ideas, products and services, find new markets and territories, and develop new methods of production or systems. With regard to this variable, majority of vendors are reported to be good at finding new markets. This is the most applicable aspect among numerous informal traders in Limpopo. The rest of the aspects are not necessarily applied as they impact much on big companies involved in the production of goods and services. As a result, innovation does not have a positive relationship with entrepreneurial success. In terms of the theoretical suppositions above, most informal traders (in the context of this research) are not involved in direct product innovation but the promotion, selling and marketing of the products already innovated by others (Drucker, 2014 & Harms (2010). Consequently, innovation has little or no direct positive effect to entrepreneurial success.

2.3.4.3 Risk taking

A critical point of departure in terms of the scholarly quest to understand risk taking is that the risk taking concept "is a quality that is frequently used to describe entrepreneurship as a discipline" (Dai, 2014). According to Cantillon, the father of entrepreneurship, the principal factors that separate entrepreneurship from hired employees is the uncertainty and riskiness of self-employment. This separation is that which has brought about the professed quality and implies the fact that there is no successful enterprise which cannot take risk (Smith, 2010). Accordingly, risk is part of the daily business process. Different meanings of risks have been given from a contextual perspective.

In a strategic context, Lumpkin & Des (2005) identify three types of strategic risk: (a) venturing into the unknown, (b) committing a relatively large portion of assets, and (c) borrowing heavily. Venturing into the unknown, as the first definition, is the most common applied in entrepreneurship literature. This type of uncertainty is characterized by aspects

such as personal risk, social risk, or psychological risk (Smith, 2010). In the context of financial analysis, risk is used in the situation of the familiar risk-return trade-off, where it refers specifically to the probability of a loss, costly failures or negative outcome (Sudarsanam, Sorwar & Marr, 2005).

Like other variables which can be measured during research endeavors, risk taking can be measured through various methods of accounting for its measure. In their scientific attempt to measure human and intellectual capital (Marr, 2005) focused on risk propensity as one measurement instrument, which he defined as perceived probability of receiving the rewards associated with the successful outcome of a risky situation. However, in their model of risk behavior, Lumpkin and Des, (2005) distinguished between risk perceptions, risk preferences, and risk propensity, and thus regard risk propensity as a mediator between risk preferences and risk behavior, as seen in Figure 2.3.

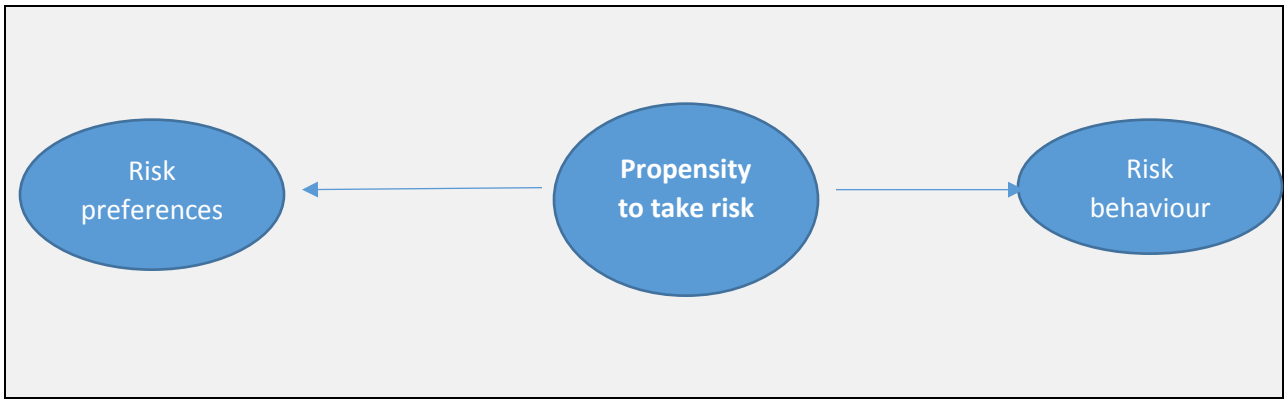


Figure 2.5: Risk propensity as a mediator of risk preferences and risk behavior

Source: Authors' own

The argument advanced in defense of the mediation between different risk measures is that "the general desire to avoid or to pursue, (which is risk preferences), does not determine specific risk behaviors, but rather it affects the general likelihood of a person behaving in more or less risky ways (Rauch et al, 2009). Other factors are considered important in predicting risk taking, such as framing the risk problem, results of the past risk taking, and the ability to perform under risky conditions. Smith, 2010, Sudarsanam, Sorwar, & Marr, 2005) have noted that numerous investigators gave reported

inconsistencies in their risk-taking propensity of entrepreneurs who engage in new entry. Nevertheless, observe an equivocal relationship between risk taking and entrepreneurial success. It must therefore be considered critically by prospective researchers that most studies of entrepreneurial related risk taking investigate individual entrepreneurs rather than firms (Lumpkin & Des, 2009)

Applicably, it has been found that in terms of this variable, The Squared Multiple Correlations show that Education, Knowledge and work experience explain 0.9% of variation in Risk Taking in terms of the respondents' ability to take calculated risk, feel comfortable with uncertainty and risk, take responsibility for ideas and decisions, and work under pressure and conflict. During the interviews, the street vendors of Tshakhuma in Vhembe District, it was established that the majority of fruits and vegetable sellers work for 24 hours shifts particularly during festive seasons. Currently the market is open for the same hours each day in a week. This means that they are able to work under pressure – a criteria stipulated in various research studies.

2.3.4.4 Management

There are several definitions of management as a concept that are also applied in entrepreneurship. Olum (2004) define management as the process of designing and maintaining an environment in which individuals, working together in groups, efficiently accomplish selected aims. Management gurus such as Drucker (2005) define management as firstly, organization and coordination of the activities of a business in order to achieve defined objectives, and secondly as directors and managers who have the power and responsibility to make decisions and oversee an enterprise. In its expanded form, this basic definition means several things. According to this definition, managers execute the function of planning, organizing, staffing, leading, and controlling. As a process, management entails the acquisition of managerial competence, and effectiveness in the following key areas: problem solving, administration, human resource management, and organisational leadership (James, et al., 2003)

There are four types of skills which are required for effective management of an enterprise, namely: technical, human, and conceptual and design. In terms of Olum (2004), technical skill is regarded as knowledge of and proficiency in activities involving methods, processes, and procedures which involve working with tools and specific techniques. Therefore, technical skills are regarded as of great importance at the supervisory level.

There are different management theories that have evolved over time. The theories, in the form of different schools of thoughts, are discussed below:

2.3.4.5 Scientific Management School

According to Shridar (2017), and Olum (2004), the first management theory is what is popularly referred to as Frederick Taylor's Scientific Management which held that the workload would be evenly shared between the workers and management with management performing the science and instruction and the workers performing the labour, each group doing "the work for which it was best suited".
According to these researchers, Taylor's strongest positive legacy was the concept of breaking a complex task down into a number of subtasks, and optimizing the performance of the subtasks; hence, his stop-watch measured time trials. However, many critics, both historical and contemporary, have pointed out that Taylor's theories tend to "dehumanize" the workers using autocratic management, rule-of-thumb methods (Olum, 2017)

2.3.4.6 Classical Organisational Theory School

The concept of bureaucracy in management was also dominant in the works of Fayol and Weber who are prominent classical scholars
According to Olum (2017), Weber then developed a set of principles for an "ideal" bureaucracy as follows: fixed and official jurisdictional areas, a firmly ordered hierarchy of super and subordination, management based on written records, thorough and expert training, official activity taking priority over other activities and that management of a given

organisation follows stable, knowable rules. However, Fayol believed that management had five principle roles: to forecast and plan, to organise, to command, to co-ordinate, and to control. In terms of this theory, forecasting and planning was the act of anticipating the future and acting accordingly. Fayol's five principle roles (plan, organize, command, co-ordinate, and control) of management are still actively practiced today.

2.3.4.7 Behavioural school

The key scholar under this category is Mayo. In terms of research findings, the origin of behaviorism is the human relations movement that was a result of the Hawthorne Works Experiment carried out at the Western Electric Company, in the United States of America that started in the early 1920s (1927-32). The term 'modern behaviorism' refers "to the current stage of evolution of the behavioural school of management, which gives primacy to psychological considerations but treats fulfillment of emotional needs mainly as a means of achieving other primary economic goals" Sridhar (2017, p. 10).

2.3.4.8 Other Management Theories

The other management theories are the product of Deming and McGregor. Drucker (2005), mention that Deming is the founder of modern quality management and is regarded by the Japanese as the key influence in their postwar economic miracle. He postulated several assumptions listed as follows: create constancy of purpose for continual improvement of products and service; cease dependence on mass inspection; build quality along with price; improve constantly and every process involves planning, production, and service; institute modern methods of training on-the-job including management; adopt and institute leadership aimed at helping people to do a better job; drive out fear, encourage effective two-way communication; break down barriers between departments and staff areas; eliminate exhortations for the workforce – they only create adversarial relationships; eliminate quotas and numerical targets; remove barriers to pride of workmanship, including annual appraisals and Management by Objectives; encourage education and self-improvement for everyone; and define top management's permanent

commitment to ever-improving quality and productivity and their obligation to implement all these principles.

On the other hand, Kopelman, Prottas & Davis (2008) discussed management ideas of McGregor as contained in “Theory X” and “Theory Y”. Using human behavior research, he noted that the way an organisation runs, depends on the beliefs of its managers. This theory gives a negative view of human behavior and management that was considered to have dominated management theory from Fayol onwards – especially Taylorism. It also assumes that most people are basically immature, need direction and control, and are incapable of taking responsibility. They are viewed as lazy, dislike work and need a mixture of financial inducements and threat of loss of their job to make them work (‘carrot and stick’ mentality).

In its adverse form, “Theory Y”, the opposite of “Theory X”, argues that people want to fulfill themselves by seeking self-respect, self-development, and self-fulfillment at work as in life in general. The six basic assumptions for ‘Theory Y’ are: work is as natural as play or rest – the average human being does not inherently dislike work, whether work is a source of pleasure or a punishment (to be avoided) depends on nature of the work and its management. Second, effort at work need not depend on threat of punishment – if committed to objectives then self-direction and self-control is needed rather than external controls. Third, commitment to objectives is a function of the rewards associated with their achievement. Satisfaction of ego and self-actualization needs can be directed towards the objectives of the organisation. Fourth, the average human being learns, under proper conditions, not only to accept but to seek responsibility. Fifth, high degrees of imagination, ingenuity and creativity are not restricted to a narrow group, but are widely distributed in the population. Lastly, under the conditions of modern industrial life, the intellectual potentials of the average human being are being only partly utilized.

2.3.4.9 Quantitative approach to management

There is, however, one theory or approach, the quantitative approach that is hardly used or known by managers. It emerges from operations research and management sciences. It is a mathematical and statistical solution to problems using optimization models, and computer simulations. Quantitative approach is most effective for management decision-making rather than managerial behavior (Lee 2001; Chinomona, 2016).

With regard to management, this study discovers that The Squared Multiple Correlations shows that Education, Knowledge and work experience explains 0.3% of Management in terms of the respondents' competency to reduce risk and deal with uncertainty, plan strategically, establish and achieve goals and objectives, define organizational roles/responsibilities. This area is critical among small businesses. The low percentages signify the extent which education can play to improve management skills among potential street vendors in Limpopo and across the country (South Africa). Critical shortage of management skills in the country does not only affect street vendors, but big businesses also fall prey to it (Drucker, 2005). As a result the relationship in terms of providing tentative answers to the research is negative.

2.3.4.10 Financial Management and Control

Financial management is a broad, but specialized area of study which concerns itself with proper management and control of the enterprise finances. To survive and prosper, a business must satisfy its customers. It must also produce and sell products and services at a profit. In order to produce, it needs many assets— plant, equipment, offices, computers, technology, and so on. Among other decisions, the company has to decide (1) which assets to buy and (2) how to pay for them. The financial manager plays a key role in both these decisions which are decisive in nature (Beverley, et al., 2001).

According to the research findings the Squared Multiple Correlations shows that Education, Knowledge and work experience explains 11.3% of financial control in terms

of the respondents' ability to perform financial analysis, develop financial systems and control costs. It has been established that the majority of informal traders are able to control costs regardless of the poor literacy levels. Collected monies generated from sales are invested, take their children to university and colleges, and construct decent houses. However, the development of financial systems and analysis is a task far below their abilities. Consequently, the overall relationship between this variable and entrepreneurial success is deemed inverse.

2.4 CONCLUSION

In concluding this review, the theoretical background to the study has been provided, with human capital theory underpinning the study. Unger, et al. (2011) has alerted other researchers and students of entrepreneurship not to underestimate a subtle distinction between human capital investments and its outcomes - a perspective which was ignored by the extant and traditional knowledge of entrepreneurship. It is within this paradigm that context as a moderator of the human capital-success relationship became famous to describe the meta-analytical approach to understanding human capital dimensions. Scholars such as Oostebeek, et al. (2010) have taken a radical position by pinpointing an inverse relationship between human capital factors and entrepreneurial orientation and success.

With regard to education as linked to knowledge, failure and success of entrepreneurs has been proved to be dependent on the possession of proper and relevant educational qualifications. Arguments, such as those of Robinson & McDougal (2001 have supported the role played by entrepreneurial education in developing youth and graduate entrepreneurship. Work experience was limited to aspects such as technical and industry-specific competencies, and prior knowledge, noting 'failure as experience' by Phelan and Adler (2003) is a wonderful learning curve. Taking a pluralistic position to understanding knowledge, Barreira (2004) has outlined both explicit and tacit knowledge

as paramount demarcations. From a microeconomic perspective, knowledge can be diffused and spilled over during the process of its creation as revealed by Carlson, et al. (2009).

The contribution made by sociological philosophy in the context of social entrepreneurship and networking enables an entrepreneur to generate more knowledge. The constructs of self-efficacy, entrepreneurial orientation are embedded in a model of entrepreneurial success adapted from Freuch & Rauch (2000); and are often entangled with psychological aspects aimed at explaining the actual drivers of entrepreneurial initiatives. Entrepreneurial success has also been tackled from a genetic approach which highlights the robustness of gender differences across cultures and national demarcations. To this effect, it must still be held that the women majority are discriminated against at various stages of entrepreneurship. Issues of concern as discussed, revolve around financial challenges, collateral and other typical gender stereotypes.

3 CHAPTER 3: DEVELOPMENT OF HYPOTHESIS STATEMENTS AND CONCEPTUAL MODEL

3.1 INTRODUCTION

This chapter shows how the research hypotheses were developed before they were stated. It also provides and discusses the conceptual model for this study. Firstly, the development of the hypothesis for each relationship was done. This was followed by the statement of the hypothesis. The chapter also discussed the conceptual model for this study in order to guide the research strategy that was applied.

3.2 DEVELOPMENT OF HYPOTHESIS AND STATEMENT

3.2.1 Relationship between education and entrepreneurial success in the informal economy

The study established whether education is a human capital variable which determines entrepreneurial success in the South African informal economy. Dickson, Solomon and Weaver (2008); Lee and Tsang (2001); have been the advocates of growth, earnings, success and profitability due to higher levels of education.

Education was measured through various variables such as different levels of qualifications and their relevance. This research emphasised various impoverished groups from the unemployed small business operators in the informal economy in Limpopo province.

Hypothesis 1: There is a positive relationship between education and entrepreneurial success in the context of South African informal economy.

3.2.2 Relationship between industry experience and entrepreneurial success in the informal economy.

The primary objective of the study was aimed at establishing whether work experience influence the success of an entrepreneur operating within the informal sector of the South African economy. Variables such as technical and industry specific competencies, prior knowledge were measures used to achieve the objective of the enquiry. Formal education coupled with training bring about significant experience in order to integrate knowledge (Barreira (2004). The research has determined the magnitude to which work experience has some relationship with entrepreneurial success; given the context of the South African informal economy

Hypothesis 2: There is a positive relation between industry experience and entrepreneurial success in the context of the South African informal economy.

3.2.3 Relationship between knowledge and entrepreneurial success in the informal economy

The study sought to determine whether knowledge is a human factor that can influence and impact on entrepreneurial success. Chrisman (1999); Venter, et al. (2008) have cited work experience, education, expert advice, imitation and copying which can be explicit (know-what) or tacit (know-how), management, technical and financial knowledge as better examples of this dimension. In the instrument used to measure this variable, the listed aspects were strictly used to determine the validity of the supposition. The study has determined the existing relationship between knowledge, as a human capital variable, and entrepreneurial success in the informal economy of South Africa.

Hypothesis 3: There is a positive relationship between knowledge and entrepreneurial success in the context of the South African informal economy.

3.3 CONCEPTUAL MODEL

The model to the study is aimed at illustrating the relationship between human capital factors and entrepreneurial success. An empirical study of founder-managed natural food stores in Florida (USA) was conducted and reported as valid research at Florida Gulf Coast University. In their model, Founder Human Capital had two dimensions: (1) level of education and (2) industry managerial experience. The authors hypothesised that higher levels of founder education and more years of founder industry managerial experience led to better firm performance. A survey of founder-managed natural food stores validated their hypotheses (Segal et al, nd).

In terms of this practical research findings, education and work experience, as human capital factors, impact positively on entrepreneurial success. It has been proven beyond reasonable doubt that most African entrepreneurs operating within the informal economy are challenged by education and experience as determining factors of success. Dickson, Solomon and Weaver (2008) reveal findings that suggest strong evidence supporting the relationship between stated human capital factors and several entrepreneurial success measures.

The following conceptual model illustrates the cause and effect relations that exist between human capital factors and entrepreneurial success in the given context:

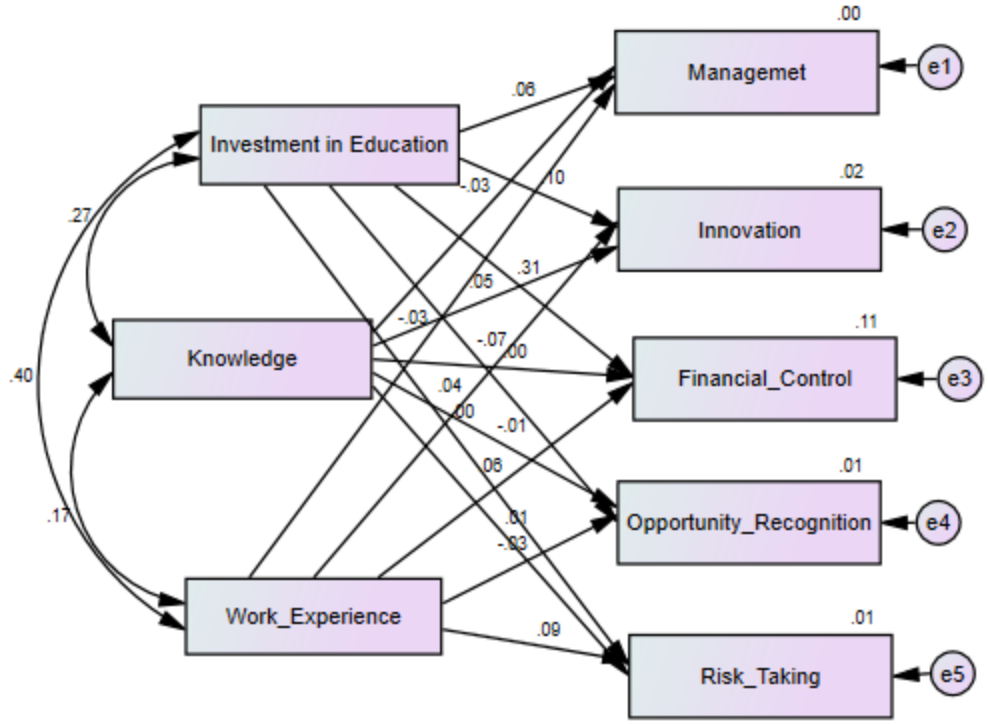


Figure 3.1: A conceptual model demonstrating the relationship between human capital factors and entrepreneurial success.

Source: Author's own

3.4 CONCLUSION

This chapter has discussed how the research hypotheses were developed before they were stated. Firstly, the development of the hypothesis for each relationship was done. This was followed by the statement of the hypothesis. The chapter also discussed the conceptual model for this study in order to guide the research strategy that was applied.

The following chapter presents the research methodology of the study.

4 CHAPTER 4: RESEARCH METHODOLOGY

4.1 INTRODUCTION

The purpose of this chapter is to discuss and justify the methodology that was adopted in this study. According to Cooper and Schindler (2011); Bryman (2012); and Kumar (2011), methodology is defined as “a systematic procedure for conducting and carrying out research as a process”. This process has three broad objectives; namely, the identification and description of the research strategy, the research design, and the procedure and methods of conducting research. This chapter discusses the research philosophy and research design or approach that underpinned this study.

Research is supported by various philosophies, depending on the choice of the approach and strategy chosen; such as qualitative and quantitative approaches. In this research, epistemology and ontology are discussed as influential philosophies supporting the study. Research design entailed a discussion on the research method used, questionnaire design and sampling design. A description of the reliability and validity measures is also addressed in the chapter in order to ensure credibility, as well as administrative and technical limitations of the research methods and procedures. A discussion relating to the statistical analyses that are used in this study is also provided, before a summary to the chapter is provided.

4.2 RESEARCH STRATEGY

Bryman (2012), Cooper & Schindler (2011) and Saunders et al. (2016), define research paradigm (strategy/approach) as a plan of how a researcher will go about answering her or his research question. There are three common strategies which are used to conduct

research; namely, quantitative, qualitative and mixed methods. In this research, a quantitative approach was followed. In terms of Bryman (2012), Kumar (2011), and Creswell (2014): Quantitative research in the social sciences is rooted in rationalism, follows a structured, rigid, predetermined methodology, believes in having a narrow focus, emphasises greater sample size, aims to quantify the variation in a phenomenon, and tries to make generalizations to the total population. The measurement and classification requirements of the information that is gathered demand that study designs are more structured, rigid, fixed and predetermined in their use to ensure accuracy in measurement and classification.

This form of research strategy has assumptions about testing theories deductively, building in protection against bias, controlling for alternative explanations, and being able to generalize and replicate findings. Based on the assumptions of this approach, it is justified to point out that the testing of hypotheses result in some form of precision and accuracy embedded within the paradigm. In this research, we committed to a quantitative research strategy with which the whole study is directed.

Philosophical assumptions play a crucial role in research. According to Bryman (2012): Quantitative Research Strategy usually emphasizes quantification in the collection and analysis of data. As a research strategy, it is deductivist and objectivist and incorporates a natural science model of the research process (in particular, one influenced by positivism). In terms of the protocol of this study, human capital is an independent factor, whereas entrepreneurial success is a dependent variable.

4.3 RESEARCH PHILOSOPHY

4.3.1 Positivism perspective

Fekede, (2010), points out that the quantitative purists articulate assumptions that are consistent with what is commonly called a *positivist paradigm* and believe that social

observations should be treated as entities in much the same way that physical scientists treat physical phenomena. In other words, Caldwell (2010) Bryant & Charmaz (2007) reveal that positivism is based on the assumption that there are universal laws that govern social events, and uncovering these laws enables researchers to describe, predict, and control social phenomena.

A basic assumption of this paradigm, as Ulin, Robinson & Tolley (2004, cited in Fekede, 2010) remarked is that the goal of science is to develop the most objective methods possible to get the closest approximation of reality. Accordingly, researchers who work from this perspective explain in quantitative terms how variables interact, shape events, and cause outcomes. They often develop and test these explanations in experimental studies.

4.3.1.1 Epistemological paradigm

According to Scotland (2012); Bryant & Charmaz (2007), epistemology poses the following questions: What is the relationship between the known and what is known? How do we know what we know? What counts as knowledge? For positivists, who have evolved largely from a nineteenth-century philosophical approach, the purpose of research is scientific explanation. However, according to Neuman (2003), epistemological positivism sees social science as an organized method for combining deductive logic with precise empirical observations of individual behavior in order to discover and confirm a set of probabilistic causal laws that can be used to predict general patterns of human activity.

4.3.1.2 Ontological Paradigm

A researcher with a positivist orientation regards reality as being ‘out there’ in the world and needing to be discovered using conventional scientific methodologies (Mutch, 2005). Ontological questions in social science research are related to the nature of reality. There are two broad and contrasting positions: objectivism that holds that there is an

independent reality and constructionism that assumes that reality is the product of social processes (Neuman, 2003). According to this perspective, research findings are usually represented quantitatively in numbers which speak for themselves (Cohen, Manion & Morrison, 2000; Mutch, 2005).

4.3.2 Methodology Applicable to this Study

According to the given research philosophy, positivist assumptions of ontology and epistemology have guided this research, as outlined above.

4.4 RESEARCH DESIGN

According to Cooper and Schindler (2011); Kumar (2011) and Bryman (2012), research design is employed to refer to a framework for the collection and analysis of data''. In this case, research design is deemed as a procedural plan adopted by the researcher to answer questions of validity and reliability precisely and objectively. In this fashion, such a design is also tantamount to a blueprint for fulfilling research objectives in answering the given questions. It is important to name the crucial generic research designs; namely, cross-sectional, longitudinal, case study, comparative and experimental (Bryman, 2012). In this study, a cross-sectional research design has been adopted.

Cooper & Schindler (2011); Saunders, et al. (2016) & Bryman (2012) establish that this design type is found in social science subjects, such as sociology, social policy, and human geography, and it is usually an extension of survey research or structured observation based on a self-completion questionnaire or structured interview research within a cross-sectional design. Content analysis is done on a sample of documents. As established by the above researchers from a cross-sectional dimension, the study is conducted only once and reveals a snapshot of one point in time. It is imperative to justify that cross-sectional design provides an assessment of the degree to which the survey researcher, for example, can achieve internally valid findings (Bryman, 2011).

Survey techniques as a means of data collection provide some useful reasons to the researcher. In the context of our research, this design is advantageously noted for using tables and calculations to explain a given phenomenon. In addition, the empirical approach consists of primary research and the collection of data through the use of questionnaires in a survey. In the context of our research, the study has utilised the paradigm to test the formulated hypotheses with the objective of establishing cause and effect relations between different variables with regard to the relationship between human capital and entrepreneurial success in the informal economy of Limpopo province. Tabulated data and computations, for example, have, however provided overall performance of the informal economy entrepreneurs. This data was measured quantitatively and provides some level of precision to the research findings. The stated measurement procedures have enabled the asking of questions to respondents that were then analysed at the end of the survey when the participant level had been reached.

4.5 POPULATION AND SAMPLING DESIGN

4.5.1 Target Population

In all research endeavors and expeditions, researchers need to determine a subset of the population which is deemed the actual focus of a target of the inquiry. Similarly, the class of families living in a particular ecosystem from which researchers select their sample are called target population. In a nutshell, it is the actual universe from which the very sample can be drawn (Kumar 2011, Bryman, 2012; Saunders, et al., 2011). According to the research proposal, the total population constituted a broad range of entrepreneurs who operate within the informal economy environment in South Africa.

4.5.2 Sampling - principles and methods

4.5.2.1 Sample frame

According to Wretman (2003), the sampling frame is a list of all the items in the population. Sample frame consists of a list of every element or everything being studied. The difference between a population and a sampling frame is that the population is general and the frame is specific.

In the light of this study, the sampling frame was the Street vendors (informal entrepreneurs operating in Limpopo Province. The province is divided into five districts, namely: Capricorn, Mopani, Sekhukhune, Vhembe and Waterberg. The study focused on Vhembe district. A few participants (Limpopo university vendors) from Capricorn district were also consulted. Specifically, the target of the population for this study was, in addition, selected entrepreneurs from different operational backgrounds within the informal economy in Limpopo province, namely: the spaza shop owners, taxi operators, taverns, apparel shops, selected artists and entertainers, vendors from creative arts and crafts, fast food owners (today locally known as "kwasa-kwasa chicken dust" sellers), fruit and vegetable vendors, cobblers, hairdressers, traders, and others whose income is tax-free, and/or excluded from the formal economy (Stigling, 2009; Williams & Nadin, 2010; Valodia & Devey, 2012). Also university students, FET college students, and high school learners engaged in informal entrepreneurial activities have been surveyed/interviewed as part of the target population.

4.5.2.2 Sample Size

A sample size is a **p**art of the population chosen for a survey or experiment (Stephanie, 2014). In terms of this definition, sample size refers to the number of items to be selected from the population to constitute the sample size (Bryman, 2012). The recommended sample size of this research is 250 as required by SEM formula of 2016.
In total, 251 were distributed and 51 questionnaires were spoiled and/or could not provide sufficient data, as required by the questionnaire layout. In terms of Bryman (2012), researchers are compelled to ensure that each subject of the population is given equal

opportunity of being part of the sample. Inclusivity is thus a paramount factor. In this case, a non-probability sampling was also applied in order to avoid research bias.

4.5.2.3 *Convenience sampling method*

There are different definitions of convenience sampling as a useful method in this study. According to the report from the *American Association for Public Opinion Research (2013),* Convenience sampling is a form of non-probability sampling in which the ease with which potential participants can be located or recruited is the primary consideration. As the name implies, the participants are selected based on their convenience (for the researchers) rather than on any formal sample design.

4.6 THE RESEARCH INSTRUMENT

The instrument of research for this study was a structured questionnaire. Based on the literature review, use was made of a fully structured observation, although a variation of approaches could have been applied. Kumar (2011), Bryman (2012) and Cooper and Schindlier (2011) distinguish fully structured observation from the former as follows: "the researcher asks a predetermined set of questions. Use was made of the same wording and order of questions as specified in the interview schedule. It provided uniform information, which assures the comparability of data". In addition, participants' levels of knowledge is considered, thus enforcing the use of non-technical language and terms in the survey questionnaire or an interview. The instrument has further assisted classifying question sets into categories (categorical data).

4.6.1 Layout of the instrument

The questionnaire of this study had sections A and B. The first section contained all the demographic information that was relevant for this study. Information such as age,

gender, dependents, category of industry, duration of business ownership, year of entry into the business and the reasons for starting a business. Section B had items that measured all three constructs (i.e., investment in education, knowledge, and industry experience. General guidelines were provided to assist the respondents in reading the questions with understanding. Nevertheless, quite a number of respondents required translation into their mother tongue, due to high levels of illiteracy.

4.6.2 Likert-Type Scales

Bertram (2006) defines a Likert-scale as a psychometric response scale primarily used in questionnaires to obtain participant's preferences or degree of agreement with a statement or set of statements. In terms of this definition, Likert scales are a non-comparative scaling technique and are unidimensional (only measure a single trait) in nature. Respondents are asked to indicate their level of agreement with a given statement by way of an ordinal scale. Respondents had to indicate how much they agree or disagree with each of the following statements: "Strongly disagree", "somewhat disagree", "Neither agree nor disagree", "Somewhat agree"', "Strongly agree".

On the other hand, each specific question (or "item") in a Likert-scale can have its response analysed separately, or have it summed with other related items to create a score for a group of statements. This is also why Likert scales are sometimes called summative scales (Bissonnette, et al., 2007). Another requirement for effective use of Likert-type scales is to consider that individual responses are normally treated as ordinal data, although in practice, researchers use the scales as interval data criteria. Kuzon, et al. (1996); Bertman (2006), and Jameson (2004) provide the pros and cons for using Likert-scales such as simplicity to construct, production of a highly reliable scale and easy to read and complete for participants. Applicably, it was easy to construct the Likert-scales for the study. However, the scales were coded prior to distribution of questionnaire. Sometimes the understanding of the participants was limited by differentiating the meanings of Likert-scale terminology such "strongly agree, somewhat agree and neutrally agree".

4.6.3 Measurement instrument

4.6.3.1 Investment in education

Investment in education was measured using guidelines from De Clercq and Arenius (2006); Unger, et al. (2011) & Venter, et al. (2008) to derive the format of the questionnaire. Using Likert scale codes, respondents were required to indicate the level of investment in education. According to De Clercq and Arenius (2006), existing knowledge questionnaires point to aspects such as asking respondents about their overall educational attainment - which by implication, relate to knowledge and education. Participants could choose from the following three categories (1) no secondary degree, (2) secondary degree, and (3) post-secondary degree. In this study, these questions guidelines were adapted to11 codes to show qualifications categories from "no schooling to Postgraduate qualification". In cases where the level of education was formal, respondents had to indicate the degree of the relevance of the education by making scale choices from "most relevant,", "relevant", partially relevant", "'not relevant".

According to Martin, et al., (2013), a 95% confidence interval around the estimated population correlation was computed in favour of the relationship between education and entrepreneurial success. This was coupled with 80% of credibility interval throughout the given hypothesis. Accordingly, the results were supportive of the notion that entrepreneurship-specific human capital formation can be influenced by entrepreneurial-specific education. In terms of Unger, et al. (2011), the 95% confidence were r=0, 59 and r=0, 93 indicating the significance of the overall results with regard to the same relationship.

4.6.3.2 Industry experience

In terms of industry experience, measures and guidelines were adapted from Venter, et al. (2008). According to literature, six broad functional areas of management were the main sources of the questions. Respondents were asked the question "Do you have

specific-industry experience with regard to the following functional areas"? The intervals of the areas ranged from "Between 1-3 years" and up to the maximum of 10 years and above. Research findings have established that the conclusive study which was made in terms of education and knowledge can more or less hold equal results in terms of reliability, validity, correlation and significance measures. Becker (1964) validates that knowledge/skills are theoretically the result of human capital investments such as education and work experience. Consequently, most studies have used education and or work experience to measure the human capital constructs as proxies for entrepreneurs' human capital (Davidson and Honig, 2003 cited in Unger, et al., 2011).

4.6.3.3 Knowledge

In terms of Venter, et al. (2008), the pertinent questions to be asked to respondents include the determination of both management and technical knowledge. According to research conducted by De Clercq & Arenius (2006), the means, standard deviations and intercorrelations of the variables of the knowledge study presented, it can be seen that the likelihood to engage in business start-up activity is indeed positively correlated to (1) one's current knowledge base (i.e. 'the perceived level of specific skills'), and (2) one's exposure to external knowledge (i.e. 'personally knowing an entrepreneur' and 'having experience as informal investor'). These findings give some preliminary support to the hypotheses associating knowledge to entrepreneurial success.

Overall the existing models have an acceptable goodness of fit, in that the chi-square test is significant. In this case, correlations, means and standard deviations were indicated by $p < .001$; $p < .01$; and $p < .05$.

4.7 Data collection

Data collection is a system of collecting data. According to Bryman (2012); Cooper & Schindler (2011); Kumar (2011) & Creswell (2014), data collection involves “gathering data from the sample so that the research questions can be answered”.

4.7.1 Procedure for data collection

The process includes setting the boundaries for the study, collecting information through unstructured or semi-structured observations and interviews, documents, and visual materials, as well as establishing the protocol for recording information. There are, nevertheless, four notable modes of collecting data; namely, ethnography, interviews, focus group discussion and documents. In this study, manual and online surveys through emails have been used to collect data. A lot of survey questionnaires were distributed to the informal traders with no or low levels of literacy. In other words, some participants are illiterate, whereas some have the basics of writing and reading. A few participants can hardly use the internet. As such, the electronic survey questions were emailed to a very few participants at university, college and/or those with technical knowledge.

4.8 Ethical consideration

Research ethics refers to, Saunders, (2016); Kumar 2014 & Bryman, 2012), the standards of behaviour that guide your conduct in relation to the rights of those who become the subject of your work, or are affected by it. Implicitly stated, however, Bryman (2012) analyses some ethical principles and issues which add to the description of ethics dynamics; such as deception, harm to participants, informed consent, and above all, privacy. As part of the appendix profiling, the research subjects were protected from common ethical malpractices as above. Sensitive questions such as the names and addresses of the respondents have been removed from the questionnaire to benefit from this positive element, although for follow-up reasons, such data have been requested on a voluntarily basis, but not as an obligatory commitment. Respondents were encouraged

to provide pseudonyms where necessary, but also not as a minimum requirement to participate.

4.9 Processing and analysis of data

4.9.1 Editing of data

There are different definitions and general descriptions of data editing as prescribed by literature. Saunders et al. (2016) define data editing as the process involving the review and adjustment of survey data. The main objectives of data editing is to clarify responses, make some omissions, avoid bias testing, make judgments, check handwriting and to make logical adjustments.

4.9.2 Coding of data

Coding is defined (Bryman, et al. 2012) as an analytical process in which data, in both quantitative form (such as questionnaire results) or qualitative (such as interview transcripts) is categorized to facilitate analysis. Basically what happens at this stage is to transform data into a form understandable by computer software. For quantitative analysis, data is collected usually into measures and recorded as nominal or ordinal variables. In this study, pre-coding was done and codes were thus assigned to expected answers on the designed questionnaires.

According to this description, numerals and related symbols are assigned to answers in order to facilitate the classification of responses for mutual exclusivity and delineation of each category (Kumar, 2011). In terms of this study, demographic aspects such as gender were classified as follows: Code 1 was used to classify male respondents whereas code 2 was used for female respondents. During the coding process, data was transcribed from the questionnaire to a coding sheet in an Excel spread sheet in order to remove possible coding errors.

4.9.3 Classification of data

Classification of data is the process of organizing data into similar categories for its most effective and efficient use. In the study, data was classified in terms of demographic information of participants. Attributes included age of respondents, gender of respondents, number of dependents and other related aspects. Data classification is done in order to avoid confusion and misunderstanding with regard to information provided.

4.9.4 Tabulation of data

The process of placing classified data into tabular form is known as tabulation. Mathematically, a table is a symmetric arrangement of statistical data in rows and columns. Accordingly, rows are horizontal arrangements, whereas columns are traditionally vertical arrangements. The type of classification determines the degree of the tabulation, for example, the classification may be simple, double or complex. Tabulation of data prepares the common ground for analysis and interpretation. As a significant part of the statistical method, a suitable method must be decided carefully, taking into account the scope and object of the investigation (Cooper & Schindler, 2011).

4.10 CONSTRUCT RELIABILITY AND VALIDITY TESTING

4.10.1 Construct reliability testing

According to Chinomona (2016), research reliability refers to the quality of a measurement procedure that provides repeatability and accuracy. In this instance, reliability estimates are used to evaluate stability of measures, the equivalence of items set from similar tests. Cronbach's Alpha Reliability values were therefore applied. This instrument is used to test internal reliability as noted by Bryman (2012).

Alpha was developed by Lee Cronbach in 1951 to provide a measure of the internal consistency of a test or scale; expressed as a number between 0 and 1 (Takavol, et al. 2011). However, in terms of Gliem (2003), there is actually no lower limit to the coefficient. The closer Cronbach's alpha coefficient is to 1.0, the greater the internal consistency of the items in the scale.

Research suggest that Cronbach's α value must be above 0.60 to 0.70 for the construct to produce acceptable outcomes (results). In descending order of the α-value, Cortina (1993) points that in terms of Cronbach Alpha, the magnitude of the measurements range are estimated as follows: $\alpha > 0.9$ = Excellent $0.7 \leq \alpha < 0.9$ = Acceptable $0.6 \leq \alpha < 0.7$ = Marginally Acceptable $0.5 \leq \alpha < 0.6$ = Poor $\alpha < 0.5$ = Unacceptable.

4.10.2 Construct validity testing

Bryman (2012); Cooper and Schindler (1998) describe validity as a way of checking and evaluating whether the research instrument measures what it purports to be measuring. Four types of validating research can be employed for quantitative oriented research strategy; namely, measurement validity, internal validity, external validity, and ecological validity. Measurement validity is described by Bryman (2012) as the degree to which the measure of a concept truly reflects that concept.

4.10.2.1 Internal construct validity

Comparatively, internal validity (Cooper & Schindler, 2011) answers the question, "Do the conclusion we draw about demonstrated experimental relations truly imply cause?" The research study put emphasis more on the entrepreneurs operating with the context of the informal economy in South Africa - Limpopo Region.

4.10.2.2 External construct validity

While internal validity, on the one hand, concerns itself with causal effects, external validity, on the other hand, answer the question, “does an observed causal relationship generalize across persons, setting and times?” Bryman, et al. (2012).
Amongst several alternatives used by researchers to determine validity, the study was limited to discriminant and convergent validity.

4.10.2.2.1 Discriminant validity

In terms of Brady, et al. (2015), divergent validity (discriminant validity) helps to establish construct validity by demonstrating that the construct you are interested in is different from other constructs that might be present in the study. As such, discriminant validity tests whether concepts or measurements that are not supposed to be related are, in fact, unrelated. In 1959, Campbell and Fiske introduced the concept of discriminant validity within their discussion on evaluating test validity. These researchers emphasised the importance of using both discriminant and convergent validation techniques when assessing new tests. Accordingly, a successful evaluation of discriminant validity shows that a test of a concept is not highly correlated with other tests designed to measure theoretically different concepts (Benet-Martinez, 2000). In showing that two scales do not correlate, it is necessary to correct for attenuation in the correlation due to measurement error. It is possible to calculate the extent to which the two scales overlap by using the formula.

A correlation between constructs measuring entrepreneurial success was checked by establishing divergent validity. In order to determine the uniqueness of the variables, correlation values were checked against the minimum of, <0, 5 which indicated the lesser value. As other studies are benchmarked by the given measure, this research also was intended to be rated by the same test.

4.10.2.2.2 Convergent validity

According to Saunders (2016) and Kumar (2011), Convergent validity are mechanisms used to assess the construct validity of a measurement procedure. Convergent validity helps to establish construct validity when a researcher uses two different measurement procedures and research methods".

The extent to which convergent validity has been demonstrated is establish by the strength of the relationship between the scores that are obtained from the two different measurement procedures and research methods that have been used to collect data about the construct of interested. The idea is that if these scores converge**,** despite the fact that two different measurement procedures and research methods have been used, we must be measuring the same construct (Benet-Martinez, 2000) In order to establish convergent validity, the strength of the relationship between the scores from the two different measurement procedures, from the two different methods, is assessed. This is usually achieved by calculating a correlation between the two scores.

In this study, the correlations between variables were checked in order to establish convergent validity. This was represented in a correlation matrix for different constructs. An inverse correlation matrix to divergent validity is shown by a higher outcome. Therefore the higher the correlation values were ≥0.5, the more converging the variables were. This test was not an exception to this study. However, the constructs were not supposed to correlate excessively with each other (i.e. be at most 0.85). In order to avoid the problems of multicollinearity, higher correlations of more than 0, 85 was not sought of.

4.10.3 Research statistics

Traditionally, there are two main parts of statistics, namely, descriptive and inferential statistics. According to Kumar (2011), statistical methods and analyses are often used to communicate research findings and to support hypotheses and give credibility to research methodology and conclusions. In the light of this research, the main function of statistics

was to simplify research planning, and statistical measures were used as useful instrument to achieve the objective. In this study, statistical measures used in this study to condense the survey data were: statistical averages or measures of central tendency; measures of dispersion; measures of relationship; and other additional measures. Generally, there are two major parts to statistics, which are descriptive and inferential statistics.

4.10.3.1 Descriptive Statistics

Descriptive statistics are used to describe the basic features of the data in a study. They provide simple summaries about the sample and the measures. Together with simple graphics analysis, they form the basis of virtually every quantitative analysis of data (Troachim, 2006). Descriptive statistics are typically distinguished from inferential statistics. With descriptive statistics (Burns, 2008), a researcher is simply describing what is or what the data shows. Data is thus simplified in a sensible and simple manner. In this research, descriptive statistics were presented through the use of pie charts, tables to summarise findings on age, gender, number of dependants, means and standard deviations.

In terms of measures of central tendency, the most used statistical averages in the study were the mean, median and the mode which were regarded as paramount representative figures. However, in statistics, measures of dispersion, also called variability, scatter, or spread, is the extent to which a distribution is stretched or squeezed. Common examples of measures of statistical dispersion are the variance, standard deviation, and interquartile range (Burns, 2008). In the study, variance and standard deviation measures were commonly used to summarise the results. Statistical Package for the Social Sciences (SPSS) version 23 was used for descriptive analysis.

4.10.3.2 Inferential Statistics

Inferential statistics consist of methods for drawing and measuring the reliability of conclusions about population based on information obtained from a sample of the population (Adams & Lawrence, 2015). According to this definition, inferential statistics include methods like point estimation, interval estimation and hypothesis testing which are all based on probability theory. According to (Adams & Lawrence, 2015), the study becomes inferential only when an inference is made about the population based on information obtained from the sample. Applicably, the concern of this research was to consider generalisation as a crucial aspect from which conclusive statements could be made. The relationship between education, industry experience and knowledge was thus conceptualised and modelled through SEM (Structural Equation Modelling).

4.10.3.2.1 Structural Equation Modelling (SEM)

SEM is one of the statistical means with which a covariance structure is analysed.
Minecke, et al (2012), Violato and Hecker (2007) and Chinomona and Sandala (2013) describe and define Structural Equation Modelling (SEM), as a family of statistical techniques used for the analysis of multivariate data to measure latent variables and their interrelationships. In order to test, analyse, and interpret the results of the model, SEM has been used with AMOS (its complimentary model).

In terms of Ullman & Bentler, (2003) SEM is a comprehensive statistical approach to testing hypotheses about relations among observed latent variables. Methodologically, SEM represents, estimates, and tests a theoretical network of (mostly) linear relations between variables. MacCallum (2000) views SEM as a statistical means which tests hypothesised patterns of direction and nondirectional relationships among a set of observed (measured) and unobserved (latent) variables.

Like other statistical tools, Structural Equation Model has a purpose to account for variation and covariation of the measured variables (MVs) through path analysis and

confirmatory analysis. According to Suhr (2000), paths analysis tests models and MVs relationships through regression as an example, whereas confirmatory factor analysis tests models of relationships between latent variables. Accordingly, SEM has two goals, namely, first to understand the pattern of correlation/covariance among a set of variables and to explain as much of their variance as possible with the model specified (Klem, et al. 200).

Although SEM has some similarities with traditional statistical methods, it is distinct for its flexibility and comprehensiveness in terms of methodological investigation of economic trends, health issues, family and peer dynamics, self-concept, self-efficacy, depression, psychotherapy and other phenomena (Suhr, 2000). In addition, SEM requires formal specification of a model to be estimated, enables researchers to recognize the imperfect nature of research measures, and provides straightforward significance tests to determine relationship between variables, resolving problems of multicollinearity (Bandalos, 2009).

Regardless of its effective use, SEM could be impacted by the following factors as envisaged by (Adams and Lawrence, 2003), the research hypothesis being tested, the requirement of sufficient sample size (20:1 ratio), measurement instruments, multivariate normality, parameter identification, outliers, missing data and interpretation of model fit indices.

Statistical software is guided by processes and techniques which act as guidelines to apply effectively. Klem, (2000). However, Suhr (2000) provide the following suggested approach to SEM analysis and process:

- review the relevant theory and research literature to support model specification.
- specify a model/a diagram, equations
- determine model identification
- select measures for the variables represented in the model
- collect data

- conduct preliminary descriptive statistical analysis (e.g., scaling, missing data, collinearity issues, outlier detection)
- estimate parameters in the model
- assess model fit
- respect the model if meaningful
- interpret and present results.

It is crucial to indicate that Structural Equation Modelling (SEM) is often effective if it is used with AMOS as its complement. SEM was employed through AMOS, which is the software that was used to analyse causal or covariance modelling. According to Violato and Hecker (2007) and Chinomona and Sandala (2012): Through the use of AMOS 23, models were drawn graphically by means of simple drawing tools – i.e., through the application of AMOS‟ Graphic User Interface. AMOS 23 made it possible for the researcher to specify, estimate, evaluate and display models that demonstrated the theorised linkages between the studies constructs (Violato & Hecker 2007). Through AMOS 23, multiple equations of inter-relationships within the structural model were calculated instantaneously. The software yielded high quality path diagrams, as it was easy for the researcher to specify, view and graphically alter the model through the use of simple drawing tools.

In line with the application of SEM as a statistical technique, Confirmatory Factor Analysis (CFA) is a crucial measurement model. Confirmatory factor analysis (CFA) is a statistical technique used to verify the factor structure of a set of observed variables which allows the researcher to test the hypothesis that a relationship between observed variables and their underlying latent constructs exists (Burns, 2008). In the context of this study, CFA was conducted in order to validate all the investigated factors, to check the reliability and validity (Violato & Hecker 2007; Chinomona & Sandala, 2013) of the instruments of the study. and verifying the model fit. For example, the validity of entrepreneurial success was analysed and summarised in a rotated component matrix table. However, the main objective of CFA is "to test whether the data fit a hypothesized measurement model as well comparing between the hypothsized covariance models" (Wallentin, et al., 2010).

Model fit indices are grouped into three broad categories: absolute fit (or model fit), model comparison (or comparative fit), and parsimonious fit. Absolute fit indices determine how well the a priori model fits, or reproduces the data. Absolute fit indices include, but are not limited to, the Chi-Squared test (Schmit, 2011). On the other hand, comparative fit index (CFI), analyses the model fit by examining the discrepancy between the data and the hypothesised model, while adjusting for the issues of sample size inherent in the chi-squared test of model fit, and the normed fit index; CFI values range from 0 to 1, with larger values indicating better fit (Schmit, 2011). Last, Relative fit indices (also called incremental fit indices), are an adjustment to the former indices which parsimoniously fit both absolute and comparative models (Jackson et al., 2009).

In the study, the following conventional and standardized Model fit indices and the relevant thresholds were used accordingly, as agreed upon by most prominent statisticians:

- Chi-square value (<3)
- Comparative Fit Index (CFI): (> 0.900)
- Goodness of Fit Index (GFI): (> 0.900)
- Incremental Fit Index (IFI): (> 0.900)
- Normed Fit Index (NFI): (> 0.900)
- Tucker Lewis Index (TLI): (> 0.900)
- Random Measure of Standard Error Approximation (RMSEA): (< 0.08)

The Structural Model was tested through the Path Model Analysis. In the study, causal relationships between, for example, human capital factors and entrepreneurial success, was estimated through the employment of the path model. The model is efficient in linking both the internal and external variables. Structural Equation Model was used effectively to demonstrate the external links. As with endogenous variables, the status of the variable is relative to the specification of a particular model and causal relations among

the independent variables. An exogenous variable is, by definition, one whose value is wholly causally independent from other variables in the system (Bound et al., 1995). Furthermore, the hypotheses as previously stated, were tested in order to determine whether they were supported or rejected (not supported). Accordingly, the concepts of null and alternative hypothesis were applied as follows:

According to Taylor (2017), the null hypothesis reflects that there will be no observed effect for our experiment, and it is what we attempt to find evidence against in our hypothesis test. In a mathematical formulation of the null hypothesis, there will typically be an equal sign. Therefore this hypothesis is denoted by H_0. In terms of the principles of this hypothesis, researchers hope to obtain a small enough p-value that it is lower than the level of significance alpha and are thus justified in rejecting the null hypothesis. If our p-value is greater than alpha, then the null hypothesis cannot be rejected.

However, the alternative or experimental hypothesis reflects that there will be an observed effect for any experiment. In a mathematical formulation of the alternative hypothesis there will typically be an inequality, or not equal to symbol. This hypothesis is denoted by either by H_1. The alternative hypothesis is what researchers are attempting to demonstrate in an indirect way by the use of our hypothesis test. If the null hypothesis is rejected, then we accept the alternative hypothesis. If the null hypothesis is not rejected, then we do not accept the alternative hypothesis (Taylor, 2017). Given the two distinctions above, this study held to the alternative hypotheses denoted by H1 to H3, as the hypothesis were clearly stated and tested accordingly.

4.11 CONCLUSION

In concluding this chapter, the main topic discussed was the research methodology. First the research philosophy was discussed. A discussion which distinguished the two crucial areas of the positivist paradigm was done. Ontology and epistemological principles were outlined as paramount perspectives underpinning this study. Subsequent discussion focused on research design. This study followed the guidelines of quantitative

research strategy. The target population of the study was the informal entrepreneurs in South Africa. The sampling frame for this research was the informal traders operating in Limpopo province (framing two out of five areas of provincial jurisdiction, namely Vhembe, Capricorn districts). The measurement instruments for the questionnaire were adapted from different sources while items were modified to be in line with the purpose of this study. Convenience sampling design was used and through applying this method towards the end of the chapter, ethical issues were discussed as a research mechanism aimed at protecting the respondents from immoral and unfair research practices. Finally, a discussion of the technique used in processing and analysis of data was done.

Chapter 5 provides a detailed account of how the raw data was analysed. This is followed by the presentation of the results of this study.

5 CHAPTER 5: DATA ANALYSIS AND PRESENTATION OF RESULTS

5.1 Introduction

This chapter is divided into three areas. Firstly, the results findings from data analysis are reported in terms of major factors, namely: education, industry experience and entrepreneurial success. Secondly, measurement of other influential variables is also provided.

5.2 PRESENTATION OF RESULTS ON MAJOR FACTORS

5.2.1 Education

This section shows the level of investment in education. The relevance of education or educational qualifications is also given in the context of the research findings.

5.2.1.1 Investment in education

Various researchers have supported the role played by education in enhancing entrepreneurial spirit. Kongo (2014) and Barreira (2004) hold strongly that education is a component of human capital. However, Davidson and Honig (2003) quoted in Venter, Urban and Rwigema (2008) theorized that education is an investment that yields higher wage compensation in return for an individual's variation of skills training and experience.

The applied measurement scale for Investment in education was measured by asking the highest level of education attained where no schooling was labelled as 1 and post graduate degree was labelled as 10. Looking at the investment in education, it can be

noted that 26.4% had either dropped out of school or had no schooling at all. A proportion of 16.2% had grade 10 as their highest level of education while 21.8% had grade 12. Only 4.6% had a bachelor's degree while 2% had post-graduate degrees.

5.2.1.2 Relevance of qualification

However, Dickson, Solomon & Weaver (2008), have argued that similar relations are derived from a conclusion that in both developing and industrialized countries there is evidence to support a positive and significant relationship between the level of general education and entrepreneurial performance, whether performance is measured as growth, profits or earning power of the entrepreneur. Enterprise failure is one of those challenges faced by large and small businesses world-wide. Upon careful scrutiny of the above elements of a successful entrepreneur, it is revealed that without proper educational qualifications, efficient planning will not take place (Sorensen & Chang, 2006). A proportion of 31.9% of the respondents indicated that their qualification was either relevant or most relevant to what they were doing. This is the sum of 22, 3% relevant and 9, and 6% most relevant as depicted below:

Table 5.1: Results on investment in education

Variable	*Category*	*Frequency*	*Percent*
Investment in Education	No schooling	22	11.2
	Dropped out of school	30	15.2
	High school (Grade 10)	32	16.2
	High school (Grade 12)	43	21.8
	Certificate	32	16.2
	Diploma	11	5.6
	Advanced/Post Graduate diploma	14	7.1
	Bachelor's degree	9	4.6
	Postgraduate degree	4	2.0
Relevance of Qualification	Not relevant	58	29.4
	Partially relevant	76	38.6
	Relevant	44	22.3
	Most relevant	19	9.6

According to the findings, literature provides a threshold of some benchmark which stipulates the possible expectations from existing and potential entrepreneurs. Practically it is not always and often the case. Most small business owners in Limpopo do not perceive qualifications as a benchmark with which their success can be determined. This has been proved by statistical measures above.

5.2.2 Statistical analysis and measurement scales

5.2.2.1 Industry experience

The analysis performed by Sudarsanam & Sorwar (2005) reveal that the relative profit tends to be high when an entrepreneur has more education and experience in the line of business. However, the profitability tends to be low when the entrepreneur has only start-up, managerial and high-growth experience without an educational background. As Peterman & Kennedy (2003) analyzed that an entrepreneur's experience can influence performance positively or negatively. Most studies, however, reported a positive relationship between prior experience and venture performance

Work Experience was rated for each of the areas of interest from Marketing, Finance, Production, Operations, Technology and Business/Entrepreneurial legal skills on a 4-point scale such that the experience between 1-3 years = 1, Between 3-6 years = 2, Between 6-9 years = 3 and 10 years and above = 4. The final value for work experience was computed by adding up the values for all the areas of interest. The results show that 11.7% of the respondents were in a high technology environment, 41.6% were in a low technology environment while 46.7% were in a non-technological environment.

In terms of this findings, it is also clear that experience is theoretically a tool which can be used as a stepping stone to entrepreneurial success. The findings from empirical research conducted reveals that most vendors do not value experience as a criteria to success. The above figures show a negative relationship between work experience and success.

In terms of frequency analysis, the lowest percentage is 1% and the highest percentage is 3, 5% with regard to respondents in possession of relevant industry experience.

5.2.2.2 Knowledge

Human capital theory views knowledge as an evolutionary process which interacts with the other factors. Unger, et al. (2011) postulates that acquisition is the transformation from experience to knowledge and skills. Venter et al. (2008); Wiklund & Shepherd (2003). emphasize that knowledge may lead to competitive advantage and superior performance. Clerq & Arenius (2006), point that the level of individuals' existing knowledge base is positively related to the likelihood to engage in business start-up activity.

The Knowledge construct was measured using two items measuring Management Knowledge Level and Technical Knowledge Level. These items were rated on a 5-point Likert scale where 1 was Excellent and 5 was uncertain. The two items had their scale reversed before analysis (i.e. 5=1, 4=2, 3=3, 2=4, 1=5) for them to be in the same format of moving from a low value (undesirable) to a high value (desirable outcome).

The studies indicate that small business owners have a good technical knowledge of the products and services offered in various informal markets in Limpopo. On aggregate frequency analysis, 81, 5% is reported. Similarly, management knowledge also score related average. What is crucial and worth noting is that the informal management ratings were not measured in terms of pure theoretical prescriptions applied in big corporates trends, but it was hugely based on critical checking of the impact made in the informal market. Aspects such as the ability to sell stock on time, and the knowledge of the products sold meet both theoretical and practical components of management (Drucker, 2005).

5.2.2.3 Entrepreneurial success

Freuch & Rauch (2000) present a general model of entrepreneurial success which is supported by the assumption that there is no success without actions. Barreira (2004) and Venter, et al. (2008) have provided a formula prescribing that entrepreneurial success depends largely on these skills namely marketing, financial management/bookkeeping, operational, human resources, legal, communication, political and strategic planning, leadership and persuasive skills and the skills needed to set up a proper business plan. Other scholars associate success and its meaning as the product of psychological process and behavior (Lee & Tsang, (2001); Munish (2007); Sorense & Chang, (2006); & Sarasvathy (2000).

Entrepreneurial Success was measured using 17 statements rated on a 5-point Likert scale where 1 was Strongly disagree and 5 was Strongly agree. The scale for the item “I can control costs” was reversed because it was negatively correlated to the other items.

According to the findings, it has been established in literature and practically that the majority of informal traders have some form of features which explains entrepreneurial success as argued by Munish (2007). Research results indicates that the informal traders in Limpopo are able to control their finances regardless of little or no financially literacy skills. Risk taking also characterizes entrepreneurs who can succeed. This aspect has been found present among the respondents as shown by the he Squared Multiple Correlations - 11.3% of Financial control is reported.

5.2.3 Measurement scale validity

Confirmatory factor analysis was conducted to assess the scale validity for each Knowledge and Entrepreneurial success. The item “I can conduct market analysis” was removed from the Entrepreneurial success construct during factor analysis because it had a factor loading less than 0.4. Cronbach’s Alpha was used to assess reliability of the scale for each of the constructs. The results are shown in Tables 5.2 and 5.3.

Table 5.2: KMO and Bartlett's Test

Knowledge		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.500
Bartlett's Test of Sphericity	Approx. Chi-Square	75.584
	Df	1
	Sig.	.000
Entrepreneurial Success		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.695
Bartlett's Test of Sphericity	Approx. Chi-Square	1097.068
	Df	136
	Sig.	.000

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) values were greater than the minimum required value of 0.5. This implies that the sample was adequate to conduct factor analysis. The Bartlett's Test of Sphericity values had significant p-values less than 0.05 as required. Both the p-values were < 0.001.

Table 5.3 shows the final construct composition, factor loadings for the items within each factor and the total variance explained.

Table 5.3: Validity and reliability for Entrepreneurial success

		Rotated Component Matrix – Validity							
	Construct		Component					Total Variance Explained	Cronbach's Alpha
			1	2	3	4	5		
Entrepreneurial Success	Management	Magnt3 I can establish and achieve goals and objectives	.911	-.005	.026	.055	.196	16%	.911
		Magnt2 I am good at strategic planning	.904	-.017	-.015	-.053	.207		
		Magnt4 I can define organisational roles/responsibilities	.884	-.032	.106	.001	.114		
	Innovation	INNO1 I am good at developing new business ideas	.023	.798	.155	-.028	-.034	13%	.687
		INNO2 I am good at developing new products or services	.026	.784	-.019	-.040	.003		
		INNO3 I can find new markets and territories	-.027	.706	.127	.012	.151		
		INNO4 I can develop new methods of production or systems	-.081	.538	.066	.265	-.035		
	Financial control	FC1 I can perform financial analysis	.067	.049	.766	-.105	-.011	13%	.630
		RT1 I can take calculated risks	-.084	.171	.720	-.069	.127		
		Magnt1 I can reduce risk and deal with uncertainty	.104	.054	.685	-.108	.340		
		FC2 I can develop financial systems	.212	-.227	.553	.059	-.339		
		FC3 I can control costs	-.041	.248	.494	-.010	-.160		
	Opportunity Recognition	OR3 I can establish a position in the market place	.006	.186	.000	.802	.087	12%	.710
		OR1 I can set and meet market share goals	.036	-.076	-.090	.785	.123		
		OR2 I can set and meet sales goals	-.024	.020	-.126	.762	-.106		
	Risk Taking	RT3 I can work under pressure and conflict	.252	.068	.009	.064	.830	10%	.802
		RT2 I can take responsibility for ideas and decisions	.280	-.023	.048	.058	.816		
	Total							64%	
Knowledge		Management Knowledge Level	.887					79%	.724
		Technical Knowledge Level	.887						

As initially hypothesised, the results revealed that the Entrepreneurial Success factor had 5 sub-constructs namely; Management, Innovation, Financial control, Opportunity Recognition and Risk Taking, which explained 64% of variation in the items. The composition of the sub-constructs however differed slightly from the initially hypothesised sub-constructs.

The knowledge construct retained the two items in one factor as initially hypothesised. The knowledge construct explained 79% of variation in the two items. All the items within each construct/sub-construct loaded highly onto their respective elements. . All the items loaded highly onto the retained factors with a minimum factor loading of .494 and with a factor loading.

5.2.4 Measurement scale reliability

The results indicate that there was excellent reliability for the Management construct (3 items, $\alpha = 0.911$) since the alpha value was ≥ 0.9. There was good reliability for Risk Taking (2 items, $\alpha = 0.802$). Opportunity Recognition (3 items, $\alpha = 0.710$) and Knowledge (2 items, $\alpha = 0.724$) had acceptable reliability level since the alpha values were ≥ 0.7 while Innovation (4 items, $\alpha = 0.687$) and Financial control (5 items, $\alpha = 0.630$) had a questionable reliability level.

Since all the constructs had a Cronbach's Alpha greater than 0.5, below which the reliability becomes unacceptable, the items within each of the constructs could be combined together to form a summated scale. The summated scale was computed by calculating the average of the items within the scale.

Table 5.4 shows the descriptive statistics and the Pearson's correlation coefficients among the constructs/sub-constructs.

Table 5.4: Descriptive Statistics and Pearson's correlation

	Descriptive Statistics		Correlations							
	Mean	SD	1.	2.	3.	4.	5.	6.	7.	8.
1.Investment in Education	4.32	2.42	1							
2.Knowledge	3.99	0.68	.266**	1						
3.Work Experience	0.70	1.32	.403**	.168*	1					
4.Management	2.36	1.35	.037	-.017	-.013	1				
5.Innovation	2.39	0.72	.126	.084	.085	-.032	1			
6.Financial Control	2.97	0.73	.331**	.093	.187**	.130	.140	1		
7.Opportunity Recognition	3.16	0.94	-.079	-.028	-.053	.018	.101	-.158*	1	
8.Risk Taking	2.24	1.14	.040	.021	.093	.396**	.074	.038	.079	1

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

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

Results in Table 11 show that Opportunity Recognition mean = 3.16) was the highest rated Entrepreneurial success sub-construct and Risk Taking (mean = 2.24) was the lowest rated Entrepreneurial success sub-construct.

A positive and significant correlation was noted between Financial Control and each of Knowledge ($r = 0.266$, p-value < 0.01) and Work Experience ($r = 0.168$, p-value < 0.05) since the p-values were less than 0.05 and the correlation coefficients were positive. None of the independent variables was highly correlated to another independent variable ($r>0.8$), this implies that there is no problem of multicollinearity.

A path analysis model shown below was fitted to test all the hypotheses. The results are summarised in Figure 5.1, table 5.5 and table 5.6.

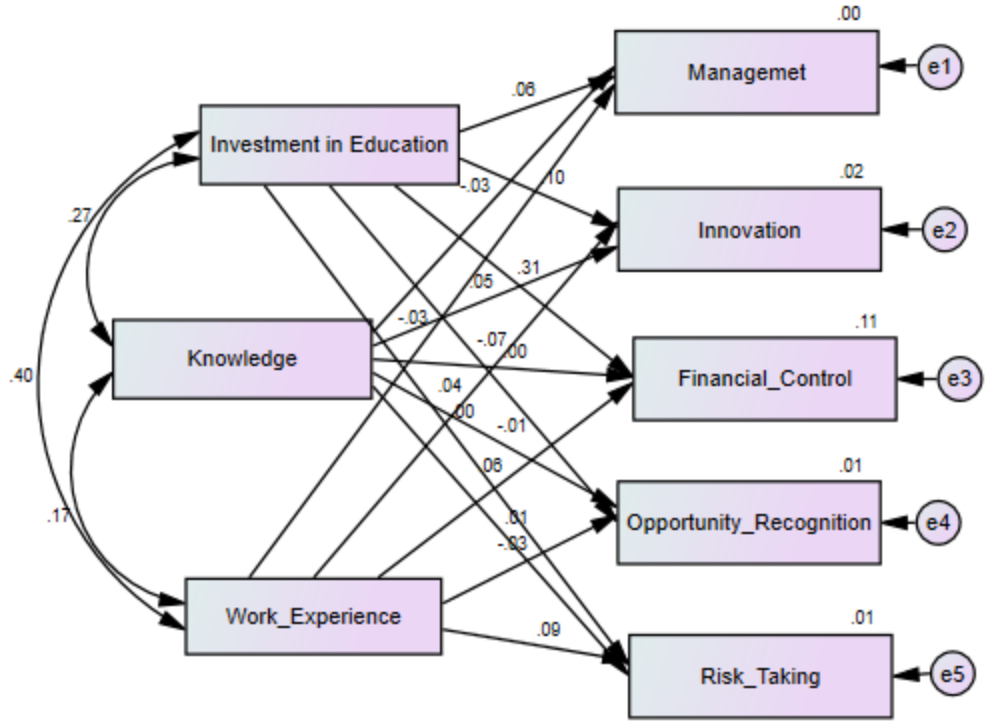


Figure 5.1: Path analysis model with Standardised estimates

The results show that the relationship between Financial control and investment in education (β = 0.093, t = 4.052, p-value < 0.001), is positive and significant. The other variables are not significantly related.

Table 5.5: Regression Weights

			Unstandardised Estimate	Standardised Estimate	C.R.	P
Management	<---	Education	0.031	0.056	0.707	0.479
Innovation	<---	Education	0.029	0.097	1.231	0.218
Financial Control	<---	Education	0.093	0.305	4.052	***
Opportunity Recognition	<---	Education	-0.026	-0.067	-0.841	0.401
Risk Taking	<---	Education	0.001	0.002	0.024	0.981
Management	<---	Knowledge	-0.052	-0.026	-0.353	0.724
Innovation	<---	Knowledge	0.056	0.052	0.709	0.479

Financial Control	<---	Knowledge	0.001	0.001	0.015	0.988
Opportunity Recognition	<---	Knowledge	-0.009	-0.006	-0.084	0.933
Risk Taking	<---	Knowledge	0.01	0.006	0.077	0.939
Management	<---	Work Experience	-0.032	-0.032	-0.405	0.685
Innovation	<---	Work Experience	0.02	0.037	0.473	0.636
Financial Control	<---	Work Experience	0.036	0.064	0.873	0.383
Opportunity Recognition	<---	Work Experience	-0.018	-0.025	-0.323	0.747
Risk Taking	<---	Work Experience	0.078	0.091	1.168	0.243

The results below show the squared multiple correlations for all the dependent variables:

Table 5.6: Squared Multiple Correlations

	Estimate
Risk Taking	.009
Opportunity Recognition	.007
Financial Control	.113
Innovation	.020
Management	.003

The Squared Multiple Correlations shown in Table 11 shows that Education, Knowledge and work experience explains 11.3% of Financial control, 2% of innovation, 0.9% of variation in Risk Taking, 0.7% of opportunity recognition and 0.3% of Management.

5.2.5 Other influential factors on success

The results show that 11.7% of the respondents were in a high technology environment, 41.6% were in a low technology environment while 46.7% were in a non-technological environment.

Other factors which determine success are profitability, growth and size of the enterprise. Most of the entrepreneurs in the sample (78.7%) used their own capital to start their

business. The business challenges being faced were mainly Financial Sourcing (36.5%) and Possession of proper Educational qualifications 32%).

The threats to the businesses of the respondents in the sample were mainly Competitors (48.2%), government (25.9%) and Technology (17.8%).

Table 5.7: Other variables

Variable	*Category*	*Frequency*	*Percent*
Operational Environment	High technology environment	23	11.7
	Low technology environment	82	41.6
	Non-technological environment	92	46.7
Sources of Capital	Own capital	155	78.7
	Bank loans	16	8.1
	Family	10	5.1
	Friends	3	1.5
	Not indicated	13	6.6
Business Challenges	Financial Sourcing	72	36.5
	Possession of proper Educational qualifications	63	32.0
	Restrictive Government policies and legislation	48	24.4
	Other	14	7.1
SWOT Analysis	Competitors	95	48.2
	Government	51	25.9
	Technology	35	17.8
	Other	16	8.1

5.3 CONCLUSION

The results findings from data analysis were reported in terms of major factors, namely: education, industry experience and entrepreneurial success. The measurement of other influential variables was also provided to determine the actual relationships amongst the variables. The following chapter discusses research findings in terms of demographics, and the results pertaining to all hypotheses.

6 CHAPTER 6: DISCUSSION OF RESULTS

6.1 INTRODUCTION

In this section, a discussion of findings is done. First, demographics of the study is provided. At least six areas of the demographics are discussed, namely; category of the industry, ownership duration, gender aspects, period of entry into the business, the size of dependents, and reasons for starting the business. Secondly, the results pertaining to all given hypotheses are discussed on an individual basis.

6.2 DISCUSSION OF DEMOGRAPHICS

6.1.1 Category of the industry

The respondents were asked to indicate the industry in which they operate. Twelve categories which represent the type of industry in which informal entrepreneurs operate are provided, namely: mining, community services, IT, finance, manufacturing, trading, transport, agriculture and related products, construction, rendering of services, sales of goods and other industries. In terms of the findings, the sales of goods was the most common industry at 41% in the cluster. This was followed by rendering of services (32%) and construction 10%. Mining was the least mentioned industry with only 1% of the sample.

Figure 6.1 depicts a summary of a graphical analysis of the findings of twelve categories of common and uncommon categories of trades in which most street vendors operate.

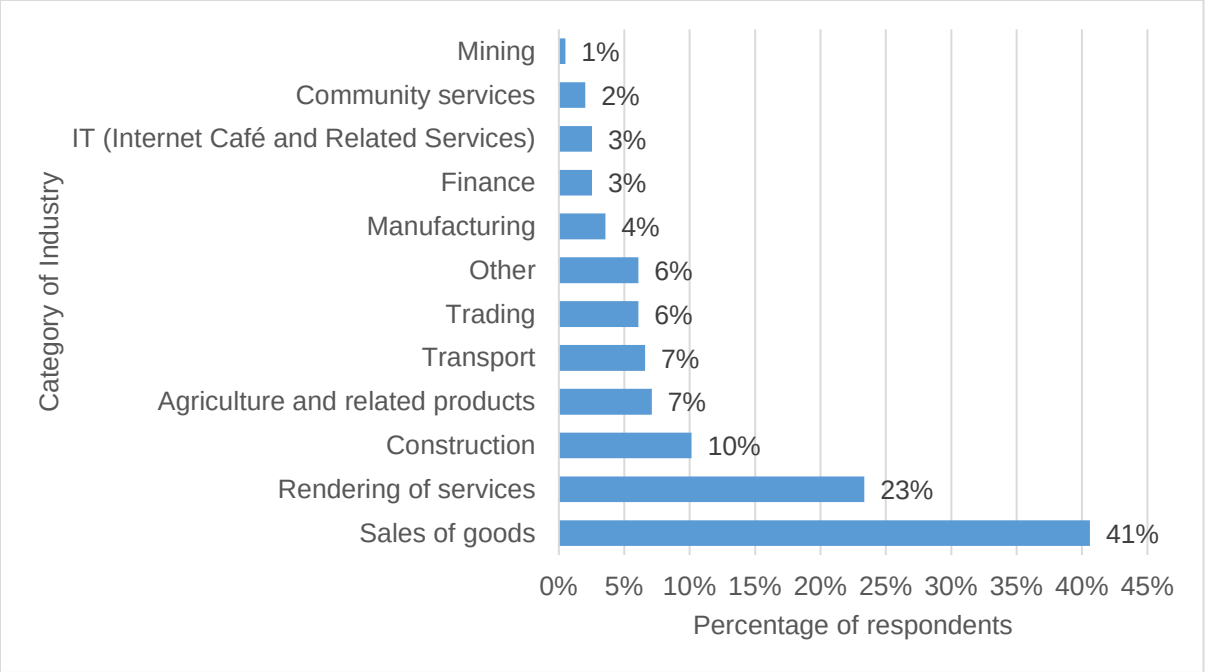


Figure 6.1: Category of Industry

6.1.2 Ownership duration

In terms of this question, participants were asked to indicate the amount of time that they have been in business. Figure 6.2 shows the amount of time that the respondents have been in business.

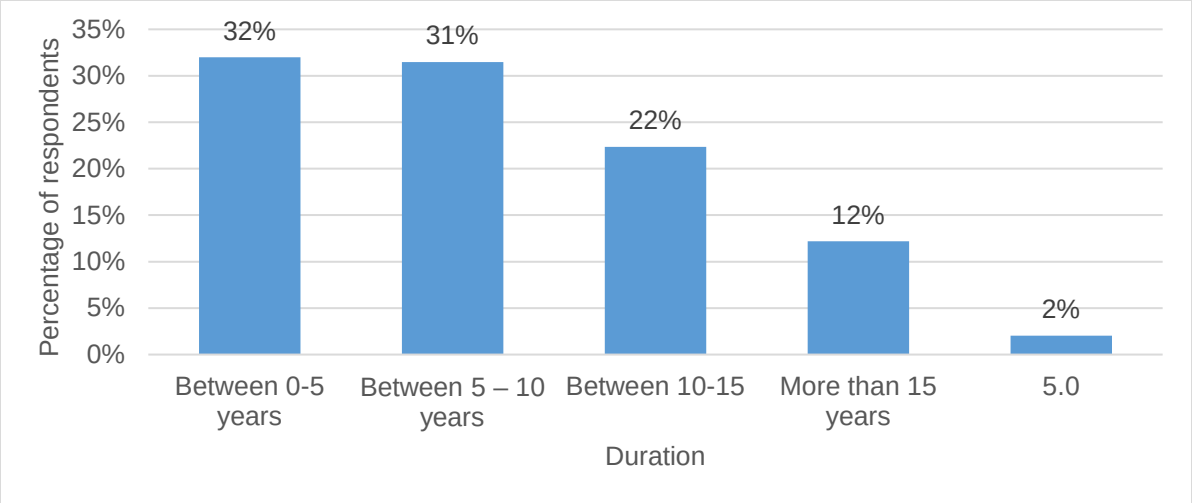


Figure 6.2: Business ownership duration

In terms of the findings, 32% of the 197 respondents, translated to 63 small business owners had been owning their business for 0 – 5 years while another 31% had been in owning theirs for 5 – 10 years. The other 36% had had their businesses for more than 10 years.

6.1.3 Gender

The sample was made up of 197 complete responses. Of the 197 respondents, 59% were female while the other 41% were male as shown in figure 6.3.

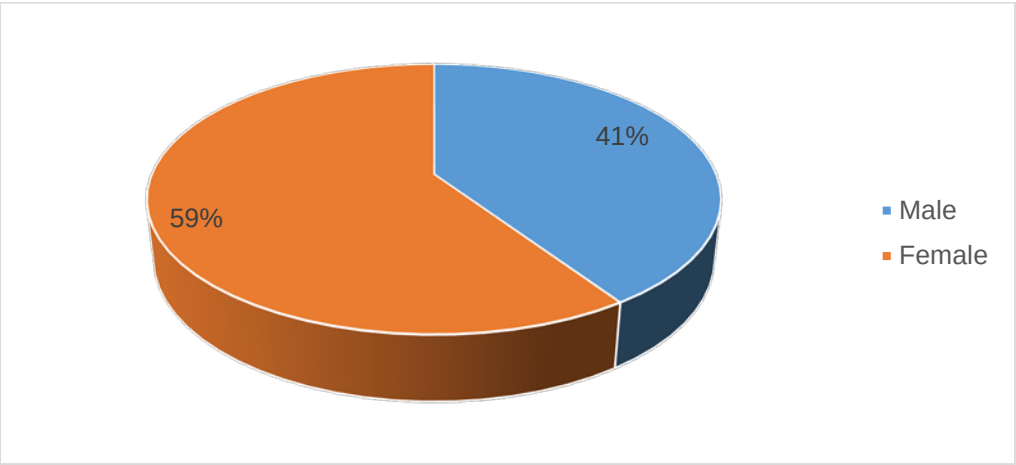


Figure 6.3: Gender of respondents

The age distribution of the respondents in the sample is summarized in Table 6.1

Table 6.1: Age of respondents

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Age	180	15	75	35.62	15.381

According to the findings above, the respondents were on average 35.62 ± 15.381 years old. The youngest respondent was 15 years old while the oldest was 75 years old. There were another 17 respondents who did not indicate their age, and their decision not to divulge was ethically respected as such (Saunders, 2016; Kumar, 2014; Bryman, 2012). The consent form in Appendix 1 also alludes to ethical commitments by researchers.

6.1.4 Period of entry into the business.

The respondents were also asked to indicate the Period of Entry into Business and the results are summarized in Figure 6.4. According to the results, 41% of the participants have entered the business for greater than five years. This means even if they were not owning the business informally, they initiated some form of trading. However, 21% of the respondents entered the undertaking for less than a year.

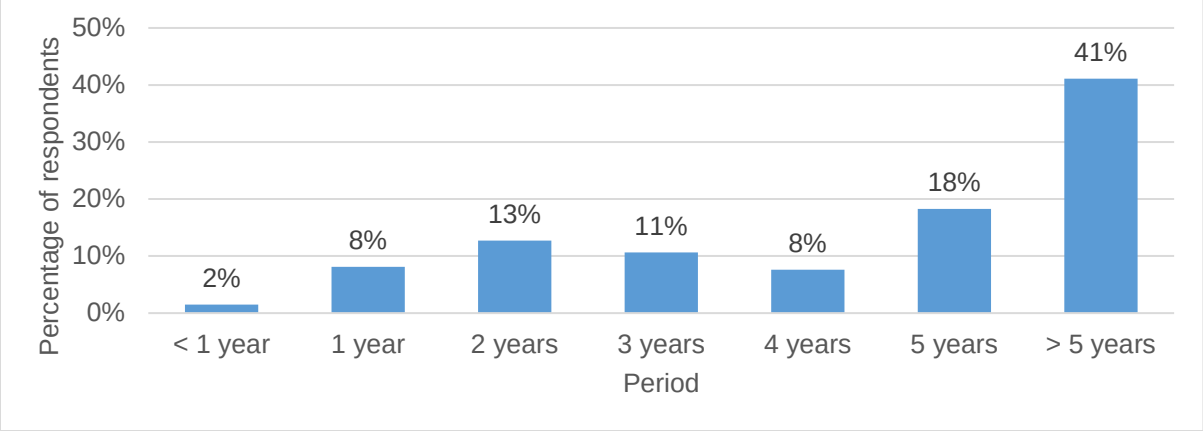


Figure 6.4: Period of Entry into Business

6.1.5 Dependants

It can be noted that 10.8% of the respondents in the sample had no dependents, 38.2% had 1 – 3 dependents while 29.6% had 3 – 5 dependents and 21.5% had more than 5 dependents.

Table 6.2: Other variables

Variable	Category	Frequency	Percent
Dependents	0	20	10.8
	1 - 3	71	38.2
	3 - 5	55	29.6
	5+	40	21.5

6.1.6 Reasons for establishing small businesses

Reasons for establishing own business were explored and the results are summarised in Figure 6.5. The graph also provides a list of the possible reasons asked.

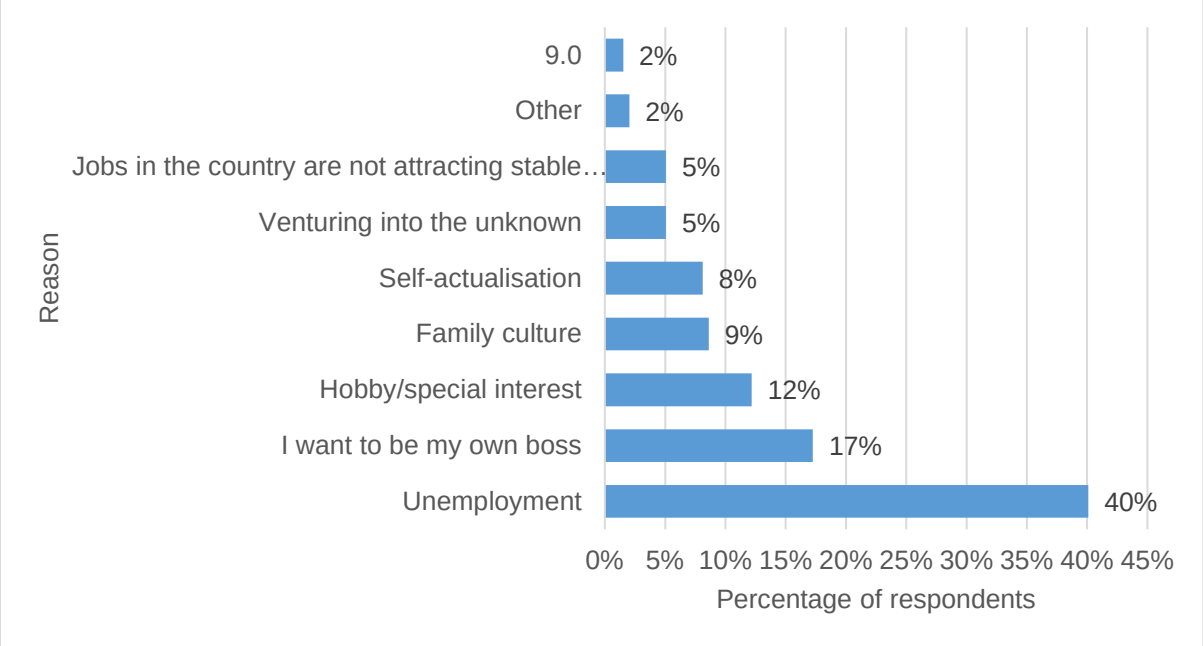


Figure 6.5: Reasons for starting own business

In terms of the findings, it can be noted that Unemployment (40%) was the most common reason for stating own business. This was followed by wanting to be own boss (17%) and as a hobby/special interest (12%).

6.2 DISCUSSION OF HYPOTHESIS

6.2.1 H1: THERE IS A POSITIVE RELATIONSHIP BETWEEN EDUCATION AND ENTREPRENEURIAL SUCCESS IN THE CONTEXT OF SOUTH AFICAN ECONOMY

H0: There is no relationship between education and entrepreneurial success.

H1: There is a positive relationship between education and entrepreneurial success.

entrepreneurial success had 5 sub-constructs and thus five hypotheses were tested.

H1a: There is a positive relationship between education and entrepreneurial success - Management.

The results from part of the analysis shows that the relationship between Entrepreneurial Success - Management and education (β = 0.031, t=0.707, p-value = 0.479) is not significant since the p-value was greater than 0.05. This implies that H1a is not supported. Thus, it is concluded that there is no relationship between education and entrepreneurial success - Management.

H1b: There is a positive relationship between education and entrepreneurial success - Innovation.

The results from part of the analysis shows that the relationship between Entrepreneurial Success - Innovation and education (β = 0.029, t=1.231, p-value = 0.218) is not significant since the p-value was greater than 0.05. This implies that H1b is not supported. Thus, it is concluded that there is no relationship between education and entrepreneurial success - Innovation.

H1c: There is a positive relationship between education and entrepreneurial success - Financial Control.

The results from part of the analysis shows that the relationship between entrepreneurial success - Financial Control and Education (β = 0.093, t=4.052, p-value < 0.001) is positive since the standardised coefficient for Education is greater than zero and is also significant since the p-value is less than 0.05. This implies that H2c is supported. Thus, the null hypothesis is rejected in favour of the alternative hypothesis. It is concluded that there is a positive relationship between education and entrepreneurial success - Financial Control.

H1d: There is a positive relationship between education and entrepreneurial success - Opportunity Recognition.

The results from part of the analysis shows that the relationship between Entrepreneurial Success - Innovation and Opportunity Recognition (β = -0.026, t= -0.841, p-value = 0.401) is not significant since the p-value was greater than 0.05. This implies that H2d is not supported. Thus, it is concluded that there is no relationship between education and entrepreneurial success - Opportunity Recognition.

H1e: There is a positive relationship between education and entrepreneurial success - Opportunity Recognition.

The results from part of the analysis shows that the relationship between Entrepreneurial Success - Opportunity Recognition and education (β = 0.001, t=0.024, p-value = 0.981) is not significant since the p-value was greater than 0.05. This implies that H2d is not supported. Thus, it is concluded that there is no relationship between education and entrepreneurial success - Opportunity Recognition.

Based on the results from the five sub-hypotheses, it can be concluded that there is a positive relationship between education and entrepreneurial success in the context of South African informal economy as all the knowledge is positively and significantly related to entrepreneurial success - Financial control.

6.2.2 H2: THERE IS A POSITIVE RELATIONSHIP BETWEEN WORK EXPERIENCE AND ENTREPRENEURIAL SUCCESS IN THE CONTEXT OF SOUTH AFICAN ECONOMY

H0: There is no relationship between work experience and entrepreneurial success.
H2: There is a positive relationship between work experience and entrepreneurial success.

Entrepreneurial success had five sub-constructs and thus five hypotheses were tested.

H2a: There is a positive relationship between work experience and entrepreneurial success - Management.

The results from part of the analysis shows that the relationship between Entrepreneurial Success - Management and Work experience (β = -0.032, t = -0.405, p-value = 0.685) is not significant since the p-value was greater than 0.05. This implies that H2a is not supported. Thus, it is concluded that there is no relationship between work experience and entrepreneurial success - Management.

H2b: There is a positive relationship between work experience and entrepreneurial success - Innovation.

The results from part of the analysis shows that the relationship between Entrepreneurial Success - Innovation and Work experience (β = 0.02, t=0.473, p-value = 0.636) is not significant since the p-value was greater than 0.05. This implies that H2b is not supported. Thus, it is concluded that there is no relationship between work experience and entrepreneurial success - Innovation.

H2c: There is a positive relationship between work experience and entrepreneurial success - Financial Control.

The results from part of the analysis shows that the relationship between Entrepreneurial Success - Financial Control and Work experience (β = 0.036, t=0.873, p-value = 0.383) is not significant since the p-value was greater than 0.05. This implies that H2c is not supported. Thus, it is concluded that there is no relationship between work experience and entrepreneurial success - Financial Control.

H2d: There is a positive relationship between work experience and entrepreneurial success - Opportunity Recognition.

The results from part of the analysis shows that the relationship between Entrepreneurial Success - Opportunity Recognition and Work experience (β = -0.018, t=-0.323, p-value = 0.747) is not significant since the p-value was greater than 0.05. This implies that H2d is not supported. Thus, it is concluded that there is no relationship between work experience and entrepreneurial success - Opportunity Recognition.

H2e: There is a positive relationship between work experience and entrepreneurial success - Risk Taking.

The results from part of the analysis shows that the relationship between Entrepreneurial Success - Risk Taking and Work experience (β = 0.078, t=1.168, p-value = 0.243) is not significant since the p-value was greater than 0.05. This implies that H2e is not supported. Thus, it is concluded that there is no relationship between work experience and entrepreneurial success - Risk Taking.

Based on the results from the five sub-hypotheses, it can be concluded that there is no relationship between work experience and entrepreneurial success in the context of South African informal economy as all the work experience was not significantly related to any of the five sub-constructs of entrepreneurial success.

6.2.3 H3: THERE IS A POSITIVE RELATIONSHIP BETWEEN KNOWLEDGE AND ENTREPRENEURIAL SUCCESS IN THE CONTEXT OF SOUTH AFICAN ECONOMY

H0: There is no relationship between knowledge and entrepreneurial success.

H3: There is a positive relationship between knowledge and entrepreneurial success.

entrepreneurial success had 5 sub-constructs and thus five hypotheses were tested.

H3a: There is a positive relationship between knowledge and entrepreneurial success - Management.

The results from part of the analysis shows that the relationship between Entrepreneurial Success - Management and knowledge (β = -0.052, t = -0.353, p-value = 0.724) is not significant since the p-value was greater than 0.05. This implies that H3a is not supported. Thus, it is concluded that there is no relationship between knowledge and entrepreneurial success - Management.

H3b: There is a positive relationship between knowledge and entrepreneurial success - Innovation.

The results from part of the analysis shows that the relationship between Entrepreneurial Success - Innovation and knowledge (β = 0.056, t=0.709, p-value = 0.479) is not significant since the p-value was greater than 0.05. This implies that H3b is not supported. Thus, it is concluded that there is no relationship between knowledge and entrepreneurial success - Innovation.

H3c: There is a positive relationship between knowledge and entrepreneurial success - Financial Control.

The results from part of the analysis shows that the relationship between Entrepreneurial Success - Financial Control and knowledge (β = 0.001, t=0.015, p-value = 0.988) is not significant since the p-value was greater than 0.05. This implies that H3c is not supported. Thus, it is concluded that there is no relationship between knowledge and entrepreneurial success - Financial Control.

H3d: There is a positive relationship between knowledge and entrepreneurial success - Opportunity Recognition.

The results from part of the analysis shows that the relationship between Entrepreneurial Success - Opportunity Recognition and knowledge (β = -0.009, t=-0.084, p-value = 0.933) is not significant since the p-value was greater than 0.05. This implies that H3d is not supported. Thus, it is concluded that there is no relationship between knowledge and entrepreneurial success - Opportunity Recognition.

H3e: There is a positive relationship between knowledge and entrepreneurial success - Risk Taking.

The results from part of the analysis shows that the relationship between Entrepreneurial Success - Risk Taking and knowledge (β = 0.01, t=0.077, p-value = 0.939) is not significant since the p-value was greater than 0.05. This implies that H3e is not supported. Thus, it is concluded that there is no relationship between knowledge and entrepreneurial success - Risk Taking.

Based on the results from the five sub-hypotheses, it can be concluded that there is no relationship between knowledge and entrepreneurial success in the context of South African informal economy as knowledge was not significantly related to any of the five sub-constructs of entrepreneurial success.

6.3 CONCLUSION

In concluding this chapter, the demographics have indicated the extent to which six areas of the demographics have supported the context of study and research findings.

Literature has revealed two perspectives with regard to positions about the existing relationships between the two variables. Scholars such as Dickson, Solomon and Weaver (2008); Lee and Tsang (2001); Jo and Lee (1996); Kongo (2014) & Barreira (2004) and others have argued in favour of the positive relationship between education, work experience, knowledge and the success of an enterprise. However, other scholars have had mixed feelings about the existence of positive relationships between the variables. Although some level of positivity has been acknowledged, it has been established that to some extent an adverse relationship is prominent. Researchers like Unger, et al. (2011); Oosterbeek, et al. (2010); Martin (2013); Lee & Tsang (2001) and others have pioneered their solid position with regard to the negative relationships as it has been discussed in literature. Table 5.1 provides a conclusive summary of the findings from the research outcomes.

Table 6.3: Summary of the hypotheses

Hypothesis		**Outcome**
H1	There is a positive relationship between **education** and entrepreneurial success in the context of South African informal economy.	Not Supported
H2	There is a positive relationship between **industry experience** and entrepreneurial success in the context of South African informal economy.	Supported
H3	There is a positive relationship between k**nowledge** and entrepreneurial success in the context of South African informal economy.	Not Supported

7 CHAPTER 7: SUMMARY, CONCLUSION AND RECOM MENDATION

7.1 INTRODUCTION

Chapter 1 provided the background, research problem, purpose, objectives, questions and justification of this research. Chapter 2 provided a discussion of the literature providing the theoretical framework as well as the empirical grounding of this study. Chapter 3 presented a discussion on how the hypotheses were developed and thereafter discussed the identified relationships between education, industry experience, knowledge and entrepreneurial success. This relationship was mediated by these three variables, namely, education, work experience and knowledge. Chapter 3 has furthermore, presented the conceptual model for this study. Constructs that were used to derive the three tentative answers to the study included opportunity recognition, risk taking, innovation, management and financial control and these were tested in this report.

Chapter 4, presented the methodology that was employed in conducting this research. Chapter 5 provided the procedure for data analysis and presented the results that were obtained after several statistical analyses. The final chapter presents the interpretation and a discussion of the results obtained from the data analysis in relation to literature reviewed. This chapter also discusses the implications of the study findings. Recommendations and contributions of the study, as well as limitations that provided directive for future research considerations are stated before the conclusion of this chapter.

7.2 Problem statement

7.2.1 Main problem

The main problem of the study was to establish the relationship between human capital and entrepreneurial success in the context of the South African informal economy.

7.2.2 Sub-problems

Sub-problem 1

To establish whether there is a positive relationship between education and entrepreneurial success of the informal economy.

Sub-problem 2

To establish whether there is a positive relationship between industry experience and entrepreneurial success of the informal economy.

Sub-problem 3

To establish whether there is a positive relationship between knowledge and entrepreneurial success of the informal economy.

7.3 SUMMARY OF LITERATURE REVIEW

The study has provided both positive and negative perspectives on relationships between the major variables of the study. Shane (2003); Venter, et al. (2008); Valodia & Devey (2012) have provided pertinent definitions for crucial terms such as Human capital and factors (entrepreneurial success, informal economy, and entrepreneurship. Human

capital factors in particular, have pointed to the necessity of education and previous experience as the most determinant factors for success. It was reviewed from literature and/or theoretical standpoint that human capital is an investment without which entrepreneurs cannot succeed. Researchers alluding to the paradigm included, among others, Unger, et al. (2011); Sarasvasthy (2008); Venter, et al. (2008); Barreira and Urban (2007; Shane (2003) and Segal, et al. (nd).

In concluding the review, the theoretical background to the study has been provided, with human capital theory underpinning the study. Unger, et al. (2011) has alerted other researchers and students of entrepreneurship not to underestimate a subtle distinction between human capital investments and its outcomes - a perspective which was ignored by extant and traditional knowledge of entrepreneurship. It is within this paradigm that context as a moderator of the human capital-success relationship became used to describe the meta-analytical approach to understanding human capital dimensions. Scholars such as Oostebeek, et al. (2010) have taken a radical position by pinpointing an inverse relationship between human capital factors and entrepreneurial orientation and success.

With regard to education as linked to knowledge, failure and success of entrepreneurs has been proven to be dependent on the possession of proper and relevant educational qualifications. Arguments, such as those of Robinson & McDougal (2001), have supported the role played by entrepreneurial education in developing youth and graduate entrepreneurship. Work experience was limited to aspects such as technical and industry specific competencies, and prior knowledge, noting failure as experience by Peterman & Kennedy, 2003) is a wonderful learning curve. Taking a pluralistic position to understanding knowledge, Barreira (2004) has outlined both explicit and tacit knowledge as paramount demarcations. From a microeconomic perspective, knowledge can be diffused and spilled over during the process of its creation as revealed by Carlson, et al. (2009).

The contribution made by sociological philosophy in the context of social entrepreneurship and networking enables an entrepreneur to generate more knowledge. The construct of self-efficacy, entrepreneurial orientation are embedded in a model of entrepreneurial success adapted from Freuch & Rauch (2000); and are often entangled with psychological aspects aimed at explaining the actual drivers of entrepreneurial initiatives.

Entrepreneurial success has also been tackled from a genetic approach which highlight the robustness of gender differences across cultures and national demarcations. To this effect, it must still be held that the women majority are discriminated against at various stages of entrepreneurship. Issues of concern as discussed revolve around financial challenges, collateral and other typical gender stereotypes.

7.4 SUMMARY OF RESULTS

Several scholars have seen human capital playing a significant role in bringing about entrepreneurial success in order to drive economic development. Dimov & Shepherd (2005) argued that human capital make human beings economically productive in society. Other influential researchers include Martin, et al. (2013), Shane and Venkataraman (2000); Kurato (2005); Rauch & Frese (2005); & Todaro (2009).

Scholars view human capital from different perspectives. There are those who take a positive view, and those who are negative about the influence human capital can have to the success of an entrepreneur. Nevertheless, some take a neutral position, defending and criticising the discourse. This study focused on the convenient perspectives, i.e.; those which address the positive and the negative view of human capital.

Positively, other researchers have acknowledged a positive relationship between human capital and entrepreneurial success, for example; Rauch & Frese (2000); Martin, et al. (2013). Furthermore, Shane & Venkataraman (2003) argue for the

enhancement of proper education among entrepreneurs operating within both the informal and informal economy.

However, Literature has also acknowledged some scholars who see an inverse relationship between human capital and entrepreneurial success. To a certain degree, they see some positive elements, but somehow refute the genuine relationship which others uphold. Some do not see any relationship at all. Among others, Unger, et al. (2011); Oosterbeek et al. (2010); Martin (2013); Lee & Tsang (2001); Minniti and Bygrave (2003); perceive a negative relationship between human capital and entrepreneurial success.

The state of poverty, which currently stands at 26.6% due to high rates of unemployment in South Africa has been outlined in the study. Approximately 42% of the Limpopo population is living in poverty; with 16, 9% of the population unemployed (Statistics South Africa; Quarterly Labour Force Survey, 2015). The global state of economics affairs has left many countries destitute in terms of growth. South Africa's GDP has declined due to the global economic recession. Youth unemployment even among graduates is alarming on an annual basis. A crucial question can be asked is to interrogate whether education, work experience, and knowledge could be a good solution to address pressing socio-economic problems in South Africa? (See recommendations).

Barreira (2004); Kongo (2015) view human capital as a component of education and industry experience. In order to measure education, the research survey questions were structured to include, among other questions: the level of education, relevance of the qualification in cases where formal studies were undertaken, as well as the industry experience. In this case, the focus was on establishing a specific-industry experience like finance, marketing, production, technology, and law. This included an enquiry into the state of their management skills in terms of their competency. Other questions were asked to determine possible challenges, such as possession of qualifications, finances, government policies and competition. Participants were also asked about their knowledge levels in terms of both management and technical knowledge.

In terms of knowledge and success relations, confirmatory factor analysis was conducted to assess the scale validity for each Knowledge and Entrepreneurial success. Cronbach's Alpha was used to assess reliability of the scale for each of the constructs. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) values were greater than the minimum required value of 0.5. This implies that the sample was adequate to conduct factor analysis. The Bartlett's Test of Sphericity values had significant p-values less than 0.05 as required. Both the p-values were < 0.001.

There are various reasons which prompt people to start business. With regard to this aspect, a questionnaire required respondents to state one reason for starting a small informal business. The table consisted of options such as unemployment, self-actualisation, hobby and interest, family culture and other. In terms of Maslow's hierarchy of needs, the answers to the reasons driving entrepreneurs start a business emanate within his hierarchy of needs, ascending from physiological to self-actualisation (Bergh & Theron, 2009).

7.4.1 The relationship between education and entrepreneurial success in informal economy in Limpopo Province.

In leading countries like the USA, United Kingdom and Australia, the possession of post-graduate qualifications by entrepreneurs signify the investment value attached to education as is constantly held by Davidson &Honig (2003), quoted in Venter, Urban and Rwigema (2008); therefore, yielding higher wage compensation in return for their variety of skills training and experience. The study revealed the extent to which education is associated with success and/or performance measure. Dickson, Solomon and Weaver (2008); Lee & Tsang (2001); have been the advocates of growth, success and profitability due to higher levels of education.

According to the results findings, 2% of the respondents have a higher level of education weighted at post-graduate status. This is followed by the lowest group of 21% who have basic education at high school level (Matriculation certificate). Upon interviewing at least

40 high school learners and teens involved in street vending, they all responded positively to the need for proper schooling before embarking on a business venture, although circumstances like poverty were cited as reasons for not wanting to proceed with formal schooling. Some participants, including those at school, and drop outs did not see any value for schooling as a requirement for venturing into a business undertaking. The findings have indicated that a proportion of 31.9% of the respondents indicated that their qualification was either relevant or most relevant to what they were doing. This is the sum of 22, 3% relevant and and 6% most relevant as depicted below:

Surprisingly, demographics indicate that a high level of small business owners on the streets are women with 58, 5% greater than 40, and 5% of the male counterpart. Literature has confirmed the justification behind this trend. The politics of gender stereotypes which are robust across cultures have been acknowledged by Banerjee, et al (2006), Alexander (2010); Rospabé (2002); Du Toit (2003) who indicate that female unemployment is consistently higher than male unemployment. The discrimination is another possible explanation for the persistent unemployment, and large inequalities between age groups, races and genders.

Further questions to be asked in relation to South Africa is: "What intervention can be done to rescue the challenges which range from finances to education"? Can South Africa breed one more typical Grameen banker of Bangladesh with the typical character of Professor Yunus? Who will employ the escalating number of university and college graduates? Similar questions can be asked with respect to the success variable with regard to the challenges prohibiting women to crack an entrepreneurial nut.

7.4.2 Relationship between Industry experience and entrepreneurial success in the informal economy in Limpopo Province.

In terms of recognising work experience, Robinson & McDougal (2001) Phelan & Adler (2003), Venter, Urban & Rwigwema (2008); find that work experience had a significant effect on venture successes. These scholars have interchangeably used the concept of ‘breadth of managerial experience’, which combined managerial and industrial

experience, and found that combined experience had a significant effect on venture successes.

As per research findings, work experience was rated for each of the areas of interest from Marketing, Finance, Production, Operations, Technology and Business/Entrepreneurial legal skills. The question “Do you have specific-industry experience with regard to the following functional areas?” was asked. In response, 3, 5% respondents have worked in marketing industry for 1-3 years whereas, 1% has worked for 6-9 years in the same industry. In total 8% of the respondents recognized the value which marketing experience has had in their business formation and management.

It can be asked whether work experience is indeed an incubator of entrepreneurial success as was assumed in the literature. If so, what do we do for infant entrepreneurs who have not been in any business venture prior to entry into business? Can an entrepreneur start a business without specific or general experience?

7.4.3 Relationship between knowledge and entrepreneurial success in the informal economy in Limpopo Province.

In terms of the pluralistic perspective of knowledge, Minniti & Bygrave (2011), Unger, et al (2011), & Barreira (2004); understand knowledge from a deductive and inductive angle which has revealed two types of knowledge as explicit and implicit knowledge underpinned by objective and subjective experiences. The interdependence between knowledge and work experience was exhibited in the works of Venter, et al. (2008); who derived a clear distinction between tacit and explicit knowledge, as well as the sources of knowledge such as work experience, expert advice, copying and imitating. Clerq & Arenius (2006) have, however, emphasized that knowledge may lead to competitive advantage and superior performance. The fusion of sociological paradigm with the role played by networking cannot be ignored. Social networks enhance external knowledge and therefore knowledge-based entrepreneurship (Unger, et al. 2011 & Urban, 2008). It is a commonly held microeconomic view that endogenous knowledge can be spilled over

and diffused to demonstrate the gradual process of acquisition and transforming knowledge from industry experience as defended by Carlson, et al. (2009).

The Knowledge construct was measured using two items measuring Management Knowledge Level and Technical Knowledge Level as per the 5-point Likert scale. According to the findings, 45% of respondents have demonstrated good management knowledge rating alongside with 24% of managerial excellence. In this case, the ability to manage was not rated according to qualifications, but according to observed planning, organisation, controlling and checking their business activities. Technically, 29% of the respondents had an excellent rating alongside with 34% of good technical knowledge. In terms of the Bartlett's Test of Sphericity, the approximate Chi-square is estimated at 75.584 for both technical and management knowledge.

In our recommendations, one question to be tackled for South Africa and the impoverished Limpopo is the extent to which knowledge is a necessary variable to influence business ventures? If so, what role can knowledge diffusion and spillage play in transmitting appropriate knowledge even to the South African destitute entrepreneurs without education?

7.5 Entrepreneurial success factors

A best definition of entrepreneurial success is, in terms of diverse literature, what can be achieved if researchers can recognize the role of the interdisciplinary nature of knowledge, such as Psychology, Education, Sociology and Philosophy as relevant examples. Accordingly, various authors have debated the manner in which success has been understood from psychological factors. As such values, attitudes, and convictions, all come to the picture with relation to the 'self'' in contrast with 'significant others'. We have seen how Munish (2007) & Venter et al. (2008) have linked the construct of self-efficacy to entrepreneurial success. Key to the central concept is a recognition of psychological individual differences, motivation, cognition and personal characters as

held by Sonnentag & Frese, (2002); Bosma ,et al. (2005); Gelderen; Thurik, & Bosma (2005).

The politics of gender has been proved robust across national boundaries, where women are victims of failure when it comes entrepreneurial success. Longowitz & Minniti (2007), Viljoen (2010), Zhang, et al. (2009), have shared sufficient light with regard to this dimension. (Mat & Mansor, 2010) pose further challenges with regard to the alleged problems of attitude approach to understanding entrepreneurial success. This study has consistently held the consideration of the attitude approach as a pertinent measure of success.

Entrepreneurial Success was measured using 17 statements rated on a 5-point Likert scale where 1 was Strongly disagree and 5 was Strongly agree. According to the study findings, Opportunity Recognition (mean = 3.16) was the highest rated Entrepreneurial success sub-construct and Risk Taking (mean = 2.24) was the lowest rated Entrepreneurial success sub-construct, which implies that even if informal traders are able to recognise opportunities, they cannot take high and calculated risks which are backed up by access to business finance, proper education and sometimes applicable work experience. According to the Bartlett's Testing, the Chi-Square is estimated at 1097.086.

7.5.1 Management

In terms of hypothesis H3a, a positive relationship between knowledge and entrepreneurial success is forged. The results from part of the analysis shows that the relationship between Entrepreneurial Success - Management and knowledge (β = -0.052, t = -0.353, p-value = 0.724) is not significant since the p-value was greater than 0.05. This implies that H3a is not supported. Thus, it is concluded that there is no relationship between knowledge and entrepreneurial success - Management. Basically, the majority

of small business owners in Limpopo have little or no management abilities by which the ventures can be managed effectively.

7.5.2 Innovation

According to hypothesis H3b, a positive relationship between knowledge and entrepreneurial success - Innovation - is identified. The results from part of the analysis shows that the relationship between Entrepreneurial Success - Innovation and knowledge ($\beta = 0.056$, $t=0.709$, p-value = 0.479) is not significant since the p-value was greater than 0.05. This implies that H3b is not supported. Thus, it is concluded that there is no relationship between knowledge and entrepreneurial success - Innovation. Applicably, innovation is not a major factor for most impoverished communities, and therefore the success of the small enterprises in the province is not determined by innovative elements.

7.5.3 Financial management and control

Hypothesis H3c points to a positive relationship between knowledge and entrepreneurial success - Financial Control. The results from part of the analysis shows that the relationship between Entrepreneurial Success - Financial Control and knowledge ($\beta = 0.001$, $t=0.015$, p-value = 0.988) is not significant since the p-value was greater than 0.05. This implies that H3c is not supported. Thus, it is concluded that there is no relationship between knowledge and entrepreneurial success - Financial Control. In terms of this factor, the study revealed that only a few educated entrepreneurs within the informal economy are able to control and manage their finances effectively. Nevertheless, financial literacy among the majority of the entrepreneurs is a major challenge. For example, in terms of the profitability frequency measure, 47, 5% of respondents receive low annual profits which were measured between R0-R20 000. Only 16% of the respondents are able to attain the turnover rate of above R100 000 per annum.

7.5.4 Opportunity recognition

There is a positive relationship between knowledge and entrepreneurial success - Opportunity Recognition - which is indicated by hypothesis H3d. The results from part analysis shows that the relationship between Entrepreneurial Success - Opportunity Recognition and knowledge (β = -0.009, t=-0.084, p-value = 0.933) is not significant since the p-value was greater than 0.05. This implies that H1d is not supported. Thus, it is concluded that there is no relationship between knowledge and entrepreneurial success - Opportunity Recognition.

7.5.5 Risk Taking

In terms of tentative answer H3e, there is a positive relationship between knowledge and entrepreneurial success - Risk Taking. The results from part of the analysis shows that the relationship between Entrepreneurial Success - Risk Taking and knowledge (β = 0.01, t=0.077, p-value = 0.939) is not significant since the p-value was greater than 0.05. This implies that H3e is not supported. Thus, it is concluded that there is no relationship between knowledge and entrepreneurial success - Risk Taking. Although the majority of informal entrepreneurs within the confines of rural settlements of Limpopo take the risk of initiating the businesses, the risk is of a low and manageable standard. As results have indicated, such risks do not impact heavily on their success.

In brief, best-fit model supported the following relationships:

H1: Education has a positive impact and relationship to the success on an enterprise.

However, the very model, did not support the following relationships:

H2: Work experience has a negative relationship and impact to the success of an enterprise.

H3: Knowledge has a negative impact and influence on entrepreneurial success.

7.6 IMPLICATIONS

7.6.1 Theoretical implication

The study is aimed at generating new knowledge and add this understanding to the existing body of literature on human capital factors in the informal economy context, and the manner in which it impacts on small entrepreneurs. In South Africa, the informal economy emerged as a sector not officially recognised in contributing to GDP. Hence, the gaps in the existing literature necessitated this research which is aimed at closing the identified gaps. This study used five constructs to devise a conceptual model which demonstrate the interrelatedness of the main factors.

7.6.2 Applied implications

The most important stakeholders to benefit from this study include, among others, public institutions and managers who deals with enterprise development in Limpopo Province and South Africa, at large. Small business agencies can benefit from this study by identifying critical challenges facing informal businesses in order to pave ways for financial assistance, as well as providing educational support.

7.7 LIMITATIONS

According to Bryman (2012), Cooper & Schindler (2011), limitations to a study are those influences, conditions or shortcomings that were out of the control of the researcher and placed restrictions on this study's methodology as well as its conclusions. First, scholars provide criticism associated with quantitative studies, arguing that constructs being investigated may not always be fixed .This practice ignores the fundamental practical life of a respondent who is seen channelled by some restricted questionnaires/surveys.

However, the representativeness of sampling methods may promote the exclusion of other participants in the research. According to the SEM (Structural Equation Modelling), at least 250-300 participants are required to conduct a quantitative analysis of research findings. In this case, researchers are concerned that the number is just an inch to the entire population and its segments. Consequently the concerns with regard to research bias are often cited. During data collection, certain crucial information is hidden by participants for fear of victimization by authorities. Some participants regard researchers as government sellouts to pose threats to their informal business operations. A non-longitudinal study is criticized for limiting the researcher to collect, analyses and produce a quality report in this study This meant that a short period of time was available to effectively apply the methodology of this study – i.e., the study was not longitudinal in nature. In addition, questionnaires provide shortfalls ranging from limiting the participants to answering specific questions, and thus causing some stereotype behavior.

7.8 RECOMMENDATIONS FOR FURTHER RESEARCH

According to the results findings and conclusion of this research, six recommendations are made. In terms of the study findings, mixed results were obtained. Firstly, a positive relation was established between knowledge and entrepreneurial success in the context of South African informal economy. The hypothesis was sufficiently supported. Secondly, the remaining two hypotheses point to a negative relationship between knowledge, industry experience and entrepreneurial success. Both hypothesis were not adequately supported.

South Africa is characterized by high levels of unemployment. Research has revealed shocking statistics with regard to the fact. Limpopo is one of the provinces which is impoverished by poverty. The government, however, is calling upon people to be educated in order to fight the scourge of poverty and unemployment. In their article *Rebellion of the poor: South Africa's service delivery protests* – Alexandra (2010) details

a quantitative extent to which service delivery protests have become the order of the day in South African urban and rural locations.

Therefore with regard to the question whether education, knowledge and work experience could be suitable solution to small business, perhaps the government needs to research the possibilities of revisiting South African policies. Results findings have proved beyond reasonable doubt knowledge, the experience and the education do not determine their fate to succeed as successful entrepreneurs. Further research should encourage the government of South Africa to check with educational authorities with regard to the appropriate curriculum for suitable street vendors who do not need advanced studies - consideration of the fact that quality education is very expensive in South Africa.

However, further longitudinal studies can be conducted within the nine provinces to establish whether the excluded entrepreneurs from the sample share the same sentiment in order to avoid research bias (Schmidt & Hunter, 2014). Alternatively similar studies can be conducted in each individual province to narrow the scope of research objectives.

Research has established the typical challenges facing entrepreneurs. To address gender stereotypes and financial challenges affecting the unemployed youth and females; further studies can be done to initiate corrective measures to address corrupt ways of allocating start-up funding from government and micro-finance institutions - taking into cognizance that racial discrimination, gender stereotypes and inequalities are still dominating the political economy of South Africa.

A large influx of foreigners to South African cities and rural states is a reality, threatening small and big businesses. Due to this challenge, a study should be conducted to identify both the social, political and economic impact of their massive exodus from their countries of birth to South Africa.

7.9 CONCLUSION

Any study embarked upon has an objective of achieving some results, i.e., providing a tentative answer to the problem. Similarly, the objective of this study was to establish whether there is a functional and concrete relationship between the variables of human capital and the success of an entrepreneur - of course in the given context of the informal sector. Education is regarded as a tool with which people and entrepreneurs specifically, can use to transform their lives and businesses. Regardless of the years which an individual must take to improve and obtain education, it remains a decisive human capital factor with which an enterprise's competitiveness can be sustained. The study has shown the extent to which both positive and negative relationships between human capital factors and entrepreneurial success can be shaped.

Unger, et al. (2011) & Martin, et al. (2013); have pointed to the uncertainty which remains over the magnitude of this relationship and the circumstances under which human capital is more or less associated with entrepreneurial success. In this case, a meta-analytical approach to the study of the relationship, the recognition of a moderator approach, and fragmentation of the study is thus acknowledged as overcomers of a static (orthodox) view of human capital. Accordingly, consideration of the outcomes of human capita is crucial. However, Rauch, et al 2005 argued that the predication of performance is higher if predictors are correctly aligned with certain key variables.

In terms of Smallbone & Welter (2003), a challenge to a dichotomy between the necessity and the opportunity entrepreneur is considered as crucial. In other words, a continuum approach between the two types of entrepreneurship is regarded as transformational and thus evidence base to understanding their differences. Phelan & Adler (2003) rejects that prior experience can be a stumbling block when drastic strategic change is called for. . Peterman, Jessica & Kennedy (2003) have nevertheless revealed that managerial experience affected performance negatively. According to the results, a very low percentage or number of respondents have industry-specific experience, leaving the

majority managing their small business ventures successfully without either industry and management experience.

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APPENDIX 1: CONSENT FORM



The Graduate School of Business Administration

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Johannesburg, 2193,

South Africa

PO Box 98, WITS, 2050

Website: www.wbs.ac.za

MM RESEARCH CONSENT FORM

For the degree:

MASTER OF MANAGEMENT

(IN ENTREPRENEURSHIP AND NEW VENTURE CREATION)

INFORMATION SHEET AND CONSENT FORM

Who I am

Hello, I am **(Ntuli Tshikani Derrick).** I am conducting research for the purpose of completing my Masters of Management at Wits Business School.

What I am doing

I am are conducting research on the **Relationship between human capital factors and entrepreneurial success in the context of South African informal economy**. I am conducting

a quantitative study with number of participants ***to establish whether there is a positive relationship between human capital factors and entrepreneurial success.***

Your participation

I am asking you whether you will allow me to conduct one interview with you. If you agree, I will ask you to participate in one interview for approximately one hour. I am also asking you to give us permission to tape record the interview. I tape record interviews so that I can accurately record what is said.

Please understand that **your participation is voluntary** and you are not being forced to take part in this study. The choice of whether to participate or not, is yours alone. If you choose not take part, you will not be affected in any way whatsoever. If you agree to participate, you may stop participating in the research at any time and tell me that you don't want to go continue. If you do this there will also be no penalties and you will NOT be prejudiced in ANY way.

Confidentiality

Any study records that identify you will be kept confidential to the extent possible by law. The records from your participation may be reviewed by people responsible for making sure that research is done properly, including my academic supervisor/s. (All of these people are required to keep your identity confidential.)

All study records will be destroyed after the completion and marking of my thesis. I will refer to you by a code number or pseudonym (another name) in the thesis and any further publication.

Risks/discomforts

At the present time, I do not see any risks in your participation. The risks associated with participation in this study are no greater than those encountered in daily life.

Benefits

There are no immediate benefits to you from participating in this study. However, this study will be extremely helpful to us in understanding *Human capital and entrepreneurial success in the context of South African informal economy.*

If you would like to received feedback on the study, I can send you the results of the study when it is completed sometime after February 2016

Who to contact if you have been harmed or have any concerns

This research has been approved by the Wits Business School. If you have any complaints about ethical aspects of the research or feel that you have been harmed in any way by participating in this study, please contact the Research Office Manager at the Wits Business School, Mmabatho Leeuw. Mmabatho.leeuw@wits.ac.za

If you have concerns or questions about the research you may call my academic research supervisor, Dr Robert Venter (084 580 7587/011 717 3582)

I hereby agree to participate in research on *Human capital and entrepreneurial success in the Context of South African informal economy*. I understand that I am participating freely and without being forced in any way to do so. I also understand that I can stop participating at any point should I not want to continue and that this decision will not in any way affect me negatively.

I understand that this is a research project whose purpose is not necessarily to benefit me personally in the immediate or short term.

I understand that my participation will remain confidential.

Signature of participant: **Date**:

…… ……

I hereby agree to the tape-recording of my participation in the study.

Signature of participant: **Date:**

…… ……...

APPENDIX 2: Capturing codes in red

APPENDIX 2: STUDY SURVEY QUESTIONNAIRE

SECTION A

1. DEMOGRAPHIC INFORMATION

Respond by putting a tick on the appropriate space (column)

1.1 GENDER

Male	Female	Other (Specify):
1	2	3

1.2 Age: (actual age) _____ years

1.3 Dependants

Number of people you are supporting (include yourself)

0	1-3	3-5	5+
1	2	3	4

2 CATEGORY OF INDUSTRY

Respond by putting a tick on the appropriate category (column)

Check the type of business undertaking/industry which you belong

2.1 Business Undertaking (Sales of goods)	
▪ Spaza shop	*1*
▪ Sheebens and liquor sales	*2*
▪ Art and craft	*3*
▪ Apparel	*4*

▪ Hairdressing products	*5*
▪ Fast foods(Include kwasa kwasa chicken dust)	*6*
▪ Other: (Specify)	*7*
2.2 Business Undertaking (Rendering services)	
▪ Traditional medicine	*1*
▪ Accounting services and Bookkeeping	*2*
▪ Crèche	*3*
▪ Hairdressing and salons	*4*
▪ Community services (Churches and projects)	*5*
▪ Cobbler(Shoe repair)	*6*
▪ Upholstery	*7*
▪ Locksmith	*8*
▪ Gas and water	*9*
▪ IT (Internet Café and related services)	*10*
2.3 Construction	
▪ Building	*1*
▪ Plumbing	*2*
▪ Carpentry	*3*
▪ Boil maker	*4*
▪ Painting	*5*
▪ Electrician	*6*
2.4 Transport	
▪ *Taxi industry*	*1*
▪ *Courier*	*2*
▪ *Assets Removal*	*3*
2.5 Manufacturing	

▪ *Goods*	*1*
▪ *Clothing*	*2*
2.6 Mining (Specify natural resources extracted):	*1*
2.7 Agriculture	*1*
2.8 Trading	*1*
2.9 Finance	*1*
2.10 Community services	*1*
2.11 Entertainment	*1*

3 DURATION OF BUSINESS OWNERSHIP

Between 0-5 years	Between 5 – 10 years	Between 10-15	More than 15 years
1	**2**	**3**	**4**

4 YEAR OF ENTRY INTO THE BUSINESS

For how long have you been running your own business venture?	**< 1 year**	**1**
	1 year	**2**
	2 years	**3**
	3 years	**4**
	4 years	**5**
	5 years	**6**
	>5 years	**7**

5 PROVIDE THE REASONS FOR STARTING THE BUSINESS UNDERTAKING

Unemployment	**1**
Venturing into the unknown	**2**

Self-actualisation	**3**
I want to be my own boss	**4**
Family culture	**5**
Jobs in the country are not attracting stable income	**6**
Hobby/special interest	**7**
Other: Specify	**8**

5.1 Do you have another full-time job/or regard entrepreneurship as second job?		
	Yes	No

SECTION B

1 INVESTMENTY IN EDUCATION

1.1. What is your level of investment in education? Tick the appropriate box (X)		
	1	No schooling
	2	Dropped out of school
	3	High school(Grade 10)
	4	High school (Grade 12)
	5	ABET
	6	Certificate
	7	Diploma
	8	Advanced/Post Graduate diploma
	9	Bachelor's degree
	10	Postgraduate degree
	11	Other. (Specify):……

1.1.1. In cases where your level of education is formal, also respond to the following question by ticking the appropriate box:

Answer the following question with regard to relatedness/relevance of qualification to entrepreneurship development and success.

Qualification (Certificate, diploma, degree, etc) State name and type of qualification	**Most relevant**	**Relevant**	**Partially relevant**	**Not relevant**
Example: National certificate in Business Administration	4	3	2	1
1				
2				
3				
4				

1.2 Tick/circle an environment (from the given list) in which your business operates.

Operational context	✓ *(Tick/circle)*
High technology environment	1
Low technology environment	2
Non-technological environment	3

2 KNOWLEDGE

Use the 5 point Likert scale to answer the following questions

2.1 Determine the level of your management knowledge by ticking the appropriate box.			
	1	Excellent	
	2	Good	
	3	Fair	

	4	Poor	
	5	Uncertain	
2.2. Do you have a working knowledge (technical knowledge) of your product operation?			
	1	Excellent	
	2	Good	
	3	Fair	
	4	Poor	
	5	Uncertain	
2.3. What is/are the main source(s) of your capital structure? (Tick the correct answer)			
		Own capital	**1 if stated and 0 if not**
		Bank loans	**1 if stated and 0 if not**
		Family	**1 if stated and 0 if not**
		Friends	**1 if stated and 0 if not**
		Investments	**1 if stated and 0 if not**

2.4 What challenges is your business facing? (Tick as many as applicable)

Financial Sourcing	Restrictive Government policies and legislation	Possession of proper Educational qualifications	Other, specify
1	2	3	4

2.5 What threats do you encounter from the external environment?

Competitors	Government	Technology	Other (Specify)
1	2	3	4

3 WORK EXPERIENCE

3.1 Do you have specific-industry experience with regard to the following functional areas: (Tick the appropriate box)

Functional areas	*Between 1-3 Years*	*Between 3-6 years*	*Between* 6-9 years	*10 years and above*
Marketing	1	2	3	4
Finance	1	2	3	4
Production	1	2	3	4
Operations	1	2	3	4
Technology	1	2	3	4
Business law skills/Entrepreneurial legal skills	1	2	3	4
Other*: (Specify)*	1	2	3	4

4 ENTREPRENEURIAL SUCCESS MEASURES AND SELF EFFICACY (ESE)

How do you rate the following statements on a 5 point scale, where 1 is strongly disagree and 5 is strongly agree. Tick where applicable

Success measure	**Strongly disagree**	**Disagree**	**Neither agree nor**	**Agree**	**Strongly agree**
4.1 Opportunity recognition					
I can set and meet market share goals	1	2	3	4	5
I can set and meet sales goals	1	2	3	4	5
I can establish a position in the market place	1	2	3	4	5
I can conduct market analysis	1	2	3	4	5
4.2 Innovation					
I am good at developing new business idea	1	2	3	4	5
I am god at developing new products or services	1	2	3	4	5

I can find new markets and territories	1	2	3	4	5
I can develop new methods of production or systems	1	2	3	4	5
4.3. Management					
I can reduce risk and deal with uncertainty	1	2	3	4	5
I am good at strategic planning	1	2	3	4	5
I can establish and achieve goals and objectives	1	2	3	4	5
I can define organisational roles/responsibilities	1	2	3	4	5
4.4 Risk taking					
I take calculated risks	1	2	3	4	5
I am comfortable with uncertainty and risk	1	2	3	4	5
I can take responsibility for ideas and decisions	1	2	3	4	5
I can work under pressure and conflict	1	2	3	4	5
4.5 Financial control					
I can perform financial analysis	1	2	3	4	5
I can develop financial systems	1	2	3	4	5
I can control costs	1	2	3	4	5

(Adapted from Urban, B (2007:53)

5. Allocate an appropriate rating to your business enterprise performance as provided below. Use a tick where necessary.

Performance measure	**Profitability measured in thousands per annum**					
Profitability	R0-R20	R20-R40	R40-R60	R60-R80	R80-R100	R100 +
	1	2	3	4	5	6
Growth	High	Average	Low			
	1	2	3			

Size of the business	Micro-enterprise	Medium enterprise	Large enterprise	
	1	2	3	

APPENDIX 3 **CONSISTENCY MATRIX**

Research problem

- There is no sufficient practical evidence to justify human capital factors as determinant variables for entrepreneurial success, particularly within the context of the informal economy

Research gap

- There is lack of universal consistency regarding whether a solid relationship exists between human capital factors and entrepreneurial success.
- Existing literature does not consider South African contextual issues which renders education, experience and knowledge as key decisive factors endorsing entrepreneurial success.
- Existing literature provide theoretical models benchmarked against foreign research some of which do not fit South African business context in the informal sector environment.

Theory guiding this research

(RBT) Resource-Based Theory **(**Brush et al, 1997's cited in Minniti, et al, (2007) & Unger, et. al).

Sub-problem	**Literature review**	**Research questions**	**Hypotheses**	**Theory/Predicted associations**	**Type of data**	**Analysis and methodology**
To establish whether there is a positive relationship between education and entrepreneurial success in the informal economy.	Venter, et, al (2008); Shane and Venkataraman (2000); Martin, et al. (2013)	Is there there a positive relationship between education and entrepreneurial success?	***H1:*** There is a relationship between education and entrepreneurial success.	Primary data source	Ordinal	Quantitative methodology. Positivist perspective Inferential statistical analysis using AMOS 23 software

To establish whether there is a positive relationship between industry experience and entrepreneurial success in the informal economy.	(Unger. 2011 Venter, et al. (2008) Buen, (2012)	Is there a positive relationship between education and entrepreneurial success of the informal economy?	***H2***: There is a positive relationship between industry experience and entrepreneurial success.	Primary data source	Ordinal	Causal relationship Quantitative methodology. Positivist perspective Inferential statistical analysis using AMOS 23 software causal relationship
To establish whether there is a positive relationship between knowledge and entrepreneurial success in the informal economy.	Barreira (2004); Carlson (2009); Clerq and Arenius (2006).	Is there a positive relationship between work experience and entrepreneurial success of the informal economy?	***H3***:There is a positive relationship between industry experience and entrepreneurial success in the informal economy.	Primary data source	Ordinal	

APPENDIX 4 TIME TABLE

ACTION	DEADLINES PLANNING						
Finalise proposal	15/09/2016						
Gain approval	19/09/2016						
Gather data		01/11/16	30/11/16				
Do data analysis			01/12/16	31/12/16			
Write report					01/02/16	28/02/2017	
Finalise report						01/03/20	31/03/2017
SUBMIT							31/03/2017