

Internationalisation of SMEs in Least Developed Countries: A Resource-based View

By

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DECLARATION

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DEDICATION

This thesis is dedicated to:

My parents Awad and Haboob

My wife Mona

My sons Awad, Talal, Abdulaziz, Fahad and my little daughter Wateen

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Abstract

Small and Medium Enterprises (SMEs) have become an integral part of the economy of the modern nation-state and are responsible for job creation and innovation, as well as the growth and development of the wider country. The contributions made by SMEs increasingly impact upon national economies to such an extent that growth and prosperity in the SME sector is now thought to enable economies of Least Developed Countries (LDCs) to grow exponentially. The newly recognised importance of SMEs as a growth factor for LDC economies has moved the focus of researchers towards the impact of the internationalisation of these firms. Both the availability and the optimal utilisation of resources enabling SMEs to grow have subsequently been identified as crucial factors in both their growth and their internationalisation.

There is still insufficient knowledge of the internationalisation of SMEs in the least Developed Countries (LDCs) and the existing body of research is thought inadequate to determining whether firm-specific resources can be used to explain whether an SME can be an exporter or non-exporter in such difficult environments. In response to this problematic, an evaluation of the internationalisation of SMEs would be of significant assistance to research into the economic impact that SMEs have on the least developed countries of Sub-Saharan LDCs. One of the factors that will influence the internationalisation of SMEs in LDCs is the availability of resources which has become one of the main focuses of this study. Studies in this area have identified knowledge-based and property-based resources as two categories of resources that determine internationalisation, leading this research towards an investigation of the impact of those two categories of resources on the ability to internationalise of SMEs operating in the least Developed Countries (LDCs). While a review of the research literature found a broad consensus for asserting a weak relationship between resources and innovation, the findings obtained from the data analysis conducted in this study establish a strong positive relationship between the resources of SMEs existing in Sub-Saharan LDCs and their exports.

The majority of LDCs identified in this research project are located in the Sub-Saharan region of Africa, entailing that a significant proportion of this study is devoted to a critical evaluation of the impact of resources on the internationalisations of SMEs operating in Sub-Saharan LDCs. The overall aim of the research was therefore to investigate how the availability of resources impacts upon the process of internationalising the SMEs that operate in the Least Developed Countries (LDCs) of the Sub-Saharan region. The principal research objective can be outlined as follows: to analyse the relationship that a firm's resources have with the level of internationalisation of SMEs in Sub-Saharan LDCs. Two further research questions have

addressed the firm-specific resources which have a direct relationship with the internationalisation of SMEs in Sub-Saharan LDCs, and the type of innovation which is thought to have a mediating effect on the relationship between firm-specific resources and the internationalisation of SMEs in Sub-Saharan LDCs.

In terms of methodology, this research places a conceptual focus on the Least Developed Countries of Benin, Guinea, Lesotho, Mali and Togo (LDCs), interrogating existing studies of these national economies in order to present a framework for analysis. Based upon the findings from data extracted from the 2016 World Bank Enterprises Survey for LDCs, the study findings establish that resources significantly influence the internationalisation of SMEs. Researchers gathered data from 713 SMEs operating in five LDC nations of Sub-Saharan African region which was analysed using SPSS software to verify the ten hypotheses developed here and so define the conceptual framework of the research. The research results were then generated by conducting Chi-Square and Logistic Regression analysis to compare the dependent, independent and control variables identified in the research.

The series of hypotheses presented by this study were drawn from an analysis of their institutions tested through an application of the theory called the Resource-based View (RBV). The hypotheses developed here thus set out to support a conceptual framework best able to serve the findings of the research while working with a positivist research approach which uses quantitative data for explanatory aims. The hypotheses have taken human, financial and technological resources as their independent variables, considering while innovation as a mediating factor responsible for the internationalisation of SMEs, while SME exports have been taken as the dependent variable for the hypotheses under interrogation.

The testing of the ten hypotheses presented in the study found that human, financial and technological resources impact positively upon the likelihood that, as a firm, an SME will internationalise only where the availability of adequate financial resources has tended to have an impact on the innovation taking place in that SME. The research findings also reveal that there is a direct relation between the internationalisation of a SME and the element of innovation, whereas as a factor innovation only mediates the impact of financial resources in aiding in the internationalisation of SMEs. In addition, the study establishes that innovation has a significant positive impact on the exports of SMEs from Sub-Saharan LDCs. The study was hence able to conclude that innovation acts as a mediator for the resources necessary for SMEs operating in the Sub-Saharan LDCs to acquire export-oriented business. In doing so, the study highlights the essence and importance of these relationships and provides an enhanced understanding of the areas upon which SMEs should focus when growing their businesses.

Abbreviations

ABS	Association of Business School
ACCA	Association of Chartered Certified Accountants
AERA	American Educational Research Association
BRICS	Brazil, Russia, India, China and South Africa
DDA	Doha Development Agency
EBSCO	Elton B. Stephens Company Information Services
EIF	Enhanced Integrated Framework
EU	The European Union
EVI	Economic Vulnerability Index
FDI	Foreign direct investment
GDP	Gross Domestic Product
GNI	Gross National Income
HRM	Human resource management
ILO	International Labour Organisation
IT	Information technology
KBV	Knowledge-based resources
LDCs	Least developed countries
OECD	Organisation for Economic Cooperation and Development
ODA	Official development assistance
RBV	Resource-based View
R&D	Research and development
SECO-EIF	The Enhanced Integrated Framework
SMEs	Small and medium-sized enterprises
SPSS	Statistical Package for the Social Sciences
UK	The United Kingdom
UN	The United Nations
UNCTAD	The United Nations Conference on Trade and Development
UNDP	The United Nations Development Programme
UNIDO	The United Nations Industrial Development Organisation
USA	United States of America
VIRN	Valuable, rare, imperfectly imitable, and not substitutable
WBES	World Bank Enterprises Survey
WTO	World Trade Organisation

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CHAPTER ONE: INTRODUCTION

1.1 Introduction

This chapter presents an introduction to the study, providing an insight into the research topic by establishing the premises of this project. The chapter starts by providing a background to the study before moving on to establish the research problem and indicating what the requirements will be to conduct the project satisfactorily, highlighting the areas that require methodological focus. The overall aims and objectives of the study are then established based upon the background of the topic and an outline of the research problem.

The chapter then justifies the research aim and objectives identified, giving a justification for why the existing body of research requires evaluation. A brief introduction to the methodology applied to the research is given and then the topic is discussed to provide the readers with knowledge of the work being done in the research. Finally, the chapter ends by establishing an outline for the thesis and providing definitions to the key terms encountered during the research. Figure 1.1 presents the key contents of the introduction.

Figure 1.1 Key contents of the Introduction



1.2 Research Background

Over the past few decades, the involvement of Small and Medium Enterprises (SMEs) in the international market has witnessed an upward trend (Lathlain, 2011). In the present day, more than 90% of firms worldwide fall into the category of Small and Medium Enterprises (SMEs) and form a strong community of industries that operate in a wide spectrum of areas (De Ferranti and Ody, 2007). SMEs are engaged in a wide range of businesses that vary in their dynamism,

risk assessment and technological advancements (Hoffman et al., 1998). Some SMEs operate in a relatively stable market with appropriate technology and scale, while others are unable to meet the same standards and operate in an uncertain environment (Shamsuddoha et al., 2009).

SMEs have proved to be wealth creators and employment generators in domestic economies (European Commissions Enterprises and Industry, 2011). Practitioners and researchers have proven that SMEs are vital in contributing to job creation and economic growth in developed and undeveloped economies (Senik et al., 2011). SMEs have also contributed significantly to numerous innovations and are a driving force behind the growth in national investment and their export market (Wilson, 1990).

However, the fast pace of globalisation and rising economic crises in local markets have resulted in a situation where SMEs need to seek opportunities in international markets (Tatiana S et al., 2002). Entering an international market is a challenging process and even more so for SMEs that belong to the least developed parts of the world. Differences in terms of social, cultural and political factors between domestic and international markets constitute barriers to the efforts put in by an SME towards internationalisation (Johanson and Vahlne, 1997). SMEs in particular have been found to lack the financial, technological and human resources required for expansion in international markets (Barringer and Greening, 1998).

The challenges faced by an SME looking to expand into an international market are further heightened for an SME belonging to a Least Developed Country (LDC) (Abubakar et al., 2019). The countries that belong to this classification exhibit the lowest social and economic development (Shamsuddoha et al., 2009). These countries exhibit high poverty levels, have weak human resource development, lag behind in technological advancement, and display an unstable financial outlook (Wilson, 1990). These nations lack the basic structure for conducting business and foster a difficult work environment for SMEs (Thirlwall, 2007). SMEs operating in LDCs reveal constrained work resources (Abubakar et al., 2019), making management of these resources and research into the impact of such resources on SMEs a crucial field for investigation.

The application of the resource-based view (RBV) theory from the perspective of an individual SMEs thus provides insight into the impact that resources have upon the internationalisation of that SME (Xie and Suh, 2014). Some of the factors that influence the construction of successful

strategies for the internationalisation of SMEs have already been examined by Fernandez and Nieto (2005), where they identify resource availability as one of the most dominant influences on the outcomes of internationalisation strategies. For firms to grow and prosper, an economic environment is necessary able to provide access to finance (Thirlwall, 2007). However, SMEs belonging to Sub-Saharan LDCs are exposed to significant financial barriers (Wilson, 1990). In general, LDCs have high financial constraints, but increased access to finance for SMEs can improve economic conditions in Sub-Saharan LDCs by fostering innovation, macro-economic resilience and GDP growth (Rehman et al., 2019).

As another crucial aspect of SMEs, human resources also impact upon the ability of an SME to create an international presence (Foss and Foss, 2005). It is critical for an SME to mobilise the available human resources effectively to pursue the overall SME goals. Research by Westhead et al. (2001) suggests that managerial experience is positively related to the propensity to export, echoing the importance of human resources capacity to any internationalisation strategy. Owing to lower levels of knowledge and technological advancement (Ottaviano and Martincus, 2011), SMEs in Sub-Saharan LDCs are decades behind in technology compared to developed nations (Goedhuys and Slauweagen, 2010). Technology innovation is a long, tedious process requiring years of research, development, heavy financing and appropriate human resources (Diyamett and Mutambla, 2014). SMEs belonging to the Sub-Saharan region are already constrained by their ability to invest in innovation (Abubakar et al., 2019).

Investing heavily in technology for the internationalisation of SMEs in LDCs thus seems to be a difficult task. In this sense, technology licensing is in the best interest of an SME looking to internationalisation to allow them to borrow technology from developed nations, resulting in saving time, finance and human input. The operating of SMEs in sub-Saharan LDCs already face weighty difficulties as it is. It stands to reason that internationalising these SME businesses would present significantly more challenges (Xie and Suh, 2014). The lack of resources and development capacity, as well as political and economic instability are a few challenges that have a deep impact on the operations of an SME (Oviatt and McDougall, 1997).

1.3 The Research Problem

Least Developed Countries (LDCs) have turbulent economies, high uncertainties and lack basic infrastructure and development (Oviatt and McDougall, 1997). These nations depend heavily upon external aid and stimulus to fund their economies (Qadir, 1982). In today's business world, Small and Medium Enterprises (SMEs) have become the backbone of a nation's economy worldwide and are identified as potential sources of economic development for countries (Ribau et al., 2018). The functioning of an SME depends on the resources available to them, control parameters, industrial sectors and political influence (Rehman et al., 2019). The SMEs operating in LDCs have a greater potential for economic development; their internationalisation would potentially bring in technological advancement, human resource development and financial progression to a country (Ribau et al., 2018). However, a lack of resources and support from governments creates a hostile institutional business environment among the economies of these nations and needs to be addressed for the economic prosperity of LDCs.

Numerous studies have been conducted over the years regarding the impact of resources, innovation and development of SMEs in LDCs (Jennings 1983; Sauvart, 2015; Osei-Bonsu, 2014; Boermans and Roelfsema 2015; Onkelinx and Sleuwaegen, 2008). The research conducted of Kazlauskaitė et al. (2015) has tried to advance knowledge in this field with regard to the extent to which the resource-based view perspective (RBV theory) helps us to understand the internationalisation process of SMEs. However, although this study was not carried out in LDCs (whose SMEs face unique and more intense constraints), useful knowledge can be acquired from this study being that the findings can be used to describe the internationalisation process of SMEs in these more developed countries.

Authors such as Will Martin & Mattoo (2010) and Osei-Bonsu (2014) have talked about the barriers of internationalisation in their respective studies and have established how challenging it is for an SME to internationalise. However, they have not been able to indicate a relationship between resources and internationalisation, let alone discuss the role of innovation. Nonetheless, these studies provide a resource-based view of the impact of resources but have been unable to provide a concrete set of guidelines that link the impact of resources and innovation on the internationalisation process of SMEs. As discussed in chapter two, our literature review has identified gaps in the research conducted by previous authors. Clearly,

these studies stand alongside with the situations prevailing in LDCs and highlight a problem of inefficient information that SMEs in LDCs can use to apply strategies to increase their level of exports.

1.4 Aim of the Research, the Objectives and Research Questions.

The aim of the research is to investigate how the availability of resources impacts upon the process of internationalising the internationalisation of SMEs that operate in Sub-Saharan Least Developed Countries (LDCs). To develop a better understanding of this concept, our research has strived to study the mediating role played by innovation in the internationalisation of SMEs in Sub-Saharan LDCs. To fulfil the aim of the research the following objectives are required to be achieved that are considered essential of gaining knowledge. The objectives are:

- Objective 1: To examine the direct relationship between an SME's resources and the likelihood of SME exports to export LDCs.
- Objective 2: To examine the direct relationship between an SME's resources and the likelihood of SME innovation in LDCs.
- Objective 3: To examine the direct relationship between innovation and the likelihood of SME exports to LDCs.
- Objective 4: To investigate the mediating effects of innovation in the relationship between SME's resources and the likelihood of SME exports to LDCs.

In terms of our overall research aim, the objectives identified here then form the basis for outlining the research problem. These objectives give a foundation for the research while providing a direction for the research to achieve the final aim. The research aim defined above thus answers the following research question:

- RQ 1: What firm-specific resources have a direct relationship with the internationalisation of SMEs in Sub-Saharan LDCs?
- RQ 2: Does innovation have a mediating effect on the relationship between firm specific resources and the internationalisation of SMEs in Sub-Saharan LDCs?

1.5 Rationale and Significance of the Research.

The research focuses on establishing a relationship between resources, innovation and the internationalisation of SMEs in Sub-Saharan LDCs. The Sub-Saharan region is the least developed region globally and has made the least progress in economic activities (Mersland and Thøgersen, 2013). An increase in economic activities would result in faster development of these countries, bringing progress, security and stability (Miyata, 2011). In turn, Schumpeter's (1934, 1942) theory drew attention to new ventures and entrepreneurs as major players in economic growth. They began to be seen as contributors to new job creation and the economic advancement of nations (Tidd and Trewhella, 1997). As a result, scholars, policymakers and entrepreneurs alike are interested in factors that can create wealth and development in developing economies. The following section provides some justifications for conducting this research in such a direction.

Firstly, the importance of this area of research is highlighted by the contributions that the internationalisation of an SME can make to socio-economic development (Naldi, 2008). The internationalisation process of an SME depends on numerous variables that are either controlled by the SME or are not (Larimo & Vissak, 2009). While SMEs can be dependent or independent of these variables (which include innovation, resources and investment), complete independence from these determining variables is hardly possible because almost every variable is either directly or indirectly connected to each other. Understanding the relationship between SMEs and such variables can thus help to conceptualise policies that would intensify these positive relationships and alleviate any negative impact that certain resources can have upon a SME.

Secondly, an evaluation of the internationalisation of SMEs helps research into the economic impact that SMEs have on the least developed countries of Sub-Saharan LDCs. There is still insufficient knowledge of the internationalisation of SMEs in the least Developed Countries (LDCs), particularly to determine whether, in such difficult environments, firm-specific resources can be used to explain whether an SME can be an exporter or non-exporter (Lu and Beamish, 2006; Shamsuddoha et al., 2009; El-Gohary et al., 2013). Thirdly, one of the factors that will influence the internationalisation of SMEs in LDCs is the availability of resources and is hence the main focus of this study. Studies in this area have identified knowledge-based and property-based resources as two categories of resources that determine internationalisation

(Fernandez and Nieto, 2005; Ruzzier et al., 2006; Mohr and Batsakis, 2014). This study hence investigates the impact of those two categories of resources on the ability of SMEs operating in the least Developed Countries (LDCs) to internationalise.

The literature on the resource-based view theory (RBV) and SME internationalisation in developing countries provides a theoretical basis for developing the conceptual framework of the study. In approaching our research questions gaining knowledge about the relationship that a resource has with processes of internationalisation may be extremely beneficial to developing the concept of SME internationalisation in Sub-Saharan LDCs, The type of research presented in this study would then enable policymakers, shareholders, governments and entrepreneurs to find the regions that require attention to enable them to internationalise SMEs. This research would establish a basic relationship between resources and highlight each of them, thus enabling SMEs to prioritise their needs. A study by Fernandez and Nieto (2005) then confirms that the availability of resources is a key determinant of internationalisation strategies. Mohr and Batsakis (2014) explain the above by adding that the ownership of resources either facilitates firms' internationalisation and/or pushes firms towards internationalisation.

The current study focuses on the entry mode of exporting, owing to the prevalence of this method of internationalisation used by SMEs in Least Developed Countries (LDCs) (Shamsuddoha et al., 2009). Compared to other forms of entry, such as a wholly owned subsidiary, exporting is cheap and has low risks, making it a suitable entry mode for SMEs from LDCs which are widely known for having limited resources available to them (Shamsuddoha et al., 2009). The study focuses on the Sub-Saharan African region because this is one of the most deprived regions of the world according to Chikhuri (2013), and the geographical location of the majority of LDCs. Growth in the internationalisation of SMEs can therefore help the region overcome some of the challenges it faces.

1.6 Research Methodology.

This study is based on the positivist philosophy, which is the epistemological position that supports working with an observable social reality (Saunders et al., 2012). The research presents an exploratory study that is built upon the quantitative research methodology. The quantitative method is applied to investigate the influence of resources and innovation on the internationalisation of SMEs operating in Sub-Saharan LDCs (see details in Chapter 4). The

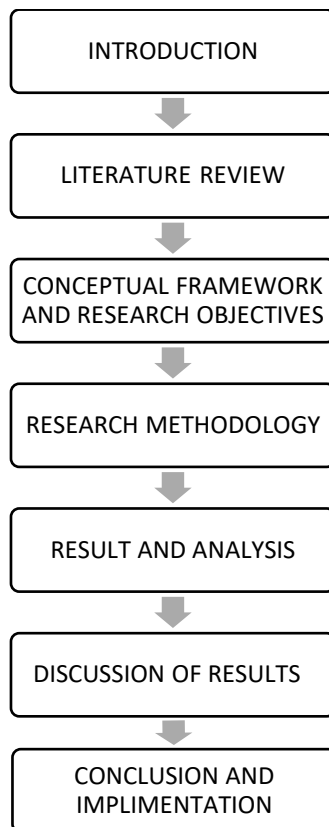
research aims to establish the relationship between variables, and hence, the quantitative approach was employed by using numerical data (Punch 2003) accessed from the World Bank Enterprise Survey (WBES) for the year 2016. The data for five Sub-Saharan LDCs were selected from the Survey. Variables such as human resource, technological resources, financial resource, innovations, SME age, transportation, political and corruption obstacles were considered. The data selected was analysed by applying chi-square and factorial regression analysis.

This study has also applied an extensive literature review to gather knowledge and understanding about the research topic. The literature has been gathered from various sources such as journals, research papers, internet sources and government data. Thorough research has then been conducted from the information available to establish the findings of previous research and their implications. Reviewing the literature has also benefitted the researcher in developing an understanding of the work conducted earlier and helps to develop the framework of the current study.

1.7 Thesis outline.

The thesis is divided into seven chapters that are connected to present all information in a cohesive structure. The structure of the thesis is as follows:

Figure 1.1 Structure of the thesis



Source: Self-compiled

The first chapter presents the introduction to the research topic. It provides a background to the topic and identifies the research problem. It presents the research aim and objectives and then moves forward by providing a rationale for the research and presenting the research methodology. Finally, the chapter provides an overview of the research design.

The second chapter is the review of the literature. The literature review provides an in-depth review of the research conducted by previous authors and researchers. It has also established the rationale behind selecting the papers, journals and the research studies chosen. The chapter proceeds to discuss the applied theories and provides an understanding of the relationships between various variables required to be analysed given the aim of the research. The literature review helps to reveal evolving themes while identifying gaps in the literature.

The following chapter, Chapter 3, presents the conceptual framework that is applied to achieve the aims and objectives of the study. This chapter defines the key concepts and assumptions

that are considered for the research and establishes the hypotheses that are being tested in the research.

The fourth chapter discusses the research methodology that applied for the research. This chapter discusses the various types of research methods, the philosophical position of the research and of each method, and how it potentially aligns with the research, along with the research techniques available to the researcher to conduct the study. The justification and rationale for selecting the chosen research method, philosophy and technique are also established. The chapter goes on to discuss the method applied for data collection, the measures taken to sort the collected data and the technique applied to analyse the data. Finally, this chapter establishes the credibility of the research and addresses ethical issues.

Chapter 5 is the results and analysis chapter. This chapter presents the results obtained by conducting Chi-Square analysis and logistic regression methods discussed in the chapter before. The result for each hypothesis is presented in this chapter, along with key findings and analysis of the results obtained.

Chapter 6 presents a discussion on the results presented in the previous chapter. The discussion covers the results, along with each objective, and is supported by knowledge gained from the literature review. This chapter is essential in establishing the key findings of the research and helping to frame the conclusion of the study presented in the next chapter.

The section of the thesis providing a conclusion and notes on implementation is the final chapter 7. This chapter presents a conclusive stand on the research and establishes the achievement of the research aim and objective. The chapter then discusses the implementation of the findings of the research on theories and policymaking. It chapter concludes the thesis by noting the limitations impacting upon the research and restricted it from achieving its full potential of findings, while also presenting the scope for future research.

1.8 Conclusion.

This chapter has presented a clear and precise description of the research background and sets a framework for the entire project. The research background has then given the author a basis for analysing the research problem. The chapter has also formulated the aim and objectives that are required to address the identified research problem. In order to fulfil the fundamental aim of the project, the researcher has decided to adopt a positivist research philosophy evolving from the application of an exploratory research method and applied quantitative research techniques to data collection. Finally, this chapter concludes by presenting a framework for the thesis through a brief description of the chapters and their importance for the overall project.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter aims to critically review the relevant literature in order to identify gaps and develop a conceptual framework for addressing the research problem of this study. Furthermore, the literature review will enable the identification of emergent themes and influence the choice of research methodology applied (Tashman et al., 2019). The two main theories being reviewed in the following sections are the resource-based view of the firm (RBV) (Ibeh, 2003) and the literature on the internationalisation of SMEs (Ayyagari et al. 2007).

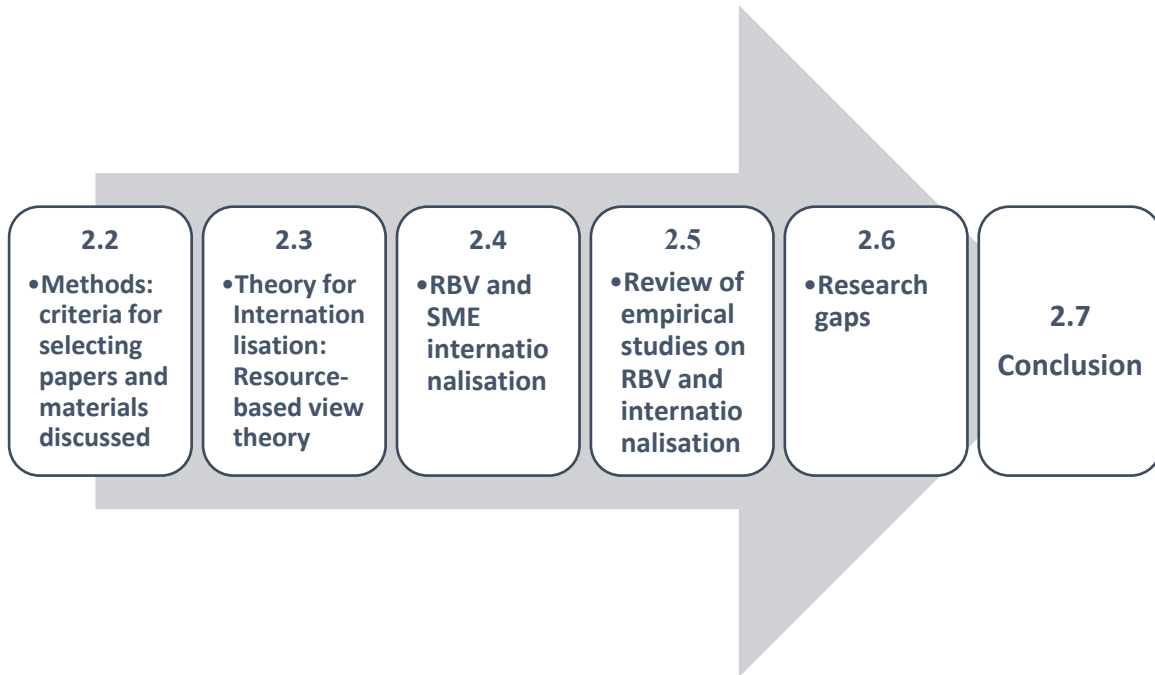
The review follows an approach where both the conceptual and empirical aspects of the literature will be critically examined in order to develop a conceptual framework for the research. In addition, areas where gaps exist will be identified to highlight opportunities for further research and thereby justifying this study. The papers reviewed here have been selected from a pool of academic research papers, which met the search criteria of a series of key phrases. More specifically, the literature focuses on “RBV” (Westhead et al. 2001; Ruzzieret et al., 2006), “SME internationalisation” (Onkelinx and Sleuwaegen, 2008) and “internationalisation in developing countries”, particularly those in Africa (Ibeh, 2003; Abubakar et al., 2019) among others.

The choice of literature considered in this review is driven by the fact that our understanding of the resources of a firm that influence SME internationalisation in LDCs is currently limited and requires a critical review of the literature to determine a) which types of formal resources play a greater role in influencing SME internationalisation in LDC regions; and b) whether or not informal resources in LDCs matter for SME internationalisation. Therefore, to gain a clearer understanding of the concepts of RBV and SME internationalisation in more detail, the chapter begins with a brief overview of each.

Figure 1.1 present the main contents of the literature review. The first section describes the criteria for selection of a paper or article from the overall review in the name of reviewed understanding of the research topic. The following section then aims to establish what a SME is and how they operate in LDCs. The chapter goes on to discuss the theory of resource-based view and how each resource has an impact on the SME operation. We also establish the

meaning of internationalisation and how resources help SME to internationalise their business. Finally, the chapter presents a review of the empirical findings and identifies the gaps in the literature.

Figure 2.1 Key contents of the literature review



2.2 Methodology: Criteria for selecting the papers and materials discussed.

This review was conducted by searching internet resources and the university's online library. Internet resources include Google Scholar Emerald Publishing, EBSCO and the ProQuest electronic databases. The journals chosen for the research were largely based on the Association of Business School (ABS) ranked journals, such as the International Small Business Journal, International Journal of Management, Strategic Management Journal and Journal of International Business Studies, to mention a few. The articles published in the various journals which contained “internationalisation”, “resource-based view”, “SMEs” and/or “LDC internationalisation” in their full text were the ones reviewed. The benefit of using an electronic search method was that it generated a large number of articles containing the key search words. It was important to use several internet resources because of the limited number of studies available on the internationalisation of SMEs in LDCs. For this reason, any such article published after 1990 was selected for the study in order to ensure that as many articles as possible are used for the study. However, detailed examination of the articles by the

researcher revealed that some of the articles were not directly relevant to this study, and those articles were dropped.

2.3 The theoretical basis of Internationalisation Theory: Resource-Based View (RBV) Theory.

Early research studies on the emerging internationalisation of firms focused mainly on strategies developed by firms over time to make the process possible (Kazlauskaitė et al., 2015). More recent studies have approached the investigation by adopting theories that focus on the motives and enablers of internationalisation (Tabares et al., 2015; Kazlauskaitė et al., 2015). One such theory is the resource-based view (hereafter abbreviated to RBV). RBV is now attracting more attention due to the limitations of previous studies in addressing key issues such as the failure of the stage theory to acknowledge that some business organisations engage in internationalisation from the outset (Westhead et al. 2001; Ruzzier et al., 2006). This means that RBV is now widely recognised as one of the top three most relevant theories that offer enlightenment around understanding of strategies used by firms concerning internationalisation (Kazlauskaitė et al., 2015).

This theory is not new, having been preceded by several RBV-related ideas presented in the literature since the early 1900s (Wernerfelt, 1984; Kor and Mahoney, 2003). However, there is an acceptance in the literature that the RBV can be attributed to the contributions made in Penrose's (1959) concept of creating competitive advantage, sustaining it and presenting isolating mechanisms to do so (Kor and Mahoney, 2003). According to Porter (1985), competitive advantage refers to a firm's ability to gain returns on investment consistently above the average for the industry. The argument is that competitive advantage can only be sustained through the effective use of resources. This promotes the necessity of evaluating firms in terms of their resources instead of the products they offer (Kor and Mahoney, 2003). Before discussing the RBV concept, it is important to briefly review the definition of resources. A range of definitions of the term "resources" can be found in the literature, although Wernerfelt (1984) provides one that is clear and easy to understand. According to the author, a resource refers to anything which could be thought of as a strength or a weakness of a given firm (Wernerfelt, 1984). At a particular time, a firm's resources may therefore refer to the tangible and intangible assets which are available to the firm at that time.

Historically, discussions around resources tend to be from an economic perspective with analysis confined to categories such as land, labour and capital (Wernerfelt, 1984). But RBV theory has extended the discussion into various tangible and intangible assets that are a source of competitive advantage (Miller and Shamsie, 1996; Lockett et al., 2009). The RBV of the firm is a concept of organisational analysis which models the capability of an organisation to compete favourably based on the unique resources it possesses (Priem and Butler, 2001). Lockett et al. (2009) explain that RBV is a theory that was developed in the strategic management field to address the nature of firms. Miller and Shamsie (1996) also agree insofar as they argue that RBV theory complements Porter's (1980) perspective of organisation strategy. This explains why there is a widely held view that RBV of the firm has perhaps become the most influential framework for understanding strategic management (Barney et al., 2001).

RBV theory aims to explain how firms operate and not why they exist (Xio et al., 2019). Srivastava (2001) agrees with the above and describes RBV as an important technique to use when assessing a company's potential for growth and the formulation of strategy. This is because it highlights the feasibility of the company strategy, taking into account the resources it has at hand (Priem and Butler, 2001). The resource-based view allows an organisation to be analysed according to a combination of its core resources, both tangible and intangible (Wernerfelt, 1984). These resources are what gives the organisation its advantage over competitors (Richard, 2000). There is no doubt that international businesses need to enjoy some form of competitive advantage to be able to compete in foreign markets where they are likely to be unknown and expect to face competition from the local businesses (Peng, 2001). The above explains why resources are key to success in foreign markets. It is therefore understandable why those who support the RBV perspective argue that firms should look inside their organisation to identify the sources of competitive advantage instead of looking at the competitive environment for it (Wernerfelt, 1984; Miller and Shamsie, 1996).

In adopting RBV, analysis is focused on the firm's exploitation of VRIN (valuable, rare, imperfectly imitable, and not substitutable) resources in a way that contributes to the achievement of competitive advantage (Oliver, 1997). The concept of VRIN indicates that resources that help with the achievement of competitive advantage must be valuable, rare, imperfectly imitable and not substitutable (Barney et al., 1991). To be considered unique,

resources must be relatively immobile and must be available to the company for a significantly extended period (Wernerfelt, 1984). Referring to the VRIN concept, a resource is only considered as valuable if it makes it possible for a firm to exploit opportunities and/or neutralise threats in the environment in which it operates (Clulow et al., 2007). The more a resource meets the VRIN requirements, the more likely it will help the firm sustain a competitive advantage (Kazlauskaitė et al., 2015).

The resource-based view is important as it allows a company to understand where its strengths lie and to shape its corporate strategy accordingly to ensure desired performance (Wernerfelt, 1984). RBV also helps to quickly identify where deficiencies lie, thereby allowing the company to focus on areas needing improvement (Richard, 2000). Based on the above, one can conclude that the central premise of RBV is that it answers the important question of why organisations are different and how they achieve their objectives, as well as how they are able to sustain competitive advantage through the deployment of the resources they own.

One can also conclude that RBV is a theory which can be adequately applied to examining and explaining different choices among businesses, ultimately leading to performance differences among them. It is important to acknowledge that resources alone do not generate sustainable competitive advantage, where the company's management must be able to understand and organise them (Makadok, 2001; Tabares et al., 2015). In other words, firms must develop much needed capabilities.

According to Tabares et al. (2015), the term "capabilities" describes the capacity of an organisation to use its available resources effectively and efficiently to produce different products and services. The concept has been extended to cover the idea of dynamic capability which involves adaptation and change since they build, integrate or reconfigure other resources and capabilities (Helfat and Peteraf, 2003). Thus, discussion of the RBV must incorporate all organisational capabilities, both the dynamic as well as non-dynamic ones (Helfat and Peteraf, 2003).

From the RBV perspective, it is shown that a firm's success in internationalisation depends on its ability to combine the resources owned effectively with its capabilities (Ramon-Jeronimo et al., 2019). However, it is important to acknowledge that the RBV theory has nonetheless been criticised in the literature (Sanchez, 2008; Seppänen, 2009). The criticism centres on many

areas. Of these, the three key ones are: the meaning of resources, the meaning of value, and the explanation of sustained competitive advantage (Priem and Butler 2001; Sanchez, 2008; Seppänen, 2009). One of the criticisms is that the RBV hypothesis presented in past studies is tautological (Priem and Butler, 2001).

According to Seppänen (2009), RBV has been unable to successfully clarify the set of resources, as well as the definitions of individual resources. The argument is that the discussion of firms' resources usually tends to be context-specific, making it problematic to provide a universal definition. This view is also shared by Gibbert (2006) who argues that in centring on the idea of heterogeneity and immobility, the notion of resource uniqueness does not provide the RBV with any potential for generalisation. The argument is that different resource configurations could potentially create the same level of value for firms, meaning that they would not represent sources of competitive advantage (Priem and Butler, 2001). According to Priem and Butler (2001), the RBV has no managerial implications since it failed to inform management on how they should obtain resources and develop the organisation. Despite the criticism, RBV still represents a useful theory that has been widely used in research studies (Barney et al., 2001). Researchers thus adopt the theory because it is still of value to managers and useful in terms of generating theoretically compelling ideas in different areas of firm management, including internationalisation (Barney et al., 2001).

2.3.1 Classification of unique resources.

As stated in the previous section, one of the cornerstones of the resource-based view (RBV) of the firm is the assertion that resources, which are unique to a firm, offer the company a competitive advantage (Priem and Butler, 2001). In other words, resources must be heterogeneous, meaning that the skills, capabilities and other resources possessed by a firm are different from the ones the competitor possesses. It has been stated that many resources could meet VRIN criteria, previously discussed, albeit with differing effectiveness (Miller and Shamsie, 1996). Miller and Shamsie (1996) present a categorisation of such resources as a way of understanding and identifying the characteristics which make them unique. The authors are then grouped these into *knowledge*-based resources and *property*-based resources according to the characteristics of the resource. Skilton (2008) has also adopted a similar classification for resources in his study carried out in the United States of America (USA).

2.3.1.1 Knowledge-based resources.

Knowledge has been described as a resource which, in most cases, is embodied in the human, technological and relational assets driving a firm has to adopt a strategy enabling it to generate sustainable competitive advantage (Gassmann and Keupp, 2007; Zhara et al., 2007). The importance of knowledge in the process of internationalisation explains the development of the knowledge-based view (KBV) of the firm which has been described as an extension to RBV (Wernerfelt, 1984). Those who support the KBV perspective believe that businesses can only maintain a competitive advantage when they can collect, accumulate, integrate and use knowledge effectively (Wernerfelt 1984; Zahra et al., 2007).

According to Miller and Shamsie (1996), a company may possess a valuable resource that is inimitable solely because of the superior knowledge which the company possesses. In other words, the competitors are unable to imitate the resource due to the “know-how” of the company. This means that any company desirous of copying such resources would have to acquire identical talent and skills. One example is a core competency achieved by a company by being the only one with the technical know-how about a particular product (Peteraf, 1993). The know-how of a company founder has been described as a supreme resource (Westhead et al., 2001). It is a prime resource for the business because it generates competitive advantage, accounting for the fact that the founders are the ones that determine the strategy. In situations when the founders have limited knowledge, the ability to exploit opportunities in foreign markets may be missing, making internationalisation challenging (Westhead et al., 2001).

It is therefore understandable that researchers claim knowledge to be one of the most essential resources if not the most crucial (Zahra et al., 2007). According to Zahra et al. (2007), it is the ability of the small and medium-sized enterprises (SMEs) to use knowledge to bring together all the other resources in a way that results in the competitive advantage that is critical to their success. Past studies have also confirmed empirically the importance of knowledge-based resources in the promotion of internationalisation (Tabares et al., 2015; Panda and Reddy, 2016). For example, the main findings from the study of Tabares et al. (2015) were that organisational capabilities are based on intellectual capital, developed from the knowledge within an organisation, are crucial for the development of a born global firm. The above finding

is consistent with the conclusion of Huselid (1995) where superior knowledge is embodied in the talent and skills of the people working within the organisation (Huselid, 1995). There is no doubt that knowledge meets one of the key requirements of resources that provide a competitive advantage by being heterogeneous.

While competitors can copy physical resources, possibly through acquisition, knowledge cannot be easily acquired, which explains why it is key to the maintenance of sustainable competitive advantage. Past studies have also shown that firms with higher knowledge-based resources and organisational capabilities are more likely to engage in international markets in their early years (Tabares et al., 2015). In other words, knowledge-based resources can explain why some firms enter the foreign market faster than others. The importance of knowledge-based resources to the internationalisation process explains why some authors have argued that knowledge is the most important resource because it contributes the most to firm performance (Miller and Shamsie, 1996). The above view is consistent with that of Zahra et al. (2007), having claimed that the success of SMEs depends most on the ability to apply knowledge to develop the right products, services and processes needed in both the domestic and international markets. In other words, while other resources are important, knowledge-based resources are considered to be paramount for internationalisation because they enable a firm to develop the capabilities that make the effective and innovative management of resources possible (Kor and Mahoney, 2003). There are the risks and costs involved with internationalisation, and it is the knowledge-based resources that make it possible for firms to deal with these challenges within international markets (Onkelinx and Sleuwaegen, 2008).

2.3.1.2 Property-based resources.

Miller and Shamsie (1996) described property-based resources as those resources owned by a firm which others cannot easily copy, and nor can another entity easily gain ownership of such resources. Examples of property-based resources include intellectual property rights and technological inventions. Melville et al. (2004) state that technology could be a resource for competitive advantage. Therefore, if a company were to protect against the imitation of its technology by way of legal mechanisms such technology would, in essence, become a property-based resource.

Skilton (2008) claimed that property-based resources refer to the discrete rights to exploit assets that are protected from misappropriation and imitation by legal barriers. Thus, the firm that own such resources should have the ability to create, appropriate and sustain value that results in competitive advantage, which will only be possible if the resources can be protected (Foss and Foss, 2005). Firms only benefit from property-based resources when they can prevent non-owners from using or destroying attributes that make the resources meet the VRIN requirements that enable it to sustain competitive advantage. Thus, an important consideration is the transactional cost involved being that transactional costs and value creation are linked (Foss and Foss, 2005; Ramon-Jeronimo et al., 2019). In other words, according to Foss and Foss (2005), the transactional cost will influence the value that the firms who own such resources are able to create and appropriate.

The extent to which the property-based resources can sustain its VRIN requirements have been questioned (Miller and Shamsie, 1996). According to Miller and Shamsie (1996), competitors are usually aware and knowledgeable of the value of their rival's property-based resources, and the implication is that they may know how to duplicate the resources. This is why businesses should protect the property-based resources through means such as patents, legal contracts, trade restrictions and trademarks and, when possible, ensure that competitive advantage can be sustained (Miller and Shamsie, 1996).

2.3.2 Types of resources available to a firm.

According to Peteraf (1993), unique resources are the cornerstones of competitive advantage. Kazlauskaitė et al. (2015) also claim that small and medium-sized enterprises (SMEs) can internationalise when they can leverage their intangible and tangible resources effectively. To better understand the resource-based view (RBV), it is important to go beyond Miller and Shamshie's (1996) broad categorisation and identify the different examples of resources that an organisation can draw upon to achieve and sustain a competitive advantage over a long time.

2.3.2.1 Human Resources.

Huselid (1995) has identified human resources to be one of the most important resources an organisation can possess. This assertion places human resources at the forefront of the

resources required to gain or maintain a competitive advantage. Human resources can be viewed as vital resources given the pivotal role that they play within an organisation (Wright et al., 2001). It has been suggested that entrepreneurs who lean more towards building an enterprise that is “export-oriented” tend to positively influence the macroeconomic environment more than those who do not (Onkelinx and Sleuwaegen, 2008). Again, this claim underlines the importance of human resources, as a tool for both competitive advantage and even the development of macroeconomics. In the study carried out by Panda and Reddy (2016) on the internationalisation of 46 Indian commercial banks, it was confirmed from the Panel data analysis that higher quality of human resources was one of the key determinants of internationalisation.

The weakness of RBV has been discussed in the literature in terms of how it treats human resources (Kraaijenbrink, 2011). According to Kraaijenbrink (2011), the RBV does not provide the analysis of how human resources might be differentiated from other types of resource, since it treats all resources as conceptually equivalent. There is also the argument that it is difficult to apply the RBV concepts of value, rareness, inimitability and substitutability to practices that enhance the human resources of an organisation, since practices can be easily copied by competitors (Wright et al., 2001). Despite these weaknesses and criticisms, researchers have shown that human resources are resources that are vital to the ability of a firm to sustain competitive advantage (Wright et al., 2001; Panda and Reddy, 2016). This explains why there has been a call for firms to invest in training, rewards and employee involvement systems, even when they are faced with financial difficulties (Wright et al., 2001).

2.3.2.2 Financial Resources.

Financial capability has been identified as a valuable resource for an organisation to have, as it allows the firm to react aggressively to a changing external environment (Kraatz and Zajac, 2001). It is widely accepted that financial resources are vital to firms, which may not be able to implement strategies that sustain a competitive advantage without these resources (Arndt et al., 2009). This is acceptable considering that financial resources allow the company to invest in areas that are needed in order to compete favourably with others (Srivastava et al., 2001; Arndt et al., 2009).

Kraatz and Zajac (2001) have studied the effect of strong financial resources in companies operating in a turbulent environment and found that financial resources dictated organisational strategies to a noticeable extent. One can conclude from Kraatz and Zajac's (2001) study that companies without the needed financial resources may find internationalisation additionally challenging even when it represents the right strategy to deal with a turbulent environment in the local market. In the study conducted in Brazil by Costa and El-Alam (2017), it was shown that financial difficulties are one of the main reasons that hinder small and medium-sized enterprises' (SME's) attempts at internationalisation. Finances are needed for the various areas that aid internationalisation such as research, development and innovation, hiring of the right people, and putting in place the infrastructure required (Costa and El-Alam, 2017). The extent to which financial resources aids internationalisation in Least Developed Countries (LDCs) (LDCs) remains unclear, as there seems to be a dearth of research in this area.

2.3.2.3 Technological Resources.

Technology has been identified as an important resource and a source of advantage for the firm (Melville et al., 2004). Some companies owe their existence to the superior technological advantage they possess. For example, compared to failing rivals, companies that operate in the high technology sector only remain competitive due to better technology (Burgel et al., 2003). Accordingly, one interesting perspective of the RBV literature has developed around the extent to which different types of resources influence internationalisation, particularly in advanced economies (Panda and Reddy, 2016). For example, Wu et al. (2006) confirm that organisations with the right capabilities increasingly rely on information technology (IT) to improve the supply chain process. The authors were able to confirm from their studies that the organisational capabilities of a firm serve as a catalyst in leading multinational organisations as a means of transforming IT-related resources into a higher value for the firm. Thus, SME firms that can develop or deploy the right technologies are also more likely to find internationalisation easier.

2.4 RBV and SME Internationalisation.

Research studies on SMEs are now very common and this has been linked to the acknowledgement that they are an integral source of growth and dynamism both in advanced industrialised and emerging economies (Laghzaoui, 2011). The fast pace of globalisation and

rising levels of the economic crisis in local markets have resulted in a situation where SMEs need to seek opportunities in international markets (Ramon-Jeronimo et al., 2019). The following section starts with a brief discussion of the definitions of SMEs, followed by the author critical review of the literature on the link between RBV and internationalisation, with a particular focus on SMEs to identify new research issues.

2.4.1 Definition of SMEs.

SMEs have been widely defined using different measures. This has resulted in a situation where there is currently no universally accepted definition for SMEs (Simpson et al., 2012). Simpson et al. (2012) further explain why it is difficult to have a universal definition of SMEs, claiming that the diverse definitions are reflective of diversity in the industries in different countries. Measures used to classify businesses include the number of employees, annual turnover, or business assets (Ayyagari et al., 2007; Simpson et al., 2012). However, most studies use the number of employees because of the difficulty of obtaining information about annual turnover or business assets (Gilmore, 2011; Simpson et al., 2012). In some countries, the cut-off for SME status is 500 employees (Ayyagari et al., 2007). In Lopez-Fernandez et al. (2016) study which was carried out in Spain, SMEs was defined as a business employing up to 249 workers.

The definition of SMEs presented in Ayyagari et al.'s (2007) study has been decided to be used by the author as the definition used hereafter in this thesis because their study was conducted for the World Bank, and the data used therein was obtained from a survey conducted by the World Bank. According to Ayyagari et al. (2007) and the European Commission (2015), an SME can be described as a corporate entity with less than 250 employees. This definition is also widely used by studies in African contexts (Ayyagari et al., 2007; Abubakar et al., 2019).

According to Ruzzier et al. (2006), one important distinction that needs to be made is that an SME has to be an independent corporate entity, entailing that subsidiaries cannot be classed as SMEs. According to ACCA (2012), in addition to the maximum headcount within the confines of the European Union, SMEs are described as having less than 50 million euro in annual turnover and under 43 million euros in assets. In terms of numbers, the OECD claimed that SMEs represent between 95-99 % of firms and are also responsible for between 60-70% of job creation (Laghzaoui, 2011). In the European Union (EU), the number of SMEs is as high as 99.8%, which is an indication that almost all registered businesses are SMEs and illustrating

why their internationalisation process cannot be ignored (García-Álvarez et al., 2019). This is an indication of the importance of SMEs to countries around the world, including the LDCs. Despite the importance of SMEs to growth, it has been stated that they usually have a higher rate of failures when compared to larger organisations (Mile, 2010). However, for the purposes of this thesis, we have focused on the definition of SMEs as firms with less than 250 employees since it is one of the most widely used definitions (Ayyagari et al., 2007; European Commission, 2015; Abubakar et al., 2019). Accordingly, in the next section we look at why internationalisation matters for SMEs.

2.4.2 SMEs in the general and international market.

The previous section highlighted the importance of a SME in the economic growth and development of a nation. Research has found that SMEs which leverage on internal and external resources have an ability to be more successful in comparison to large corporations (Saeed and Ziaulhaq, 2019). Castagna et al. (2020) have evaluated the role of SMEs in the global market and state that the globalisation of SMEs brings about competitive advantage to SME operations and increases the efficiency of resource utilisation by the SMEs.

A SME can achieve a global/international platform in multiple ways. In respect to the entry mode deployed by a SME for internationalisation, Morais and Ferreira (2019) state that the majority of the SMEs prefer to enter the international market through the method of exportation. This approach is definitely preferable because it involves the lowest level of commitment by a SME to the external market. They also state that the decision of a SME to internationalise is greatly influenced by the resources available to them and the environment in which the SME operates. In this context, the research conducted by Narooz and Child (2017) compared SMEs in Egypt and United Kingdom, concluding that the difference in institutional, financial and technological support received by the SME had an impact on the internationalisation objectives.

Rehman et al. (2021) have evaluated the impact of internationalisation of SME in an emerging economy and found that internationalisation has a significant impact on both financial and non-financial performance of a SME. They found that internationalisation allowed the SME to gain competitive advantage, increase sales and profits, add knowledge and enable market expansion.

Mendy and Rehman (2019) have also studied the importance of human resource management process in the human and technological barriers faced by SMEs for their internationalisation. Their study found that there is a need to dedicate resources to SMEs to optimise economic development and growth of SMEs. These studies thus provide evidence that SMEs' internationalisation is dependent upon the availability of resources and impacts the growth of national economies. The following section discusses in further detail the importance of internationalisation.

2.4.3 The importance of SME internationalisation.

To a fair degree of consistency, internationalisation has been defined in many ways throughout the literature (Beamish, 1990; Majocchi and Zucchella, 2003; Al-Hyari et al., 2012). Internationalisation can be described as a drive to expand a business to have a global outlook, typically involving a geographical expansion in the form of foreign direct investment (FDI) or exporting etc. (Majocchi and Zucchella, 2003). Another definition comes from Beamish (1990) who defines internationalisation as the process through which firms increase their awareness of the direct and indirect influence of international transactions on their future performance, as well as establish and conduct transactions with firms and consumers of other countries.

The determinants of internationalisation have been widely discussed from the perspective of the pull and push factors (Oviatt et al., 1997). According to Oviatt et al., (1997) the pull factors are external to an organisation and constituting the set of attractive forces found in the firm's external environment, which increases the competitiveness and provides stimuli for internationalisation. Given the significant impact of resources on the ability of a company to compete (Priem and Butler 2001; Richard 2000; Miller and Shamshie 1996), it is imperative that an understanding of the relationship between a firm's resources and internationalisation is sought.

Internationalisation has been identified as a valuable contributor to national economic development insofar as it provides both income and jobs (Onkelinx and Sleuwaegen 2008; Abubakar et al., 2019). Consequently, the concept of internationalisation within SMEs has been given considerable attention in academic literature (Onkelinx and Sleuwaegen 2008). According to Lloyd-Reason (2003), SMEs face competitive pressure from both domestic and

overseas rivals in today's more globalised world. Internationalisation thus presents a useful way for SMEs respond (Lloyd-Reason, 2003). However, the benefits of small and medium economies' (SME's) participation in internationalisation are not a completely new phenomenon, since several scholars have previously presented strong arguments with evidence on why it is beneficial for their performance too (Abubakar et al., 2019). In this sense, the literature reveals conflicting evidence in ascertaining the extent to which internationalisation is conclusively beneficial to SMEs (Abubakar et al., 2019).

Although a significant number of studies have explored the internationalisation of businesses, the need for more studies that are specifically focused on SMEs should be acknowledged (Al-Hyari et al., 2012). In other words, studies on the internationalisation of SMEs lack the knowledge specific to this group, given that most of the previous studies on the topic have focused on multinational enterprises or large, well-established firms (Al-Hyari et al., 2012). SMEs are structurally different from large multinational firms and behave differently, particularly concerning their competencies, market behaviours as well as strategies (García-Álvarez et al., 2019). Zahra et al. (2007) also confirm this trend, arguing that significant differences exist between how SMEs respond to opportunities and threats in international markets, when compared to large organisations. The inadequacy of extensive research on the question of how SMEs, particularly in LDCs hindered by the lack of different resources justifies the need for more studies on SME internationalisation.

Onkelinx and Sleuwaegen (2008) provide an overview of the prevalent theories aimed at explaining the internationalisation of SMEs. The first theory examined by the paper is the Stage Models Theory wherein internationalisation is seen as a deliberate and gradual growth process recognising that firms grow in stages. Secondly, Onkelinx and Sleuwaegen (2008) have presented a discussion on an international new venture theory. The theory aims to integrate the strategic management theory, entrepreneurship and international business together in order to provide a single explanation for how SMEs would pursue internationalisation. Lastly, they also present a discussion on how Network Theories aim to explain internationalisation. Onkelinx and Sleuwaegen (2008) explain that theorising leads one to believe that that firms whose partnership provides a competitive advantage (by exposing complementary resources) could be used to explain drivers for internationalisation. This means that proximity to other SMEs, with whom the organisation can form strong strategic alliances, enables them to pursue internationalisation plans.

In contrast, Burgel et al. (2000) have a different view of the reasons why SMEs seek to internationalise. The authors present evidence to suggest that intense competitive rivalry forces firms to seek opportunities outside their domestic markets. Furthermore, according to Burgel et al. (2000), it appears that where a company has made investments in an innovation that has a limited period for reaping returns, the pressure to internationalise increases. Conscious of the need for a quick return on investment, such companies are more likely to start to seek opportunities outside of their local markets. However, Onkelinx and Sleuwaegen (2008) argue against unhealthy fixation on internationalisation as, even though growth and survival may be dependent on internationalisation in the long term, it is not a fool-proof recipe for survival. Nevertheless, the internationalisation of SMEs is an important aspect of any economy. For example, the European Commission (2011) observes that SMEs hold the key to future economic performances in the region. Furthermore, ACCA (2012) purports that SMEs have a lot to gain by internationalising, meaning that by extension, the whole economy stands to gain from SME internationalisation.

ACCA (2012) cites several advantages to SME's internationalisation. Firstly, according to the report, internationalisation translates to higher turnover for the company. Secondly, exporting SMEs have the power to influence the performance of the economy as a whole (ACCA, 2012). However, although a number of studies suggest that internationalisation is important for SMEs (Lloyd-Reason, 2003; Abubakar et al., 2019), firm level resources are considered to be critical for SME internationalisation (McDougall et al., 1994). Hence, in the next section, I discuss why resources are important for SME internationalisation.

2.4.4 The importance of resources for SME internationalisation.

Fernandez and Nieto (2005) have examined the factors which influence the success of internationalisation strategies by SMEs, identifying the availability of resources as one of the most dominant influences on the outcome of internationalisation strategies. Internationalisation is a growth strategy that is likely to stretch a company beyond its current capacity (Ruzzier et al., 2006; Ibeh, 2003; Naldi, 2008). Therefore, for this capacity to be stretched, it is unsurprising that certain resources are needed. For example, exporting firms need financial resources to pay export agents as they may not receive the payment for goods to be exported until when they have been sold in the foreign market. Human resources could provide SMEs with the capability to see more export opportunities (Kazlauskaitė et al., 2015). The application of technological resources would help SMEs to increase production and develop better

products, given that availability of adequate resources reduces the burden on SMEs to create these resources for their operations (Putranto et al., 2003).

Sukaatmadia et al. (2021) describe how the availability of resources creates a competitive advantage for SMEs. The competitive advantage generated by the application of resources provides SMEs with an opportunity to enter a higher competitive market such as international markets (Sukaatmadja et al., 2021). They help to attract more resources to an SME, which further increases the capability of an SME. From the perspective of the RBV, it is the unique resources and capabilities of SMEs that gives them a competitive advantage in the international markets. However, it is important to acknowledge that there have been mixed findings in research studies that have looked into the internationalisation of SMEs (Hitt et al., 2006). The following section critically reviews the literature on RBV and internationalisation.

2.5 Review of empirical studies on RBV and internationalisation.

In this section, a critical review of the empirical literature on RBV and internationalisation will be carried out so that new research gaps related to the research problem can be identified. In relation to SMEs, the RBV framework suggests that they can only integrate internationally when they enjoy resource-based advantages in their home base, or they can use internationalisation to create resource-based advantages (Fong & Chang, 2021) through the creation of resource combinations that are valuable as well as difficult to substitute across national borders (Kazlauskaitė et al., 2015).

2.5.1 Human resources and internationalisation.

Human resources are composite of the skilled and unskilled workforce, informal sector experience and the size of the firm or number of workers (Lawlor, 2014). It is critical for an organisation to mobilise the available human resources effectively internally in pursuit of the overall organisational goal (Ibeh, 2003). The study of human resource management can be traced decades back, while various policies, strategies and theories have been developed in the context of human resource management (Purkayastha et al., 2020). Research by Adrian Flint (2003) indicates that it is important for an organisation to strategically align its human resources and place them across the organisation that results in the accomplishment of the overall organisational goals.

Barney et al. (2001) claim that the RBV has made an important contribution within the field of human resource management (HRM), which explains the fast growth in strategic human resource management. One important aspect of the link between strategic HRM and RBV is the realisation of the need to develop employees as resources (Barney et al., 2001; Ottaviano and Martincus, 2011). Ottaviano and Martincus's (2011) research highlights the level of training provided to employees as another important factor in determining if a company can expand its reach across borders. Again, this points to the importance of human resources as a precursor to internationalisation as identified by (Huselid, 1995; Burgel et al., 2000; Lawlor, 2014; De Jong and Brouwer, 1999).

An important study reviewed by Westhead et al. (2001) examines the internationalisation of small and medium scale enterprises. The researchers twice interviewed 116 businesses operating in a diverse number of industries in Great Britain. Once in 1990, and again in 1997, they asked workers to answer several research questions. The research employed a resource-based view (RBV) to identify critical success factors of internationalising an SME. The study found that managerial experience is positively related to the propensity to export, which again echoes previous research on the importance of people to any internationalisation strategy (De Jong and Brouwer, 1999; Huselid, 1995). The research found that in organisations where the management had considerable experience of both industry-specific and international markets, such firms were able to quickly scale internationally.

The research also found that the profile of the principal founder of an SME is one of the most important resources determining whether a company becomes an exporter or not. Furthermore, the research finds that the type of industry in which the company operated is a factor. For example, the results indicated that SMEs which operated in the service sectors were less likely to internationalise. Burgel et al. (2000) have also identified the experience of the entrepreneur as an important precursor to growth, which again echoes Huselid's (1995) assertion that human resources are valuable organisational resources. Ibeh (2003) has conducted a study on the internationalisation activities of SMEs in Nigeria. The focus here was on understanding the effect of having an entrepreneurial disposition on pursuing international expansion, considered within the confines of moderators which are external to the firm. The findings suggest that an entrepreneurial strategy is a precursor to internationalisation among Nigerian firms. The paper also points to evidence suggesting that firms existing in hostile environments performed better

by striking such an entrepreneurial posture. This echoes Covin and Slevin's (1989) finding on the strategy adopted by firms operating in a hostile environment.

Ibeh (2003) has also drawn a correlation between the founder's characteristics and the drive for an SME to internationalise. The paper identified international orientation and experience and contacts as having an association with the decision to expand internationally, which Westhead et al. (2001). also found to be true. Ibeh (2003) has identified "*firm-level competencies*" as another factor affecting the decision to internationalise in Nigerian SMEs, which can be understood as a resource-based view (RBV) of a firm predicting its propensity to internationalise. It appears that unique competencies separate SMEs in Nigeria who feel confident enough to sell overseas from those who do not.

Hitt et al. (2006) have also investigated the effect of human resources on the internationalisation of SMEs and confirmed that a positive relationship exists between the two. Their explanation is that the more impressive the human resources are the more likely that SMEs will have positive internationalisation outcomes (Hitt et al., 2006). A key factor that impacts on the performance of SMEs is the ability to innovate (Mile, 2010; Genc et al., 2019). According to Genc et al. (2019), a relationship endures between innovation and internationalisation performance. In other words, innovative SMEs are more likely to internationalise into foreign markets. There is no doubt that without the right human resources, SMEs may not innovate and may find the internationalisation process challenging.

Ruzzier et al. (2006) have examined academic literature on SME internationalisation to come up with the theory of international entrepreneurship. According to the authors, key aspects of the success of SME internationalisation are the *skills and experiences of the entrepreneur*. Molnar et al. (2007) have examined the effect of internationalisation of enterprise on labour in OECD countries. The paper focuses on investigating what happens to employment in the home countries of companies who have made foreign direct investments (FDIs) abroad. The research finds that the effect varies depending on the country as well as the industry. In the United States, FDI by US companies appears to lead to growth in domestic employment. However, for countries such as Japan, domestic employment is negatively impacted when the FDI is to China.

Table 2.1 Summary of literature review findings: Human Resources and Internationalisation

Author, Date	Summary of Findings
Barney et al. (2001)	RBV has made an important contribution within the field of human resource management (HRM)
Ottaviano and Martincus (2011)	Level of training provided to employees is another important factor in determining if a company can expand its reach across borders
Westhead et al. (2001)	Internationalisation of SMEs from the perspective of the resource-based view (RBV) theory is used to identify critical factors for internationalisation of SMEs. The positive relationship between managerial experience and the level of exports was also highlighted.
De Jong and Brouwer (1999); Huselid (1995)	Considerable experience of the management team in industry-specific and international markets enables SME to scale up international operations quickly.
Burgel et al. (2000)	Experience of the entrepreneur is an important precursor to growth
Ibeh (2003)	An entrepreneurial strategy is a precursor to internationalisation among Nigerian firms
Covin and Slevin (1989)	The hostile environment presents difficult opportunities for entrepreneurs to tap into; and the experience of entrepreneurs is critical in tackling a hostile environment.
Hitt et al. (2006)	Human capital has an effect on the internationalisation of SME, and this study confirmed that a positive relationship exists between the two
Genc et al. (2019)	There is a strong and positive relationship between innovation and the ability of a firm to become international. This implies innovative firms have a higher tendency to internationalise themselves.
Ruzzier et al. (2006)	This study notes that important aspects of the success of SME internationalisation are the skills and experiences of the entrepreneur

Source: Author, developed for research

2.5.2 Financial resources and internationalisation.

As defined by Laxmi Prasad Pant (2013), financial resources are critical to the implementation of any organisational goal. The SMEs that belong to the LDCs face several hardships in assimilating financial resources (Pant, 2013). Onkelinx and Sleuwaegen (2008) cite the difficulty of obtaining finances as a significant barrier to SMEs aiming to expand internationally. Gunaratne (2009) underlined the importance of financial resources when

pursuing interests in internationalisation. These two studies further underline the importance of having the financial resources to pursue internationalisation.

As Onkelinx and Sleuwaegen (2008) have pointed out, a fair degree of investment is required when a firm decides to pursue an internationalisation strategy. Covin and Slevin (1989) agree with this and have also identified a commitment to capital investment as an important aspect of an internationalisation strategy. Moreover, Ottaviano and Martincus (2011) have researched the antecedents of the ability of SMEs to export outside their local market in Argentina. The research identifies the level of employment and *investment* in product improvement as factors which predict the ability to export. This finding also suggests a reliance on the financial resource to be able to pursue an internationalisation strategy.

Table 2.2 Summary of literature review findings: Financial resources and internationalisation.

Author, Date	Summary of Findings
Onkelinx and Sleuwaegen (2008)	The difficulty of obtaining finance is a significant barrier to SMEs aiming to expand internationally
Gunaratne (2009)	This study highlighted the importance of financial resources when pursuing interests in internationalisation
Covin and Slevin (1989)	Commitment to capital investment is an important aspect of the internationalisation strategy
Ottaviano and Martincus (2011)	This study recognised the of SMEs to export outside their local market in Argentina

Source: Author, developed for research

2.5.3 Technological resource and internationalisation.

A critical evaluation by Shahid Qadir (1982) indicates that technological resources are composed of the technology licensing available to an organisation. This includes access to the latest and developing technologies that enables the mobilisation of other resources available to an enterprise. The new-age business policies cannot do without dependence on technology (Sukaatmadjaet al., 2021). Whether it is the use of artificial intelligence or automated

manufacturing or digital marketing, the use of technology and various platforms is all-pervasive (Pergelova et al., 2019). Structurally challenged economies form a group of nations denied first-mover advantage to the new and developing technological processes (Xie & Suh, 2014). This reason is that the development of such technology requires considerable financial resources and access can only be granted by investing capital resources (Shahid Qadir, 1982).

Technological resources are integral in supporting the integration of LDC economies in the global value chains by enabling successful technological transfers (Amaro Rosales & Natera Marín, 2020). With the increase in technological development, the SMEs operating in these chains adopt technological practices in their work. Vergara (2018) has studied the impact of technology on the productivity and performance of SMEs. This study established that application of technology results in increased production and quality of the goods produced as it eliminates the risk of human error.

Furthermore, the study established that technology has a positive influence on the performance of human resources as technology reduces redundancy and the time needed to complete a task. The surge in technological developments in the era of globalisation and internationalisation has opened up various avenues for the small and medium enterprises to explore the global processes and value chains (Melville et al., 2004). The use of technology has enabled stronger connections between the enterprises and has improved the overall returns on the capital investment (Burgel et al., 2000). Technology also enables improved production quality and access to newer markets at a lower cost of acquisition for the business (Charles et al., 2006).

Research conducted by Abubakar (2014) has investigated the effect of mobile phone diffusion on new business formation in developing countries. The author also examines the effect of education on starting new businesses in such countries. The paper selects a large sample for analysis which covers a sizeable number of developing countries including Brazil, Russia, India, China and South Africa commonly known as BRICS for short. The research concludes that mobile phone diffusion is positively related to the start of new businesses in those countries. The researcher posits that the advent of mobile technology has given an advantage to entrepreneurs in these countries insofar as they can learn from and participate in international markets. This observation again reinforces Melville et al.'s (2004) view of technology as a valuable resource to an organisation. Furthermore, based on Abubakar's (2014) findings, it appears that education also has a moderate impact on whether individuals decide to pursue an

entrepreneurial path in developing economies. The main shortcoming of this research is that it does not draw a convincing correlation between mobile phone diffusion and new business creation.

Naldi (2008) has examined the growth of a firm through internationalisation in Swedish SMEs. The research finds that internationalisation allows companies to improve their technological knowledge. Since researchers such as Burgel et al. (2003) and Melville et al. (2004) have identified technological knowhow as a valuable resource, it follows that internationalisation can be said to contribute to the competitive advantage of the firm even in its local market. Along with Molnar et al. (2007), Naldi (2008) finds that internationalisation does not necessarily translate to more jobs in the company's local market, but it does aid in securing existing home jobs if the company continues to succeed in the international market.

Unsurprisingly, companies who have experience in knowledge protection are also better placed to export the application of their knowledge into international markets. Rammer and Schmiele (2008) also agree with authors like Molnar et al. (2007) and Naldi (2008) that international activities spur firm growth in their home market. However, the research brings a fresh perspective as it considers this trend from internationalising research and development activities. The authors argue that such innovation activities abroad allow SMEs to gain from knowledge resources, which brings clarity to Naldi's (2008) claim that SMEs gain further technological knowledge through internationalisation activities. However, it is noteworthy that Racic et al. (2008) find that the acquisition of technology alone does not guarantee internationalisation success.

Following Abubakar (2014) and Lawlor (2014), it has been found that technology encourages innovation within SMEs, using the emergence of innovation ecosystems in such locations as an important driver for success. Like Abubakar (2014), Lawlor (2014) found a lack of education to be a barrier to innovation. Burgel et al. (2000) have studied the internationalisation of technology start-ups in the United Kingdom and Germany to understand whether or not internationalisation could make firms grow faster. Their research finds that internationalisation is positively related to sales growth with firms who sell globally performing better than firms whose efforts are primarily local. One of the key findings of the research is that technology plays an important role as incentive to internationalise which reinforces Melville et al.'s (2004) identification of technology as a valuable resource for any company.

Table 2.3 Summary of literature review findings: Technological Resources and Internationalisation

Author, Date	Summary of Findings
Abubakar (2014)	Mobile phone diffusion has a positive effect on new business formation in developing countries as does education on starting a new business in these countries.
Melville et al. (2004)	This study reiterates that technology is a valuable resource to an organisation
Lawlor (2014)	Technology encourages innovation within SMEs using the emergence of innovation ecosystems in such locations as an important driver for success
Burgel et al. (2000)	Internationalisation of technology start-ups in the United Kingdom and Germany was looked at to understand if internationalisation could make firms grow faster
Naldi (2008)	This study observed the growth of a firm through internationalisation in Swedish SMEs
Molnar et al. (2007)	This study concludes that internationalisation does not necessarily translate to more jobs in the company's local market, but it does aid in securing existing home jobs if the company continues to succeed in the international market
Rammer and Schmiele (2008)	This study found that international activities spur firm growth in their home market
Racic et al. (2008)	This study noted that the acquisition of technology alone does not guarantee internationalisation success.

Source: Author, developed for research

The section discusses the impact of technology and internationalisation and provides a review of how technology impacts the internationalisation of SMEs. Although resources provide an advantage for SMEs to advance into the international market, certain barriers are faced by SMEs to enter the international market. The next section of the chapter critically analyses the literature that highlights the various barriers encountered by an SME when trying to enter the international market.

2.5.4 Barriers encountered by SMES to internationalisation.

As Gnanon's study reveals (2018), since LDCs are identified with major structural challenges as fundamental problems within their economies, they face hardships when trying

to integrate their economic resources internationally. The instability of the political climate within these countries plays a critical role as a hindrance towards strong internationalisation policies (Gnangnon, 2018). Any developed nation is reluctant to invest in a developing or emerging nation struggling with an unstable policy. Investors lose their confidence when putting their financial resources in these economies. The governance of LDCs hence needs to provide stable macroeconomic conditions that enable smoother internationalisation of these economies. Here, a study by Will Martin & Mattoo (2010) indicates that barriers to internationalisation exist in the least developed economies in the form of high tariffs, limited domestic resource mobilisation, limited technology transfers, a low proportion of skilled labour, sectoral discrepancies, political instability, high fiscal deficit and current account deficit, limited profitability and competitiveness of investments directed to these economies.

Non-supportive government business policies which discourage efforts to be put in by the owners of small and medium enterprises (SMEs) need to be eradicated from the political climate of these economies. Consequently, government support towards all sectors needs to be strengthened, so that a higher level of internationalisation can be achieved within these economies. Other than government policies, steps also need to be taken to improve the internal business climate within these nations. The availability of skilled labour, raw materials and marketing and logistic support services need to be enhanced and sustained so that small and medium enterprises, which form the backbone of the economy, progress towards sustained internationalisation (Martin & Mattoo, 2010). It is widely acknowledged that in the global and interconnected marketplace, SMEs are increasingly seeking for opportunities in international markets as internationalisation strategies helps to boost growth, profitability and competitiveness (Rahman et al., 2019). However, studies on SME internationalisation have shown that most of them find the process challenging which is why a good number of them never operate in the international market (Osei-Bonsu, 2014).

The suggestion of Al-Hyari et al. (2012) is that the barriers that hinder SME internationalisation should be discussed from two perspectives. The first perspective to be considered is barriers that discourage the SMEs from engaging in internationalisation activities such as exporting. The second perspective to be considered is the barriers that are experienced by those SMEs that are already engaging in internationalisation activities. Previous research by Onkelinx and Sleuwaegen (2008) has concluded that manufacturing activities by SMEs in OECD countries are significantly focused on getting goods into international markets, with about a quarter of

firms engaging actively in international markets. The authors identified exporting as an important aspect of productivity as it allows companies to leverage the advantages of economies of scale (Onkelinx and Sleuwaegen, 2008). However, Onkelinx and Sleuwaegen (2008) have identified a couple of barriers to the internationalisation of SMEs. Firstly, the paper cites the difficulty of obtaining finance as an important barrier to SMEs aiming to expand internationally. Secondly, the management of such companies usually has limited international experience within the management team.

Barringer and Greening (1998) have studied the geographical expansion strategy pursued by SMEs to encourage growth in the United States. The research studied five companies in total, two of which were not successful in their expansion strategy. The researchers concluded that pursuing a geographical expansion strategy requires a certain important areas of concentration. The paper recognises that small firms have to manage their current business and expansion plans alongside each other. This presents the challenge of maintaining business as usual and also managing activities on the new site. According to the authors, this requirement to concurrently manage across multiple locations is one of the reasons why some of the SMEs sampled have failed. Barringer and Greening's (1998) paper then raises an interesting point that further underlines the importance of people in SME expansion. However, the research is based on SMEs looking to expand to another geographical location within the United States. While this report concedes that the challenges identified are also likely to apply to an internationalisation strategy, the sample size and the homogeneity of national boundaries within the sample diminish the reliability of the research in the international context.

Dusooye et al. (2013) have investigated the export barriers faced by SMEs wanting to internationalise in Mauritius. The research found evidence of two categories of barriers. The internal challenges identified include marketing and logistics. However, the key finding was the admission based on the sample that there was a lack of knowledge and skills in relation to international market penetration. ONELAN and Sleuwaegen (2008) found similar dependence on the international experience of the management of SMEs in their research. These findings align with Westhead et al.'s (2001) observation that managerial experience was positively related to the firm's propensity to export. The cost of expansion was identified as an external barrier to the internationalisation of SMEs. The main cost identified was the financial commitment required to set up operations overseas. The researchers concluded that internal barriers were easier to overcome than external ones.

Research by Dusoye (2013) has also identified several factors which affect the success of internationalisation efforts. These factors could not be categorised as either internal or external and they include natural disasters which hampered transportation. Another factor is the fluctuation of currency exchange rates which impacts overseas transactions. The study here also identified the potential for the government to become a blocker by establishing political and legislative obstacles. Again, this conclusion echoes the findings of Onkelinx and Sleuwaegen (2008) on the negative role that governments can play in the internationalisation efforts of SMEs. Al-Hyari et al. (2012) have conducted a study in which they investigated the barriers to the internationalisation of SMEs in Jordan. They surveyed 250 Jordanian manufacturing SMEs with a response rate of 54% (Al-Hyari et al., 2012). The findings confirmed that a range of barriers hinders SME internationalisation including economic/political-legal, governmental, financial and information barriers.

Gunaratne (2009) has investigated the barriers to internationalisation faced by Sri Lankan SMEs. He found that SMEs face many barriers in a developing country. These include a lack of staff experience in export activities and a lack of financial resources to pursue interests in internationalisation. The research also found that lack of outward-looking government policies hinders the successful internationalisation of Sri Lankan SMEs. Apart from financial constraints which are widely acknowledged as barriers to the internationalisation of SMEs, some studies have also identified labour market constraints (Arndt et al., 2009). Labour is a firm resource that can help the internationalisation process; a fact confirmed by Arndt et al. (2009) in recognition that it is covered by a collective bargaining scheme, the probability of internationalisation is reduced. They also confirmed that an inadequate number of qualified personnel are available to firms then increase the probability that labour will become a barrier to internationalisation (Arndt et al., 2009).

Gimede (2004) has investigated the propensity to export in South African SMEs. This research finds that firms, who have intermediaries to link them with international markets, are more likely to succeed than those who do not. The author explains that paucity of information about international markets is a barrier to internationalisation. Therefore, the research suggests that governments set up programs to give SMEs access to export market intelligence. In relations to SMEs, some researchers have suggested that they are apprehensive and late adopters of technology (Clarke, 2004). In other words, SMEs that find the adoption of technology difficult

are more likely to find the internationalisation process challenging. This is understandable considering that technology plays a significant role in today's interconnected business environment. The suggestion in the literature is that limited resources and limited information system knowledge and skills are some of the reasons why SMEs are slow adopters of technology (Clarke, 2004). This can be a barrier to the internationalisation of SMEs since technology has been confirmed in past studies as a factor that promotes the process (Melville et al., 2004; Abubakar, 2014; Lawlor, 2014).

From the perspective of the RBV theory, researchers have confirmed that the size of the firm could be considered a key determinant of internationalisation (Singh, 2009; Kazlauskaitė et al., 2015). This indicates that size could be a barrier to internationalisation. The idea is that size impacts the magnitude of managerial and financial resources available to a firm and therefore determines its strength in the domestic market (Singh, 2009). This also points to the fact that studies that have explored internationalisation of firms in general from the perspective of RBV would not reflect what happens with SMEs.

There is hence a need for studies capable of exploring whether the size is indeed a barrier for SMEs in LDCs to internationalise. In other words, how does size impact key resources such as financial, human and technology that are relevant for SME internationalisation? In summary, the barriers to SME internationalisation are broad and range from labour constraints to economic/political-legal, governmental, financial and information barriers. The following section discusses the role of government in the internationalisation of a firm.

2.5.5 Role of government in internationalisation.

A study by Ravenhill (1986) points out that the role of government is vital in the economic, social, human and technological progression of any economy. Government is the engine that runs and fuels the entire economy. Any political event that is positive or negative has implications on the financial and economic markets of a nation. The magnitude of the impact may range from mild to severe depending upon the intensity of the political event. Government policies also have a strong role to play when it comes to shaping the business environment within any nation (John Ravenhill, 1986). In the context of the research problem presented here, it is crucial to examine the role of the government in the industrial sectors. The majority of the Sub-Saharan LDCs have unstable governments, military rule or dictatorship (Chikhuri,

2013). The presence of such governance has a strong influence on the industries that are present in those countries. Understanding the policies framed by the government to conduct business then helps develop knowledge about the barriers to internationalisation.

All governments draft their sectoral policies in alignment to the economic benefits they receive from certain sectors; hence, the role that government plays in the Least Developed Countries (LDCs) is indispensable. The share of the private sector towards the overall development of these nations is small compared to the contribution made by the public sector. Whether it is the general public, or the large corporations or the small and medium enterprises, all segments of the country are largely dependent on public aid, sponsorships and grants. The enterprises and the manufacturing set-up are also dependent on the government as it represents the only access for these sectors to be brought closer to international financing and aids. Thus, governments are integral institutions for linking small and medium enterprises belonging to the Least Developed Countries (LDCs) with international donors and agencies which regulate assistance funds within these economies.

The comprehensive research conducted by Diyamett and Mutambla (2014) highlights that as a composite group of 48 nations, each of these the Least Developed Countries (LDCs) needs to be competitive in its own right in an attempt to grab the highest share of official development aids granted by various agencies and commissions. For that to happen, it is important for the government of these individual countries to be stable, fierce and competitive and have positive goodwill and strong relations with agencies like the United Nations and the World Trade Organisation. When a share of official development aid is directed towards the entire composite group, it is channelled towards the individual countries. The role of the government then transitions to deploying these funds among the various sectors of its national economy. The priority sectors are granted the highest share having already been identified on parameters such as a high level of exports, a high level of employment opportunities to be generated within the economy, and a high level of generation of tax revenues for the government. Thus, the government plays an important bi-directional role: the first role attracting foreign aids towards the economy and the next being an effective deployment of funds among various sectors of the economy (Diyamett and Mutambla, 2014).

In addition, Onkelinx and Sleuwaegen (2008) stated that it is important that government policies encourage internationalisation in SMEs operating in developing countries. They argue

for measures that help to overcome the obstacles which such companies may face when trying to access the international market. These include expansion costs, and protection of intellectual rights. However, according to Onkelinx and Sleuwaegen (2008), it is equally important that the government itself does not become a hindrance by constituting a bureaucratic obstacle to small firms seeking expansion. This research by Onkelinx and Sleuwaegen (2008) also gives guidance on what governments in developing countries could do to encourage SMEs to seek international expansion, which includes targeted schemes put in place solely to encourage SMEs that want to expand overseas. The paper provides guidelines on how such schemes could be structured to reward “entrepreneurial competency” focused on internationalisation.

Lawlor (2014) has researched the role of government in the internationalisation of SMEs. The author identifies the need for government to provide companies with better access to capital. Lawlor (2014) has also discussed how government intervention could boost the chances of SMEs expansion, and advised that governments could help SMEs by providing access to capital while also building a “commercial mentorship” infrastructure to guide start-ups on the best way to utilise capital. De Clercq et al. (2008) have investigated the concept of knowledge spill overs and their relationship with internationalisation. The study points out that SMEs affect each other based on proximity. According to this study, being close to an outward-looking SME engaging in FDI and international trade encourages companies who were previously domestically focused to look outside to foreign markets. Furthermore, the paper underlines the role of government in fostering this proximity and encourages governments to set up specialist zones where companies with an international orientation can congregate.

Boermans and Roelfsema (2015) have contributed positively to the research on SME internationalisation by highlighting the importance of export promotion programs. This echoes Lawlor (2014)’s point on the importance of government support to SME internationalisation. Racic et al. (2008) studied export strategies of SMEs in Croatia to determine its effect on the success of internationalisation efforts by SMEs in that country. The paper finds that SMEs which produce highly specialised products usually have more success at internationalisation. In addition, the paper finds that cooperation with foreign companies in the destination market is central to achieving a successful internationalisation drive. A recent study that explored how the home government influence the internationalisation of firms is that of Angulo-Ruiz et al. (2019). The study collected primary data from 672 firms in Canada and China and confirmed that governments are critical to the internationalisation process. However, the data was not

gathered in LDCs, an indication that the findings of Angulo-Ruiz et al. (2019) will not reflect the contexts of LDCs. Furthermore, the study has collected and used primary data not only from SMEs but firms in general. The following section critically evaluates the relation between internationalisation and the performance of SMEs in LDC. This has been done to understand how improvement in performance results in creating resources and their subsequent impact on internationalisation.

2.5.6 SME internationalisation and performance.

Research on SME's internationalisation is very common in today's globalised world (Burgel et al., 2000; Majocchi and Zucchella, 2003; Boermans and Roelfsema, 2015). The rise in studies on SME internationalisation has been linked to the widely held view that they are critical for social development, economic welfare, job creation and the reduction in poverty levels in countries around the world (Syed et al., 2012). The need to examine the relationship between SME internationalisation and performance rises from establishing the requirement for a firm to enter the international market. The section evaluates how performance is impacted for SMEs that internationalise their business and the corresponding impact on resources.

From the point-of-view of a study that involved a self-completed survey of 302 managers, it was confirmed that international SMEs differ from the non-international ones in terms of international entrepreneurship, organisational innovation intensity and firm size (O'Cass and Weerawardena, 2009). This finding indicates that whether or not an SME will pursue an internationalisation strategy depends on the management's desire and knowledge of internationalisation, further confirming the importance of knowledge as a resource in the process. O'Cass and Weerawardena's (2009) study also confirms the importance of innovation as it points to the fact that SMEs striving towards internationalisation have to carry out organisational innovation to ensure they are equipped to take advantage of opportunities in the foreign market.

Similarly, studies on the impacts of internationalisation of SMEs on firm performance are also very common as researchers try to justify why such firms must pursue the strategy (Lu and Beamish, 2001; Majocchi and Zucchella, 2003). Majocchi and Zucchella (2003) have researched the internationalisation and performance of 220 SMEs in Italy. The definition of internationalisation adopted by that paper was of export intensity and international agreements.

The research finds that when the firms' performance was measured by profitability ratios, internationalisation did not affect firm performance. This finding runs contrary to findings by (Boermans and Roelfsema, 2015; Burgel et al., 2000) where the authors find that internationalisation is related to firm performance. Majocchi and Zucchella (2003) did not discount the effect of internationalisation altogether, rather other researchers' finding that firms only performed well if they internationalised into specific markets. In the case of the Italian companies, that country was the United States. In addition, Majocchi and Zucchella (2003) found FDI to be related to lower profitability and "liability of foreignness" at the start of their internationalisation efforts. This finding echoes Lu and Beamish's (2001) finding with Japanese firms that company performance will dip at the start of any internationalisation efforts. However, Majocchi and Zucchella (2003) have also observed that SMEs who develop strong international experience by exporting before pursuing FDI efforts usually fare better than those who do not. This introduces the complementary relationship between FDI and exporting regarding internationalisation. In turn, Lu and Beamish (2001) have advised against concurrently pursuing FDI and exporting but did not guide how these two activities can be complementary.

Another study into SMEs was conducted by Covin and Slevin (1989) who investigated the strategy employed by small firms in reaction to their external environment. Their research suggests that the performance of SMEs when they operate in a hostile environment is influenced by several factors. Firstly, the authors contest that an organic structure and "an entrepreneurial strategic posture" is important for firms to be able to survive in a hostile environment, which also translates to seeking opportunities outside the immediate environment or, in other words, internationalisation. Secondly, such companies have a long-term orientation. In contrast, companies that operate in benign environments have a rigid structure and are usually conservative in their approach to finances. They also tend to rely on a limited pool of customers, entailing that the drive to internationalise is substantially weaker.

However, the research conducted by Covin and Slevin (1989) suffers from several shortcomings. The principal shortcoming is the inconclusive distinction between what was classified as benign versus hostile environments. Considering that the main premise of the result presented in the research is an archetype of the profile of a firm successful in each type of environment, this dampens confidence in the conclusion. Lu and Beamish (2001) have examined how the pursuit of internationalisation has impacted the performance of Japanese

SMEs. The authors found that the success of internationalisation is positively impacted by foreign direct investment (FDI) activities rather than simply exporting. Moreover, the research suggests that restricting internationalisation just to exports then robs SMEs of the full extent of values which internationalisation adds. This conclusion runs contrary to Onkelinx and Sleuwaegen's (2008) glowing recommendation of exporting as a useful internationalisation strategy. It also contradicts Ottaviano and Martincus' (2011) findings about successful Argentine SMEs.

Despite the rosy picture of FDI painted by the research, the authors admit that performance declines in the first stages of foreign direct investment activities by SMEs. Nonetheless, the research predicts that performance begins to grow as the period of FDI extends. The paper only argues against exports, as it finds that exporting could moderate the effects of foreign direct investment on a SME's performance. Therefore, concurrently increasing exporting and FDI cancels the effect of FDI on performance. Furthermore, Lu and Beamish (2001) argue that firms face the challenge of being seen as "foreign" when moving into new markets, and so advocate the forging of alliances with local partners to overcome this challenge. However, the breadth of Lu and Beamish's (2001) study is narrow, with only country-specific results available as Japanese companies alone were sampled. Furthermore, only publicly listed companies were included in the study as an indication that the findings will not reflect what happens with SMEs in LDCs.

2.6 Research gaps.

From the literature gathered in the previous sections, there is evidence of a lack of research regarding the specific relationship between resources, innovation and exports from SMEs operating in LDCs. In this context, the study has identified the following research gaps which it aims to cover.

2.6.1 Research Gap 1: Lack of studies that examine the direct relationship between an SME resources and the likelihood of SME export in LDCs.

The first gap identified from the literature is that there is not much evidence that evaluate the relationship of resources available to a SME and the likelihood of the SME to start exporting in a LDC. The study presented by Lu and Beamish (2001) restricted their sample size to Japan

as a developed country which cannot be related to the situation of LDC. Among the papers reviewed, Onkelinx and Sleuwaegen (2008) had a healthy sample that included information on least developed countries, although the study mostly concentrated on the BRICS. The study examined internationalisation as an essential strategy for the growth of SMEs and an appropriate balance of external and internal factors that are required to develop a holistic strategy for internationalisation. The paper also examines the existing theories of internationalisation in detail. It links the firms' performance to the level of internationalisation by comparing exporting and non-exporting firms across the manufacturing and service sector in Europe. However, it is found that the study lacks to draw insights on the relationship between the three critical resources, i.e., human, technological and financial resources, and the level of internationalisation achieved.

Kazlauskaitė et al. (2015) have tried to advance the development of knowledge on the extent to which the RBV perspective helps understand the internationalisation process of SMEs. However, the study was not carried out in LDCs, and the findings cannot therefore be used to describe the internationalisation process of SMEs from those countries. The literature indicates that there have been research conducted that establishes the relationship between resources and exports but these studies do not take LDCs into consideration. Hence, the author has identified that there is a need to address this lack of information.

2.6.2 Research Gap 2: Lack of studies that examine the direct relationship between an SME resources and the likelihood of SME innovation in LDCs.

The second gap identified in the literature is connected to the relationship between SME resources and the likelihood of innovation occurring in LDCs. Authors such as Molnar et al. (2007) and Michael A. Hitt, Leonard Bierman et al. (2006) have studied the impact of resources on the internationalisation of business but lack the element of innovation in resources. The availability of resources leads to the creativity that results in innovation and hence the need to evaluate the extent of their relationship properly.

Abubaker et al. (2019) have studied the impact of resources on innovation but were unable to examine their role in particular to LDCs. Studying the relationship between resources and innovation in relevance to LDCs is important because LDCs behave differently compared to the developed and developing world. Development being decades behind innovation is crucial

to encourage these economies to integrate themselves into global economies. Nevertheless, the papers reviewed in the literature provide valuable insight into the nature of SMEs resources and innovation, so identifying the strategies and resources needed. The data has focused on SMEs in developed or developing countries, where there is a need to research the nature of SMEs in the least developed countries to determine whether or not the same conclusions hold.

2.6.3 Research Gap 3: Lack of studies that examine the direct relationship between innovation and the likelihood of SME exports in LDCs.

The third gap identified tries to explore the relationship between innovation and likelihood of an SME in LDC becoming an exporter. In terms of related studies conducted to explore the relationship between innovation and exports, Saridakis et al. (2019) have recently conducted a study to investigate the relationship between innovation and SME internationalisation by collecting primary data from a sample of 12,823 SMEs in the United Kingdom (UK). It was confirmed here that innovative UK SMEs are more likely to internationalise than non-innovative SMEs, particularly through exporting entry mode.

Boermans and Roelfsema (2015) have studied the effect of internationalisation on innovation and performance in small firms. Their study was based in Holland with a sample size of 150 companies. The studies established the relation between innovation and exports, although these studies focused on developed countries. Hence, it's far from easy to find evidence in the literature of studies that have particularly concentrated on LDCs. Generally, the research is limited to authors identifying the problems an SME faces while trying to internationalise their business concerning resources and not try to find the correlation between both the factors. Furthermore, from the research available, it was understood that innovation is perceived to be beneficial for the internationalisation of an SME. Still, the areas in which innovation needs to be focused on are not highlighted in great detail. Along with these factors, most of the research is conducted concerning either developed or developing economies, while little or no research has been conducted concerning LDC countries, especially in the sub-Saharan region.

2.6.4 Research Gap 4: Lack of studies investigating the mediating effects of innovation in the relationship between SME resources and the likelihood of SME exports in LDCs.

There is currently an absence of research on the role of innovation on resources and the internationalisation of SMEs in Sub-Saharan LDCs. The literature gathered in this section hence focuses for the most part on innovation, resources and internationalisation as individual factors. As yet, there has been no concrete research establishing innovation as a mediator between resources and the internationalisation of SMEs. Authors such as Will Martin & Mattoo (2010) and Osei-Bonsu (2014) have talked about the barriers of internationalisation in their respective researchers and established how challenging it is for an SME to internationalise but have not been able to produce a relationship between resources and internationalisation, yet alone discuss the role of innovation. Research conducted by Onkelinx and Sleuwaegen (2008) has identified difficulties in obtaining finance as an important barrier to SMEs aiming to expand internationally and limited experience of the management of such companies in international business. The study was hence able to identify the impact factors of financial and human resources on internationalisation but was limited to just establishing the factor and not understanding the relationship.

Generally, the existing body of research has yielded only a few studies, such as those conducted by Jennings (1983) Sauviant (2015), who have identified that the ability to innovate is directly proportional to the resource mobilisation by the SMEs. They established that it is important to develop skills and competencies among the owners and the employees of these enterprises to mobilise resources and develop innovative products effectively. It may be concluded from the literature gathered here that the internationalisation of an SME in any region is dependent upon resources and innovation in them. Hence it is important to establish the relationship innovation has on resources and, finally, internationalisation. Researching this area would help develop knowledge of how innovation impacts the resources that influence the internationalisation of an SME.

Table 2.4 Summary of research gaps.

Author, Date	Country	Contribution	Gap
Covin and Slevin (1989)	United States	An organic structure and “an entrepreneurial strategic posture” influences internationalisation	1, 4
Ottaviano and Martincus (2011)	Argentina	The level of employment and investment in product improvement as factors which predicate the ability to export	1
Westhead et al. (2001)	Great Britain	1. Profile of the principal founder of an SME is one of the most important resources 2. Management experience within the international market is key 3. Certain industries are reluctant to internationalisation for example Services industries	1, 2
Molnar et al (2007)	OECD Countries	FDI has an effect on the labour market in the home country of the investing company, but the polarity of effect varies from country to another.	1, 3
Michael A. Hitt, Leonard Bierman, et.al. (2006)		To study the impact of human capital and relational capital on internationalisation.	1, 3, 4
Lawlor (2014)		1.The need for government to provide companies with better access to capital 2.Lack of education is a barrier to internationalisation	4
Onkelinx and Sleuwaegen (2008)	Europe	1.Difficulties in obtaining financing is a barrier to the internationalisation of SMEs 2.Limited experience of the management team	1, 3, 4
Sist, Federica (2014)	Italy	1.The financial needs of firms across various stages of the life cycle of development as a firm by analysing several stages of internationalisation. 2.Dearth in the study of financial needs arising out of internationalisation, as financial needs are generally included under financial inquiries (e.g. financial benefits, financial constraints, raising financial capital or raising financial capital abroad).	1, 4
Armando Dalla Costa, Naijla Alves EL ALAM (2016)	Brazil	1. An examination of the interrelationship between internationalisation and finance 2.The impact on the strategy of the Brazilian SMEs operating in Latin America	3,4
Michael A. Hitt, Leonard Bierman etal. (2006)		To study the impact of human capital and relational capital on internationalisation.	3
Lawlor (2014)		Technology aids internationalisation	4
Burgel et al. (2000)	UK and Germany	1.Technology itself is an incentive to internationalise 2.Internationalisation is related to company performance	1, 3, 4
Racic et al. (2008)	Croatia	The acquisition of technology without innovative application is not positively related to successful internationalisation.	1
Barringer and Greening(1998)	United States	SMEs face the difficulty of managing both home operations and international expansion concurrently.	1, 3, 4
Ruzzier et al. (2006)		If the founder or principal actor in an SME does not have the necessary skills or experience, it is a barrier to internationalisation.	1, 4
Gimede(2004)	South Africa	1.Lack of export market intelligence is a barrier. 2.The government should provide SMEs with export market intelligence.	2, 3, 4
Gunaratne (2009)	Sri Lanka	1. Lack of staff experienced in export. 2. Lack of government policies that encourage internationalisation.	2, 3, 4
Boermans and Roelfsema (2015)	Holland	Internationalisation drives company growth by encouraging firms to innovate	1
Naldi (2008)	Sweden	Internationalisation helps to make the SME more competitive in its local market by giving the company technological knowledge gained by participating in international markets which can be used to compete against local rivals who may not necessarily have access to such knowledge.	1, 2, 4
Huan Zou, Xiaohui Liu (2010)	China	The impact of technological capability, financial capability, and network capability on financial growth strategies adopted by SMEs in China.	3, 4
K Narayanan, Savita Bhat (2009)	India	The examination of the role of in-house research and development capabilities and external technological resources on the level of internationalisation achieved by different SMEs belonging to the IT sector in India.	3, 4
Diana-AndreeaFilipescu (2010)	Spain	The examination of the relationship between the level of innovation and the level of internationalisation of firms.	1, 2

1- Not focused on LDCs.

2- Not focused on whether resources matter for the internationalisation of SMEs in LDCs.

3- Not focused on whether innovation matter for the internationalisation of SMEs in LDCs.

4- Notfocused on whether innovation mediates the relationship between resources and SME internationalisation in LDCs.

2.7 Conclusion.

The chapter has critically evaluated a wide range of papers, articles and publications in reference to SMEs, LDCs and the impact of resources on a firm, innovation, internationalisation and economies in sub-Saharan region. The first section established that RBV can help extensively in explaining how resources impact the competitive advantage of a firm. It then explains how knowledge-based resources and property-based resources impact on the growth of a SME.

The literature reviewed here provides a critical insight into to the importance of the human, technological and financial resources that are available to firms. It further discusses how these resources can be used effectively and optimally to drive higher efficiency for SMEs operating in the Sub-Saharan Region and how they influence the internationalisation of firms. The barriers that SMEs face in the internationalisation of their businesses have been identified as unstable political environment, lack of infrastructure, limited availability of resources, high tariffs, low level of skilled workforce and limited technological infrastructure. The literature thus highlights how these barriers impact the operations of SMEs in LDCs. Furthermore, the study evaluated that the internationalisation of SMEs is dependent upon the administrative effectiveness of the firm and plays a crucial role in pushing the firm to opt for a business strategy that aims to achieve the internationalisation of their operations.

The chapter concludes with the observation that since the structure, operation and availability of resources for a SME is different from a large corporation the factors impacting the ability for them to internationalise are also different and need to be evaluated. The presence of a high number of SMEs in a nation also makes it important for scholars to investigate the internationalisation process of SMEs because this would allow for higher economic activity in the country which would eventually aid in enhancing the economic prosperity of the nation. It may be concluded from the literature gathered in this chapter that the internationalisation of an SME in any region is dependent upon resources and the innovation taking place in them. Hence it is important to establish the relationship that innovation has with resources and, finally, internationalisation. Further research in this area would help develop knowledge of how innovation impacts upon the resources that influence the internationalisation of an SME.

CHAPTER THREE: CONCEPTUAL FRAMEWORK AND RESEARCH OBJECTIVES

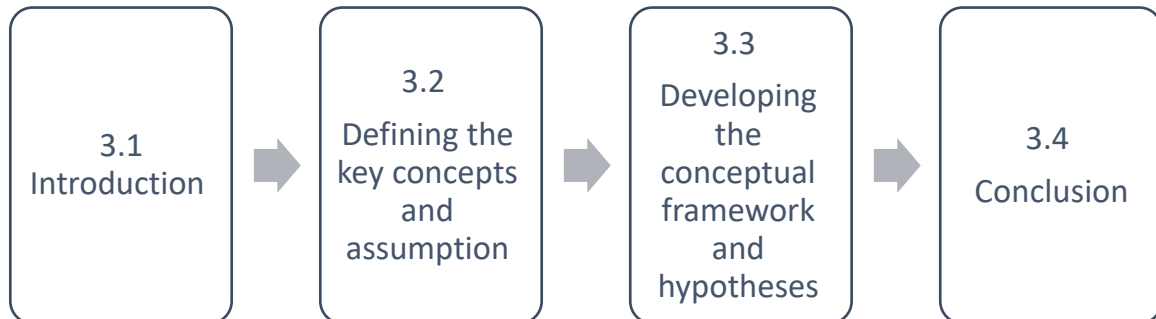
3.1 Introduction

The review of literature in chapter two highlights the significance of the resource-based view theory (Purkayastha et al., 2020) and its contribution towards the internationalisation of SMEs (Breuillot, 2021). However, there is a significant research gap that needs to be addressed and this research aims to bridge the research gap in the existing literature. Currently, not much research is structured around the internationalisation of SMEs compared to research on large corporations (Ribau et al., 2018). The policies that can be applied to large corporations differ significantly for the SMEs because the access to resources available with the SMEs differs significantly to that of the large corporations (Ribau et al., 2018). Along with limited research on small and medium enterprises, there is a paucity of research focused on LDCs.

A framework is considered to be an essential foundation for any research. Consequently, this chapter is dedicated to the conceptual framework designed for the current research. Moreover, a framework enables the researcher to better identify the variables of interest that have a significant influence on the dependent variable (Prashantham and Birkinshaw, 2019). The dependent variable or the variable of interest in the research is the level of internationalisation of the SMEs in the LDCs. The influencing variables or the independent variables are the compartments of resources that are available within the SMEs, such as the human resources, technological resources, financial resources and innovation.

The proceeding chapter explains in detail the formulation of the hypothesis being investigated and critically evaluated to test whether the resource-based view (RBV) theory contributes to the internationalisation of SMEs in the LDCs. This section concludes by explaining the assumptions related to the hypothesis testing and the conclusions drawn consequently. Figure 3.1 presents the key contents of the conceptual framework and research objectives.

Figure 3.1 Key contents of the conceptual framework and research objectives



3.2 Defining the key concepts and assumptions.

3.2.1 Definition of the Resource-Based View Theory (RBV).

According to Resource-Based View theory (RBV), the availability of integral resources is critical to a firm's performance. This approach to gaining and sustaining a competitive edge was developed in the decade 1980-1990. According to this approach, a firm can achieve competitive advantage by managing its internal resources rather than having to find it in the external competitive environment (Bareny, 1991). The proponents of this theory hence suggest that external opportunities can be exploited by harnessing internal resources rather than acquiring a new skill for each new opportunity.

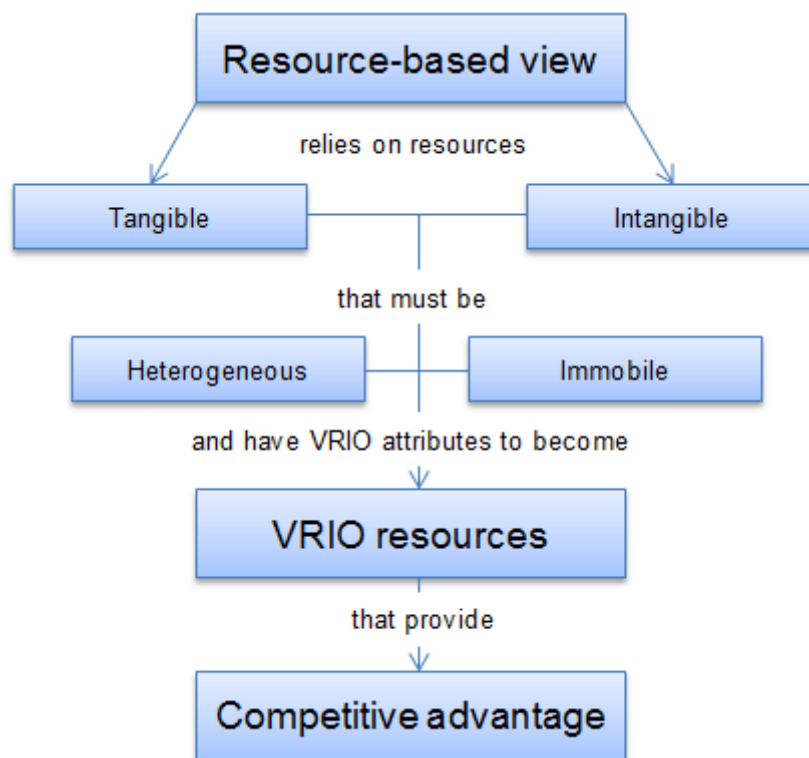
A firm's internal resources can be classified into two main categories: the tangible and intangible. Tangible assets are those resources that are physical; these resources or assets can be touched, seen and purchased from the market, but they also start to decrease in their competitive advantage as similar assets are acquired by competitors. Elements like land, building, equipment and machinery are critical tangible resources (Heirman and Clarysse, 2007).

Intangible assets are those resources that are not physically present but belong to a company. These resources are created over time and are unique to any firm. When a competitor firm starts

to create stronger intangible assets through the use of competitive advantage, the value creation to the firm starts to diminish on account of intangible assets. Moreover, intangible resources are not available in the market and are unique to all firms (Heirman and Clarysse, 2007).

For the resource-based view (RBV) theory to be applicable, critical resources should be heterogeneous and immobile. Each firm has a unique combination of skills, capabilities and other resources that cannot be replicated entirely by another firm. The unique set of resources that a firm possesses offers a competitive advantage to firms allowing them to implement different strategies. Considered immobile, these resources are unable to be moved from one firm to another, at least in the short run. Consequently, the competitive advantage gained by a firm is not lost to another firm (Bareny, 1991).

Figure 3.2 Resource-based View



Proponents of Resource-Based View (Jurevicius, 2013)

3.2.2 The definition of Small and Medium Enterprises Exports.

SMEs are differentiated from large corporations based on their annual turnover and the average number of employees (Hoffman et al., 1998). There is no standard definition of SMEs that universally applies to all the countries (Kazlauskaite et al., 2015). However, each country and each geographic region has its own criteria for classifying SMEs from large corporations. SMEs are defined as small and medium enterprises that do not control large proportions of economic resources for their economic prosperity (Kaleka, 2002). Hence, an SME can be classified as an enterprise having less than 250 employees (Hakan & Carin, 1996; European Commission, 2005).

It is also important, as per this study, for an SME to have an independent corporate entity. Any subsidiary of a large corporation cannot be classified as an SME. It has to be a separate, legally registered corporate firm, with an average or fewer than 250 employees. For the current research, the definition of SME is applied as stated by Hakan, C Hakan & Carin (1996) and the European Commission (2005). This study has selected this definition as it is the most widely used definition of SMEs per the global standards and has been widely found in the literature. Furthermore, researchers such as Abubakar et al. (2019) have also applied the same SME definition to their research into SMEs in LDCs.

3.2.3 Definition of internationalisation.

As a field of study, internationalisation demands rampant changes in the theoretical perspectives to keep pace with the radical changes in the real-life world (Xie & Suh, 2014). As an economy integrates with the global world, the fundamental principles that drive the economic growth within that nation change radically with them. This is because the opening of an economy creates multi-level dependencies on financial markets, labour markets, technological markets and production processes across the world, which brings with it the advantages of access to global resources but also impedes a nation's economic growth through the ripple effects of financial and economic crises.

Internationalisation equates to putting a place, thing, human or product on a global map. Having interactions with different businesses that do not share the same country is internationalisation (Xie & Suh, 2014). The above definition of internationalisation has been adopted for the research as the research aims to explore the impact of resources on the internationalisation of SMEs. Breuillot (2021) states that internationalisation can occur in numerous ways, including import and exports of goods and services, overseas offices, access to international resources, FDI, and such.

This research focuses only on exports as a measure of internationalisation. Exports are the only unit selected to measure the internationalisation of SMEs in LDCs because they are one of the internationalisation factors that is impacted by the availability of resources (Hitt et al., 2006). Furthermore, exports incorporate various other internationalisation factors both indirectly and directly. They attract FDI, lead to import of technology and resources, while business growth also results in the establishment of overseas office premises.

These factors are important because of the numerous interlinkages between the various nations of the global economy, with these relationships not being mutually exclusive in description. Thus, any policy reform in any nation ought to impact the international relations it shares with other countries (Lu, & Beamish, 2001). Therefore, academic theories and paradigms need to be updated with practical changes in the world. The progressive internationalisation of Least Developed Countries (LDCs) is driven by SME firms which have resulted in rethinking and reshaping their strategic management policies (Burt, 1997). Our research will thus attempt to modify existing theories and the literature on international business relations effectively by creating updated versions of the existing literature that fit well with the dynamics of international relations.

3.2.4 Distinguishing LDCs from developed countries and emerging economies.

The concept of LDCs was developed by the United Nations in the year 1971 to make transparent the diverse economic and social development stages within the economies of the world. The countries that belong to this classification exhibit the lowest level of social and economic development (Dess et al., 1990). These are economies with the lowest level in the human development index ratings developed by the United Nations (Friedman, 2005).

LDCs are thus categorised as countries with low per capita income and structural impediments that prohibit strong economic growth (Goerzen, & Beamish, 2003). These structural challenges are universally measured using indices built by the United Nations such as the Economic Vulnerability Index (EVI) and the Human Assets Index (HAI) (Dess et al., 1990). These economies seek special support and contributions from international support groups, the international community and other economies as a whole (Kaleka, 2012). The current strategies for LDCs are focused on the identification of these economies and the application of appropriate special treatments required to be offered to them with regard to economic, social and demographic development (Kaleka, 2012).

The World Trade Organisation (WTO) has developed and initiated special plans to encourage and promote export strategies within LDCs to boost the overall economic prosperity of these countries and to implement effective participation of these economies in the multilateral trading system. Meanwhile, various international institutes and organisations have developed several criteria to identify the Least Developed Countries (LDCs). The three prime factors that are critically evaluated to make this determination are: 1) the level of income within the economy which can be measured at the national and the per capita level; 2) the demographic profile of the human assets; and 3) the level of economic vulnerability (Friedman, 2005). Moreover, various inclusion thresholds are selected by the international body of organisations, to enable entry of economies in the LDCs category (Goerzen, & Beamish, 2003). After the inclusion thresholds, the international bodies create graduation thresholds to map the progress of these weaker economies continuously and to ascertain how far they are progressing in terms of economic development on a year-by-year basis (Goerzen, & Beamish, 2003). The countries that belong to the LDC category are free to move out from this category once they exceed the threshold (Goerzen, & Beamish, 2003).

Each of the three critical areas of study here is quantified using key measures or indicators that are reflective of structural impediments in the economy. These indicators have a robust methodology, remain stable over time and are universally applied across all economies of the world (Hitt et al., 2001). The universal applicability of these indicators across the economies of the world enables a comparative study of these economies on the critical factors of lesser development as identified by the United Nations. The key indicators of their economic profile, human capital demographic and risk of economic vulnerability are updated consistently with time for any new research to be adaptive to the current scenario (Hitt et al., 2001).

This research is focused on LDCs belonging to the Sub-Saharan geography. Globally, most of the LDCs have been identified in Sub-Saharan Africa (Hoffman et al. 1998). Consequently, a significant proportion of past research has been done on the critical evaluation of the economic policies and strategies adopted by the LDCs in Sub-Saharan Africa (Sukaatmadja et al., 2021).

3.2.5 Understanding RBV in the context of SME exports.

The RBV theory focuses on the internal resources and the capabilities that a firm has in identification and assessment of the key factors that are critical to the success of any SME (Westhead et al., 2001). The measure of success in the current research is the level of exports that SMEs belonging to the Sub Saharan LDCs have been able to achieve. An organisation owns, manages and controls various internal resources such as human, financial and technological resources. These resources contribute to the overall development of the organisation by having an impact on its profit, revenue and on the scope of doing business (Kaleka, 2012). RBV theory then deems that proper management of these resources yields competitive advantage for a SME, enabling it to enter the international market (Barney, 1991). According to Xie and Suh (2014), the competitive strength gained from availability of resources enables the SME to initiate exports. According to Kaleka (2012), export resources and export capabilities both have a significant positive impact on enabling a firm to achieve competitive advantage.

Understanding RBV theory from the perspective of SME is important as small and medium enterprises work with constrained resources (Abubakar et al., 2019). Since the resources available to a SME are limited, there is a need to manage these resources effectively so that the organisations can internationalise their business. Kazlauskaitė et al. (2015) state that firm owners need to take complete advantage of their resources and maximise their efficiency in order to stay competitive in the international market. Academic researchers have thus proposed that SMEs be more heavily reliant on IT systems and a stronger financial network to achieve internationalisation of their organisations (Ismail et al., 2014).

3.2.6. Justification for applying RBV theory.

Our research has attempted to analyse the various factors able to speed up and strengthen the mobilisation of resources crucial for the internationalisation of SMEs in LDCs. Along with access to innovation capabilities, human resources, technological resources and financial resources are considered to be significant resources that provide internationalisation to SMEs in the least developed economies (Barney and Arikan, 2001). The theory of resource-based view (RBV) is adopted in our study to provide a compartmentalised view of these resources and their potential to increase the internationalisation of the enterprises significantly. The choice of this theory is based on various factors that contribute to the utility of this perspective. This research attempts to analyse the overall internationalisation of SMEs and not just the exports orientation. It is, however, important to have comprehensive and holistic access to the global value chain to provide experiential knowledge for small and medium enterprises within the context of their internationalisation of business operations (Grosse, 2000).

The analytical framework provided by the RBV theory is reliant on the fact that interlinkages between the three most crucial resources (Manolova et al., 2002) may provide an impetus for the internationalisation of the Least Developed Countries (LDCs). Our research follows this analytical framework in attempting to gather answers to questions such as: ‘What factors contribute to the internationalisation of SMEs?’; ‘How are the interlinkages between the variables identified contributing towards internationalisation?’; ‘What are the challenges faced by enterprises in internationalizing by accessing the three crucial variables?’; and ‘What role does research and development or innovation capabilities play in mediating the relationship between the three variables and the magnitude of internationalisation?’ This analytical framework is consistent with to the structure followed in past research and lends itself to adding value to this study project through the use of hypothesis testing applying a mediating factor (Cohen and Levinthal, 1990).

3.3 Developing the conceptual framework and hypotheses.

The aim of this section is to theorise and develop a conceptual framework on the specific resources that matter for SME exports in LDCs. More precisely, the chapter here will focus on the role of three key resources, which are human resources (Friedman, 2005), technological

resources (Kaleka, 2002) and financial resources (Stone, 1988). These resources are chosen because they are some of the most frequently cited in the literature (Manolova et al., 2002) and because their influence on SME exports in LDCs is rarely considered.

This study thus focuses on the relationship resources of SMEs (i.e., financial, human and technological resources) and the internationalisation of SMEs in LDCs. There are also other factors to consider that have an influence on the internationalisation of SMEs. These factors are known as the controlling factors and are a type of constant for SMEs. The development of the hypothesis of this study considers age, sector, country effects, obstacles in transport, corruption and political obstacles, and informal competitors from other geographies as the controlling factors that influence resources, internationalisation and innovation in SMEs.

Hypotheses development is an integral step in the designing of a conceptual framework of a study (Imran et al., 2019). A hypothesis entails specific scientific estimations on what can be predicted from a particular study (Spanned, 2009). Reasoning in relation to the existing evidence is then used to infer what can also be estimated from the study.

This research seeks to examine the mediating role of innovation mediating the relationship between the resources of SMEs and internationalisation. More precisely, the research attempts to test the significance of each of the following firm level resources i.e., human resources, technological resources and financial resources on SME exports in the context of LDCs. The theoretical foundation of the conceptual framework is based on: (i) the RBV literature, with a focus on human, technological and financial resources (Imran et al., 2019); (ii) SME exports literature, with regard to the factors that affect the likelihood of an SME in becoming an exporter in the LDC (Kaleka, 2002); and (iii) institutional theory, which discusses the hostile context of LDCs for innovation/entrepreneurship (North and Smallbone, 2000; Abubakar et al., 2019; Slesman et al., 2021).

3.3.1 Sub-Saharan LDCs as hostile institutional environments for SME innovation.

The context of this research refers to small and medium enterprises (SMEs) within the hostile institutional context of LDCs. By definition, a hostile environment is an environment that poses a threat to an SME's performance (Welter et al., 2012). LDCs have been identified as hostile

environments because the lack of resources and support from governments create a hostile institutional environment among the economies of these nations (Verheul et al., 2002). The presence of a hostile environment in LDC is due to the constraint in resources presented to SMEs.

Along with the limitation of resources, SMEs are faced with weaker domestic markets and underdeveloped institutional settings. It is important to understand SME innovation, keeping the restrictive environment of these countries in view. The factors that determine SME innovation in the LDCs have not yet been thoroughly studied. The current research attempts to draw insights from the factors that are crucial for SME innovation in the context of internationalisation of SME firms belonging to these hostile environments.

In terms of the LDCs existing across the world, Sub-Saharan Africa is the largest poor region of the world. The majority of African countries, which is 34 out of 49 countries, have been defined by the United Nations as within this category of the Least Developed Countries (LDCs) based in the African region (UNCTAD, 2011). As defined earlier, for a country to be categorised as an LDC, it has to meet three criteria which are low-income levels, weakness of human capital as measured by Human Assets Index and economic vulnerability, as measured by the Economic Vulnerability Index.

Previous findings by various research organisations, academicians and global organisations, such as the United Nations, indicate that the presence of a hostile economic environment in the Least Developed Countries (LDCs) impedes the internationalisation of SMEs in these economies. The factors that enable internationalisation among enterprises of developed nations might not then be suitable for the least developed nations (World Bank, 2013). The presence of institutional deficiency hampers the innovation process and here, UNCTAD (2011) identifies that institutions are viewed in particular for innovation. The presence of a hostile environment due to lack of resources, low development and difficulty in gaining knowledge pushes the entrepreneurs in the country to enter sectors that are well-established rather than entering sectors that are new and innovative (Verheul et al., 2002).

3.3.2 Conceptualising SME innovation in LDCs.

The innovation of SMEs has been regarded as an important contributor to the internationalisation of these firms (Kafouros et al., 2008). The role of innovation as a mediating factor driving the internationalisation of SME firms in the LDCs has been widely researched by academicians (Freeman, 1971). Researchers have argued about the basic definition of innovation. Some researchers claim that innovation includes something that is radical and impacts the overall economy, while other researchers argue that innovation can be anything new for a firm (Larimo and Visaak, 2009). Various studies on SME innovation conclude that innovation should include radical changes in the firm that impact the economy overall by offering a new and marketable products or services in the industry (Kafouros et al., 2008). Other researchers have claimed innovation to include technological advances in the industrial context. Acclaimed academics such as Porter (1990) have identified innovation as the competing advantage that a firm has over its competitors in the process of creating and offering products in the market (Porter, 1990).

The current research identifies innovation as incremental innovation rather than radical technological breakthroughs. With the constraint on resource access and with the limitations of surviving in a hostile environment as experienced by the Least Developed Countries (LDCs), SMEs are expected to contribute incrementally to existing products and processes rather than creating radical advances or breakthroughs applicable to the overall industry or economy (North and Smallbone, 2000). Incremental innovation is more prominent in SMES, as SMES in LDCs are more likely to implement generic technologies in incremental phases rather than achieving radical technological breakthroughs. As per Larimo and Visaak (2009), SMEs need to focus on develop and launch products that are at least incremental innovation and where there is no major improvement in the product or process. The application of product and process innovation are key indicators for innovation in SME, even in hostile environments (North and Smallbone, 2000).

3.3.3 Innovation and internationalisation.

As discussed by Wilson (1990), innovation is a concept of adopting new methods, processes and techniques for conducting an existing practice. Innovation can arise through the use of new production processes, or by adopting new materials, or by working in a new environment which

results in the creation and development of a new product required to meet an already existing unmet need or want of a customer. Innovation is an important pillar that supports the sustained growth of a firm. The other supporting pillar is internationalisation, which is a method of attracting cross-border customers. Thus, by offering new products to new customers, a firm can gather momentum for sustained economic growth. It is important to understand whether innovation and internationalisation are substitutive or complementary to each other. It is important to formulate a knowledge-based view of the firm so that the integral relationship between innovation and internationalisation can be evaluated holistically. The indicators of internationalisation are integrated with technology-driven industries and a comprehensive understanding of the theme of innovation can be built in turn (R. A. Wilson, 1990).

Karl P. Sauvant (2015) has defined internationalisation as the process of acquiring cross-border customers which is largely dependent on product innovation. There has to be an unmet need, or a want expressed by customers in any part of the world. And a product that still does not exist to match that need has to be innovated and developed so that the gap is bridged. This requires considerable efforts to be put into market evaluation, product development and marketing and logistics evaluation to make the product available at the right place at the right time to the right people.

Successful internationalisation requires constant efforts to be put in place by the owners of the small and medium enterprises to integrate technology transfers, the flow of skilled labour and the resources required to develop and innovate products. There is a dynamic relationship between the level of imports, exports and the source of productive growth generated at both the firm level and the country level. As a government of a structurally challenged economy, it is important to design cross-border relationship management strategies and policies that promote the production of innovative products and internationalisation through increased exports of these products (Sauvant, 2015).

As discussed by various authors, the ability to innovate is directly proportionate to the resource mobilisation of small and medium enterprises. It is important to develop competencies among the owners and the employees of these enterprises to be able to mobilise resources effectively and develop innovative products (Jennings, 1983). It is also important to upskill the human resources associated with the small and medium enterprises to enable innovative methods of conducting business operations which help in waste reduction around critical resources.

Innovation and internationalisation are related concepts that offer diversification benefits to small and medium enterprises. By being able to produce goods differently, or by producing different goods, or by selling to customers belonging to different economic regions, small and medium enterprises add diversification benefits to their existing portfolio of business operations. This also adds additional revenue streams for the government and enables it to accumulate larger financial reserves.

A paper by Hoffman et al. (1998) identifies the ability to consistently innovate as a unique resource of SMEs. Similarly, Rajapathiran and Hui (2018) confirm that innovation is widely viewed as a pinnacle success factor in the highly competitive and global economy of today. Hoffman et al. (1998) have researched the innovative activities of SMEs to determine if there are characteristics that are common across companies. These researchers acknowledged that SMEs are usually more likely to innovate on products rather than focus on continuous improvement. Furthermore, they are more likely to concentrate on building products for a niche market rather than producing generic offerings.

Other authors also found that innovation in these organisations tend to be more ad-hoc than formally organised (Hoffman et al., 1998). They concluded that innovation is a valuable resource as it encourages growth and increased output which makes such firms stronger. This paper identifies innovation as a resource that is critical to the innovation of SMEs (Hoffman et al., 1998). Previous reviews of papers like Lawlor (2014) and Ottaviano and Martincus (2011) acknowledge the importance of innovation to SME performances, although Hoffman et al. (1998) draw attention to the *ability to innovate* as a valuable resource in itself. Thus, one can propose that “the ability to innovate” is one of the intangible resources identified by Wernerfelt (1984) during the classification of resources which gives a company a competitive advantage.

Saridakis et al. (2019) have also conducted a study in which they investigated the relationship between innovation and SME internationalisation by collecting primary data from a sample of 12,823 SMEs in the United Kingdom (UK). It was confirmed that innovative UK SMEs are more likely to internationalise particularly through the adoption of exporting entry mode than non-innovative SMEs. Boermans and Roelfsema (2015) have studied the effect of internationalisation on innovation and performance in small firms. Their study was based in Holland with a sample size of 150 companies. They found that internationalisation is positively related to company performance. Furthermore, the research unlocks a new dimension to the

relationship between innovation and internationalisation from a resource-based view. Boermans and Roelfsema's (2015) assertion is that innovation impacts organisational performance as a driving force to innovate. In other words, when firms start to expand their operations into foreign markets then they begin to innovate, which impacts their performance positively in turn. A further salient point raised by the research lies in the finding that innovation does not directly impact performance; it is rather that the effect on company growth is only significant when it serves as a conduit for internationalisation. However, this finding needs to be caveated with the realisation that all the companies sampled were part of an export promotion program. Therefore, it is hardly unsurprising that the link between performance, innovation and internationalisation is so strong.

Hence, it is not that Hoffman et al.'s (1998) assertion that innovation directly influences performance is untrue, or that Kraatz and Zajac's (2001) identification of innovation as a valuable resource is wrong. It is rather that Boermans and Roelfsema's (2015) sample has shaped the results obtained. It would be beneficial if a similar study were to be conducted but with a sample size that is not limited to companies taking part in an export promotion program. The sample for their study had already self-selected themselves into a biased population.

Rammer and Schmiele (2008) had investigated the drivers and effects of internationalisation in German SMEs. However, rather than looking at internationalisation from the perspective of FDI, export, or other market expansion related activities, the paper concentrated on how such companies look to internationalise their innovation activities. In other words, the focus is on how companies look to improve the quality of their delivery by sourcing knowledge from abroad, which constitutes a deviation from the core of the earlier discussion on internationalisation. This research provides a rounded view of internationalisation in SMEs in general by providing a perspective on non-market expansion related activities. The research found that companies with export experience typically fared better when trying to export innovation.

Jong and Brouwer (1999) have investigated the factors which determined that the innovative ability of an SME condensed the list down to 7 key areas, namely: *people, culture, strategy, capital, structure, characteristics and network activities*. Several items on the list have already been identified as resources for competitive advantage. Listing them as resources for acquiring innovation capabilities by Jong and Brouwer (1999) therefore blurs the relationship between

the ability to innovate and the resource-based view. On the one hand, one can deduce that there is a hierarchical structure in place with items such as capital and structure aiding innovations which consequently become resources for competitive advantage. On the other hand, the relationship could be complementary to items such as capital and innovative abilities, supporting each other to give a firm its competitive advantage.

While a significant number of studies support the argument that innovation has significant consequences on business economic performances, several studies failed to confirm the proposition (Kafouros et al., 2008; Rajapathiran and Hui, 2018). According to Kafouros et al. (2008), it will be wrong always to expect that the contribution of innovation to an organisation performance would always be a positive one since there are times when this is not the case. The inconsistency in studies on innovation and firm performance has been linked to the fact that not all businesses can reap rewards from innovation (Kafouros et al., 2008). For example, firms that are unable to protect their innovation from the intense competition, as well as from rivals' imitations, may not benefit from their innovative efforts (Lieberman and Asaba, 2006).

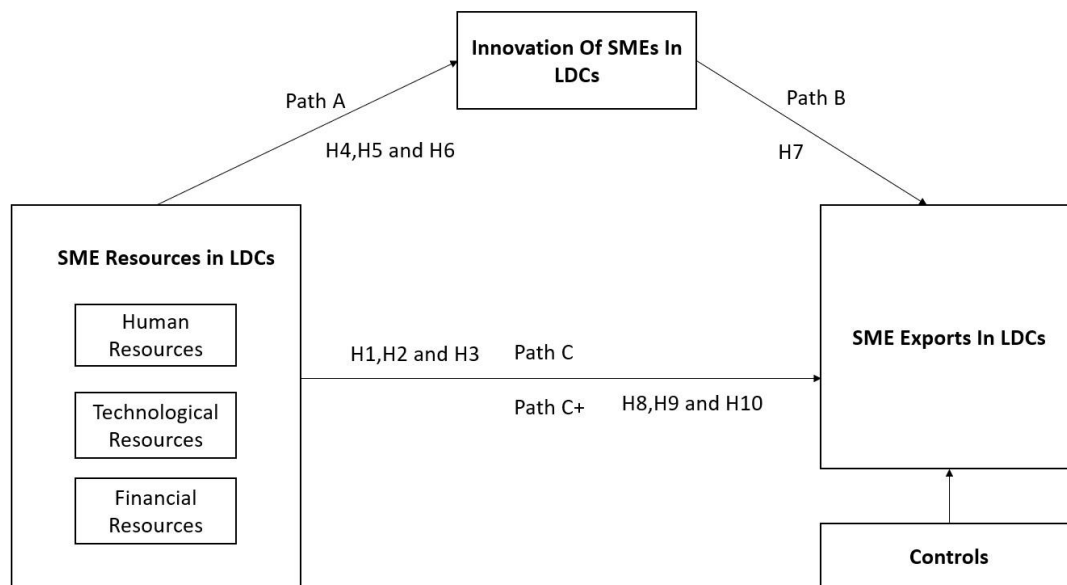
According to Lieberman and Asaba (2006), imitation is one of the most common behaviours that businesses show as they try to copy competitor products and processes, managerial methods, organisational forms, market entry strategies as well as the timing of investment. If firms cannot protect their innovation, then they will be vulnerable (Lieberman and Asaba, 2006). One can hence argue that the problem is not the failure of innovation to improve performance but one of firms needing to take steps to ensure that innovations are protected. Some studies supporting the argument that innovation is vital to SME performance hence accept that the type of innovation introduced as well as its degree of the novelty will influence the level of internationalisation (Saridakis et al., 2019).

3.3.4 The effects of the framework and relationships within it.

The main theoretical implications of resources for SME exports in LDCs and the mediating role of innovation are depicted in Figure 3.2. Accordingly, the following relationships have been incorporated in the structure presented here: Path A- the direct relationship between resources and SME innovation in LDCs; Path B- the direct relationship between innovation and SME exports in LDCs; Path C -the direct relationship between resources and SME exports

in LDCs; and Path C+ -innovation as a mediator of the relationship between SME resources and the likelihood of SME exports in LDCs.

Figure 3.3 Proposed framework for SME resources in Sub-Saharan LDCs



As depicted in the figure above, the independent variables used in the framework are human resources, technological resources and financial resources. The innovation of SMEs in LDCs acts as the mediating variable. The level of SME exports from LDCs is the dependent variable with control variables such as age, country effects, transport obstacles, corruption, political instability and informal competitors. The paths described in the conceptual framework above can be explained in detail as below:

3.3.4.1 Path A- Effects of SME resources on Innovation and Path C: SME resources contribute to the likelihood of SME exports in LDCs.

Firms in a hostile environment cannot follow what other firms are doing due to uncertainty and the instability of economic parameters (Newman, 2002). Moreover, in hostile unstable environments limitations in resources can affect the performance of SMEs negatively. In

contrast, in stable environments SMEs are better able to perform in an innovative approach due to the availability of the resources (Amoah-Mensah, 2013). Researchers have identified SME resources as important characteristics for achieving innovation (Imran et al., 2019). These SME resources are human resources, technological resources and financial resources (Manolova et al., 2002). Therefore, these characteristics of SME resources explained below could influence the likelihood of innovation of SMEs in the hostile environments of LDCs.

Human Resources: Human resources are defined as human capital combined, which spread across various levels of management, and in being controlled by the firm are essential for the attainment of organisational objectives (McMahan and McWilliams, 1994). Human resources are comprised of human capital, which is either indicative of firm size or reflective of skilled workers, and informal sector experience (Snell and Dean, 1992). Moreover, it is argued that acquiring the right people helps firms to be innovative and increase their profitability (Gupta and Singhal, 1993). Improving the calibre of human resources thus helps the firm to obtain opportunities for innovation (Antonioli and Pinni, 2011).

Human resources play a vital role in innovation as it is the ability of the human mind and its curiosity to find a solution that innovation takes place. Human resources are the backbone of innovation (McMahan and McWilliams, 1994), while the presence of adequate exposure of human resources is beneficial for growth. Based on the above arguments, it is posited that SME with highly qualified and strong human resources will contribute to the likelihood of SME exports and have a higher probability of innovation in sub-Saharan LDCs, where unstable, hostile environments are prevalent. Thus, the hypothesis is formulated as:

- *H1: Human resources of SMEs in Sub-Saharan LDCs have a positive influence on the likelihood of an SME becoming an exporter. (See Path C in figure 2)*
- *H4: Human resources of SMEs in Sub-Saharan LDCs will positively influences SME innovation. (See Path A in Figure 2)*

Technological Resources: these can be defined as the resources that contribute to achieving technological advancement in a firm (Srivastava, 2011). They are primarily comprised of the information technology processes and systems that are in place in an organisation (Mercader et al., 2006) along with technology licensing (Bianchi, Mattia et al., 2014; Abubakar et al., 2019). Discovering new technologies for firms usually begins with what other firms do, which

usually happens through technology licensing or by searching in a different direction or by invention on a previous patent (Laursen et al., 2010). Therefore, technological capabilities help firms to invent (Srivastava, 2011).

The limitation of technology available for SMEs in LDCs creates barriers to technological advancement which is further increased because of a lack of financial resources and the huge cost of technological acquisitions. Hence, to garner technological improvements SMEs are better opting for technological licensing (Wang et al., 2013). Technological licensing allows SME to use technology without incurring the investment required to acquire or develop the technology. This creates a win-win situation for the SMEs as they can gain technological advancement without bearing a huge investment.

Based on the above arguments, we can posit that SMEs with good technological resources will contribute to the likelihood of SME exports and have a higher probability of innovating in LDCs in spite of unstable hostile environments. Hence, the hypothesis is formulated as:

- *H2: Technological resources of SMEs in Sub-Saharan LDCs have a positive influence on the likelihood of SMEs becoming an exporter. (See Path C in figure 2)*
- *H5: Technological resources of SMEs in Sub-Saharan LDCs will positively influence SME innovation. (See Path A in Figure 2)*

Financial Resources: these can be defined as the available capital resources that a firm has to invest in its overall growth, which gives it strength in interaction with the external environment (Kraatz and Zajac, 2001). The availability of financial resources is critical to the achievement of organisational objectives, as these resources determine the potential of a firm in executing its business plan for profit and sales (Srivastava et al., 2001; Arndt et al., 2009). Financial resources are comprised of bank borrowings and capital financed through friends, family and relatives. In turn, Eniola and Entebang (2015) suggest that finance resource plays an important role in providing opportunities to contribute to the growth of the economy through innovation.

The importance of financial resources for a SME in LDC is highlighted by the fact that financial stability provides an opportunity to SME to grow business. Ayob et al. (2015) have found that financial factors have an impact on the export behaviour as it allows the industries to scale up

their operations and enter international markets at a fierce competition. Availability of adequate finances help SME to achieve economies of scale and produce products at a competitive price.

Based on the above arguments, it is posited that SMEs with strong financial resources will contribute to the likelihood of SME exports and have a higher probability of innovating in LDCs, even in the presence of unstable hostile environments. Hence, in view of the above arguments, this hypothesis is proposed:

- *H3: Financial resources of SMEs in Sub-Saharan LDCs have a positive influence on the likelihood of SMEs becoming an exporter. (See Path C in figure 2)*
- *H6: Financial resources of SMEs in Sub-Saharan LDCs will positively influences SME the innovation. (See Path A in Figure 2)*

3.3.4.2 Path B- The effects of innovation on SME exports in Sub-Saharan LDCs

Innovation: this is defined as the firm's ability to generate new ideas or develop products or services that help increase the firm's benefits (Aas and Breunig, 2017). Research and development (R&D) is a measure of innovation in terms of the number of new ideas, products, processes or the services that it produces (Fuente et al., 1993). Innovation for SME create new opportunities to build a new business, new market and develop the firm (Ahlstrom-Soderling, 2003). As has been widely researched and published, innovation is an important indicator that differentiates successful firms from the not so successful ones (Horne, 1993).

Innovative firms can grow at the cost of non-innovative firms (Baldwin and Johnson, 1995). Moreover, several researchers have argued that product innovation can improve the probability of firms to improve SME exports from LDC economies (Abu-Bakr et al., 2019). However, the effects of innovation can be studied through popular growth indicators, such as growth in sales, growth in employment and growth in SME exports arising out of the LDCs.

Love & Roper (2013) report in their study that innovation impacts the likelihood of an SME becoming an exporter. They evaluated that there is a strong relationship between innovation, export in terms of productivity and growth. Innovation helps in producing better products that are increasing the ability for an SME to export its goods. Innovation and exporting appear to work jointly to improve performance. Innovation without access to foreign markets does not seem to provide substantial performance benefits. These arguments lead to the following

hypotheses:

- *H7: Innovation has a positive influence on the likelihood of SME becoming an exporter in Sub-Saharan LDCs (see Path B in figure 2).*

3.3.4.3 Path C+: Innovation positively mediates the relationship between SME resources and SME exports in Sub-Saharan LDCs.

Path B suggests that the innovation of SME in LDCs increases the likelihood of an SME becoming an exporter in LDCs. Consequently, gathering Path A and Path B, it transpires that SME resources influence SME innovation in LDCs, while the effects of innovation on SME exports in LDCs. The research argues that innovation as a mediator between SME resources and SME exports in LDCs will strengthen the relationship and increase the likelihood of the SME becoming an exporter in LDCs.

Resources have the potential to yield innovation. For innovation to occur anywhere, there is a need to fulfil the basic requirements, which are having enough capital to invest in R&D, having the presence of a brilliant human mind and access to the latest technological developments (Aas and Breunig, 2017). These requirements translate to the financial, human and technological resources that are available to a firm. The availability of resources results in innovation which further influences the exporting capacity of a nation because innovation leads to progress and development, providing confidence to the businesses to put their products in the international market.

The relation between innovation and export is vis-a-vis, i.e., innovation aids in exports, and exports also aid in innovation (Ahlstrom-Soderling, 2003). Innovation provides opportunities, while exports increase the exposure available to a company. Hence, innovation does influence export. Since resources and exports influence innovation are influenced by innovation, there is an indirect link between resources and exports created by the presence of innovation. This implies that innovation might become an influencing factor between resources and export. This discussion leads to the following hypotheses:

- *H8: Innovation positively mediates the relationship between SME Human resources and SME exports in Sub-Saharan LDCs. (see Path C in figure 2)*

- *H9: Innovation positively mediates the relationship between SME Technological resources and SME exports in Sub-Saharan LDCs. (see Path C in figure 2)*
- *H10: Innovation positively mediates the relationship between SME Financial resources and SME exports in Sub-Saharan LDCs. (see Path C in figure 2)*

The above hypotheses are conducted using control variables such as age, sector, country effects, transport obstacles, corruption, political instability and informal competitors.

Table 3.1 Summary of the research question, research objectives and hypothesis

Research question	Research objectives	Hypothesis
Critically investigate the significant contribution of SME resources towards SME exports in Sub-Saharan LDCs under the Resource-Based View Theory (RBV Theory) using innovation (R&D) as a mediator?	1: To investigate whether SME resources significantly contribute to the likelihood of SME exports in Sub-Saharan LDCs.	H1: Human resources of SMEs in Sub-Saharan LDCs have a positive influence on the likelihood of SME becoming an exporter. H2: Technological resources of SMEs in Sub-Saharan LDCs have a positive influence on the likelihood of SMEs becoming an exporter. H3: Financial resources of SMEs in Sub-Saharan LDCs have a positive influence on the likelihood of SMEs becoming an exporter.
	2: To investigate whether SME resources in Sub-Saharan LDCs will positively influence innovation.	H4: Human resources of SMEs in Sub-Saharan LDCs will positively influence SMEs innovation. H5: Technological resources of SMEs in Sub-Saharan LDCs will positively influence SME innovation. H6: Financial resources of SMEs in Sub-Saharan LDCs will positively influence SMEs innovation.
	3: To investigate whether innovation will positively influence the likelihood of SME exports in Sub-Saharan LDCs.	H7: Innovation has a positive influence on the likelihood of SMEs in Sub-Saharan LDCs becoming an exporter.
	4: To investigate whether innovation mediates, strengthens and increase the relationship between the likelihood of SME exports in Sub-Saharan LDCs.	H8: Innovation positively mediates the relationship between SMEs Human resources and SMEs exports in Sub-Saharan LDCs. H9: Innovation positively mediates the relationship between SMEs Technological resources and SMEs exports in Sub-Saharan LDCs. H10: Innovation positively mediates the relationship between SMEs Financial resources and SMEs exports in Sub-Saharan LDCs.

Source: Author, developed for research

3.4 Conclusion.

This chapter lends a conceptual framework to the study of internationalisation strategies adopted by the SMEs in the LDCs, keeping the resource-based view (RBV) theory as the foundation. The key concepts involved in this research have been probed in detail. The integral concepts of internationalisation have been extensively highlighted, followed by the key concepts on SMEs, their difference from the large corporations, a definition of SME exports and a critically evaluation of the role of SME exports in the overall economic development of the LDCs. The chapter also develops hypothesis testing in alignment with the research objectives designed for the analysis.

According to the resource-based view (RBVT) theory, which compartmentalises the resources available in an SME, such as human resources, technological resources and financial resources. These are all then mediated by the capability of the firm to innovate and conduct R&D. The research is focused on quantifying the individual contribution of human resources, technological resources and financial resources, while testing the relationships between the contribution of these resources to the level of internationalisation of the SMEs. The higher level of internationalisation of the SMEs, the higher is the economic prosperity of the LDCs.

Hypothesis testing uses the mediating variable employed in the following chapters of the current research which focus on the methodology and data analysis. Under hypotheses testing, an individual hypothesis has been developed for each of these resources along with an alternative hypothesis examining the mediating impact of research and development on the individual contribution of each of these resources towards a higher export generation for SMEs within the LDC economies. Finally, hypothesis testing will be conducted using SPSS statistical analysis.

CHAPTER FOUR: RESEARCH METHODOLOGY

4.1 Introduction.

The literature review preceding this chapter evaluated previous studies on internationalisation in Small and Medium Economies (SMEs) in an effort to identify gaps in the literature. The purpose of this chapter on methodology is now to explain how the current study into the internationalisation of Least Developed Countries (LDCs) is conducted. The chapter will discuss the choice of quantitative research methods for this study with a specific focus on the benefits of adopting the method.

The discussion begins with an explanation of the cross-sectional design as well as a justification for it being adopted in the current study. The chapter then discusses the benefits of cross-sectional design as part of this justification. The data collection, as well as sampling, will also be discussed with an emphasis placed on the benefits of using the World Bank data to investigate the internationalisation of SMEs in the Least Developed Countries (LDCs) instead of conducting a primary data collection. Finally, the chapter concludes with a discussion of the limitations beginning with a review of the purpose of the research with regard to the rationale for the research aims and the development of the research questions. Figure 4.1 present the key contents of the research methodology.

Figure 4.1 Key contents of the research methodology

4.1	•Introduction
4.2	•Purpose and rationale for the aims of the research
4.3	•Philosophical position and research method
4.4	•Techniques for collecting and Analysing Research data
4.5	•Cross-sectional research design
4.6	•Data collection
4.7	•Research Variables for Measuring Research Data
4.8	•Data Analysis: Chi-Square and logistic regression
4.9	•Factors defining research credibility
4.10	•Research ethical Consideration
4.11	•Limitations of the research methodology
4.12	•Suitability of the current research approach
4.13	•Conclusion

4.2 Purpose and rationale of the research aims.

Researchers need to be clear about the role and purpose of their study before designing the project. According to Saunders et al. (2012), the purpose of research can be exploratory, descriptive or explanatory.

4.2.1 Exploratory research.

Research is described as an exploratory study when it aims to find out what is happening, seeks new insights, asks questions and assesses phenomena in a new light (Saunders et al., 2012). As the name 'exploratory research' suggests, the only intention of the research method is to explore research questions. Exploratory research does not aim to deduce a conclusive solution (Bell, 2010). Furthermore, Bell (2010) adds that this type of research technique is effective in providing some familiarity to the basic details of the research and facilitative in developing the feasibility of future research by offering a direction.

The main disadvantage associated with this kind of research is that the data collected is qualitative. Furthermore, the research method cannot be applied to collect a large size of data as it would create difficulties when analysing the data. The research undertaken requires establishing relationships between various variables available to an SME operating in an LDC. This research thus looks into collecting quantitative and definitive data for completing the research objectives, which means that exploratory research is unsuitable for the current research.

4.2.2 Descriptive Research.

Descriptive research aims to provide an accurate profile of persons, events or situations, as opposed to explanatory research which aims to establish causal relationships between variables (Saunders et al., 2012). Singh and Sahu (2010) state that descriptive research is applied when it is useful to sought information related to a particular phenomenon to describe the variables that exist or the conditions that concern a given situation. As per the clarification provided by Ethridge (2004), descriptive analysis is characterised as an attempt to describe, determine or identify 'what is'. It also attempts to establish why a thing is the way it is or how it came to be

the way it is, using analytical research. Furthermore, descriptive research is composed of data collected through both quantitative and qualitative means. Therefore, it can be concluded that the underlying principle for descriptive research is to define various variables that have an impact on a given phenomenon, with its fundamental purpose of explaining, describing and validating the findings of a given research problem.

The disadvantage associated with applying descriptive research is that the study conducted using descriptive research cannot verify the research problem effectively. Moreover, since the data collected is descriptive, it is difficult to replicate the study for further analysis of the research problem and thus eliminate the chances of creating a comparison between situations. Finally, another reason to question the application of the descriptive research method is that there is a presence of biases in the results achieved due to the absence of any statistical backing. Due to these disadvantages, the research method is unsuitable for the current research problem. The research needs to deliver unbiased results with statistical analysis, while future studies need to be conducted to study the implications of the findings of this research.

4.2.3 Explanatory research.

Explanatory research is based on the concept of seeking enlightenments for a given phenomenon. As per McNabb (2004), a research study applying the explanatory research technique aims to identify an event or a cause unique to the situation and further proceeds to identify the consequences that result from the potential causes. These causes can belong to any aspect of life such as the environmental, social, practical, economic, financial etc. Explanatory research provides an optimum research design where a research problem can be solved by conducting a comprehensive and precise investigation. A major benefit of applying this technique is that it provides the fastest way to generate a collective stream of knowledge for any discipline (McNabb, 2014). Thus, studies applying explanatory research are designed to identify the reason and purpose for which a hypothesis is valid while eliminating any possible defunct theory/hypothesis.

4.2.4 Rationale for selecting the research methodology.

This study is explanatory since the aim is to examine and explain whether the various theories identified in the literature review and conceptual framework chapters can be used to explain the internationalisation of SMEs in LDCs. The primary reason for applying this research method is that the data collected through this method can provide predictability of what may happen in the future. This is made possible by validating the research hypothesis that is created to find the results. Furthermore, the research method selected allows the researcher to conduct a thorough investigation of the proposed phenomena.

This study has applied the explanatory research method to verify the impact of technological resources on the internationalisation of SMEs in LDCs, while also studying the role of innovation as a mediator. Data collected through the explanatory research method would yield quantitative data that would quantify the depth of relations between various variables that are considered for the study. Furthermore, the validation of the hypothesis presented in the previous chapter can be obtained by applying this research technique. Hence an explanatory research technique has been applied to conduct the research presented here.

4.3 Philosophical position and research method.

Philosophers have had critical discussions about how to accrue knowledge and form an understanding in regard to a philosophical stance that may hold true for a given research design. This discussion has called attention towards an appreciation of the epistemology and ontology of research. The understanding of the epistemology and ontology of a research design is crucial because, firstly, it aids in clarifying the type of data required and the corresponding method of analysis and interpretation. Secondly, it helps to identify the appropriate design function along with the strengths and limitations of that design, thus reducing the time required to select an appropriate research design. Lastly, it assists the researcher in developing the research design in the event that it may be out of the scope of the researcher if he or she is unfamiliar with it (Easterby-Smith et al., 2009).

Researchers such as Clough and Nutbrown (2007) claim that the examination of any empirical research leads to an acknowledgement of assumptions about the research. These assumptions are in regard to “what the world is, how it operates and how much a person claims to know

about a particular subject”. As there is no absolute answer to any of these assumptions without reference to epistemological and ontological research philosophies, it is important to have an understanding of these research philosophies. Epistemology can be defined as the “appropriate knowledge about the social world in a discipline with a particular question of whether or not a natural science model of the research process is suitable for the social world known as ‘positivism’ and a contrasting view as ‘interpretivism’” (Henn et al., 2006) Ontology, on the other hand, refers to the nature of social entities, i.e. “whether the social entities could be classified as objective entities that have a reality that is external to social actors or just social constructions from the social actors’ perceptions and actions. These ontological positions are named ‘objectivism’ and ‘constructivism’ respectively” (Bryman and Bell, 2011).

4.3.1 Interpretivism philosophy for research.

The writings of Max Weber and others like G.W.F. Hegel, Immanuel Kant and Erving Goffman have established the traditional origin of interpretivism, when they attempted to establish the importance of appreciating a problem from the perspective of others by studying them (Weber, 1949). These philosophers argued that the adaptation of the interpretive paradigm in addressing a situation allows participants in research and discussion to express their views about the situation with their own thoughts focusing on the importance of language in interpretation. In the light of the above, interpretivism appears to focus on building a theory rather than on testing it.

Interpretivism is a research technique based on an analytical-inductive methodology and is generally referred to as the “research-then-theory” approach. According to May (1977), the research paradigm requires that a study begins with a research question that is broad in its scope and gradually begins to develop an understanding in respect to the research, narrowing down the research questions. Interpretivism is predominantly associated with a qualitative (observation studies, focus groups, interviews etc) research methodology and emphasises the validity of the data collected.

The purpose of following this research technique is to develop an understanding of the intention and motive of an individual about the stated research question. However, the current research focuses on establishing a relationship between certain variables (resources, innovation and

level of exports) for SMEs in LDCs. This type of research is heavily dependent on numerical data in order to establish the premise of the research; hence, applying interpretivism would not be suitable for the scope of the current study.

4.3.2 Positivist philosophy for research.

Positivism is based on the core concept that research can be expressed by observing the cause and effect of variables in question. The research paradigm helps to establish relationships between variables (to establish cause and effect), to test existing theories, to create hypotheses, to collect data to assess the theory and to verify hypotheses. Positivism can then be called a hypothetic-deductive technique as in ‘theory-then-research’. As per Henn et al. (2006), positivism is a structure-based research technique applying large-scale statistically-based data and employing quantitative measuring methods such as content analysis, questionnaire surveys and experiments.

Our research hence seeks to answer the question: To what extent do external resources (human, technological and financial) and innovation influence an SME operating in an LDC to become an export-oriented unit? The application of positivism to prove this theory needs to be explored before being applied to the research. Numerous theories lend their knowledge to innovation as the development of an enterprise. Most of the studies about innovations in SMEs focus on four dimensions of Schumpeter’s (1934) theory of innovation, but only a few discuss the theory for expansion in new markets. Research on innovation has generally been conducted in relation to economics and marketing strategies (Lieberman and Montgomery, 1988). The application of positivism has attracted some criticism from philosophical standpoints (Bryman and Bell, 2011). To understand the application of positivism and interpretivism, it is essential to draw a comparison between both. The following illustration, Table 5.1, provides a comparative study of these two research philosophies.

Table 4.1 Comparison between Positivism and Interpretivism

POSITIVISM	INTERPRETIVISM
Is based on the phenomena in which information/data is distinctively observable.	Is based on the phenomena of understanding, interpreting and observing data that is not distinctively observable.
Reliability and generalisation of information is focused upon	Validity and authenticity of the data is the key focus
Believes in researching through experiments and results that are numerically proven	Believes in researching through observations and interviews to develop behaviour analysis
Results are explained through the formulation of laws	Results are explained through descriptive reasons.
The philosophy is independent of any attachment of the respondent in context to the research	The philosophy is heavily dependent on the influence and attachment of the respondent in context to the research
The analysis is based on statistical testing of given theories and hypotheses	The analysis is based on the situational description leading to the evolution of theories.

Source Henn et al. (2006)

The current study is based on the positivist philosophy which is the epistemological position that supports working with an observable social reality (Saunders et al., 2012). The philosophy embodies two main emphases: the use of highly structured methodology to facilitate replication; and the outcomes of its research being law-like generalisations, similar to those produced by physical and natural scientists (Saunders et al., 2012). The positivist position was chosen for the current study because it aligns with the aim of this study to confirm the resource-based view (RBV) theory in the case of the internationalisation of SMEs in LDCs, and the need to ensure that the findings can be generalised for the Least Developed Countries in Africa.

On the other hand, as an alternative to the positivist approach, the interpretivist position was considered but rejected on the basis that said theory does not enable the study to achieve its goal of confirming the resource-based view (RBV) theory for internationalisation of SMEs in LDCs and being able to generalise its findings. The interpretivist position is more relevant when there is a need to develop theories that will not be generalised until tested following the positivist position (Creswell, 2003).

According to Creswell (2003), positivism reflects a deterministic philosophy based on the idea that it causes possibly determine effects or outcomes. This is the philosophical position taken

when researchers are interested in investigating the causes that influence outcomes. In the case of the current study, resources are seen as the cause and the outcome is the internationalisation of the SMEs in Least Developed Countries (LDCs). Thus, by following the positivist position, the current study will be able to determine whether the resources (knowledge-based and property-based) result in the internationalisation of SMEs in Least Developed Countries (LDCs). The positivist position is linked to the quantitative method that involves the testing of theories (Saunders et al., 2012). According to Choy (2014), quantitative methods involve researchers' carefully recording data in numerical form, verifying information/theory through statistical analysis of the data. In other words, researchers start by identifying theories from literature and then collecting numerical data to confirm the theories.

The alternative method is the qualitative research method which refers to any kind of research that produces findings which are not arrived at through the means of statistical procedures or other means of quantification (Saunders et al., 2012; Bryman and Bell, 2015). The qualitative method is therefore used by researchers when there is a need to develop new theories. This method is hence popular when a study aims to investigate research area that is yet to receive adequate research attention. Thus, this study is not about developing a new theory on the internationalisation of SMEs in Least Developed Countries (LDCs), but about confirming the RBV theory in a bid to determine whether it can explain the internationalisation of SMEs in these Least Developed Countries (LDCs). In conclusion, the fact that this study is concerned with testing the RBV theory makes the quantitative method appropriate to it (Bryman and Bell, 2015).

4.4 Technique for collecting and analysing research data.

Two basic techniques are applied for collecting data for research: qualitative and quantitative methods. Either method is applied for research depending upon the nature of the research problem, the type of data required and the means to collect data. This section discusses in detail the pros and cons of each method.

4.4.1 Qualitative research method.

William (2001) defines qualitative research as a research approach that gathers information and results in the collection of data for descriptive analysis, while including analysis of perceptions

and behaviour. Qualitative research does not lend information to evaluate any specific theory or hypothesis and is hence unable to provide a definitive call on the research problem. This research technique is most suitable for conducting exploratory studies by employing questionnaires that have open-ended questions and probe into the responses generated by the respondents. According to Saunders (2003), data analysis methods such as focus groups, observations and interviews are employed by qualitative research technique. The data collected through qualitative research is complex in nature and difficult to convert into a quantitative set of information.

As described by Denzin and Lincoln (2013), the concept of the qualitative method is that it makes it possible for an experience to be presented directly to a reader. Merriam (2009) states that the nature of qualitative research is interpretive and is in conflict with the quantitative method that is positivist. The research technique offers a researcher an opportunity that enables him/her to conduct research in-depth which is not possible by using a quantitative survey. The data collected through this technique is fundamentally non-numerical and is more inclined to be text oriented. Patton and Cochran (2002) state that “Qualitative research is characterised by its aims, which relate to understanding some aspect of social life, and its methods which (in general) generate words, rather than numbers, as data for analysis.”

The primary approach of qualitative research is to focus on how an individual or a group perceives a situation in their own way (Hancock, Okleford, & Windridge, 2008). This research technique can take into account the tediousness of a scenario by analysing data from real-life context and developing understanding from the context of multiple perspectives. Therefore, the application of qualitative research enables researchers to study a problem or situation in its natural state without any manipulation conducted by changing variables. The focus of the technique remains in reporting an experience that cannot be numerically expressed. Qualitative research lends itself to the development of descriptive research based on interpretation, thus allowing the creation of new theories and concepts. Finally, it can be said that although it is an emergent and flexible style of research, qualitative research does provide a systematic approach to a given research problem.

4.4.2 Quantitative Research Technique.

Quantitative research as per Sukamolson (2014) is defined as, “the numerical representation and manipulation of observations to describe and explain the phenomena that those observations reflect. It is used in a wide variety of natural and social sciences, including physics, biology, psychology, sociology and geology.” Quantitative research can also be defined as a research approach that is based on statistical and empirical techniques to generate and analyse information to conclude on. The characteristics of the findings of data by quantitative research are described by Babbie (2010) as a collection of numeric intensive data which is applied to develop results in the form of graphs or tables. The focus of the quantitative research technique is to test theories or hypotheses that are pre-determined and generate results following them. By applying statistical data analysis techniques, the results obtained from quantitative research can agree or disagree on the presented theories or hypotheses, thus providing a conclusive and meaningful answer.

The research technique involves exploration and explanation of a research phenomenon by collecting data that is primarily numerical in nature, then later using models such as regression analysis and comparative analysis developed using mathematical and statistical means (Vogt, 2009). According to Goertz & Mohoney (2012), the primary rationale for quantitative research is to establish a relationship between variables to understand the cause-and-effect relation between them. In the view of Hancock, Okleford, & Windridge (2008), quantitative research focuses on the ideology of describing as well as creating an understanding of reality effectively by studying general concepts. The research technique takes into consideration the complexity presented by a situation and tries to imply precise definitions, fundamentally ensuring that the impact of external variables can be neglected. According to Rajasekar et al. (2013), quantitative research is developed on the measurements of quantity and amount for which the results are primarily a set of numbers.

In regard to quantitative research, Windridge (2008) suggests, “the technique involves the manipulation of some variables (independent variables) while other variables (which would be considered to be extraneous and confounding variables) are held constant”. It is vital to consider that quantitative research unlike qualitative research is developed through application of statistical measures, allowing the researcher to gain knowledge in regard to an event to be considered true for a given scenario and in a measurable sense. Furthermore, the research

technique is dependent on tests and experiments to confirm or refute any given theory or hypothesis by establishing a cause-and-effect relationship.

The basic characteristics of quantitative research as described by Rajasekar et al. (2013) can be described as follows:

- The research techniques are numerical in their core nature applying statistical and mathematical models.
- It is essentially non-descriptive in its core nature.
- Tables and graphs are used to present the results.
- Involves an iterative process from which evidence is evaluated.
- The results are conclusive.
- It investigates the reasons for what when and where a decision is made.

Multiple noticeable strengths are associated with the application of the quantitative research technique that makes it popular for application in research. These were discussed by Vogt (2007) and Babbie (2010) and are described as follows:

- The research technique allows for a wider study as it can involve a larger population size as a sample.
- Due to the larger sample size usable to conduct research, it is simpler to generalise the results evaluated.
- The research applies objectivity for analysis and thus generates more accurate results.
- Well-established procedures are applied by quantitative research processes which makes it easier for researchers to replicate and use them for future references and comparative studies.
- Quantitative research can avoid researcher biases as the researcher can keep him/herself independent from the viewpoints of the participants in the study.

The previous sections have discussed in detail the benefits and drawbacks that are associated with both qualitative and quantitative research techniques, respectively. To understand which technique is better suited for research, a comparison chart has been created which highlights the concepts of both research techniques. Table 5.2. provides a visual comparison between qualitative and quantitative research techniques.

Table 4.2 Comparison between qualitative and quantitative research techniques

Qualitative Research Technique	Quantitative Research Technique
The technique aims to generate a detailed descriptive analysis of what is observed	The aim is to measure and quantify what is observed
The purpose is to interpret, contextualise and understand a certain perspective	The purpose is to generalise the findings and create predictions
Questionnaires and interviews are tools applied for the collection of data	Surveys, regression analysis statistical models are tools that are applied.
The data collected is generally unstructured	The data collected is well structured
The results generated are text-oriented	The results generated are numerical and statistical in nature
The sample size is limited and selected based on their experience and understanding of the topic	Uses a larger sample size to conduct the research
Result generated are subjective in nature and are open to interpretation and understanding of the reader	Generates results that are objective in nature seeking precise measurement and analysis
The researcher can be biased as results are open to interpretation	Researcher bias is avoided
Complements Interpretivism	Complements positivism

Source: MacDonald and Headlam, 2011

4.4.3 Justification for using quantitative research technique.

As discussed in the literature review and will be further discussed later in this chapter, the RBV theory will be tested using quantitative data. One of the strengths of the quantitative method is that it is possible to generalise the findings for SMEs operating in Least Developed Countries (LDCs) (Bryman and Bell, 2015). This is possible thanks to the large sample size selected for the study (Saunders et al., 2012). Another advantage of using the quantitative method for this study is the fact that it allows the researcher to seek out objective answers to the research questions (Ratner, 2002). The data also used for the research is numeric in nature hence further justifying the use of quantitative technique of statistical data analysis as the appropriate method

to analyse the data and generate results. Furthermore, the results generated are precise in nature and leave no space for ambiguity and interpretation. This provides the researcher with a clear answer to the research problem.

According to Ratner (2002), objectivity can be described as the ability to avoid conscious bias and subjective selection (Ratner, 2002; Saunders et al., 2012). In other words, by using the quantitative method, this study can be designed, the data collected and analysed, and the findings described without the being influenced by personal feelings or prejudices. Noble and Smith (2015) claim that the “*qualitative method is widely criticised for lacking rigour with a poor justification of the methods adopted, lack of transparency in the analytical procedures and the findings being merely a collection of personal opinions subject to researcher bias*” (p. 35).

In the light of Smith’s study (2015), we can say that the qualitative methodology is open to the subjective views of the researcher which is seen as a limitation of that method (Saunders *et al.*, 2012). An application of the quantitative method will thus allow the researcher to be independent from the research that would in turn allow the results presented to be un-biased from human point of view. The presentation of unbiased results is crucial for verification of hypothesis that are presented in the previous chapter. Strong, numerical and logical reasoning is required to establish the validity of the hypothesis which can only be achieved by applying quantitative research method. However, there are still some limitations, however, associated with the quantitative method, and these would be discussed later in the limitations section.

4.5 Cross-sectional research design.

Cross-sectional studies have been defined as studies that involve the collection of data at a defined time (Levin, 2006). Mann (2003) states that this is one of the methods widely adopted in observational studies with the cohort and case-control studies being the alternative designs. Cross-sectional design is the design of choice when a study aims to determine prevalence (Mann, 2003). In other words, cross-sectional design only provides knowledge of the differences between subjects, or phenomena and not the process of change. Another way to describe the above point is that cross-sectional design only provides information and does not answer the question as to why a particular phenomenon is occurring. This study is about identifying the resources that influence the internationalisation of SMEs in Least Developed

Countries (LDCs). A cross-sectional design therefore makes it possible for the study to identify factors that determine SME internationalisation in Least Developed Countries (LDCs) even though it does not explain the reasons those factors are drivers of internationalisation (Mann, 2003). The “why” questions will be answered by using literature to explain the findings.

A cross-sectional study can be either descriptive or analytical. The descriptive cross-sectional design is simply characterised by the prevalence of all factors measured in a specified population. The descriptive cross-sectional analysis provides an advantage by avoiding complications created by data that are drawn from various timelines. It also provides the advantage of not developing any assumptions in the analysis of data to develop relationships between various variables. On the other hand, analytical cross-sectional studies attempt to describe the prevalence of the outcome by first beginning with a population base and comparing the two possible outcomes. These types of studies aim to quantify or build associations between two or more variables. Since the research is applying positivist research philosophy and quantitative research technique it is best to develop the study as an analytical cross-study that aims to quantify the results obtained. Furthermore, an analytical cross-study approach is more suitable for the research design as the aim of the research is to study relations between resources, exports and innovation to internationalise SMEs in Least Developed Countries (LDCs).

Cross-sectional research design offers several advantages; hence it is selected as the design for the current study (Levin, 2006; Saunders et al., 2012). Cross-sectional design usually involves the use of survey data meaning that the benefits associated with the survey strategy are also associated with cross-section design. These benefits include a large sample size, low research cost, convenient data gathering, the opportunity for statistical analysis as well as the opportunity to limit subjectivity and bias (Saunders et al., 2012). In the case of this research, only data obtained from the World Bank database is used together with the knowledge of statistical software for data analysis. Depending on the sample size, it is usually possible for the findings of the cross-sectional study to be generalised for the population (Levin, 2006).

Although only a few LDCs are selected for this study, the data collected covers several years and the analysis produces findings that could be generalised for the population of Least Developed Countries (LDCs). Notwithstanding, there are limitations of a cross-sectional design including the fact that it is difficult to use this design for a study where there is a need to make a causal inference (Levin, 2006). This is because the date on all the variables in a

cross-sectional study are collected simultaneously, making it difficult to establish a putative cause before the effect (Saunders et al., 2012). However, the current study is about association between the key variables not about making causal inferences, entailing that the limitation of the cross-sectional design does not affect this research.

4.6 Data Collection.

The collection of appropriate data for research is crucial in order for any research study to be successful. The data collection depends upon the type of data collected, the sample size, the validity and reliability of data, ethical considerations and criteria for data selection.

4.6.1 Type of data collected with regards to SMEs of sub-Saharan LDCs.

Studies can make use of either qualitative or quantitative data, although it is also possible to combine both data in the same study (Creswell, 2003; Williams, 2007). Quantitative data is numerical while qualitative data is in the form of words and cannot be measured. The current study makes use of secondary quantitative data in order to test and validate already constructed theories on the resource-based view (RBV) theory and determine how it influences internationalisation. Another important advantage of quantitative data is that the findings of this study can be generalised for the population of LDCs in Africa, making the study relevant not just to the sample but to the population of LDCs (Creswell, 2003).

It is also possible to generalise the findings to SMEs in other LDCs because the data collected relates to a large sample size of SMEs. Using quantitative data in this study will also help to ensure that the research results are relatively independent of the researcher and are not influenced by researcher biases. In other words, the findings of the study will be of statistical significance (Saunders et al., 2012). One possible limitation of using quantitative data is that the researcher can miss out on important phenomena that may impact the internationalisation of SMEs due to the focus on theory or hypothesis testing instead of theory generation (Creswell, 2003). If qualitative data had been obtained, then it would have been possible for follow up questions to be asked during data collection, thus, leading to the discovery of new insights and theory generation. Instead, the research data is contextual and collected from the

World Bank Enterprises Survey (the WBES) which provides reliable validated data in quantitative form.

4.6.1.1 Sample Data: World Bank's Enterprise Survey.

The current study uses firm-level data that was collected through the World Bank Enterprise Surveys. The World Bank firm-level data is reliable, and hence the reason it is selected for this study (World Governance Indicators, 2015). The World Bank survey makes it possible for researchers to pool large datasets from different countries (Martinez and Singh, 2014). This makes it possible for researchers to conduct more advanced studies that would have proven more difficult to conduct due to potential difficulties associated with obtaining primary data directly from countries (Vogt, 2007). The application of data already available reduces the amount of time required and expenses associated with conducting research (Dayanara et al., 2007). This not only expedites the research but also results in saving valuable research resources (Saunders et al., 2012).

As a key subject interesting the current research, the possibility of pooling data on the Least Developed Countries (LDCs) is one of the reasons it is possible to rely on the data. Another benefit of accessing the World Bank data is that it makes it possible for significantly large data on relatively large sample sizes to be used for statistical analysis (World Governance Indicators, 2015). One of the most important aspects of any study is ensuring a suitable sample size representative of the population is used (Saunders et al., 2012). The WBES data makes it possible for the current study to collect data from a sample size that is more representative of the population (Ayyagari et al., 2007). Using large data limits the influences of outliers or extreme observations and therefore increases the reliability of the findings of the study (World Governance Indicators, 2015). WBES provides assimilation of a large set of data that can be used to verify the various hypothesis developed in Section 5.

The use of the WBES data in the current study constitutes a further advantage by helping to prevent the repetition of research and the wastage of resources (Tripathy, 2013). The researcher would have had to collect primary data from SMEs operating in the Least Developed Countries (LDCs) if the WBES data were not available. This would have proven challenging and costly given the resources of time and money required to collect data from such a large sample size

of SMEs and LDCs. In the end, the decision to use the WBES data was best, particularly given the large sample sizes being considered.

Notwithstanding, there are some disadvantages to using the WBES data. Among the disadvantages of using the WBES data is the fact that the researcher has no control over the specific variables that are included in the study because not all variables that impact LDC internationalisation were considered by the WBES. Another disadvantage associated with the usage of such data is the applicability of the data to the present situation because of the dynamic nature of SMEs, entailing that data can become invalid by the time research is published.

However, the WBES database is very popular with researchers and is commonly used in a good number of firm-level studies, particularly those that are interested in investigating issues that relate to developing countries. The fact that the data was obtained from the WBES database also meant that the researcher does not have to worry about response bias. In other words, the World Bank would already have addressed the issue of response bias when the survey data were collected, a factor that is beneficial to the current study.

4.6.1.2 Least Developed Countries (LDCs) - lack of firm-level data on SMEs suitable for large scale research.

Databases are currently limited in providing adequate data on developing countries, with the WBES being one of the only large-scale firm-level data collectors with data collected through random sampling. Studies such as Kshetri (2010) and Eifert et al. (2008) have successfully used the WBES to obtain relevant data and, consequently, reach findings. Those studies were published in high calibre journals such as the *Journal of Management Research*, confirming their reliability and validity. The current study has only collected data from Sub-Saharan Least Developed Countries (LDCs), given that most of the Least Developed Countries (LDCs) in the world are located in this geographical region (34 out of 48) of Sub-Saharan Africa according to the UN (2015). There is also a gap in the literature with regard to the internationalisation of SMEs in Sub-Saharan Africa remain under investigation (see Ibeh et al., 2012).

Consequently, the five countries selected for analysis in this study are Benin, Guinea, Lesotho, Mali and Togo. The selection of these countries is based upon the availability of data. Since

the sub-Saharan region of Africa is home to most LDCs, the development in the region and in these countries is limited. The research identified five major economies out of the Least Developed Countries (LDCs) in the region that show promising future financial improvements in their economies. The research thus aims to develop a generalised concept to understand the relationship between resources, innovation and internationalisation so that the results obtained can be applied to other countries as well.

4.6.1.3 Research context: Sub-Saharan LDCs.

Among all the LDCs in the world, Sub-Saharan Africa is the largest poor region of the world. The majority of African countries - 34 out of 49 countries - have been defined by the United Nations as the least developed countries based out of the African region (UNCTAD, 2011). Globally, most of the LDCs have been identified in Sub-Saharan Africa (Hoffman et al., 1998). As defined earlier, for a country to be categorised as an LDC, it has to meet three criteria: low-income levels, weakness of human capital as measured by Human Assets Index, and economic vulnerability, as measured by the Economic Vulnerability Index. LDCs have been identified as hostile environments being that the governments' lack of resources and support have created a hostile institutional environment among the economies of these nations (Verheul et al., 2002).

Possession of a hostile environment is further supported by the incidence of political instability in these countries and high crime rates. Political instability then produces fear in international investors regarding the return on their investments, thus blocking international investments that would help to lift up these economies. Moreover, high poverty has resulted in high crime rates that have deterred foreign nationals from entering these countries. The lack of infrastructure creates further limitations to setting up businesses and results in a difficult environment to conduct business.

Africa and LDCs are highly diverse in their economic, social and political structures, as well as natural-resource and environmental issues. They differ in terms of industry and technology, skills, infrastructure, employment, social inclusion and environmental protection. But they also share common characteristics and face similar challenges, such as low levels of socio-economic development, weak human and institutional capacities and wide inequalities. In some, poor governance, political instability and internal and external conflicts hamper development. Sub-Saharan LDCs are then categorised as countries with low per capita income and structural impediments that prohibit strong economic growth (Goerzen & Beamish, 2003). These

structural challenges are universally measured using indices built by the United Nations such as the Economic Vulnerability Index (EVI) and the Human Assets Index (HAI) (Dess et al., 1990).

These economies look out for special support and contributions from the international support groups, community and other economies as a whole (Kaleka, 2012). This research has focused on Sub-Saharan LDCs as most of the LDCs are concentrated in this area. The close proximity of these countries indicates that the factors hindering their development will be similar in nature, which enables a more generalised study to be conducted. Furthermore, since more than 70% of the world's LDCs belong to this region the research can be used as an extension to other LDCs.

4.6.2 Sampling method for research data.

Sampling is an important aspect of every research study since it is not always possible to collect data from the entire population (Thompson, 2012). The use of the sampling technique in statistical analysis makes it possible for researchers to select a part representative of the whole population, and then to estimate or learn from a lower cost compared to collecting data from the entire population (Lee and Lee, 2011; Thompson, 2012).

The WBES is a firm-level survey of a representative sample of an economy's private sector. The sampling methodology used in the World Bank Enterprise Surveys is stratified random sampling. The stratified random sampling technique is one where all population units are assembled within identical groups referred to as a stratum, before selecting the sample through the random sampling technique (Saunders et al., 2012). Stratified sampling offers several advantages that are also benefits of WBES (Saunders et al., 2012). For example, there is the opportunity to study the stratum variations since estimates could be made for each stratum (Saunders et al., 2012). There is also the possibility of selecting disproportionate samples from each stratum, therefore making it possible to manipulate the sample in a way that will make it possible for a more detailed investigation.

Another important advantage of stratified sampling is that the precision is likely to increase as variance may be smaller than when simple random sampling with the same sample size is used in a study (Lee and Lee, 2011). It is also possible to organise the field works using strata, as

seen with the WBES data where the strata of the surveys include firm size, business sector and geographic region in a country.

4.6.3 Criteria for sample selection.

When conducting sampling, there is a need to establish well-defined sampling criteria. Data from four Least Developed Countries (LDCs) were pooled from the WBES. For the four LDCs, this research imposes additional criteria to construct a sample of firms appropriate for the research problem. The first criterions that the firms must be small and medium enterprises (SMEs), meaning those firms with less than 250 employees (European Commission, 2005). Although there are many ways of defining SMEs, given that there is no single universal definition (Ashoor, 2013). Some countries categorise SMEs based on the number of employees, others on their annual turnover, while others still use the assets of the company to determine their suitability for the category (Ashoor, 2013). There are also countries where more than one of these criteria are used to classify SMEs. In the current study, SMEs are defined as businesses employing less than 250 workers, following the World Bank's definition of SMEs for LDCs, as well as the definition used in studies such as that of Ayyagari et al. (2007).

The second criterion for SMEs in the current research specifies that they must be private companies i.e., not state-owned. Gu (2009) explains that private SMEs show different internationalisation behaviours from state-owned SMEs. Private SMEs benefit from the presence of a strong entrepreneurial spirit and are more likely to seek market opportunities in their markets, including in LDCs (Gu, 2009). Gu (2009) has also called for research into private investment in Least Developed Countries (LDCs) as this is an under-researched area. By focusing on private SMEs, the current study will be able to contribute towards filling the gap in this under-researched area. The third criterion is that SMEs must not be foreign-owned as this would be counter-intuitive with what this study aims to achieve. Thus, the widely used threshold of 10% for foreign ownership has been applied (Nachum and Keeble, 2003), which ensures that only indigenous African SMEs are included in the sample.

The fourth criterion is that the SMEs must be located in Africa, while the fifth is that the SMEs must be from Least Developed Countries (LDCs). The SMEs in the study must belong to the manufacturing sector because innovation trends of businesses in the sector differ from those within the service and other sectors, according to Hughes and Wood (2000). Furthermore, it is

easier to measure the innovation process of manufacturing sector organisations when compared to that of other sectors, such as services (Hughes and Wood, 2000). Following the sampling criteria previously discussed, a sample of 1,000 manufacturing SMEs in the Least Developed Countries (LDCs) will be selected. This represents a good sample size, considering that the WBES data was obtained from a total of 2,562 firms.

4.7 Research variables for measuring research data.

There are three types of variables assessed in the current research: the dependent variable, independent variables and control variables. It is important to identify which factor is considered the dependent variable and which one are independent variable. The control variables act as a bridge between the dependent and the independent variables.

4.7.1 Dependent research variable.

The outcomes of dependent variables are, as the name suggests, dependent on other variables referred to as independent variables (Lowe et al., 2006). In other words, when there is a change in one or more independent variables, then a change is expected to be followed in the dependent variable, which reflects a cause-and-effect relationship (Saunders et al., 2012). In our study the dependent variable is export, which will have dichotomous outcomes. In other words, the measure of export is a binary variable equal to one (1) when the SME has engaged in internationalisation and is otherwise at zero (0).

Exports are considered the dependent variable because the research intends to establish how parameters impact the level of exports from the LDCs. Keeping exports as dependent thus makes it easier to study how different variables change the scope of exporting. As previously explained, the decision to focus only on the SMEs' ability to use the exporting entry mode as a measure of internationalisation was based on the fact that this is the most popular form of entry used by SMEs in the Least Developed Countries (LDCs) for internationalisation (Shamsuddoha et al., 2009). Compared to other forms of entry, exporting is cheap and has the lowest risks, making it a fitting mode of entry for SMEs from Least Developed Countries (LDCs), given that they have limited resources (Shamsuddoha et al., 2009) - hence their categorisation.

4.7.2 Independent research variables.

The independent variable is the predictor of the dependent variable. Independent variables include all the variables that can impact upon the variables being controlled (Lowe et al., 2006), being dependent variables. Independent variables are both the knowledge-based resources (Miller and Shamsie, 1996) and property-based resources of SMEs (Melville et al., 2004), as well as financial resources, human capital, education and intellectual property. Financial resources are measured based on sources of funding used by the SMEs i.e., use of formal financing, whether from private or public financial institutions, and informal financing from informal money lenders, friends and family etc. (Onkelix and Sleuwaegen, 2008). Chelliah et al. (2010) have used the above as measures of financial resources in their study on SME internationalisation. Access to credit will also be used as a measure of financial resources.

These knowledge-based resources include a formal level of education of managers, formal sector experience, intellectual property, managerial know-how, technology know-how, trademarks and informal experiences in informal sectors. (Chelliah et al., 2010; Ottaviano and Martincus, 2011; Lawlor, 2014). In the current study, research human resources, technological resources and financial resources available to an SME operating in an LDC are considered the independent variable. Our study considers these as independent variables because these fundamental variables have an impact on the operations and the efficiency of an SME.

4.7.3 Control variables for the research.

Control variables are factors that controlling the dependent and the independent variables. A control variable can be defined as a variable that can be held constant and has a limited impact on the research. These variables are of minimal interest to the aim of the current research, but are required to be controlled because if not, they have the potential to influence the outcomes of the study. In the current research, control variables include the age of the SME, obstacles created due to corruption, political influences, countries' infrastructure and competition from the informal sector. These factors are considered control variables because although they do not have a direct impact on the outcomes of the research, they do impact the dependent and the independent variables.

4.8 Data Analysis: Chi-Square and Logistic Regression.

4.8.1 Chi-square Data Analysis Method.

It is possible to conduct Chi-square analysis in this study because the WBES data is grouped into discrete classes. The chi-square test makes it possible for the study to find out how likely it is that the two variables are associated (Lehmann, 2009; Saunders et al., 2012). The test of independence makes it possible for research studies to determine whether or not variables under investigation are independent of each other, or whether a pattern of dependence exists between the variables (Larimo and Vissak, 2009).

In order to use the Chi-Square statistic for testing relationships between variables, the variables have to be categorical. The chi-square test has been used in this study because the aim of the research is to determine the likelihood of the resources (human, technological and financial) helping in the internationalisation of SMEs. Furthermore, this method allows the hypothesis developed in the previous chapter to be tested. The usage of the Chi-square method will thus allow the testing of the selected data to be evaluated and then examine how likely it is that innovation, resources and internationalisation are all interlinked. The process of conducting a chi-square test involves setting the null hypothesis, which means that there is no significant difference while, in contrast, the alternate hypothesis means that there is a significant difference (Saunders et al., 2012). In the case of this study, the Chi-square test serves to indicate the significance of the variables (Larimo and Vissak, 2009).

4.8.2 Logistic regression for data analysis.

With indications about the significance of the variables through the Chi-square analysis, logistic regression is then applied for testing, in a step-by-step manner, the extent to which the dependent variable in this research, i.e., the decision to internationalise, is influenced by the independent variables (knowledge-based resources and property-based resources of SMEs). The rationale behind this is that through the logistic regression, it is possible to determine the variables to be included in the regression model that will describe the internationalisation of SMEs in Least Developed Countries (LDCs), while the other variables have to be eliminated because they have no significant impact on SME internationalisation (Chen et al., 2008).

In the current study, the binary nature of the dependent variable, i.e., whether a firm internationalises or not, advocates the use of logistic regression and hence quantitative data analysis is selected for this study. The logistic regression approach was adopted effectively by Lehmann (2009) in his study on the internationalisation of goods and services in Switzerland. Lehmann's (2009) study was published in a reliable journal, the *Journal of International Business Research*, available on the Emerald journal database. This approach has therefore been tested and confirmed in studies on internationalisation, indicating that it can also be adopted effectively in the current study.

In logistical regression, the analysis involves modelling the outcome $\log(p/(1-p))$ where p is the probability of an outcome that a firm will internationalise in the case of this research, while $1-p$ is the probability that a firm will not internationalise. Just like the Ordinary Least Squares (OLS) regression, the logistic regression is an approach that makes it possible to predict the relationship between variables (Cohen et al., 2002). Freedman (2009) describes logistic regression as a regression model where the dependent variable is categorical. Categorical variables are those that can take on one of a limited and usually fixed number of possible outcomes, indicating that logistic regression can only be used to predict dichotomous outcomes (Freedman, 2009). In the current study, the binary logistic models more applicable, which can be applied to estimate the probability of a binary response, based on one or more independent variables. Two possible outcomes are that either the independent variables lead to internationalisation, or they do not.

One of the differences between the more common linear regression and the logistic regression relates to the assumptions. Logistic regression is based on a set of assumptions that are different from the assumptions of linear regression (Freedman, 2009). For example, with logistic regression, the conditional distribution is Bernoulli distribution instead of Gaussian distribution because the dependent variable in logistic regression is binary (Freedman, 2009). The model in logistic regression is correctly specified when the true conditional probabilities are a logistic function of the independent variables, and no important variables are omitted. Furthermore, it is also assumed that the model in logistic regression is correctly specified when no extraneous variables are included, and the independent variables are measured without error (Freedman, 2009). The previous cases used to develop the model were completely independent, as in the case of the organisations that took part in the WBES survey, while the assumption is that the independent variables are not linear combinations of each other (Freedman, 2009).

Another assumption of logistic regression is that dependent variables (predicted values) are probabilities and not actual values like in linear regression. In other words, the outcomes of the dependent variable are restricted to (0, 1) through the logistic distribution function, being that logistic regression only predicts the probability of particular outcomes (Freedman, 2009). In the case of this research, internationalisation will be coded as 1 while failure to internationalise will be coded as 0. Thus, logistic regression makes use of a maximum likelihood estimation, instead of the least-squares estimation that is used in traditional multiple regression (Cohen et al., 2002). With the logistic regression model, the slope coefficient provides information on the effect of a unit of change in the independent variable, and on the predicted logits when all the other variables in the model are held constant (Freedman, 2009). The odds ratios in logistic regression are interpreted as the influence of one unit of change among the independent variables on the predicted odds ratio when all the other variables in the model are held constant.

4.9 Factors defining research credibility.

Wilson (2012) states that the ability to test the quality of the research is an essential aspect of every research study. When proving the quality of a study, the two key issues that researchers have to address relate to the reliability and validity of the study (Wilson, 2012). The issues surrounding reliability and validity are discussed in the following subsections.

4.9.1 Reliability of data collected.

Saunders et al. (2012) state that the issue of reliability involves the extent to which the data collection techniques or analysis procedures adopted in a research study can be replicated. According to Easterby-Smith et al. (2008), to prove the reliability of a study, researchers have to answer three questions. Firstly, 'Will the measure adopted in their study produce the same results when replicated'? In the case of this research, the expectation is that any future study replicating the current research design will obtain the same results, considering that the data was obtained from a reliable source, the World Bank.

The second question researchers should ask to confirm the reliability of a study is whether similar observations will be reached by other observers (Easterby-Smith et al., 2008). Again,

as it related to the current study, the expectation is that similar observations will be obtained if another study is replicated exactly, given the source of the data and the data analysis technique. The third question for researchers to consider in projecting reliability for future studies is whether there is transparency in how conclusions are drawn from the raw data. Again, this is not an issue in the current study since the WBES data is freely available to be used in future research studies, thereby ensuring the reliability of the findings and therefore, greater transparency of research procedures and integrity in the process. Furthermore, the data analysis technique adopted (Chi-square and logistic regression) has been adopted successfully in previously published studies on internationalisation (Chelliah et al., 2010).

In Saunders et al. (2012), four potential threats to reliability are discussed. They are threats linked to participant error, participant bias, observer error and observer bias. The fact that the survey was obtained for the World Bank meant that the above threats were addressed by the World Bank researchers in the survey. The World Bank is an international organisation with the necessary resources to collect data effectively from the Least Developed Countries. Furthermore, wherever more than one measure is used for a variable in the current study, Cronbach alpha is used to test reliability.

4.9.2 Validity of data collected.

The second factor determining the quality of research is the question of validity concerned with whether the findings are really about what they appear to be about (Saunders et al., 2012). A definition of validity developed by the American Educational Research Association (AERA) (1999) states that “validity is the degree to which a theory and evidence are supported by the interpretation of the research results that are attained from the proposed research.” Ary et al. (2002) have defined validity as the extent to which an instrument measures what it claims to measure enabling a researcher to achieve meaningful interpretations of the results. In other terms, validity can be defined as the efficiency of the proposed indicators to measure the underlying research concept.

According to Wilson (2012), validity must be reviewed from the two perspectives of internal and external validities. Internal validity means establishing a logical relationship between dependent and independent variables, whereas external validity is related to how efficiently the

findings of the research can be generalised to fit other situations and populations (McBurney, 1994). Internal validity can be further divided into two elements; namely, content and construct validity (Trompenaars et al., 2005; Wilson, 2012). Construct validity outlines how well a test measures up to its claims, while content validity is the evaluation of how much a measure represents every single element of a construct (Wilson, 2012).

Threats to the validity of a research study include history, testing, instrumentation, mortality, maturation and ambiguity about causal direction (Saunders et al., 2012). These issues relate to the period of collecting data. The assumption is that when the WBES data is collected, adequate measures will have been taken to ensure that the data were being collected at a period when valid data would be obtained. One issue to consider when discussing the external validity of a study is generalisability, i.e., the extent to which the research results can be applied to the population (Wilson, 2012). The sample size is a key issue in terms of ensuring the generalisability of the findings. In the current study, the sample size of SME selected is significantly large, which is why the findings are expected to be easily generalised to the population of LDCs in Africa.

4.10 Research Ethics Consideration of research ethics.

Tripathy (2013) suggests that “*concerns about secondary use of data mostly revolve around potential harm to individual subjects and issue of return for consent*” (p. 1478). Saunders et al. (2012) claim that the general ethical issue in research studies is that the research design must not subject the participants to any form of embarrassment, harm or any other material disadvantage. The above issue is of concern when the secondary data contains significant identifying information that could be used to identify the initial research participants. This is not a concern in this study since the WBES data does not contain information that could be used to identify the SMEs from the Least Developed Countries (LDCs) that took part in the World Bank survey. Tripathy (2013) also states that when secondary data is freely available, such as on a freely accessible database, the Internet, books or public fora, the permission for further use of the data in other research studies is implied. The need to acknowledge the ownership of the original data was discussed by Tripathy (2013). In the case of this study, the source of the data has been acknowledged several times in this chapter, clearly stating that the current study makes use of data from the World Bank Enterprise Surveys (WBES).

4.11 Limitations of the research methodology.

One of the limitations of the current study is that only variables obtained from the WBES data are testable as part of the study. In other words, the study will not benefit from the advantages associated with primary research whereby researchers can determine what data is needed and design a survey to obtain the exact data (Saunders et al., 2012). However, the study findings will be limited to SMEs since the only data obtained related to SMEs, which means that the findings should not apply to large firms. Moreover, the findings are limited to Least Developed Countries (LDCs) specifically those in Sub-Sahara African and may not apply to non-LDCs. With quantitative data, there is always the risk that the knowledge produced from a study might be too abstract and general for direct application to specific local situations. Therefore, some caution in attempting to generalise the findings of this study to considerably different LDC settings, particularly those outside of Africa, is prudent as there will be differences in the environment, albeit within the context of LDCs.

There is no denying that the introduction and availability of the WBES database have provided the opportunity for studies to be conducted on different issues affecting the growth of SMEs in Least Developed Countries (LDCs), an area that is still widely under-investigated. However, the WBES data is limited by the date of collecting the data. The WBES data collected prior to the period of conducting this study may not be as current and updated as would otherwise be ideal. It is possible that some circumstances in the Least Developed Countries (LDCs) may have changed in such a way that those resources used to limit internationalisation no longer do so. The most recent WBES data is used in this study to limit the likelihood and potential impact of major changes.

4.12 Suitability of the current research approach.

The research methodology of exploratory quantitative research is suitable for the current research as it provides with the results that can be quantified and at the same time explores the concept of relationship between resources and internationalisation of SMEs, while also exploring the mediating effect that any innovation will have on the relationship between resources and SME internationalisation. The regression analysis technique chosen to evaluate the data is the best method in which the hypothesis framework developed in the previous chapter can be addressed. The data used for the research is numerical in nature and the best

way to analysis it is through quantitative techniques. A quantitative approach will then enable the generation of the regression results permitting the validation of hypothesis formulated. The exploratory research technique will hence allow the researcher to explore the possibilities and relations between various dependent and independent variables that are considered for the research.

4.13 Conclusion.

This chapter has presented the method adopted to fulfil the aims and objectives of this research project. The study has hence been based upon an exploratory research method while applying the positivist research theory. As researchers, we have opted to use the quantitative research technique as the fundamental technique for gathering to gather and evaluating data in the context of the research aim and objectives.

The data for the analysis was collected by using the World Bank survey data for the SMEs operating in the LDCs of sub-Saharan Region. From the sample data collected, the independent and dependent variables that impact the operations of the SME were identified. The identification of these variables has helped us to design the analysis tools then used to analyse the data collected. The individuality of this study is in its use of Chi-Square analysis and logistical regression as a tool to analyse the sample data collected through WBES.

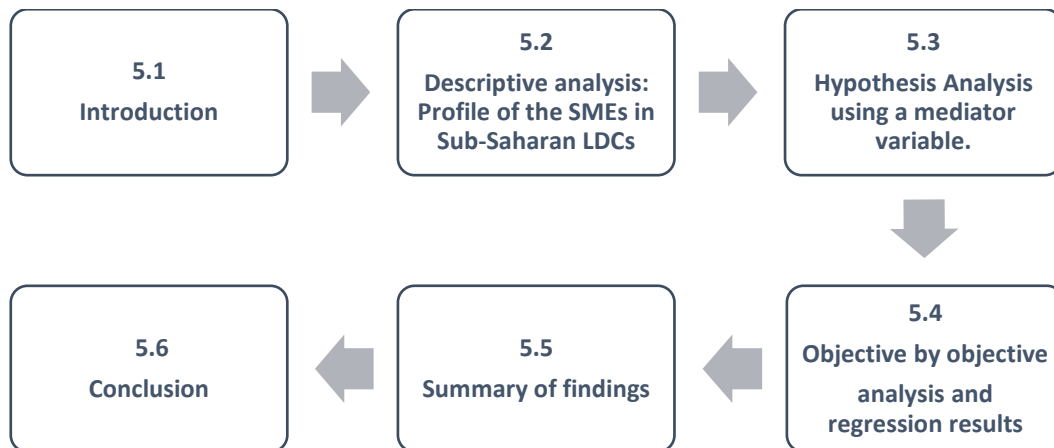
CHAPTER FIVE: RESULTS AND ANALYSIS

5.1 Introduction

This chapter focuses on the results and analysis of the research conducted for this study, while attempting to summaries the data collected from the samples in order to gather insights on unique results. This chapter highlights the contributions of the resource-based view theory (RBV Theory) and the critical resources identified for the internationalisation of SMEs in Sub-Saharan LDCs. SPSS software was used for the analysis, and the step-by-step details of the results are explained herein.

The chapter starts with the list of the objectives investigated in the study, followed by descriptive statistics and the explanations of the results. The regression analysis was conducted on the sample data to test the hypothesis developed in Chapter 3, while the findings from the analysis are presented in a table of summary of findings, finally followed by the conclusion. Figure 1.1 presents the key contents of the introduction.

Figure 5.1 Key contents of the results and analysis



The following objectives are investigated:

- Objective 1: To examine the direct relationship between an SME's resources and the likelihood of SME exports in LDCs.
- Objective 2: To examine the direct relationship between an SME's resources and the likelihood of SME innovation in LDCs.
- Objective 3: To examine the direct relationship between innovation and the likelihood of SME exports in LDCs.

- Objective 4: To investigate the mediating effects of innovation in the relationship between SME's resources and the likelihood of SME exports in LDCs.

5.2 Descriptive Analysis: Profile of the SMEs in Sub-Saharan LDCs

This section presents a brief profile of the sample of 713 SMEs in Sub-Saharan LDCs. The data was collected from the World Bank Enterprise Survey (WBES), as described in Chapter Four (Research Methodology) to understand the rationale behind selecting these cases. Descriptive statistical analysis of the data was then conducted to represent the entire data set in line with the research (Warhurst, 2007).

Table 5.1 shows that about 15% of the SMEs in Sub-Saharan LDCs are exporters, with about 85% of SMEs being non-exporters. Twelve (12) years is the average lifetime of SMEs in the sample, 19% of which are from Benin. Then 20% are from Guinea, 24% from Mali, 17% from Lesotho and about 19% from Togo. Only about a quarter of these SMEs, or 28%, report borrowing from banks with about 11% having capital finance. Only 5% use technology licensing and about 11% of SMEs invested in innovation R&D. The proportion of SMEs employing skilled workers is about 35% while 85% have informal origins.

Regarding transportation, about 17% of SMEs reported transport as no obstacle, 26% reported it as a minor obstacle, 21% said it is a moderate obstacle, 24% said a major obstacle, while for 11% it is a very severe obstacle. Regarding corruption, 11% reported corruption as no obstacle, for 18% it is a minor obstacle and for 20% it is a moderate obstacle, while for 24% it's a major and 17% a very severe obstacle. In addition, regarding political obstacles, about 12% of SMEs reported politics to be no obstacle, 12% said a minor obstacle, 17% took it to be a moderate obstacle, 35% as a major obstacle and 16% a very severe obstacle. Finally, regarding the practices of competitors in the informal sector, about 12% reported they are no obstacle, 16% said minor obstacles, 17% moderate obstacles, 36% said it was a major obstacles and 16% said that the practices of competitors in the informal sector are very severe obstacles. The results obtained from the descriptive statistical analysis of the SME's data are presented in Table 5.1 as follows:

Table 5.1: Descriptive statistics

Variables	%	Mean (Std.Dev.)
Dependent variable:		
Exports	14.9	
Independent variables:		
Human Capital	35.1	
Informal Origin	85.3	
Technology licensing	5.0	
Borrowed from banks	27.6	
Capital financed	11.2	
Mediator variable:		
Innovation (R&D)	11.1	
Control Variables		
Age		11.589
Country Effects:		
Benin	19.1	
Guinea	20.3	
Mali	24.	
Lesotho	17.0	
Togo	19.6	
Transport Obstacles		
No obstacle	17.5	
Minor obstacle	25.8	
Moderate obstacle	21.3	
Major obstacle	23.7	
Very severe obstacle	10.7	

Variables	%	Mean (Std.Dev.)
Corruption Obstacles		
No obstacle	10.7	
Minor obstacle	18.5	
Moderate obstacle	19.8	
Major obstacle	24.0	
Very severe obstacle	17.3	
Political Obstacles		
No obstacle	12.5	
Minor obstacle	12.3	
Moderate obstacle	16.7	
Major obstacle	35.3	
Very severe obstacle	16.0	
Informal Competitors Obstacles		
No obstacle	11.9	
Minor obstacle	15.8	
Moderate obstacle	17.4	
Major obstacle	35.9	
Very severe obstacle	16.5	

Notes: Observations - 713

Source: Author, developed for research

5.3 Hypothesis analysis using a mediator variable.

Hypothesis testing using a mediating variable has been followed in the current research. This process of hypothesis testing has been proposed by Baron and Kenny for when the impact of a mediator on the relationship between independent variables and the dependent variable is to be critically analysed (Howell & Buro, 2009). This process of testing includes a four-step mediation analysis and a chi-square difference test. Hypothesis testing is the process of analysing the impact of an independent variable on the dependent variable. Statistical analysis is then conducted to test the significance of the contribution of the independent variables towards estimating a dependent variable. The result of a hypothesis analysis is to adjudge the statistical significance of the null hypothesis which the researcher either rejects or fails to reject (Howell & Buro, 2009).

A variable is termed as a mediator variable to the extent that it can carry the influence of an independent variable onto a dependent variable (Baron & Kenny, 1986). The process of mediation can occur in the following ways (MacKinnon, 2008):

1. The mediator is largely impacted by the independent variable.
2. Statistically, the independent variable significantly impacts the dependent variable in the absence of the mediating factor.
3. The mediator also has a statistically significant impact on the dependent variable.
4. The impact created by the independent variable on the dependent variable is reduced in magnitude upon the inclusion of the mediator factor in the hypothesis testing.
5. The mediating hypothesis model is conducted based on a certain set of assumptions which are presented below:
 - i. The model should be correctly presented and described in its functional form, which implies that a structured regression equation should be developed, accurately describing the dependent variable, the independent variables and the mediating factor (Frazier et al., 2004).
 - ii. The model should not have any omitted variables.
 - iii. The model should be free of measurement errors.

The correct ordering of causal variables should be maintained, while reverse causality effects should not be incorporated. (Spencer et al., 2005). The error variance of the model described should be homogenous which implies the variance of error terms from two or more subgroups

should be considered statistically equal (Baron and Kenny, 1986). The following section of this chapter presents a detailed analysis of the hypothesis testing as described above. Hypothesis testing has been conducted using three sets of independent variables: human resources, technological resources and financial resources. Each of these types of resources includes specific elements that are described below:

Human Resources – Human Capital (Skilled Workers), Informal Origin (Sector Experience)

Technological Resources – Technology Licensing

Financial Resources – Borrowed from banks, capital financed (through friends and relatives).

Within each of the hypothesis, innovation (as defined by research and development) has been used as a mediator variable. The data has been moderated by the factors such as the size of the firms (less than 250 for SMEs) and non-government firms using the select cases function in SPSS to eliminate all data rows belonging to either large firms or government firms. Furthermore, within every hypothesis testing, certain control variables have been used such as age, country effects, transport obstacles, corruption obstacles, political obstacles and informal competitor obstacles.

5.3.1 Dependent Variable: level of SME exports.

The thesis attempts to analyse the impact of the critical resources identified by the RBV theory regarding the level of SME exports in Sub-Saharan LDCs. The dependent variable in the current study is the level of SME exports in Sub-Saharan LDCs. The research attempts to define SME internationalisation as a drive to expand a business to have a global outlook (Al-Hyari et al., 2012). This expansion can be identified by the level of foreign direct investments (FDI), or by the way a firm increases the direct and indirect influences of international transactions on the firm's future performance (Beamish, 1990), or by the level of exports achieved by the SME located in Sub-Saharan LDC economies (Majocchi and Zucchella, 2003).

It is not as simple for SMEs to attain the desired level of internationalisation, as it is for large firms. Larger corporations have greater access to resources such as human, technological and financial, and SMEs have to compete for their basic survival. It has been extensively observed throughout the literature that SMEs face stiff competition from domestic as well as international rivals. Strong studies have been conducted to discuss the benefits of

internationalisation on SMEs' performances. The current thesis has identified the level of exports as the most significant measure of the level of internationalisation attained by the SMEs, with a predominant focus on the SMEs in Sub-Saharan African Least Developed Countries (LDCs). Thus, the dependent variable identified in this research is the level of SMEs' exports in Sub-Saharan LDCs.

5.3.2 Independent Variables: Human Resources, Technological Resources, Financial Resources.

The independent variables in hypothesis testing analysis are the variables that influence the dependent variable. The main purpose of hypothesis testing is to analyse how significant or non-significant the relationship is between independent variables and the dependent variable. Acclaimed researchers and statisticians have identified critical resources that belong to a firm and enable the firm to attain organisational objectives. The role of the RBV theory has been identified as vital in classifying critical firm resources. As per this theory, a firm has significant human resources, technological resources and financial resources that enable the success of an organisation as measured in the attainment of organisational goals and objectives.

5.3.3 The Control Variables

The data to be analysed is moderated by variables such as the firm size and the ownership of government. The firm size has to be less than 250, which means less than 250 employees employed within the firm. This ensures that the data selected belongs to the SMEs. Furthermore, the moderator variable ownership of government is used to remove the data that belongs to the government-owned firms. This thesis is solely focused on privately-owned SMEs in Sub-Saharan LDCs. The control variables used in the analysis are age, country effects, transport obstacles, corruption obstacles, political obstacles and informal competitors' obstacles. The control variable age is used because younger firms tend to grow faster than older firms. Factors such as transport obstacles, political obstacles, corruption obstacles and informal competition are used because these influence the level of SMEs exports in Sub-Saharan LDCs.

5.3.4 The Mediating Variable

The mediator variable used in this thesis is innovation (research and development) as it represents the generative mechanism through which the independent variables influence the

dependent variable (Baron and Kenny, 1986). Innovation is measured by the research and development activities conducted by the SMEs in Sub-Saharan LDCs. This measure is widely used and is following the metrics used by the World Bank Enterprise Survey (WBES) (Abubakar et al., 2019; Goedhuys and Sleuwagen, 2010).

5.4 Objective-by-objective analysis and regression results.

This section describes in detail the objectives of the study and the steps of hypothesis testing using mediation. The research attempts to analyse whether the resource-based view theory significantly positively influences the level of SMEs exports and whether innovation (R&D) might mediate and strengthen the relationship or not.

5.4.1 Objective 1: To examine the direct relationship between an SME's resources and the likelihood of SME export in LDCs.

Step one: Relationship of dependent and independent variable: resources and SME exports

To verify the first objective, the relationship between dependent and independent variables will be analysed. Human resources, technology resources and financial resources are considered to be the independent variables, while the level of SMEs exports in Sub-Saharan LDC is taken as the dependent variable. This approach has been taken to obtain results for the hypotheses starting with H1: Human resources of SMEs in Sub-Saharan LDCs have a positive influence on the likelihood of SMEs becoming an exporter in Sub-Saharan LDCs. The results obtained regarding this hypothesis are represented in table 5.2.

Table 5.2: Regression analysis of human resources and SMEs exports in LDCs

		STEP 1	STEP 2	STEP 3	STEP 4
		<i>Exports</i>	<i>R & D</i>	<i>Exports</i>	<i>Exports</i>
DEPENDENT VARIABLE	HUMAN CAPITAL	.013**	.536		.007***
	INFORMAL ORIGIN	.067*	.219		.029**
MEDIATOR VARIABLE	Innovation (R&D)			.012**	.000***
CONTROL VARIABLES	Age	.840	.923	.078*	.945
	Country Effects	.004***	.228	.000***	.002***
	Transport Obstacles	.138	.337	.019**	.149
	Corruption Obstacles	.183	.037**	.211	.089*
	Political Obstacles	.726	.609	.676	.634
	Informal Competitors Obstacles	.418	.615	.717	.185
	-2Log Likelihood	182.653	132.406	443.872	159.888
	Cox & Snell R Square	.223	.139	.120	.286
	Nagelkerke R Square	.327	.253	.204	.422
	Chi-square	51.671***	30.477	74.450***	67.803***
	Hosmer and Lemeshow Test	9.734	8.570	11.625	8.549

*** $P < 0.01$. ** $P < 0.05$. * $P < 0.1$.

Source: author, developed for own research

Based on Baron and Kenney's (1986) hypothesis testing using a mediator variable, the relationship between human resources (independent variable) and the level of SMEs exports in Sub-Saharan LDCs (dependent variable) is examined. The results are presented in Table 5.3.1. Being representative of skilled workers, human capital is found to have a significant positive influence on the SMEs export in Sub-Saharan LDCs ($p < 0.05$ level). As representative of sector experience, informal origin resources are found to have a significant positive influence on the SME export in Sub-Saharan LDCs ($p < 0.1$ level). The Chi-square for the overall model is significant at 0.01 level. The Hosmer and Lemeshow test suggest that the model is a good fit for the data ($p > 0.05$) the findings support H1.

After establishing the relationship between human resources and the level of exports, further analysis has been conducted to obtain results for the second hypothesis H2: Technological resources of SMEs in Sub-Saharan LDCs have a positive influence on the likelihood of SMEs becoming an exporter in Sub-Saharan LDCs. The results of this analysis are presented in the follow illustration, Table 5.3.2.

Table 5.3: Regression analysis of technological resources and SMEs exports in LDCs

		STEP 1	STEP 2	STEP 3	STEP 4
		<i>Exports</i>	<i>R & D</i>	<i>Exports</i>	<i>Exports</i>
DEPENDENT VARIABLE					
	INDEPENDENT VARIABLES				
	Technology Licensing	.031**	.137		.088*
MEDIATOR VARIABLE CONTROL VARIABLES	Innovation (R&D)			.012**	.001***
	Age	.742	.929	.078*	.649
	Country Effects	.004***	.914	.000***	.002***
	Transport Obstacles	.533	.944	.019**	.151
	Corruption Obstacles	.209	.462	.211	.156
	Political Obstacles	.759	.581	.676	.497
	Informal Competitors Obstacles	.418	.633	.717	.324
	-2Log Likelihood	208.377	146.371	443.872	191.852
	Cox & Snell R Square	.187	.141	.120	.227
	Nagelkerke R Square	.277	.256	.204	.337
	Chi-square	46.891***	34.334**	74.450***	57.288***
	Hosmer and Lemeshow Test	.742	.929	.078*	.649

*** $P < 0.01$. ** $P < 0.05$. * $P < 0.1$.

Source: author, developed for own research

Based on Baron and Kenney's (1986) hypothesis testing using a mediator variable, we have examined the relationship between technological resources (independent variable) and the level of SMEs exports in Sub-Saharan LDCs (dependent variable). The results are presented in (Table 5.3.2). Technology licensing is found to have a significant positive influence on the SMEs export in Sub-Saharan LDCs ($p < 0.05$ level). The Chi-square for the overall model is significant at 0.01 level. The Hosmer-Lemeshow test suggests that the model is a good fit for the data ($p > 0.05$) and the findings support H2.

Financial Resources is the last independent variable used to study the impact of the relationship between financial resources as an Independent Variable and the level of SME exports in Sub-Saharan LDCs as the dependent variable. This comparison has been done to verify the third hypothesis H3: Financial resources of SMEs in Sub-Saharan LDCs have a positive influence on the likelihood of SMEs becoming an exporter in Sub-Saharan LDCs. The results obtained for this relationship are represented in the following illustration, Table 5.3.3.

Table 5.4: Regression analysis of financial resources and SMEs exports in LDCs

		STEP 1	STEP 2	STEP 3	STEP 4
		<i>Exports</i>	<i>R & D</i>	<i>Exports</i>	<i>Exports</i>
DEPENDENT VARIABLE					
	INDEPENDENT VARIABLES				
	Borrowed from Banks	.002***	.041**		.003***
	Capital Financed	.026**	.682		.015**
MEDIATOR VARIABLE	Innovation (R&D)			.012**	.004***
CONTROL VARIABLES	Age	.403	.335	.078*	.227
	Country Effects	.000***	.142	.000***	.000***
	Transport Obstacles	.004***	.308	.019**	.004***
	Corruption Obstacles	.545	.000***	.211	.580
	Political Obstacles	.288	.077*	.676	.159
	Informal Competitors Obstacles	.541	.030**	.717	.709
	-2Log Likelihood	402.886	345.996	443.872	388.829
	Cox & Snell R Square	.150	.112	.120	.160
	Nagelkerke R Square	.249	.208	.204	.266
	Chi-square	85.949***	62.552***	74.450***	90.711***
	Hosmer and Lemeshow Test	5.623	12.549	11.625	7.416

*** $P < 0.01$. ** $P < 0.05$. * $P < 0.1$.

Source: author, developed for own research

Taking Baron and Kenney's (1986) hypothesis testing using a mediator variable, we have examined the relationship between financial resources (independent variable) and the level of SME exports in Sub-Saharan LDCs (dependent variable). The results are presented in Table 5.3.3. Borrowing from banks is found to have a significant positive influence on SME exports in LDCs ($p < 0.01$ level). Capital finance from friends and relatives have also been found to have a significant positive influence on SME export in LDCs ($p < 0.05$ level). The Chi-square for the overall model is significant at 0.01 level. The Hosmer-Lemeshow test suggests that the model is a good fit for the data ($p > 0.05$) and the findings support H3.

5.4.2 Objective 2: To examine the direct relationship between an SME resources and the likelihood of SME innovation in LDCs

Step two: Relationship of independent variable with mediator: resources and innovation (R&D).

The second objective investigates the relationship of the independent variable with the mediator. The human resources, technology resources and financial resources constitute the independent variables and innovation i.e., research and development (R&D) is the mediator variable. We start with verification of the fourth hypothesis H4: Human resources in SMEs in

Sub-Saharan LDCs will positively influence SMEs innovation. The results here are presented in Table 5.3.1.

The relationship between human resources and innovation (R&D) is then examined. Table 5.3.1 shows the Nagelkerke R Square as 0.253 and the Chi-square score (30.477), which is significant at 0.05 level. The findings suggest that human resources are not significantly related to innovation (R&D). The Hosmer-Lemeshow Test also suggests that the model is a good fit ($p > 0.05$). Therefore, the relationship between human resources and innovation (R&D) does not appear significant and does not support H4 (See table 5.3.1).

Technological Resources are considered to be the next independent variable while the level of innovation (research and development) is the mediator variable. This is performed in order to verify hypothesis H5: Technological resources in SMEs in Sub-Saharan LDCs will positively influence SME innovation. The results required to verify this hypothesis are represented in table 5.3.2. The relationship between technological resources and innovation (R&D) is then examined.

Table 5.3.2 shows the Nagelkerke R Square as 0.256 and the Chi-square score (34.334), which is not significant. The findings suggest that technological resources are not significantly related to innovation (R&D). The Hosmer-Lemeshow Test also suggests that the model is a good fit ($p > 0.05$). Therefore, the relationship between technological resources and level of innovation (R&D) does not appear significant and does not support H5. (See table 5.3.2)

The third investigation probed Financial Resource as the Independent Variable with the level of innovation (research and development) as the mediator variable. This analysis has been done to verify hypothesis H6: Financial resources in SMEs in Sub-Saharan LDCs will positively influence SMEs innovation. The results of this analysis are presented in table 5.3.3. The relationship between financial resources and the level of innovation (R&D) has also been examined.

Table 5.3.3 shows the Nagelkerke R Square as 0.224 and the Chi-square score (67.863), which is significant at 0.01 level. The findings suggest that borrowing from banks is significantly related to innovation (R&D) ($p < 0.05$ level). While capital finance is not significantly related to innovation (R&D). The Hosmer-Lemeshow Test also suggests that the model is a good fit

($p > 0.05$). Therefore, the relationship between financial resources and innovation (R&D) appears significant and supports H6. (See Table 5.3.3)

5.4.3 Objective 3: To examine the direct relationship between innovation and the likelihood of SME exports in LDCs.

Step three: The relationship between the mediator and the dependent variable: innovation (R&D) and SME exports

The third objective investigates the relationship between innovation (R&D) and the likelihood of an SME becoming an exporter. This research has been conducted to analyse objective hypothesis H7: Innovation has a positive influence on the likelihood of SMEs becoming an exporter in Sub-Saharan LDCs. In this hypothesis, innovation (R&D) is the mediator variable and the level of SMEs exports in Sub-Saharan LDCs is the dependent variable. The results of this objective are presented in Table 5.3.1.

At step three of Baron and Kenney, the relationship between innovation (R&D) and the level of SME exports in LDCs is examined. It shows the Nagelkerke R Square as 0.204 and the Chi-square to be 74.45, which is significant at 0.01 level. The findings suggest that the level of innovation (research and development) is significantly related to the level of SMEs exports in Sub-Saharan LDCs ($p < 0.01$ level). The Hosmer-Lemeshow test suggests that the model is a good fit ($p > 0.05$). Therefore, the findings support H7.

5.4.4 Objective 4: To investigate the mediating effects of innovation in the relationship between SME resources and the likelihood of SME exports in LDCs.

Step four: Establishing mediation: Innovation (R&D) as the mediator

Partial vs. full mediation: As per Baron and Kenny's mediating hypothesis, the following 3 criteria should be met for mediation to be supported:

- The independent variable is shown to significantly influence the dependent variable in the first regression equation.

- The independent variable is shown to influence the mediator significantly in the second regression equation.
- The mediator must significantly influence the dependent variable in the third equation. Here, the independent variable and mediator are entered as predictors.

For complete mediation, the significance of independent variables should become non-significant while for partial mediation, the significance of independent variables should be reduced. Hypothesis H8: Innovation positively mediates the relationship between SME Human resources and SME exports in Sub-Saharan LDCs. At Step Four, the relationship between human resources and the level of SME exports in Sub-Saharan LDCs (tested earlier in Step One above) is re-examined, but this time with innovation (R&D) included as a mediator.

The research does not meet all the above criteria, which means that mediation is not supported. (See table 5.3.1)

The analysis suggests that innovation (R&D) does not mediate the relationship between human resources and the level of SME exports in Sub-Saharan LDCs. Table 5.3.1 shows the results for Step Four. It is found that the effect of human capital (skilled workers) is still significant ($p < 0.01$), and the effect of informal origin (sector experience) is also still significant ($p < 0.05$) when the innovation (R&D) is controlled. The final step does not suggest partial or full mediation. This finding does not support H8. Innovation (R&D) does not mediate the relationship between human resources and the level of SME exports in Sub-Saharan LDCs.

Hypothesis H9: Innovation positively mediates the relationship between SME Technological resources and SME exports in Sub-Saharan LDCs. At Step Four, the relationship between technological resources and the level of SME exports in Sub-Saharan LDCs (tested earlier in Step One above) is re-examined, but this time with innovation (R&D) included as a mediator. The research meets all the above criteria, which means that mediation is supported (See table 5.3.2). The analysis suggests that innovation (R&D) supports partial mediation between the technological resources as the independent variable and the level of SME exports in LDCs as the dependent variable.

Table 5.3.2 shows the results for Step Four where the effect of technological resources is still significant ($p < 0.1$) when innovation (R&D) is controlled but the significance is reduced. The

final step suggests partial mediation. These findings support H9: Innovation (R&D) mediates the relationship between technological resources and the level of SME exports in Sub-Saharan LDCs.

Hypothesis H10: Innovation positively mediates the relationship between SME Financial resources and SME exports in Sub-Saharan LDCs. In step four, the relationship between financial resources and the level of SME exports in Sub-Saharan LDCs (tested earlier in Step One above) is re-examined but this time with innovation (R&D) included as a mediator. The research meets all the above criteria, which means that mediation is supported (See table 5.3.3). The analysis suggests that innovation (R&D) supports mediation between the financial resources as the independent variable and the level of SME exports in Sub-Saharan LDC as the dependent variable. Table 5.3.3 shows the results for Step Four. It is found that the effect of borrowing from banks is still significant ($p < 0.01$) but reduced, while the effect of capital finance is still significant ($p < 0.05$) when innovation (R&D) is controlled. The final step does suggest partial mediation, so these findings support H10. Finally, innovation (R&D) mediates the relationship between human resources and the level of SME exports in Sub-Saharan LDCs.

5.5 Summary of findings.

The thesis has attempted to analyse extensively the impact of human resources, technological resources and financial resources on the level of SME exports, using innovation (R&D) as the mediator variable. The summary of the findings from the analysis conducted are presented in the following table:

Table 5.5: Summary of objectives and findings.

Objectives		Findings	Hypothesis
1	To investigate whether SME resources significantly contribute to the likelihood of SME exports in Sub-Saharan LDCs.	It is found that the human resources, technological resources and financial resources have a significant positive influence on the level of SMEs exports in Sub-Saharan LDCs	H1: Supported H2: Supported H3: Supported
2	To investigate whether SME resources in Sub-Saharan LDCs will positively influence innovation.	It is found that resources are not significantly related to innovation (R&D) and positive influence on the level of SMEs exports in Sub-Saharan LDCs	H4: Not supported H5: Not supported H6: Supported
3	To investigate whether innovation will positively influence the likelihood of SME exports in Sub-Saharan LDCs.	It is found that innovation (R&D) will positively influence the likelihood of the SMEs to become an exporter.	H7: Supported
4	To investigate whether innovation mediates, strengthens and increases the relationship between the likelihood of SME exports in Sub-Saharan LDCs.	It is found that innovation (R&D) does not mediate the relationship between human resources and SME exports but mediates and strengthens the relationship between the technological and financial resources and SME exports in Sub-Saharan LDCs.	H8: Not supported H9: Supported H10: Supported

Source: Author, developed for research

5.6 Conclusion.

This chapter gives the results of the surveys conducted on 713 SMEs within Sub-Saharan LDCs. As the descriptive findings suggest, extensive analysis has been conducted using factor analysis, while regression analysis has been conducted using a mediator variable. Four objectives have been identified and analysed objective-by-objective as per the data collected.

The hypotheses have been tested and the results presented. The results gathered indicate that the resources available enable SMEs in Sub-Saharan LDCs to internationalise their business. While not all resources have an impact on innovation, financial resources do have an influence because innovation in human resources is negligible while technological innovation is time-consuming and capital intensive which is not suitable for a SME in Sub-Saharan LDC.

The results also found that innovation has a positive influence on exports from SMEs in Sub-Saharan LDCs. It also has the potential to mediate between resources available to SMEs and their internationalisation process. A summary of findings has been presented to conclude the analysis chapter. This chapter is followed by an extensive discussion of the results obtained.

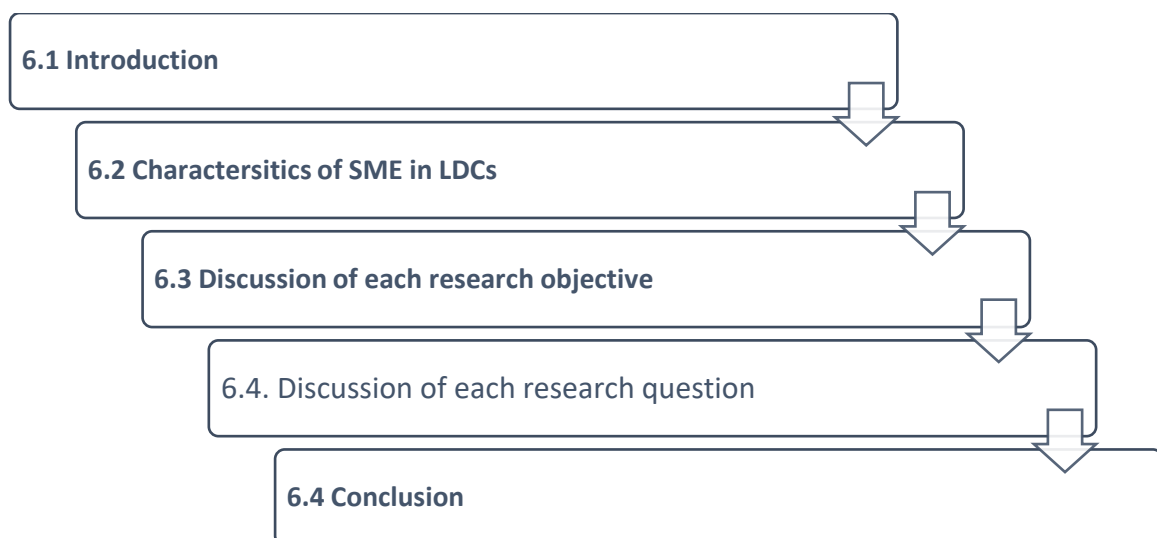
CHAPTER SIX DISCUSSION

6.1 Introduction.

This chapter presents a discussion of the research objectives outlined in chapter one of the thesis. The research has identified four objectives which have been further divided into ten hypotheses to achieve the aim of the intended research. The chapter hence highlights the findings that were determined after an extensive literature review and analytical analysis of the hypothesis and discusses the relevance of the findings.

Chapter six is structured in the following manner. Initially, the characteristics of an SME identified through the research process are discussed to develop an understanding of SME. This is followed by an evaluation of the relationship between the SMEs resources and the SMEs exports in Sub-Saharan LDCs and their corresponding results. The discussion of the relationship between the SME resources and innovation of SMEs in Sub-Saharan LDCs is then undertaken. The chapter then moves on to discuss the impact of innovation on SMEs exports and finally concludes with a discussion of the findings in the association between innovation, SME resources and SMEs exports in Sub-Saharan LDCs. Figure 6.1 present the key contents of the discussion.

Figure 6.1 Key contents of the discussion



6.2 Characteristics of the SMEs in LDCs.

The research applied descriptive statistics to the analysis of the various characteristics of SMEs present in LDCs. The results gathered from the data analysed from 713 SMEs surveyed in the Sub-Saharan region of Africa indicate that a majority of the SMEs operating in these countries are non-exporters, which implies that the SMEs are providing products and services that are not in demand in the international markets, nor do the SMEs have the efficiency or exposure to cater to the international market.

The most critical resources identified in the analysis conducted here are human resources (as represented by skilled workers and informal origin), technological resources (as represented by technology licensing) and financial resources (as represented by borrowing from banks and capital finance). The researcher found it necessary to evaluate the proportion of SMEs in the sample that employs these resources. The analysis identified that only one-third of the total SMEs operating in the region employ permanent highly skilled production workers. Furthermore, a majority of the firms did not officially register themselves at their time of inception.

SMEs in Sub-Saharan LDCs face uncertainty about their survival and hence try to avoid the legal aspects of establishing a business identity before starting operations. This may also be due to high corruption and bureaucratic red tape, causing businesses to refrain from registering themselves through the formal channels. The employment of full-time skilled labour is shown to have a direct impact on the percentage of sales in exports, while SMEs will benefit from employing and maintaining skilled workers. In terms of technical aspects, a very small percentage of the SMEs apply technology licensed from a foreign-owned company. This poses a challenge for these companies because the technological aspect is not owned by them and, as third-party manufacturers, any disturbance in their operations may result in the foreign company who owns the technological license ending the SME contract. Furthermore, as LDCs lack self-sufficiency in technological ingenuity, they are dependent on larger corporations.

In terms of financial characteristics of SMEs in LDCs, only one-fourth of the operating SMEs borrow from private or state-owned banks, while some of these companies even use capital financed by friends and relatives. These tendencies demonstrate that the companies are highly dependent on external financial aid to operate, highlighting potential problems of bankruptcy

in case of default repayments of loans and interests. The gap in external financing highlights the difficulties faced by SMEs to secure financing to expand their business. In conclusion, the analysis suggests that most SMEs operating in Sub-Saharan LDCs are non-export-oriented industries, while only a small portion employ permanent full-time skilled employees. These firms do not usually register themselves with the appropriate authorities when they launch. Only a handful of SMEs employ technological licenses which are owned by foreign entities. Furthermore, most SMEs do not have access to funds through banks and some even receive capital financing from friends and relatives.

6.3 Discussion of each research objective.

In this section, each objective of the research is discussed in detail in correspondence with the findings established throughout the process of the research. These objectives are discussed along with the hypothesis generated to form the conceptual framework of the study.

6.3.1. Objective 1: SME resources and SME exports in LDCs

The first objective of the research is to analyse the relationship between SME resources (human, technological and financial resources) and SME exports in Sub-Saharan LDCs. This objective approaches the positive influence of these resources on SMEs to become exporters in Sub-Saharan LDCs. Three hypotheses were established for this relationship, which are H1: Human resources of SMEs in Sub-Saharan LDCs have a positive influence on the likelihood of an SME becoming an exporter; H2: Technological resources of SMEs in Sub-Saharan LDCs have a positive influence on the likelihood of an SME becoming an exporter; and H3: Financial resources of SMEs in Sub-Saharan LDCs have a positive influence on the likelihood of an SME becoming an exporter.

As defined by McMahan and McWilliams (1994), human resources are distributed over multiple levels of an organisation. They control the firm and form a crucial part of attaining organisational objectives. The importance of human resources cannot be denied in the overall development of a firm as they are at the forefront of the resources that are required by a firm to gain and maintain a competitive advantage. Human resources are a composite of skilled and unskilled workforces, informal sector experiences along with the size of the human resources

which is also denoted by the firm size. It is critical for an organisation to mobilise the available human resources effectively in pursuit of the overall organisational goals.

Research conducted by authors such as Onkelinx and Sleuwaegen (2008), Wright et al. (2001) and Panda and Reddy (2016) highlights the importance of firms investing in human resources, especially those enterprises that aim to be export-oriented. The hypothesis testing also established that there is a significant positive influence on SMEs having skilled workers and those belonging to informal sectors; hence, they have a positive influence on the firm becoming a potential export-oriented business. SMEs operating in Sub-Saharan LDCs thus need to invest in human resources to experience growth in business and export. Having effective human resources will aid the firm and help in operating efficiently, thus increasing the quality of work and eventually increasing the standards of the product matching international standards. Based on the resource-based view (RBV) theory, we concluded that SME exports have a positive relationship with the experience of management staff i.e., an SME employing skilled workforce and experienced management is more likely to become an export-oriented firm in an LDC. It also establishes that an important aspect of the success of exports from an SME is the skills and experiences of the entrepreneur.

Researchers such as Melville et al. (2004) and Brugel et al. (2003) have identified technology as an important resource and a source of advantage for the firm. It is evident from their studies that certain SMEs owe their existence to the superior technological advantage which they possess. For example, companies that operate in the high technology sector can remain competitive due to the possession of better technology in comparison to their competitors. From the regression analysis conducted to verify hypothesis H2: technology licensing is identified to have a significant positive influence on SME exports in LDCs. This implies that SMEs working with licensed technologies can reach export potential in comparison to SMEs that do not have a technological license. The results indicate that foreign companies are willing to provide their technology to offer their products for international markets. This trend is also indicative of the lack of technological advancements and unreliability of local technology.

From the literature gathered, it is evident that technological resources are integral to supporting the integration of LDC economies in the global value chains by enabling successful technological transfers. As the Least Developed Countries (LDCs) become strongly integrated within the domestic and global value chains, the flow of funds generated from within the

economy are expected to surge, resulting in the accumulation of government reserves. This will result in reduced dependency of these economies on external financing, official aids and funds. The use of technology has enabled stronger connections between SMEs and exports and has improved the overall returns on capital invested. Technology also enables improved production quality and access to newer markets at a lower business acquisition cost and plays an important role in the incentive to export, placing a firm on the global business map.

The third resource with an impact on the operations of an SME is financial resources. SMEs located in Least Developed Countries (LDCs) have been shown to face several hardships in assimilating financial resources. Since these countries are structurally challenged, it is difficult for these nations to attract significant foreign investments other than aid-based official development assistance. Strong reliance of these economies on the influx of external financial resources is a dampener to their overall economic growth, most noticeably when a global financial crisis is unfolded and the developed nations or the donor nations are struggling with their own weakened economies and their problems. Financial resources are comprised of bank borrowings and capital finances through friends, family and relatives. Authors such as Onkelinx and Sleuwaegen (2008), Covin and Slevin (1989) and Gunaratne (2009) underline the importance of financial resources when pursuing internationalisation desires, and the difficulties in obtaining financing as a significant barrier to SMEs aiming to expand internationally.

The regression analysis conducted in the research to verify hypothesis H3 has found that there is a strong positive correlation between SME exports and funding from banks and financing capitals from friends and families. The results are indicative of the fact that there is a heavy reliance on external financing from SMEs to become export-oriented units. The firms either do not have enough profits or are unwilling to use their earnings as a source for financing their enterprises. A heavy dependence on external financing demonstrates that SMEs lack financial independence of and highlights the crude financial problems that surround the LDC economies.

6.3.2 Objective 2: SME resources and SME innovation in LDCs.

The second objective of the research was to analyse the relationship that exists between SME resources and the innovation of SMEs in Sub-Saharan LDCs. In the context of this objective, the research identified three hypotheses to verify the objective. These hypotheses are H4: Human resources of SMEs in Sub-Saharan LDCs will positively influence SME innovation; H5: Technological resources of SMEs in Sub-Saharan LDCs will positively influence SME innovation; and H6: the financial resources of SMEs in Sub-Saharan LDCs will positively influence SME innovation. These hypotheses aim to verify the influence of human, technological and financial resources over innovation in SMEs. It can be understood from our research that the innovation of a firm lies in its ability to generate new ideas or develop products or services that can increase the firm's benefits. The research and development (R&D) department of an SME is a measure of innovation in terms of the number of new ideas, products and the processes or services it produces.

The human resources of an SME are indicative both of human capital and their informal origin, which is reflective of skilled workers and informal sector experiences. In their respective studies, Snell and Dean (1992), Gupta and Singhal (1993) and Antonioli and Pinni (2011) have argued that acquiring the right people helps a firm to be innovative and increases the profitability of the firm. Therefore, improving the quality of human resources helps the firm to access more opportunities for innovation.

However, the findings of the regression analysis suggest that human resources are not significantly related to the level of innovation. In fact, the results obtained highlight that the presence of highly skilled staff does not affect the innovation level of the firm. Nonetheless, human resources can add value during the research and development phase of a product or service and can also provide better styles of administration and management which may benefit the SME in the long run, albeit with little bearing on innovation itself. Based on the current study we conclude that having intelligent, effective and skilled human capital increases the possibilities of the development of new ideas for the operation of the enterprise, but does not have an impact on the innovation level.

Our research has analysed the relationship between technological resources and innovation. The findings from the literature highlight the utmost importance of technology in the present-

day world. Authors such as Mercader et al (2006) and Srivastava (2011) have thoroughly explained that technological resources refer to the resources that contribute to achieving technological advancement for a firm and are primarily comprised of the information technology processes and systems that are in place in an organisation. These resources are measured by technology licensing i.e., the ability of a firm to patent and license their technology. The development of new technologies for firms usually begins with what other firms do, which usually happens through technology licensing or by searching in a different direction, or by the invention of a previous patent. Technological capabilities therefore help firms invent, while technology encourages innovation within SMEs using the emergence of innovation ecosystems in such locations as an important driver for success.

The term “technological advancement” is highly synonymous with innovation. An SME present in an LDC with access to a technology license will be more innovative in comparison to an SME that lacks technological input. The reason is that the prevailing technology in LDCs tends to be outdated and not up to international standards. The presence of technology licensing then aids in bridging the technological gap prevalent between LDCs and developed markets, and hence provides an opportunity to bring innovation to existing technologies in those countries. However, this fact has not been supported by the regression analysis conducted to verify hypothesis H5, as the results from the regression analysis indicate a relationship between technological resources and SME innovation in Sub-Saharan LDCs which is not strong.

Instead, the results of our research indicate that the presence of technological resources does not have a positive influence on SME innovation in Sub-Saharan. The result may be attributed to the fact that the prevalent technologies in Sub-Saharan LDC are so outdated it is improbable that they will ever achieve the level of innovation required to reach the same level of technological advancement as in developed nations. Moreover, technological innovations are capital intensive, while SMEs in Sub-Saharan LDCs do not have the financial resources required to invest in R&D and maintain systems.

The third hypothesis then aims to verify the relationship between financial resources and innovation. Our research reveals that the financial resources of an SME are the capital resources required by a firm to invest in its overall growth and so give it the strength to interact with the external environment. Other researchers have investigated how the availability of these financial resources is critical to the achievement of organisational objectives because these

resources determine the potential of a firm to execute its business plan to profit and increase its volume of sales (Srivastava et al 2001; Arndt et al., 2009; Eniola and Entebang 2015). The literature suggests that financial resources play an important role in providing opportunities to contribute to the growth of the economy through innovation.

Least Developed Countries (LDCs) are generally largely dependent on external financing. A significant portion of the external financial assistance and investment received is spent on the mobilisation of resources to meet local demand and consumption, pushing economies backwards in terms of holistic growth and development as they do not have much research and development leaving little room for finances to be invested in innovation. The regression analysis conducted for H6 verifies the hypothesis and establishes a strong correlation between financial resources and SME innovation in Sub-Saharan LDCs. Like other resources, the financial resource of an SME is crucial for its operations. A SME having a strong financial record can invest in the innovative process, having finances to be spent on the research and development process. The higher the investment in the R&D process, the higher the resulting innovation so making the firm more competitive.

6.3.3 Objective 3: Innovation and SME exports in LDCs.

The third objective of the research is to explore the correlation between SME innovation and SME exports in Sub-Saharan LDCs. To complete this objective of the research, a seventh hypothesis was established, H7: Innovation has a positive influence on the likelihood of an SME becoming an exporter in Sub-Saharan LDCs. To discuss this hypothesis, the researcher used a combination of an extensive review of the literature and regression analysis. The research literature finds that SMEs create new opportunities such as new businesses, new markets and developing firms. As widely researched and published, innovative capabilities are an important indicator that differentiates successful firms from the not-so-successful ones (Ahlstrom-Soderling, 2003; Horne, 1993).

The literature also suggests that innovative firms can grow at the cost of non-innovative firms, arguing that product innovation can improve the probability of firms improving SME exports in Sub-Saharan LDCs (Baldwin and Johnson 1995; Abubakar et al., 2019). The innovation of small and medium enterprises (SMEs) has been regarded as a pivotal contributor to the internationalisation of these firms. Various studies on SME innovation conclude that

innovation should include radical changes within the firms that impact the economy overall by offering a new and marketable product or service to the industry.

Further research findings provided by the literature indicate that innovation and internationalisation are related concepts that offer diversification benefits to small and medium enterprises. By being able to produce goods differently, or by producing different goods, or indeed by selling to customers belonging to different economic regions, small and medium enterprises add diversification benefits to their existing portfolio of business operations. Innovation is a valuable resource because it encourages growth and increased output which makes such firms stronger. This research has hence identified innovation as a resource that is critical to the innovation of SMEs.

From the findings of the regression analysis, it is suggested that the level of innovation (research and development) is significantly related to the level of SME exports in Sub-Saharan LDCs. This finding reinforces the claims made by the literature in terms of the positive correlation that exists between SMEs innovation and exports of SMEs. The analysis of this hypothesis suggests that an innovative SME yielding products and services out of the box have an upper hand in gaining export-based orders. Since the economies of Sub-Saharan LDC are very small and poor in comparison to the economies of developed and emerging economies, the competition between the SMEs is high. Having an innovative firm can result in an organisation gaining a competitive advantage.

When looking at the macro level of economics, an LDC economy that has innovative SMEs is more likely to attract more orders, so increasing its net exports and bringing in valuable foreign exchange. Hence, based on evidence from the literature review and the regression analysis findings of this research, it is evident that the presence of innovation does have a positive impact on increasing the export-oriented business of SMEs operating in Sub-Saharan LDCs.

6.3.4 Objective 4: SME Innovation, SME resources and SME exports in LDCs.

The fourth and last objective of the research was to study the relationship between SME innovation, SME resources and SME exports in Sub-Saharan LDCs. The last three hypotheses of the research have thus been established to complete Objective Four. These hypotheses are

as follows: H8- SME innovation positively mediates the relationship between SME Human resources and SME exports in Sub-Saharan LDCs; H9: SME innovation positively mediates the relationship between SME Technological resources and SME exports in Sub-Saharan LDCs; and H10: SME innovation positively mediates the relationship between SME Financial resources and SME exports in Sub-Saharan LDCs.

When examined closely, objective four of this research is an assimilation of the findings that were established in objectives one, two and three respectively. This objective has thus tried to link the resources of an SME and exports of an SME by introducing innovation as the mediation factor. The implication is that the introduction of SME innovation as another element to the resources will further help in increasing the level of exports in comparison to what might have been gained by the SMEs in the absence of innovation.

This research has critically tested the mediating role of innovative while evaluating the statistical significance of each of these resources in improving export generation from SMEs. The research has attempted to test statistically the significance of each of the individual resources - such as human resources, technological resources and financial resources - in generating exports from SMEs located in Sub-Saharan LDCs, as well as studying the mediating impact of research and development (R&D) on the contribution of these factors.

From the statistical tests conducted, it was found that the level of innovation (R&D) does not support mediation between the human resources and level of SME export, whereas it supports the mediation for technological resources and financial resources as the independent variable and the level of SME exports from the Sub-Saharan LDC as the dependent variable. The research suggests that in terms of controlling the innovation process, although there is a significant effect of exports on technology licensing, the mediation is not full. In terms of financial resources, the effect of borrowing from banks is still significant but reduced, while the effect of capital finances from friends and relatives is still significant when the level of innovation (R&D) is controlled, but the analysis suggests partial mediation.

The results of the statistical analysis indicate that innovation does not act as a successful mediator between human resources and exports of SMEs in Sub-Saharan LDCs. An SME that hires an experienced and skilled workforce may lead to any type of innovations in their style of operations and administrations, which could help the SME in gaining export-oriented

business. In terms of technological resources then, innovation has an impact on increasing exports but when innovation is controlled, the significance of technological resources decreases.

This research identifies innovation as incremental innovation rather than radical technological breakthroughs. With a constraint on resource access, and with the limitations of surviving in a hostile environment as experienced by the Least Developed Countries (LDCs), SMEs are expected to contribute incrementally to the existing products and processes rather than creating radical advancements or breakthroughs applicable to the overall industry or economy. Technology and innovation go hand-in-hand and with the advancement and adaptation of technology, there will always be innovation and more technologically advanced SMEs with the potential of attaining export-oriented orders.

When applying financial resources as an independent variable and exports as the dependent variable, innovation seems to mediate the relationship between the two. But controlling the level of innovation in an SME causes the relationship to be hampered. Financial resources are then a crucial resource that is required for operating and pushing the firm. The research has provided evidence that SMEs in Sub-Saharan LDCs rely heavily on external financial resources to run their business. It thus becomes imperative that this resource is taken care of with utmost precautions. The research suggests that with an adequate number of financial resources, innovation in the industry will help SMEs in Sub-Saharan LDCs to gain export business.

One key factor that impacts the performance of SMEs is the ability to innovate (Mile, 2010; Genc et al., 2019). According to Genc et al. (2019), there is a relationship between innovation and internationalisation performance. In other words, innovative SMEs are more likely to internationalise into foreign markets. A further salient point raised by the research is that innovation does not directly impact performance, but rather that the effect on company growth is only significant when it serves as a conduit for internationalisation. Notwithstanding, it must be acknowledged as a caveat that all the companies sampled here were part of an export promotion program. It is not unsurprising then that the links between performance, innovation and internationalisation are so strong.

6.4 Discussion of each research question.

This section of the thesis aligns the research findings with the research questions that were formulated in section 1.4. The discussion of the research questions is as follows:

6.4.1. What firm-specific resources have a direct relationship with the internationalisation of SMEs in Sub-Saharan LDCs?

The first research question probed which firm-related resources have a direct relationship with the internationalisation of SMEs in Sub-Saharan LDCs. The answer to this question was attained from objective one, which aimed to evaluate the relation between firm resources and the internationalisation of SMEs. The objective found that all three resources - human, technological and financial - evaluated in the study do have a direct relationship with the internationalisation of SMEs operating in Sub-Saharan LDCs.

The study found that human resources are essential for overall administrative and product development. A skilled and educated administrative staff will display the confidence to interact on an international platform. A skilled labour force will also be able to manufacture a product that is of a good quality and be accepted in the international market. Hence, human resources directly impact upon the internationalisation of SMEs in Sub-Saharan LDCs.

In terms of technological resources, the availability of good technology to a SME allows it to enhance its manufacturing process. Technology enables the creation of smoother process flows, both reducing redundancy and developing products at a faster pace. Our findings further indicate that SMEs working with licensed technologies can reach export potential in comparison to the SMEs that do not have a technological license. We would then conclude from our research that foreign companies are willing to provide their technology to offer their products for international markets.

The availability of adequate financial resource is crucial for any business and hence the dependence of SMEs to internationalise in sub-Saharan LDC is valid. The availability of capital to SMEs will hence allow them to invest funds in creating inventories and products that are required for exports. Further availability of financial resource will then enable further production growth and business expansion which is also required for internationalisation.

6.4.2. Does innovation have a mediating effect on the relationship between firm specific resources and the internationalisation of SMEs in Sub-Saharan LDCs?

The answer to this research question was achieved by objective four of the research. The objective aimed to link the impact of innovation on the relationship present between resources and internationalisation of SMEs operating in Sub-Saharan LDCs. The objective was able to answer the question by establishing that though innovation mediated the relationship of technological and financial resources with internationalisation of SMEs however it was unable to act as a mediator between human resources and internationalisation.

The findings indicate that innovation does not mediate the impact of resources on internationalisations. The reason is that innovation does not impact directly upon human resources. Instead, innovation will lead to higher skill creation which raises the quality of human resource available to SMEs which will lead to further innovation, although this does not impact on the internationalisation of SMEs.

Our research found that innovation does mediate the relationship between technological and financial resources because innovation plays a pivotal role in enhancing technological and financial resources that are available to SME. An upgrading of technological and financial resources then leads to an increase in efficiency, cost optimisation, decrease in wastage and integration of business. These factors further impact the internationalisation process of SMEs. A mediating role for innovation is thus established between technological and financial resources with internationalisation of SMEs in Sub-Saharan LDCs.

6.5 Conclusion.

This chapter has presented various findings of the research gained from an extensive review of the literature and analytical research. The findings indicate that the majority of SMEs - predominantly in Sub-Saharan LDCs - are non-export-oriented businesses that aim to hire a skilled stable workforce. The SMEs in question are dependent on technological licensing and external financing for their operations. Our research has managed to establish the fact that there is a strong positive relationship between the resources and exports from SMEs existing in Sub-Saharan LDCs.

Regarding the second objective, both the existing literature and current analytical results suggest a weak relationship between resources and innovation. Our findings suggest that the presence of human and technological resources do not necessarily help in increasing innovation in SMEs operating in Sub-Saharan LDCs. Instead, innovation in SMEs is more dependent on the financial resources present in Sub-Saharan LDCs.

The third research objective has been achieved by successful verification of the seventh hypothesis, H7, which highlights that innovation does have a positive and significant impact on the exports of SMEs from Sub-Saharan LDCs. The findings concerning this objective provide strong evidence to prove this point.

The final objective of the research was to study the effect on SME exports when innovation acts as a mediator for the resources. The findings of the study proved that the introduction of innovation to the technological and financial resources of SMEs in the Least Developed Countries helps SMEs to acquire export-oriented business.

CHAPTER SEVEN: CONCLUSION AND IMPLICATIONS

7.1 Introduction.

This study has aimed to review the relationship between the resources of Small and Medium Enterprises (SMEs) in Sub-Saharan Least Developed Countries (LDCs) and their internationalisation. Our research has also aimed to determine the impact and influences of innovation on these resources, and consequently on the level of exporting that SMEs are able to achieve.

This chapter presents a summary of the study's findings and points out the implications indicated by the research conducted. The conclusions of the study are drawn from the findings of the literature review, as well as the regression analysis conducted on the data to analyse the extent of the impact of resources and innovation on the internationalisation of SMEs in LDCs.

This chapter highlights the way in which the framework created to establish this relationship has yielded its results. The chapter then moves on to discuss the implications of SME internationalisation in Sub-Saharan LDCs and potential benefits that policymakers can gain from this research. Finally, the chapter concludes by providing a framework for future work within the field, and by acknowledging the limitations which have hindered the findings of the research. Figure 7.1 present the key contents of the conclusion and its implications.

Figure 7.1 Key contents of the conclusion and implications.

7.1 Introduction	
7.2 Research Findings	
7.3 Implications for Research theory	
7.4 implication for SMEs internationalisation in Sub-Saharan LDCs	
7.5 Implication on Government polices for Sub-Saharan LDCs	
7.6 Limitations of Rsearch	
7.7 Possible Areas for Future Research	
7.8 Conclusion	

7.2 Research findings.

The research problem presented in this study has focused on improving the internationalisation of SMEs in Sub-Saharan LDCs by way of exports. To address the research problem, the study has taken up a resource-based perspective to develop an understanding of the impact of resources on the level of internationalisation in SMEs operating in Sub-Saharan LDCs.

As part of the research, the resource-based view was also engaged to consider how an understanding could be developed of how innovation acts as a mediator between the resources and the level of exports from SMEs. The proposed framework for the research (Figure 3.1) then generated ten hypotheses presented in Chapter 3. These hypotheses were tested in line with the research objectives. The following section provides a conclusion to the findings of each objective:

7.2.1. Objective 1: To examine the direct relationship between an SME's resources and the likelihood of SME exports in LDCs.

The first objective of the research was to investigate whether resources significantly contribute to the likelihood of exporting of SMEs in Sub-Saharan LDCs. The analysis of the framework then established that resources (human, technological and financial) do have a positive

influence on the level of SME exports in Sub-Saharan LDCs. Consequently, the availability of human, technological and financial resources to an SME in the Sub-Saharan LDCs deeply impacts upon its ability to become an international firm.

Human resources contribute by providing an efficient workforce both in terms of labour and administrative staff. Having sufficient knowledge in terms of their work, an effective workforce will focus on the quality of the product or service, which will then enable an SME to provide quality products and services to international clients. While the informal origin of human resources impacts the internationalisation of SMEs, technological resources - or the lack thereof - also impact deeply upon the internationalisation of SMEs in Sub-Saharan LDCs.

Technology licenses enable firms to ensure speed and precision in the work done, increasing output efficiency and thereby benefitting the development of the firm. Our research highlights that SMEs can procure financial resources from banks, friends and relatives. Having easy access to external financial aid then helps SMEs to grow with the investment that is available to them. Easily procurable financial resources thus enable SMEs to employ better human and technological resources and help with research and development.

7.2.2. Objective 2: To examine the direct relationship between an SME's resources and the likelihood of SME innovation in LDCs.

The second objective of the study was to investigate whether SME resources in Sub-Saharan LDCs will positively influence innovation. Here the research concludes in finding that human resources and technological resources do not impact on innovation. This adds to the perception on the part of importing economies that Sub-Saharan LDCs are a source of cheap labour, resulting in reduced production costs for their products and thereby fueling the notion that innovation is not required for human resources in the region.

In reality, LDCs are way behind in terms of technological resources, comparing the technology available across the globe. However, technological innovation at the level of the developed world may not be beneficial as it is to the LDCs in the Sub-Saharan region, as these organisations may not be in a position themselves to outpace the technological advancement of the developed world. Hence, it appears more advantageous for LDCs to focus more on adopting technological licensing rather than pursue innovation similar to the developed world.

The analysis supported the existence of a relationship between innovation and financial resources. This relationship is positive, as financial independence is important for SMEs to internationalise their businesses. Innovation will lead to the development of better financial products and services becoming available to SMEs, so enabling them to grow their businesses. Innovation in the financial systems then results in the development of new financial products and services for customers, thus contributing to the internationalisation of SMEs.

7.2.3. Objective 3: To examine the direct relationship between innovation and the likelihood of SME exports in LDCs.

The third objective of the research was to investigate whether innovation is likely to influence SMEs exports positively in Sub-Saharan LDCs. The research indicated that innovation does have a positive influence on the likelihood of an SME in a sub-Saharan LDC becoming a potential exporter. Innovation is a dynamic process that SMEs need to adopt in order to remain proactive in their fields. The process of innovation thus helps firms gain a sustained competitive advantage (Dereli, 2015).

Our study found that innovation impacts the firm as a whole and results in the overall development of an SME. An innovative SME is one that is dynamic in its style of operation and ready to adapt to new opportunities. Consequently, providing the SME with a competitive advantage over other SMEs will thereby attract more business.

7.2.4. Objective 4: To investigate the mediating effects of innovation in the relationship between SMEs' resources and the likelihood of SME exports in LDCs.

The fourth and final objective of the study was to investigate whether innovation mediates and increases the relationship between resources and the level of SMEs exports in Sub-Saharan LDCs. The research concludes that innovation is unable to act as a mediator between human resources and the level of exports from SMEs in Sub-Saharan LDCs. This conclusion is supported by the knowledge that innovation in human resource is not a dominant factor, and that there is little innovation associated with human resources.

On the contrary, the results support innovation as a source of mediation for technological and financial resources to strengthen and increase the level of SME exports in Sub-Saharan LDCs. Innovation and the adaptation of innovative processes in both these resources - technology and financing - will thus lead to the creation of opportunities for SMEs. The study emphasises that even though innovation does not impact upon the technological resources, it does mediate the increase in exports. This is a crucial aspect of the research as it highlights the variance of technological resources. Findings from the current study promote the use of technology in the form of licensed technology for SMEs in LDCs but discourage an emphasis of the development of technology in LDC SMEs. R&D for technological innovation is an expensive, time-consuming procedure and is hence not recommended as a way for SMEs to conserve their resources.

The results obtained from the analysis are conclusive in achieving the aim of the research to analyse the relationship between the resources of an SME in Sub-Saharan LDCs with the level of internationalisation of the firm. The study highlights the core and importance of these relationships and suggests basic areas where SMEs could benefit from focusing their efforts to see growth in their businesses. The findings of the study also provide certain implications for the theories discussed in the research. These findings are discussed in detail in the following section.

7.3 The theoretical implications of the research project.

Several theoretical implications can be drawn from the current research to make a contribution to the relevant literature. Three theories were used in the research for the development of the framework used to complete the study. The first theory was the Resource-based View of SME internationalisation (Barney, 1991; Westhead et al., 2001). Here the research was able to establish a relationship between resources and SME internationalisation. The thesis then presents findings that indicate a positive relationship between the resources and internationalisation of SMEs and further confirms the RBV theory.

The second theory applied by the research is institutional theory, which shows that innovation is linked with the hostile institutional factor presented by North and Smallbone (2000), Welter et al. (2012) and Kotey (2014). The research adds to this theory by identifying specific factors, such as human, financial and technological resources, to find that there is a positive correlation

with the resources and innovation. Furthermore, the results indicate that technological advancement reduces hostility and improves relations between innovation and internationalisation.

The final theory applied during the research was contained in the SME export literature. This theory considered the factors that affect the likelihood of an SME becoming an exporter in an LDC. Within this context, the research supports the works of Onkelinx & Sleuwaegen (2008) and Abubakar et al. (2019) in stating that the internationalisation of SMEs has been identified as a valuable contributor to national economic development. The research also adds to the findings of Prime and Butler (2001), Richard (2000) and Miller & Shamshie (1996) by supporting with their research that it is imperative to understand the relationship between a firm's resources and internationalisation by policymakers and governments. The current research also supports studies conducted by Ruzzier et al. (2006), Ibeh (2003) and Naldi (2008) by highlighting that the internationalisation of SMEs is dependent upon resources.

The current research also contributes by supporting the works of Huselid (1995), Burgel et al. (2000), Lawlor (2014) and De Jong & Brouwer (1999), whose studies emphasise the importance of human resources as a precursor to internationalisation. Our study further supports Covin & Slevin (1989) and Gunaratne (2009) in relation to the importance of financial resources when pursuing internationalisation aspirations. This research has therefore made significant contributions to the literature with regard to the internationalisation of SMEs in LDCs and has served to back up existing theories and knowledge.

7.3 Implications for SMEs' internationalisation in Sub-Saharan LDCs.

The economic situation in which LDCs find themselves today in attracting export-oriented orders in the manufacturing industry could lead to and benefit the development of national economies. Financial resources have been identified as an important factor impacting upon the exports of SMEs. Hence, a strong international market for an LDC would yield many benefits that a country may reap.

In terms of economic implications, the flow of foreign currency into the domestic market can help bridge the gap of the fiscal deficits held by the country. Furthermore, the influx of foreign currency can provide stability to the local currency, thus resulting in a more stable national

economy. To handle international trading, the financial sector of the LDC nation also needs to be strong. The internationalisation of SMEs will increase the workload of the financial sector, thereby improving the services provided as well as the standard of service.

The internationalisation of SMEs can produce multi-dimensional benefits for the human resources of a nation. Firstly, it will create an upsurge in jobs, leading to a decrease in unemployment which will have an agreeable knock-on effect of decreasing crime. Obtaining employment will further increase the physical, mental and financial security of the public. Internationalisation will also bring with it a demand for a skilled workforce, which could lead to a better education system in the country where skills can be developed by citizens. Thirdly, expenditure is directly proportional to income, meaning that a rise in income will lead to a rise in demand which would later result in the setting up of more industries to cater to this demand. The rising living standards of the population can also create greater public awareness of unhealthy and unhygienic habits. Consequently, one can safely conclude that the internationalisation of SMEs in Sub-Saharan LDCs can increase the overall quality of life for citizens.

The findings indicate that financial resource are crucial for SMEs to attain internationalisation. An absence of adequate financial availability and services limits the functioning of SMEs as it hinders the cross-border transfer of financial resources. Furthermore, internationalisation is an investment-oriented process and SMEs need funds to execute orders. The availability of financial support to help internationalisation will eventually allow the country to exit the LDC category. Finally, in terms of innovation, technological advancement has the greatest impact on innovation. The presence of technology allows SME to innovate. Moreover, the effective management of technological resources by SMEs can lead to greater innovation.

On the whole, the internationalisation of SMEs in Sub-Saharan LDC nations will result in the overall development of the nation. Internationalisation will bring with it a superior financial and technological environment to a more secure country. It may result in creating jobs, improving lifestyles, reducing crime and improving infrastructure. Internationalisation can also result in creating a more formal industrial sector, thereby increasing the economic activities of the country and placing the nations on a track to economic and social development. Thus, the internationalisation of SMEs results in the overall development of the financial, human and technological resources of LDC, thus bringing about overall development.

7.5 Implications for government policies in Sub-Saharan LDCs.

Based on the findings of the current research project, there are clear implications for policymakers which, if heeded, can assist in the development of the Least Developed Countries (LDCs) and support the internationalisation of Small and Medium Enterprises (SMEs). Policymakers would do well to take note of these implications. Informal structures are heavily present in LDCs, so government recognition of this sector of business would enable them to gain easier access to financing from the formal sector. In so doing, governments will help integrate the informal sector into the economy which can support SMEs directly and indirectly in their expansion into the international market. Furthermore, policymakers focusing on increasing training opportunities to increase the productivity of workers – for instance, by conducting workshops, seminars or conferences - can be beneficial not only to SMEs but to entire nations.

The study also has implications for policymakers to encourage the adaptation of technology licenses as these may play a crucial role in the development of SMEs. More policies should be framed in such a way so as to adopt technology and promote digitalisation. A technological and digitisation push from policymakers would lead to technological advancements in the country. These advances would trickle down further to help develop more technologically sound industries, resulting in the increased internationalisation of SMES.

Our research finds that internationalisation and export-oriented business require an adequate flow of capital. This study thus implies that policies designed to allow easy access of capital to SMEs in the process of internationalising their businesses, not only benefit SMEs but entire nations. These policies may take the form of lower interest rates, bank guarantees, capital funding and ease in exchange of currency. Policies may also be introduced to promote exports from LDC nations that provide tax benefits to SMEs in the forms of tax rebates, lower VAT and lower income tax.

7.6 The limitations of research.

This study has been able to accomplish its intended aims and objectives. However, there were factors encountered in the process of the research that limited the impact of the findings underscored here. These are among the implications to be considered when taken in a context of generalised findings.

Firstly, the scope of the study was limited to LDCs in the Sub-Saharan region, with only five countries having been considered. Consequently, a cautious approach should be taken when extending the findings of the current study to other LDCs in the Sub-Saharan region and other parts of the world. Secondly, the study only focused on three resources - the human, technological and financial. While these key resources have considerable influence on the operations of SMEs in Sub-Saharan LDCs, the impact of other resources such as infrastructure, connectivity and the availability of raw materials also has a significant bearing on the internationalisation process of SMEs and possibly on the implications of this very research.

Thirdly, the research is restricted to defining an SME as a firm with less than 250 employees (the European standard for an SME). A firm operating in an LDC may consider this size of workforce as a large-scale business. Consequently, an SME definition customised to LDCs might result in more accurate findings and implications that might serve more precisely to benefit the internationalisation of SMEs. Fourthly, the study was confined to investigating the impact of innovation as a mediator between the resources and the internationalisation SMEs. For this reason, the results may not be applicable to the impact that innovation has on other dimensions of operations which may also contribute to internationalisation.

Finally, the study is limited by the data used for the research, insofar as it is dated 2016 and comes from a secondary source - the WBES 2016. Consequently, its findings may not truly represent the most updated and precise information about the SMEs in those LDCs. This consideration is also relevant because the data only counts SMEs belonging to the formal structure. Data from the informal structure of SMEs has not been considered.

Furthermore, the study was unable to assess the results for different control parameters and hence their impact has not been investigated due to the unavailability of data within these parameters. An awareness of these limitations is essential as it allows for them to be factored

in when determining the direction of future research. Later studies may be undertaken to expand current knowledge and gain a deeper understanding into the factors that can act as catalysts to help SMEs operating in LDC to enter the international market and gain recognition. The recommendations for future research are discussed in the next section.

7.7 Suggestions for future research.

The previous section highlighted the limitations of the current research, which was conducted to understand further the relationships between resources, innovation and the internationalisation of SMEs operating in LCDs in the Sub-Saharan region. This study hence provides a base from which future researchers can leap into a greater expanse of knowledge on the topic.

Our research has identified areas in which further investigation can be conducted to expand and strengthen the implications of the current study. Since, our approach has been based on quantitative data that applies a more explanatory approach, future qualitative research could also be conducted following a descriptive research philosophy and approach. This type of research might also help in identifying factors that act as promoters or barriers in influencing the impact of resources on the internationalisation of SMEs. It will also benefit from facilitating an understanding of the emotions that SME operators may experience during the process and the difficulties they face on a day-to-day basis operating in countries that lack the basic services to provide to firms.

Further research could also be attempted on all countries that are part of the Sub-Saharan LDC group which would contribute to greater accuracy and understanding of regional trends and challenges. By virtue of meeting the criteria for this categorisation, and given that LDCs are unable to provide sound infrastructure and are likely to have an unstable political climate, further research on the topic that considers these two themes would be well placed. These are crucial aspects of the internationalisation of SMEs, as the absence of a sound infrastructure and an unstable political environment can cost SMEs valuable resources and hinder their progress to internationalisation.

WBES surveys are conducted every three years after which the corresponding data is published. The current research has applied the data collected from the 2016 WBES survey,

with the next survey following in 2019. Any follow-up to the current research would benefit from using data from the most recent 2019 survey. By so doing, a comparative analysis of former and more recent SME and LDC circumstances might be accepted. Such follow-up studies could also shed light on the process of development in LDCs in the Sub-Saharan region. Furthermore, the availability of data for different control parameters taken from a more recent survey would add to the current body of knowledge.

7.8 Conclusion.

The study has established that the availability of resources has a positive impact on the internationalisation of SMEs in Sub-Saharan LDCs. The importance of resources has been established and how the development of each of these resources might enable the development of SMEs and provide them with a competitive edge to compete in the global economy. Our research has also been able to establish that innovation does have an impact on the internationalisation process of SMEs and may also play a mediating role between certain resources and internationalisation. The research recommends that the governments of Sub-Saharan LDCs devise strategies and policies that will enhance the availability of resources to the SMEs, while the SMEs themselves should focus on increasing their efficiency and use the optimal resources available in order to grow their business and establish a strong foothold in the international marketplace.

8. References

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Appendix A

The world bank enterprise survey

QUESTIONNAIRE NUMBER **id**

0																	
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 RECORD NUMBER **recnumber**

								0	0
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 ROTATION
 PREFERENCE NUMBER **preference**

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rotation

THE WORLD BANK
Enterprise Survey
Manufacturing Module (2013)

GPS Coordinates	
Degrees North (Latitude)	lat
Degrees East (Longitude)	lon

A. CONTROL INFORMATION [TO BE COMPLETED BEFORE INTERVIEW]

A.0 Questionnaire a0	Module
Manufacturing	1

A.1 Country	
a1	

A.1a Language	
a1a	

A.2	Sampling Region a2
Region A	1
Region B	2
Region C	3
Region D	4
Region E	5

A.3a	Screener Region (coded ex post) a3a
Region A	1
Region B	2
Region C	3
Region D	4
Region E	5

A.3x Name of city/town/village	
a3x	

A.3b Is this city the official capital city? a3b	
Yes	1
No	2

A.3c Is this city the main business city? a3c	
Yes	1
No	2

A.3 Size of locality a3	
City with population over 1 million	2
Over 250.000 to 1 million	3
50.000 to 250.000	4
Less than 50.000	5

A.4 Industry		Sampling sector a4a	Screener sector a4b
Manufacturing Section D	Food	15	15
	Tobacco	16	16
	Textiles	17	17
	Garments	18	18
	Leather	19	19
	Wood	20	20
	Paper	21	21
	Publishing, printing, and Recorded media	22	22
	Refined petroleum product	23	23
	Chemicals	24	24
	Plastics & rubber	25	25
	Non metallic mineral products	26	26
	Basic metals	27	27
	Fabricated metal products	28	28
	Machinery and equipment (29 & 30)	29	29
	Electronics (31 & 32)	31	31
	Precision instruments	33	33
	Transport machines (34&35)	34	34
	Furniture	36	36
	Recycling	37	37
Retail	Retail	52	52
Other Services	Wholesale	51	51
	IT	72	72
	Hotel and restaurants: section	55	55

Manufacturing module

QUESTIONNAIRE NUMBER

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H		
Services of motor vehicles	50	50
Construction Section F:	45	45
Transport Section I: (60-64)	60	60

A.5 Sector match between screener information and sample frame **a5**

Yes, screener and sample frame info match	1
No, screener and sample frame do not match but establishment still does activities that match sample frame	2
No, does not match	3

A.6 Size	Sampling size a6a	Screener Size a6b
Micro <5	0	0
Small >=5 and <=19	1	1
Medium >=20 and <=99	2	2
Large >=100	3	3

A.7 Establishment is part of a larger firm **a7**

Yes	1
No, a firm on its own	2

A.7a

Number of establishments that form the firm	a7a
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A.8 Type of establishment **a8**

HQ without production and/or sales in this location	1
HQ with production and/or sales in this location	2
Establishment physically separated from both HQ and other establishments of the same firm	3
Establishment physically separated from HQ but it locates with other establishments of the same firm	4
DOES NOT APPLY	-7

A.9 Are establishment's financial statements prepared separately from HQ's statements? **a9**

Yes	1
No	2
DOES NOT APPLY	-7

A.10 Are establishment's financial statements prepared separately from other establishments of the same firm? **a10**

Yes	1
No	2
DOES NOT APPLY	-7

A.11 If HQ, are financial statements independent from the rest of establishments? **a11**

Yes	1
No	2
DOES NOT APPLY	-7

A.12 Interviewer code **a12**

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A.13 Supervisor code **a13**

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QUESTIONNAIRE NUMBER

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A.14 Time face-to-face interview begins:

Day (dd)	Month (mm)	Year (yyyy)	Hour (00 to 23)	Minutes (00 to 59)
a14d	a14m	a14y	a14h	a14min

READ THE FOLLOWING TO THE RESPONDENT BEFORE PROCEEDING.

The goal of this survey is to gather information and opinions about the business environment in [insert country name]. The information gathered here will help the World Bank to develop new policies and programs that enhance employment and economic growth.

The information obtained here will be held in the strictest confidentiality. Neither your name nor the name of your business will be used in any document based on this survey.

B. GENERAL INFORMATION

READ OUT THE FOLLOWING INTRODUCTORY SENTENCE ONLY IF A7 = 1 (yes):

The first few questions apply to the firm which your establishment is part of.

B.1 What is this firm's current legal status? **SHOW CARD 1**

Shareholding company with shares trade in the stock market	1
Shareholding company with non-traded shares or shares traded privately	2
Sole proprietorship	3
Partnership	4
Limited partnership	5
OTHER (SPONTANEOUS-SPECIFY) <u> b1x </u>	6
DON'T KNOW (SPONTANEOUS)	-9

SKIP TO B.2

b1

INTERVIEWER: PLEASE NOTE WHEN b1 IS 3 (SOLE PROPRIETORSHIP), WRITE 100% FOR QUESTION b3.

B.3 What percentage of this firm does the largest owner or owners own?

	Percent
Percentage held by largest owner or owners	b3 %
DON'T KNOW (SPONTANEOUS)	-9

QUESTIONNAIRE NUMBER

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B.2 What percentage of this firm is owned by each of the following: **SHOW CARD 2**

	Percent	DON'T KNOW (SPONTANEOUS)
Private domestic individuals, companies or organizations	b2a %	-9
Private foreign individuals, companies or organizations	b2b %	-9
Government or State	b2c %	-9
Other	b2d %	-9
	100%	

IF 100% END INTERVIEW

INTERVIEWER: CHECK THAT TOTAL SUMS TO 100% (UNLESS RESPONDENT DOES NOT KNOW)

B.4 Amongst the owners of the firm, are there any females?

Yes	1	
No	2	<i>SKIP TO B.5</i>
DON'T KNOW (SPONTANEOUS)	-9	<i>SKIP TO B.5</i>

b4

B.4a What percentage of the firm is owned by females?

	Percentage
Percentage of female ownership	b4a %
DON'T KNOW (SPONTANEOUS)	-9

READ ONLY IF A7=1 (yes)
I want to proceed by asking you about this establishment only.

B.5 In what year did this establishment begin operations?

	Year	Answer from previous round
Year establishment began operations	b5	
DON'T KNOW (SPONTANEOUS)	-9	

INTERVIEWER: PROVIDE FOUR DIGITS FOR YEAR

B.6 How many full-time employees did this establishment employ when it started operations? Please include all employees and managers (**INTERVIEWER: INCLUDE RESPONDENT WHEN APPLICABLE**)

	Number
Full-time employees at start-up	b6

QUESTIONNAIRE NUMBER

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DON'T KNOW (SPONTANEOUS)	-9
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B.6a Was this establishment formally registered when it began operations?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

b6a

B.6b In what year was this establishment formally registered?

	Year	Answer from previous round
Year establishment formally registered	b6b	
DON'T KNOW (SPONTANEOUS)	-9	
NEVER REGISTERED (SPONTANEOUS)	-7	

INTERVIEWER: PROVIDE FOUR DIGITS FOR YEAR.

B.7 How many years of experience working in this sector does the Top Manager have?

	Years
Manager's experience in sector	b7
LESS THAN ONE YEAR	1
DON'T KNOW (SPONTANEOUS)	-9

B.7a Is the Top Manager female?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

b7a

B.8 Does this establishment have an internationally-recognized quality certification?
(INTERVIEWER: SOME EXAMPLES ARE ISO 9000 or 14000, or HACCP)

Yes	1
No	2
STILL IN PROCESS	-6
DON'T KNOW (SPONTANEOUS)	-9

b8

QUESTIONNAIRE NUMBER

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C. INFRASTRUCTURE AND SERVICES

READ THE FOLLOWING TO THE RESPONDENT BEFORE PROCEEDING.
Now, we turn to the establishment's operations

C.3 Over the last two years, did this establishment submit an application to obtain an electrical connection?

Yes	1	
No	2	<i>GO TO QUESTION C.6</i>
DON'T KNOW (SPONTANEOUS)	-9	<i>GO TO QUESTION C.6</i>

c3

C.4 In reference to that application for an electrical connection, approximately how many days did it take to obtain it from the day of the application to the day the service was received?

	Days
Wait for electrical connection	c4
LESS THAN ONE DAY	1
STILL IN PROCESS	-6
APPLICATION DENIED	-5
DON'T KNOW (SPONTANEOUS)	-9

C.5 In reference to that application for an electrical connection, was an informal gift or payment expected or requested?

Yes	1	
No	2	
DON'T KNOW (SPONTANEOUS)	-9	
REFUSAL (SPONTANEOUS)	-8	

c5

C.6 Over fiscal year [insert last complete fiscal year], did this establishment experience power outages?

Yes	1	
No	2	<i>GO TO QUESTION C.10</i>
DON'T KNOW (SPONTANEOUS)	-9	<i>GO TO QUESTION C.10</i>

c6

C.7 In a typical month, over fiscal year [insert last complete fiscal year], how many power outages did this establishment experience?

	Number	
Number of power outages in a typical month	c7	<i>IF 0, GO TO QUESTION C.9</i>

QUESTIONNAIRE NUMBER

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DON'T KNOW (SPONTANEOUS) **-9** *GO TO QUESTION C.9*

C.8 How long did these power outages last on average?

	Hours
Average duration of power outages in hours	c8
LESS THAN ONE HOUR	1
DON'T KNOW (SPONTANEOUS)	-9

C.9 Please estimate the losses that resulted from power outages either as a percentage of total annual sales or as total annual losses.

	Percent
Loss as percentage of total annual sales due to power outages	c9a %
NONE	0
DON'T KNOW (SPONTANEOUS)	-9

PROVIDE EITHER ONE OR THE OTHER, NOT BOTH

	LCUs
Annual losses due to power outages	c9b
NONE	0
DON'T KNOW (SPONTANEOUS)	-9

C.10 Over the course of fiscal year [insert last complete fiscal year], did this establishment own or share a generator?

Yes	1	
No	2	<i>GO TO QUESTION C.12</i>
DON'T KNOW (SPONTANEOUS)	-9	<i>GO TO QUESTION C.12</i>

c10

C.11 In fiscal year [insert last complete fiscal year], what percentage of this establishment's electricity came from a generator or generators that the establishment owned or shared?

	Percent
Percentage electricity from generators	c11 %
DON'T KNOW (SPONTANEOUS)	-9

C.12 Over the last two years, did this establishment submit an application to obtain a water connection?

Yes	1	
No	2	<i>GO TO QUESTION C.15</i>
DON'T KNOW (SPONTANEOUS)	-9	<i>GO TO QUESTION C.15</i>

c12

QUESTIONNAIRE NUMBER

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C.13 In reference to that application for a water connection, approximately how many days did it take to obtain it from the day of the application to the day the service was received?

	Days
Wait for water connection	c13
LESS THAN ONE DAY	1
STILL IN PROCESS	-6
APPLICATION DENIED	-5
DON'T KNOW (SPONTANEOUS)	-9

C.14 In reference to that application for a water connection, was an informal gift or payment expected or requested?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9
REFUSAL (SPONTANEOUS)	-8

c14

C.15 Over fiscal year [insert last complete fiscal year], did this establishment experience insufficient water supply for production?

Yes	1
No	2
The establishment does not use water for production	-7
DON'T KNOW (SPONTANEOUS)	-9

GO TO QUESTION C.22a
GO TO QUESTION C.22a
GO TO QUESTION C.22a

c15

C.16 In a typical month, over fiscal year [insert last complete fiscal year], how many incidents of insufficient water supply did this establishment experience?

	Number
Number of incidents of water insufficiency in a typical month	c16
DON'T KNOW (SPONTANEOUS)	-9

IF 0, GO TO QUESTION C.22a
GO TO QUESTION C.22a

C.17 How long did these incidents of insufficient water supply last on average?

	Hours
Average duration of insufficient water supply	c17
LESS THAN ONE HOUR	1
DON'T KNOW (SPONTANEOUS)	-9

C.22a At the present time, does this establishment use e-mail to communicate with clients or suppliers?

QUESTIONNAIRE NUMBER

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Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

c22a

C.22b At the present time, does this establishment have its own website?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

c22b

C.28 Does this establishment currently use cell phones for the operations of the establishment?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

c28

C.30 Using the response options on the card; To what degree is **Electricity** an obstacle to the current operations of this establishment? **SHOW CARD 3**
 Using the response options on the card; To what degree is **Telecommunications** an obstacle to the current operations of this establishment? **SHOW CARD 3**

		No obstacle	Minor obstacle	Moderate obstacle	Major obstacle	Very Severe Obstacle	(SPONTANEOUS)	
							DON'T KNOW	DOES NOT APPLY
Electricity	c30a	0	1	2	3	4	-9	-7
Telecommunications	c30b	0	1	2	3	4	-9	-7

QUESTIONNAIRE NUMBER

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D. SALES AND SUPPLIES

READ THE FOLLOWING TO THE RESPONDENT BEFORE PROCEEDING:
 The next topic to be covered is how and where this establishment makes its sales.

D.1a1 In fiscal year [insert last complete fiscal year], what was this establishment's main activity and product, that is, the activity and product that represented the largest proportion of annual sales?
ENUMERATOR: PLEASE SPECIFY THE ACTIVITY AND PRODUCT IN DETAIL, FOR EX., "LEATHER SHOE MANUFACTURING" NOT JUST SHOES' MANUFACTURING

Description	d1a1x
-------------	--------------

INTERVIEWER: THE FOLLOWING QUESTION IS NOT PART OF THE INTERVIEW. IT WILL BE FILLED OUT IN THE OFFICE

D.1a2 PLEASE CHOOSE THE 4-DIGIT ISIC REV. 3.1 CODE THAT BEST APPLIES TO THE ESTABLISHMENT'S MAIN ACTIVITY AND PRODUCT.

CODE OF THE MAIN PRODUCT AND ACTIVITY	Code d1a2
---------------------------------------	---------------------

D.1a3 What percentage of total sales does the main activity or product represent?

	Percent
Percentage of sales represented by main product or activity product	d1a3
DON'T KNOW (SPONTANEOUS)	-9

INTERVIEWER: PLEASE NOTE THAT THE NEXT QUESTION REFERS TO THE TOTAL SALES OF ALL PRODUCTS AND SERVICES

D.2 In fiscal year [insert last complete fiscal year], what were this establishment's total annual sales for **ALL** products and services?

	LCUs
Last complete fiscal year's total sales	d2
DON'T KNOW (SPONTANEOUS)	-9

QUESTIONNAIRE NUMBER

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PLEASE ALSO WRITE OUT THE NUMBER (i.e. 50,000 as Fifty Thousand)

d2x

N.3 In fiscal year [insert last complete fiscal year minus two], three fiscal years ago, what were total annual sales for this establishment?

	LCUs
Total annual sales three years ago	n3
IF ESTABLISHMENT WAS NOT IN BUSINESS THREE YEARS AGO	-7
DON'T KNOW (SPONTANEOUS)	-9

D.3 In fiscal year [insert last complete fiscal year], what percentage of this establishment's sales were: (INTERVIEWER: SKIP PATTERNS MUST BE FOLLOWED IN THE ORDER THEY APPEAR IN THE TABLE) SHOW CARD 5

	Percent	DON'T KNOW (SPONTANEOUS)	
National sales	d3a %	-9	<i>IF 100, GO TO QUESTION D.10</i>
Indirect exports (sold domestically to third party that exports products)	d3b %	-9	<i>IF 100, GO TO QUESTION D.8</i>
Direct exports	d3c %	-9	<i>IF 0, GO TO QUESTION D.8</i>
	100 %		

INTERVIEWER: CHECK THAT TOTAL SUMS TO 100% (UNLESS RESPONDENT DOES NOT KNOW)

D.4 In fiscal year [insert last complete fiscal year], when this establishment exported goods directly, how many days did it take on average from the time this establishment's goods arrived at their main point of exit (e.g., port, airport) until the time these goods cleared customs?

	Days
Average number of days to clear customs	d4
LESS THAN ONE DAY	1
DON'T KNOW (SPONTANEOUS)	-9
DOES NOT APPLY	-7

D.6 In fiscal year [insert last complete fiscal year], what percentage of the value of the products exported directly was lost while in transit because of theft?

	Percent
Losses due to theft as percentage of the value of the products	d6 %
NO LOSSES	0
DON'T KNOW (SPONTANEOUS)	-9
DOES NOT APPLY	-7

QUESTIONNAIRE NUMBER

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D.7 In fiscal year [insert last complete fiscal year], what percentage of the value of the products exported directly was lost while in transit because of breakage or spoilage?

	Percent
Losses due to breakage or spoilage as percentage of the value of the products	d7 %
NO LOSSES	0
DON'T KNOW (SPONTANEOUS)	-9
DOES NOT APPLY	-7

D.8 In which year did this establishment first export directly or indirectly?

	Year
Began exporting directly or indirectly	d8
DON'T KNOW (SPONTANEOUS)	-9

INTERVIEWER: WRITE YEAR USING 4 DIGITS

D.10 In fiscal year [insert last complete fiscal year], what percentage of the value of products this establishment shipped to supply domestic markets was lost while in transit because of theft?

	Percent
Losses due to theft as percentage of the value of the products	d10 %
NO LOSSES	0
DON'T KNOW (SPONTANEOUS)	-9
NO INTERNAL SHIPMENTS MADE (DOES NOT APPLY)	-7

GO TO QUESTION D.12

D.11 In fiscal year [insert last complete fiscal year], what percentage of value of products this establishment shipped to supply domestic markets was lost while in transit because of breakage or spoilage?

	Percent
Losses due to breakage or spoilage as percentage of the value of the products	d11 %
NO LOSSES	0
DON'T KNOW (SPONTANEOUS)	-9
NO INTERNAL SHIPMENTS MADE (DOES NOT APPLY)	-7

D.12 In fiscal year [insert last complete fiscal year], as a proportion of all material inputs or supplies purchased that year, what percentage of this establishment's material inputs or supplies were:
SHOW CARD 6

	Percent	DON'T KNOW (SPONTANEOUS)
Material inputs or supplies of domestic origin	d12a %	-9
Material inputs or supplies of foreign origin	d12b %	-9
	100%	

IF 0, GO TO QUESTION D.16

QUESTIONNAIRE NUMBER

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**INTERVIEWER: CHECK THAT TOTAL SUMS TO 100%
(UNLESS RESPONDENT DOES NOT KNOW)**

D.13 Were any of the material inputs or supplies purchased in fiscal year [insert last complete fiscal year], imported directly?

Yes	1	<i>GO TO QUESTION D.16 GO TO QUESTION D.16</i>
No	2	
DON'T KNOW (SPONTANEOUS)	-9	

d13

D.14 In fiscal year [insert last complete fiscal year], when this establishment imported material inputs or supplies, how many days did it take on average from the time these goods arrived to their point of entry (e.g. port, airport) until the time these goods could be claimed from customs?

	Days
Average number of days to clear customs	d14
LESS THAN ONE DAY	1
DON'T KNOW (SPONTANEOUS)	-9

D.16 At the present time, when this establishment receives delivery of its most important input, on average, how many days of inventory, measured in days of production, does this establishment keep?
(INTERVIEWER: IF RESPONDENT REQUIRES CLARIFICATION, DEFINE AS STOCK ON HAND)

	Days
Days of inventory of most important input	d16
DON'T KNOW (SPONTANEOUS)	-9

D.30 Using the response options on the card; To what degree is **Transport** an obstacle to the current operations of this establishment? **SHOW CARD 7**
Using the response options on the card; To what degree is **Customs and Trade Regulation** an obstacle to the current operations of this establishment? **SHOW CARD 7**

	No obstacle	Minor obstacle	Moderate obstacle	Major obstacle	Very Severe Obstacle	(SPONTANEOUS)	
						DON'T KNOW	DOES NOT APPLY
Transport d30a	0	1	2	3	4	-9	-7
Customs and trade regulations d30b	0	1	2	3	4	-9	-7

QUESTIONNAIRE NUMBER

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E. DEGREE OF COMPETITION

E.1 In fiscal year [insert last complete fiscal year], which of the following was the main market in which this establishment sold its main product? **SHOW CARD 8**

Local – main product sold mostly in same municipality where establishment is located	1
National – main product sold mostly across the country where establishment is located	2
International	3
DON'T KNOW (SPONTANEOUS)	-9

GO TO QUESTION E.6
GO TO QUESTION E.6

e1

E.2 In fiscal year [insert last complete fiscal year], for the main market in which this establishment sold its main product, how many competitors did this establishment's main product face?

Number of competitors	e2b
TOO MANY TO COUNT	-4
DON'T KNOW (SPONTANEOUS)	-9

E.6 Does this establishment at present use technology licensed from a foreign-owned company, excluding office software?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

e6

E.11 Does this establishment compete against unregistered or informal firms?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

e11

E.30 Using the response options on the card; To what degree are **Practices of Competitors in the Informal Sector** an obstacle to the current operations of this establishment? **SHOW CARD 9**

	No obstacle	Minor obstacle	Moderate obstacle	Major obstacle	Very Severe Obstacle	(SPONTANEOUS)	
	0	1	2	3	4	DON'T KNOW	DOES NOT APPLY
Practices of competitors in the informal sector e30	0	1	2	3	4	-9	-7

QUESTIONNAIRE NUMBER

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H. INNOVATION

READ THE FOLLOWING TO THE RESPONDENT BEFORE PROCEEDING

And now we switch to a different topic. In this section "new" means new to the establishment but not necessarily new to the market.

H.1	During the last three years, has this establishment introduced new or significantly improved products or services? SHOW CARD 10
-----	---

INTERVIEWER: SHOW CARDS IN THIS SECTION CONTAIN EXAMPLES OF INNOVATIONS. THEY ARE MEANT AS EXAMPLES ONLY - THEY DO NOT CONTAIN ALL POSSIBLE INNOVATIONS.

INTERVIEWER: PLEASE WRITE THE RESPONSES BELOW AS WELL AS COPY THEM TO THE DECISION MATRIX.

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

h1

GO TO QUESTION H.3
GO TO QUESTION H.3

H.2	Were any of the new or significantly improved products or services also new for the establishment's main market?
-----	--

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

h2

H.3	During the last three years, has this establishment introduced any new or significantly improved methods of manufacturing products or offering services? SHOW CARD 11
-----	--

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

h3

QUESTIONNAIRE NUMBER

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H.4a	During the last three years, has this establishment introduced any new or significantly improved logistics, delivery, or distribution methods for inputs, products, or services? SHOW CARD 15
-------------	---

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

h4a

H.4b	During the last three years, has this establishment introduced any new or significantly improved supporting activities for your processes, such as maintenance systems or operations for purchasing, accounting, or computing? SHOW CARD 16
-------------	---

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

h4b

H.5	During the last three years, has this establishment introduced any new or significantly improved organizational structures or management practices? SHOW CARD 13
------------	---

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

h5

H.6	During the last three years, has this establishment introduced new or significantly improved marketing methods? SHOW CARD 14
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Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

h6

H.7	During the last three years, did this establishment spend on formal research and development activities, either in-house or contracted with other companies? SHOW CARD 27
------------	---

(INTERVIEWER: Research and development (R&D) is defined as creative work undertaken on a systematic basis in order to increase the stock of knowledge. For example, laboratory research for a new chemical compound of paint would be research and development while market research surveys or internet surfing would not be research and development.)

QUESTIONNAIRE NUMBER

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Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

h7

H.8	During the last three years, did this establishment give employees some time to develop or try out a new approach or new idea about products or services, business process, firm management, or marketing?
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Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

h8

QUESTIONNAIRE NUMBER

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F. CAPACITY

F.1 In fiscal year **[insert last complete fiscal year]**, what was this establishment's output produced as a proportion of the maximum output possible if using all the resources available (capacity utilization)?

	Percent
Capacity utilization	f1 %
DON'T KNOW (SPONTANEOUS)	-9

F.2 In fiscal year **[insert last complete fiscal year]**, how many hours per week did this establishment normally operate? **(INTERVIEWER: RESPONSE CANNOT BE GREATER THAN 168 HOURS)**

	Hours
Typical hours of operation in a week	f2
DON'T KNOW (SPONTANEOUS)	-9

QUESTIONNAIRE NUMBER

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G. LAND AND PERMITS

G.6 Of the buildings occupied by this establishment, what percentage is owned and what percentage is rented or leased? **SHOW CARD 13**

	Percent	DON'T KNOW (SPONTANEOUS)
Owned by this establishment	g6a %	-9
Rented or leased by this establishment	g6b %	-9
Other	g6c %	-9
	100%	

**INTERVIEWER: CHECK THAT TOTAL SUMS TO 100%
UNLESS RESPONDENT DOES NOT KNOW OR ESTABLISHMENT IS A FLOOR IN A BUILDING**

G.1 Of the land occupied by this establishment, what percent is: **SHOW CARD 12**

	Percent	DON'T KNOW (SPONTANEOUS)	DOES NOT APPLY IS A FLOOR IN A BUILDING
Owned by this establishment	g1a %	-9	-7
Rented or leased by this establishment	g1b %	-9	-7
Other	g1c %	-9	-7
	100%		

**INTERVIEWER: CHECK THAT TOTAL SUMS TO 100%
UNLESS RESPONDENT DOES NOT KNOW OR IF ESTABLISHMENT OCCUPIES A FLOOR IN A BUILDING**

G.2 Over the last two years, did this establishment submit an application to obtain a construction-related permit?

Yes	1	<i>GO TO QUESTION G.30 GO TO QUESTION G.30</i>
No	2	
DON'T KNOW (SPONTANEOUS)	-9	

g2

G.3 In reference to that application for a construction-related permit, approximately how many days did it take to obtain it from the day of the application to the day the permit was granted?

	Days
Wait for a construction-related permit	g3
LESS THAN ONE DAY	1
STILL IN PROCESS	-6

QUESTIONNAIRE NUMBER

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APPLICATION DENIED	-5
DON'T KNOW (SPONTANEOUS)	-9

G.4 In reference to that application for a construction-related permit, was an informal gift or payment expected or requested?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9
REFUSAL (SPONTANEOUS)	-8

g4

G.30 Using the response options on the card; To what degree is **Access to Land** an obstacle to the current operations of this establishment? **SHOW CARD 17**

		(SPONTANEOUS)						
		No obstacle	Minor obstacle	Moderate obstacle	Major obstacle	Very Severe Obstacle	DON'T KNOW	DOES NOT APPLY
Access to land	g30a	0	1	2	3	4	-9	-7

QUESTIONNAIRE NUMBER

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I. CRIME

READ THE FOLLOWING TO THE RESPONDENT BEFORE PROCEEDING:
We now turn to another topic.

I.1 In fiscal year [insert last complete fiscal year], did this establishment pay for security, for example equipment, personnel, or professional security services?

Yes	1	<i>GO TO QUESTION I.3</i> <i>GO TO QUESTION I.3</i>
No	2	
DON'T KNOW (SPONTANEOUS)	-9	

i1

I.2 In fiscal year [insert last complete fiscal year], what percentage of this establishment's total annual sales was paid for security, or what was the total annual cost of security?

	Percent
Percentage of total annual sales for security	i2a %
DON'T KNOW (SPONTANEOUS)	-9

PROVIDE EITHER ONE OR THE OTHER, NOT BOTH

	LCUs
Total annual cost of security	i2b
DON'T KNOW (SPONTANEOUS)	-9

I.3 In fiscal year [insert last complete fiscal year], did this establishment experience losses as a result of theft, robbery, vandalism or arson on this establishment's premises?

Yes	1	<i>GO TO QUESTION I.30</i> <i>GO TO QUESTION I.30</i>
No	2	
DON'T KNOW (SPONTANEOUS)	-9	

i3

I.4 In fiscal year [insert last complete fiscal year], what were the estimated losses as a result of theft, robbery, vandalism or arson that occurred on this establishment's premises either as a percentage of total annual sales or as total annual losses?

	Percent
Losses as percentage of total annual sales	i4a %
DON'T KNOW (SPONTANEOUS)	-9

PROVIDE EITHER ONE OR THE OTHER, NOT BOTH

	LCUs
Total annual value of losses	i4b
DON'T KNOW (SPONTANEOUS)	-9

QUESTIONNAIRE NUMBER

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L30	Using the response options on the card; To what degree is Crime, Theft and Disorder an obstacle to the current operations of this establishment? SHOW CARD 17
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	No obstacle	Minor obstacle	Moderate obstacle	Major obstacle	Very Severe Obstacle	(SPONTANEOUS)	
						DON'T KNOW	DOES NOT APPLY
Crime, theft and disorder i30	0	1	2	3	4	-9	-7

QUESTIONNAIRE NUMBER

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K. FINANCE

READ THE FOLLOWING TO THE RESPONDENT BEFORE PROCEEDING:
I would like to ask you a few questions about how you finance the operations of this establishment.

K.1 In fiscal year [insert last complete fiscal year], what percentage, as a proportion of the value of total annual purchases of material inputs or services was purchased on credit?

	Percent	DON'T KNOW (SPONTANEOUS)
Purchased on credit	k1c %	-9

K.2 In fiscal year [insert last complete fiscal year], what percentage of this establishment's total annual sales of its goods or services was sold on credit?

	Percent	DON'T KNOW (SPONTANEOUS)
Sold on credit	k2c %	-9

K.3 Over fiscal year [insert last complete fiscal year], please estimate the proportion of this establishment's working capital, that is the funds available for day-to-day operations, that was financed from each of the following sources? **SHOW CARD 18**

	Percent	DON'T KNOW (SPONTANEOUS)
Internal funds or retained earnings	k3a %	-9
Borrowed from banks: private and state-owned	k3bc %	-9
Borrowed from non-bank financial institutions which include microfinance institutions, credit cooperatives, credit unions, or finance companies	k3e %	-9
Purchases on credit from suppliers and advances from customers	k3f %	-9
Other, moneylenders, friends, relatives, etc.	k3hd %	-9
	100 %	

INTERVIEWER: CHECK THAT TOTAL SUMS TO 100% (UNLESS RESPONDENT DOES NOT KNOW)

K.4 In fiscal year [insert last complete fiscal year], did this establishment purchase any new or used fixed assets, such as machinery, vehicles, equipment, land or buildings?

Yes	1	<i>GO TO QUESTION K.6</i> <i>GO TO QUESTION K.6</i>
No	2	
DON'T KNOW (SPONTANEOUS)	-9	

k4

QUESTIONNAIRE NUMBER

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N.5 In fiscal year [insert last complete fiscal year], how much did this establishment spend on purchases of:
INTERVIEWER: READ OUT

	LCUs	DON'T KNOW (SPONTANEOUS)
Machinery, vehicles, and equipment (new or used)	n5a	-9
Land and buildings	n5b	-9

K.5 Over fiscal year [insert last complete fiscal year], please estimate the proportion of this establishment's total purchase of fixed assets that was financed from each of the following sources:
SHOW CARD 19

	Percent	DON'T KNOW (SPONTANEOUS)
Internal funds or retained earnings	k5a%	-9
Owners' contribution or issued new equity shares	k5i %	-9
Borrowed from banks: private and state-owned	k5bc%	-9
Borrowed from non-bank financial institutions	k5e %	-9
Purchases on credit from suppliers and advances from customers	k5f %	-9
Other, moneylenders, friends, relatives, bonds, etc	k5hdj%	-9
	100%	

INTERVIEWER: CHECK THAT TOTAL SUMS TO 100% (UNLESS RESPONDENT DOES NOT KNOW)

K.6 Now let's talk about the establishment's current account. At this time, does this establishment have a checking or savings account?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

k6

K.7 At this time, does this establishment have an overdraft facility?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

k7

K.8 At this time, does this establishment have a line of credit or a loan from a financial institution?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

GO TO QUESTION K.15d
GO TO QUESTION K.15d
k8

QUESTIONNAIRE NUMBER

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K.9 Referring to the most recent line of credit or loan, what type of financial institution granted this loan? **SHOW CARD 20**

Private commercial banks	1
State-owned banks or government agency	2
Non-bank financial institutions	3
Other	4
DON'T KNOW (SPONTANEOUS)	-9

k9

K.10 Referring only to this most recent line of credit or loan, in what year was the most recent line of credit or loan approved?

	Year
Year most recent loan or line of credit approved	k10
DON'T KNOW (SPONTANEOUS)	-9

INTERVIEWER: PROVIDE FOUR DIGITS FOR YEAR

K.11 Referring only to this most recent loan or line of credit, what was its value at the time of approval?

	LCUs
Size of most recent loan or line of credit approved	k11
REFUSAL (SPONTANEOUS)	-8
DON'T KNOW (SPONTANEOUS)	-9

K.13 Referring only to this most recent loan or line of credit, did the financing require collateral?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

GO TO QUESTION K.15b
GO TO QUESTION K.15b

k13

K.14 Referring only to this most recent loan or line of credit, what type of collateral was required?
INTERVIEWER: READ OUT

Collateral		Yes	No	DON'T KNOW (SPONTANEOUS)
Land, buildings under ownership of the establishment	k14a	1	2	-9
Machinery and equipment including movables	k14b	1	2	-9
Accounts receivable and inventories	k14c	1	2	-9
Personal assets of owner (house, etc.)	k14d	1	2	-9
Other forms of collateral not included in the categories above	k14e	1	2	-9

QUESTIONNAIRE NUMBER

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K.15 Referring only to this most recent line of credit or loan, what was the approximate value of the collateral required?

	LCUs
Value of collateral	k15a
DON'T KNOW (SPONTANEOUS)	-9

K.15b What is the total number of outstanding loans or open lines of credit held by this establishment?

	Number	
Total number of outstanding loans or open lines of credit	k15b	IF 1, GO TO QUESTION K.15d
DON'T KNOW (SPONTANEOUS)	-9	GO TO QUESTION K.15d

K.15c What is the total value of outstanding loans or lines of credit held by this establishment?

	LCUs
Total value of loans outstanding	k15c
REFUSAL (SPONTANEOUS)	-8
DON'T KNOW (SPONTANEOUS)	-9

K.15d At this time, does the owner or owners of this establishment have any outstanding personal loans that are used to finance this establishment's business activities?

Yes	1	
No	2	
DON'T KNOW (SPONTANEOUS)	-9	

k15d

K.16 Referring again to the last fiscal year [insert last complete fiscal year], did this establishment apply for any loans or lines of credit?

Yes	1	GO TO QUESTION K.20
No	2	
DON'T KNOW (SPONTANEOUS)	-9	GO TO QUESTION K.21

k16

K.17 What was the main reason why this establishment did not apply for any line of credit or loan?
SHOW CARD 21

No need for a loan - establishment had sufficient capital	1	GO TO QUESTION K.21
Application procedures were complex	2	GO TO QUESTION K.21
Interest rates were not favorable	3	GO TO QUESTION K.21
Collateral requirements were too high	4	GO TO QUESTION K.21
Size of loan and maturity were insufficient	5	GO TO QUESTION K.21

QUESTIONNAIRE NUMBER

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Did not think it would be approved	6	<i>GO TO QUESTION K.21</i>	
Other	7		<i>GO TO QUESTION K.21</i>
DON'T KNOW (SPONTANEOUS)	-9		<i>GO TO QUESTION K.21</i>
k17			

K.20 Referring only to this most recent application for a line of credit or loan, what was the outcome of that application?

Application was approved	1
Application was rejected	2
APPLICATION STILL IN PROCESS	-6
DON'T KNOW (SPONTANEOUS)	-9
k20a	

K.21 In fiscal year [insert last complete fiscal year], did this establishment have its annual financial statements checked and certified by an external auditor?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9
k21	

K.30 Using the response options on the card; To what degree is **Access to Finance** an obstacle to the current operations of this establishment? **SHOW CARD 22**

		(SPONTANEOUS)						
		No obstacle	Minor obstacle	Moderate obstacle	Major obstacle	Very Severe Obstacle	DON'T KNOW	DOES NOT APPLY
Access to finance	k30	0	1	2	3	4	-9	-7

QUESTIONNAIRE NUMBER

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J. BUSINESS-GOVERNMENT RELATIONS

READ THE FOLLOWING TO THE RESPONDENT BEFORE PROCEEDING:
 The following questions assess how establishments, such as this one, deal with government officials and their agencies.

J.1 I am going to read one statement describing the courts system and how it could affect business. Please tell me if you Strongly disagree, Tend to disagree, Tend to agree, or Strongly agree. **SHOW CARD 23**

						(SPONTANEOUS)	
	Strongly disagree	Tend to disagree	Tend to agree	Strongly agree	DON'T KNOW	DOES NOT APPLY	
"The court system is fair, impartial and uncorrupted." h7a	1	2	3	4	-9	-7	

J.2 In a typical week over the last year, what percentage of total senior management's time was spent on dealing with requirements imposed by government regulations?
 (By senior management I mean managers, directors, and officers above direct supervisors of production or sales workers. Some examples of government regulations are taxes, customs, labor regulations, licensing and registration, including dealings with officials and completing forms)

	Percent
Senior management's time spent on dealing with regulations	j2 %
NO TIME WAS SPENT	0
DON'T KNOW (SPONTANEOUS)	-9

J.3 Over the last year, was this establishment visited or inspected by tax officials?

Yes	1	<i>GO TO QUESTION J.6a</i> <i>GO TO QUESTION J.6a</i>
No	2	
DON'T KNOW (SPONTANEOUS)	-9	

j3

J.4 Over the last year, how many times was this establishment either inspected by tax officials or required to meet with them?

	Number
Times inspected or met with tax officials	j4
DON'T KNOW (SPONTANEOUS)	-9

J.5 In any of these inspections or meetings was a gift or informal payment expected or requested?

Yes	1
No	2

QUESTIONNAIRE NUMBER

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DON'T KNOW (SPONTANEOUS)	-9
REFUSAL (SPONTANEOUS)	-8

j5

J.6a Over the last year, has this establishment secured or attempted to secure a government contract?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

GO TO QUESTION J.7
GO TO QUESTION J.7

j6a

J.6 When establishments like this one do business with the government, what percent of the contract value would be typically paid in informal payments or gifts to secure the contract?

	Percent
Percent of the contract value paid as informal payments or gifts	j6 %
DON'T KNOW (SPONTANEOUS)	-9
REFUSAL (SPONTANEOUS)	-8
NO PAYMENTS	0

J.7 It is said that establishments are sometimes required to make gifts or informal payments to public officials to "get things done" with regard to customs, taxes, licenses, regulations, services etc. On average, what percentage of total annual sales, or estimated total annual value, do establishments like this one pay in informal payments or gifts to public officials for this purpose?

	Percent
Percentage of total annual sales paid as informal payment	j7a %
NO PAYMENTS OR GIFTS ARE PAID	0
DON'T KNOW (SPONTANEOUS)	-9
REFUSAL (SPONTANEOUS)	-8

PROVIDE EITHER ONE OR THE OTHER, NOT BOTH

	LCUs
Total annual informal payment	j7b
NO PAYMENTS OR GIFTS ARE PAID	0
DON'T KNOW (SPONTANEOUS)	-9
REFUSAL (SPONTANEOUS)	-8

J.10 Over the last two years, did this establishment submit an application to obtain an import license?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

GO TO QUESTION J.13
GO TO QUESTION J.13

j10

QUESTIONNAIRE NUMBER

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J.11	Approximately how many days did it take to obtain this import license from the day of the application to the day it was granted?
-------------	--

	Days
Wait for import license	j11
LESS THAN ONE DAY	1
STILL IN PROCESS	-6
APPLICATION DENIED	-5
DON'T KNOW (SPONTANEOUS)	-9

J.12	In reference to that application for an import license, was an informal gift or payment expected or requested?
-------------	--

Yes	1	j12
No	2	
DON'T KNOW (SPONTANEOUS)	-9	
REFUSAL (SPONTANEOUS)	-8	

J.13	Over the last two years, did this establishment submit an application to obtain an operating license?
-------------	---

Yes	1	GO TO QUESTION J.30 GO TO QUESTION J.30 j13
No	2	
DON'T KNOW (SPONTANEOUS)	-9	

J.14	Approximately how many days did it take to obtain this operating license from the day of the application to the day it was granted?
-------------	---

	Days
Wait for operating license	j14
LESS THAN ONE DAY	1
STILL IN PROCESS	-6
APPLICATION DENIED	-5
DON'T KNOW (SPONTANEOUS)	-9

J.15	In reference to that application for an operating license, was an informal gift or payment expected or requested?
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Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9
REFUSAL (SPONTANEOUS)	-8

QUESTIONNAIRE NUMBER

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j15

J.30 Using the response options on the card; To what degree is/are **[INSERT OPTION]** an obstacle to the current operations of this establishment?
SHOW CARD 24

ROTATE OPTIONS		No obstacle	Minor obstacle	Moderate obstacle	Major obstacle	Very Severe Obstacle	(SPONTANEOUS)	
							DON'T KNOW	DOES NOT APPLY
Tax rates	j30a	0	1	2	3	4	-9	-7
Tax administration	j30b	0	1	2	3	4	-9	-7
Business licensing and permits	j30c	0	1	2	3	4	-9	-7
Political instability	j30e	0	1	2	3	4	-9	-7
Corruption	j30f	0	1	2	3	4	-9	-7
Courts	h30	0	1	2	3	4	-9	-7

QUESTIONNAIRE NUMBER

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L. LABOR

READ THE FOLLOWING TO THE RESPONDENT BEFORE PROCEEDING:
Now I would like to ask you a few questions about this establishment's labor force.

L.1 At the end of fiscal year [insert last complete fiscal year], how many permanent, full-time individuals worked in this establishment? Please include all employees and managers (Permanent, full-time employees are defined as all paid employees that are contracted for a term of one or more fiscal years and/or have a guaranteed renewal of their employment contract and that work a full shift)
(INTERVIEWER: INCLUDE INTERVIEWEE IF APPLICABLE).

	Number
Permanent, full-time workers end of last fiscal year	11
DON'T KNOW (SPONTANEOUS)	-9

L.2 Three fiscal years ago, at the end of fiscal year [insert last complete fiscal year minus two], how many permanent, full-time individuals work in this establishment? Please include all employees and managers **(INTERVIEWER: INCLUDE INTERVIEWEE IF APPLICABLE).**

	Number
Permanent, full-time workers three fiscal years ago	12
IF ESTABLISHMENT WAS NOT IN BUSINESS THREE YEARS AGO	-7
DON'T KNOW (SPONTANEOUS)	-9

L.3 At the end of fiscal year [insert last complete fiscal year], how many permanent, full-time individuals in this establishment were: **(INTERVIEWER: READ EACH CATEGORY)**

	Number	DON'T KNOW (SPONTANEOUS)
Production workers	13a	-9
Non-production workers [e.g., managers, administration, sales]	13b	-9

L.4 At the end of fiscal year [insert last complete fiscal year], how many permanent, full-time individuals working in this establishment were: **INTERVIEWER: READ EACH CATEGORY**

	Number	DON'T KNOW (SPONTANEOUS)
Skilled production workers	14a	-9
Unskilled production workers	14b	-9

QUESTIONNAIRE NUMBER

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L.5 At the end of fiscal year [insert last complete fiscal year], how many permanent full-time individuals working in this establishment in the following categories were female?

	Number	DON'T KNOW (SPONTANEOUS)
Female permanent full-time production workers	15a	-9
Female permanent full-time non-production workers	15b	-9

L.6 How many full-time temporary employees did this establishment employ throughout [insert last complete fiscal year]?
(Full-time, temporary workers are all paid short-term (i.e. for less than a year) employees with no guarantee of renewal of contract employment and work full-time)

	Number	
Full-time seasonal or temporary workers employed last fiscal year	16	
NO FULL-TIME SEASONAL OR TEMPORARY WORKERS	0	<i>GO TO QUESTION L.9a</i>
DON'T KNOW (SPONTANEOUS)	-9	<i>GO TO QUESTION L.9a</i>

L.6a How many full-time temporary employees employed throughout [insert last complete fiscal year] were female?

	Number
Full-time female seasonal or temporary workers employed last fiscal year	16a
DON'T KNOW (SPONTANEOUS)	-9

L.8 What was the average length of employment of all full-time temporary employees in fiscal year [insert last complete fiscal year]?

	Months
Average length full-time seasonal or temporary employment last fiscal year, in months	18
LESS THAN ONE MONTH	1
DON'T KNOW (SPONTANEOUS)	-9

L.9a What is the average number of years of education of a typical permanent full-time production worker employed in this establishment?

	Number
Average number of years of education of typical production worker	19a
DON'T KNOW (SPONTANEOUS)	-9

QUESTIONNAIRE NUMBER

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L.9a2 What is the average number of years of education of a typical female permanent full-time production worker employed in this establishment?

	Number
Average number of years of education of typical female production worker	19a2
DON'T KNOW (SPONTANEOUS)	-9
NO FEMALE PRODUCTION WORKERS	-7

L.9b What is the percentage of full-time permanent workers who completed secondary school?

	Percent
Percentage of full time permanent workers who completed secondary school	19b
DON'T KNOW (SPONTANEOUS)	-9

L.10 Over fiscal year [insert last complete fiscal year], did this establishment have formal training programs for its permanent, full-time employees?

Yes	1
No	2
DON'T KNOW (SPONTANEOUS)	-9

GO TO QUESTION I30a
GO TO QUESTION I30a

110

L.11 Referring to the training programs run over fiscal year [insert last complete fiscal year], what percentage of permanent, full-time employees of the following categories received formal training?

	Percent	IF NO EMPLOYEES IN A CATEGORY WERE TRAINED	DON'T KNOW (SPONTANEOUS)
Production full-time permanent employees trained	111a %	0	-9
Non-production full-time permanent employees trained	111b %	0	-9

L.30 Using the response options on the card; To what degree are **Labor Regulations** an obstacle to the current operations of this establishment? **SHOW CARD 24**
Using the response options on the card; To what degree is an **Inadequately Educated Workforce** an obstacle to the current operations of this establishment? **SHOW CARD 24**

					(SPONTANEOUS)	
No obstacle	Minor obstacle	Moderate obstacle	Major obstacle	Very Severe	DON'T KNOW	DOES NOT

QUESTIONNAIRE NUMBER

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					Obstacle		APPLY
Labor regulations I30a	0	1	2	3	4	-9	-7
Inadequately educated workforce I30b	0	1	2	3	4	-9	-7

QUESTIONNAIRE NUMBER

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M. BUSINESS ENVIRONMENT

READ THE FOLLOWING TO THE RESPONDENT BEFORE PROCEEDING:

M.1 By looking at card [insert card number] can you tell me which of the elements of the business environment included in the list, if any, currently represents the biggest obstacle faced by this establishment **SHOW CARD 25**
INTERVIEWER: DO NOT READ OUT

1-Access to finance
2-Access to land
3-Business licensing and permits
4-Corruption
5-Courts
6-Crime, theft and disorder
7-Customs and trade regulations
8-Electricity
9-Inadequately educated workforce
10-Labor regulations
11-Political instability
12-Practices of competitors in the informal sector
13-Tax administration
14-Tax rates
15-Transport

Biggest obstacle	m1a
DON'T KNOW (SPONTANEOUS)	-9
DOES NOT APPLY (SPONTANEOUS)	-7

Rotation (option 1, 2 or 3)	m1d
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QUESTIONNAIRE NUMBER

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N. PERFORMANCE

READ THE FOLLOWING TO THE RESPONDENT BEFORE PROCEEDING:
 Now, we would like to ask you a few questions about the financial results of this establishment. It is important that this information be as accurate as possible. The individual data are treated as confidential – the identity of your establishment will not be revealed at any point. Please provide the following information from the financial statements of this establishment.

N.2 From this establishment's Income Statement for fiscal year [insert last complete fiscal year], please provide the following information: **SHOW CARD 26**

	LCUs	DON'T KNOW (SPONTANEOUS)
Total annual cost of labor including wages, salaries, bonuses, social security payments	n2a	-9
Total annual cost of raw materials and intermediate goods used in production	n2e	-9
Total annual costs of fuel	n2f	-9
Total annual costs of electricity	n2b	-9
Total rental cost of machinery, vehicles and equipment	n2ra	-9
Total rental cost of land and buildings	n2rb	-9
Other cost of production not included above	n2j	-9

N.6 From this establishment's Balance Sheet for fiscal year [insert last complete fiscal year], what was the net book value, that is the value of assets after depreciation, of the following:

	LCUs	DON'T KNOW (SPONTANEOUS)
Machinery, vehicles, and equipment	n6a	-9
Land and buildings	n6b	-9

N.7 Hypothetically, if this establishment were to purchase the assets it uses now, in their current condition and regardless of whether the establishment owns them or not, how much would they cost, independently of whether they are owned, rented or leased?

	LCUs	DON'T KNOW (SPONTANEOUS)
Machinery, vehicles, and equipment	n7a	-9
Land and buildings	n7b	-9

QUESTIONNAIRE NUMBER

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A.15a Please complete the following information about the interviewee(s)

	Position in the firm	Years with the firm	Gender
Main respondent	a15a1ax	a15a2a	a15a3
Second respondent	a15a1bx	a15a2b	a15b3
Third respondent	a15a1cx	a15a2c	a15c3

ENTER 1 WHEN YEARS WITH THE FIRM IS LESS THAN ONE. FOR GENDER 1: MALE, 2: FEMALE

THE SURVEY ENDS HERE
 THANK YOU VERY MUCH FOR YOUR COOPERATION.

A.15 Time face-to-face interview ends:

Day (dd)	Month (mm)	Year (yyyy)	Hour (00 to 23)	Minutes (00 to 59)
a15d	a15m	a15y	a15h	a15min

INTERVIEWERS PLEASE ANSWER AT END OF THE INTERVIEW:

A.16 It is my perception that the responses to the questions regarding opinions and perceptions:

Truthful	1
Somewhat truthful	2
Not truthful	3
	a16

A.17 The responses to the questions regarding figures (productivity and employment numbers):

Are taken directly from establishment records	1
Are estimates computed with some precision	2
Are arbitrary and unreliable numbers	3
Are in some case taken from books in some case estimates	4
	a17

INTERVIEWER COMMENTS:

	a17x
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QUESTIONNAIRE NUMBER

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(Problems occurred/extraordinary circumstances which could influence results)

SUPERVISORS PLEASE ANSWER:

A.18	This questionnaire was completed in:
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One visit in face-to-face interview with one person	1	<i>STOP HERE</i>
One visit in face-to-face interview with different managers/staff	2	
Several visits	3	

a18

A.19	If option 2 or 3 in A.18 , estimate duration of the whole interview
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Hour	Minutes

a19h **a19m**

Appendix B

Regression analysis of human resources and level of SMEs exports in LDCs.

Step one:

Omnibus Tests of Model Coefficients				
		Chi-square	df	Sig.
Step 1	Step	51.671	23	.001
	Block	51.671	23	.001
	Model	51.671	23	.001

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	182.653 ^a	.223	.327

a. Estimation terminated at iteration number 6 because parameter estimates changed by less than .001.

Hosmer and Lemeshow Test			
Step	Chi-square	df	Sig.
1	9.734	8	.284

Variables in the Equation							
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	SKILLED WORKERS - Num. of Permanent, Full-Time Highly Skilled Production Workers, Last Fy	.025	.010	6.120	1	.013	1.026
	INFORMAL ORIGIN - Was Establishment Formally Registered When it Began Operations?	1.176	.642	3.351	1	.067	3.240
	AGE Year Establishment Began Operations	-.004	.018	.041	1	.840	.996
	COUNTRY CODE			15.479	4	.004	
	COUNTRY CODE(1)	-2.015	.629	10.269	1	.001	.133
	COUNTRY CODE(2)	-1.740	.865	4.044	1	.044	.176
	COUNTRY CODE(3)	-1.621	.543	8.902	1	.003	.198
	COUNTRY CODE(4)	-2.149	.750	8.211	1	.004	.117

TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?			6.952	4	.138	
TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(1)	-.636	.900	.500	1	.480	.529
TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(2)	-.602	.854	.498	1	.480	.548
TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(3)	-.036	.822	.002	1	.965	.965
TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(4)	.760	.786	.935	1	.334	2.138
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption			6.219	4	.183	
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(1)	-1.552	1.078	2.074	1	.150	.212
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(2)	-.282	.684	.170	1	.681	.754
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(3)	-.688	.676	1.035	1	.309	.503
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(4)	-1.267	.605	4.383	1	.036	.282
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability			2.054	4	.726	
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(1)	.270	.805	.112	1	.737	1.310
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(2)	.432	.724	.356	1	.551	1.541
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(3)	.682	.679	1.008	1	.315	1.977

POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(4)	-.099	.612	.026	1	.871	.905
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in Informal Sector?			3.911	4	.418	
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in Informal Sector?(1)	1.088	.844	1.663	1	.197	2.970
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in Informal Sector?(2)	1.070	.782	1.869	1	.172	2.914
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in Informal Sector?(3)	.790	.787	1.008	1	.315	2.203
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in Informal Sector?(4)	.186	.659	.080	1	.778	1.204
Constant	-.995	1.171	.722	1	.395	.370

Step two:

Omnibus Tests of Model Coefficients				
		Chi-square	df	Sig.
Step 1	Step	30.477	23	.136
	Block	30.477	23	.136
	Model	30.477	23	.136

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	132.406 ^a	.139	.253

a. Estimation terminated at iteration number 20 because maximum iterations had been reached. Final solution cannot be found.

Hosmer and Lemeshow Test			
Step	Chi-square	df	Sig.
1	8.570	8	.380

Variables in the Equation							
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	SKILLED WORKERS - Num. of Permanent, Full-Time Highly Skilled Production Workers, Last Fy	.010	.016	.384	1	.536	1.010
	INFORMAL ORIGIN - Was Establishment Formally Registered When it Began Operations?	-.771	.627	1.511	1	.219	.463
	AGE Year Establishment Began Operations	-.002	.023	.009	1	.923	.998
	COUNTRY CODE			1.646	4	.801	
	COUNTRY CODE(1)	.551	.767	.517	1	.472	1.736
	COUNTRY CODE(2)	.440	1.059	.172	1	.678	1.552
	COUNTRY CODE(3)	-.196	.725	.073	1	.787	.822
	COUNTRY CODE(4)	-.477	.891	.287	1	.592	.620
	TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?			5.632	4	.228	

TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(1)	-.196	.918	.045	1	.831	.822
TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(2)	-1.890	.974	3.765	1	.052	.151
TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(3)	-.732	.832	.773	1	.379	.481
TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(4)	-.970	.823	1.387	1	.239	.379
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption			4.544	4	.337	
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(1)	-2.568	1.229	4.363	1	.037	.077
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(2)	-.728	.835	.760	1	.383	.483
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(3)	-.764	.836	.835	1	.361	.466
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(4)	-.298	.645	.214	1	.644	.742
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability			2.701	4	.609	
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(1)	.070	.850	.007	1	.935	1.072
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(2)	-19.612	6668.622	.000	1	.998	.000
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(3)	-1.120	.866	1.672	1	.196	.326
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(4)	.021	.643	.001	1	.974	1.022

INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?			2.665	4	.615	
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?(1)	.126	1.080	.014	1	.907	1.134
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?(2)	1.196	.921	1.686	1	.194	3.306
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?(3)	.520	.942	.305	1	.581	1.682
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?(4)	.884	.720	1.507	1	.220	2.420
Constant	-.227	1.245	.033	1	.855	.797

Step three:

Omnibus Tests of Model Coefficients				
		Chi-square	df	Sig.
Step 1	Step	74.450	22	.000
	Block	74.450	22	.000
	Model	74.450	22	.000

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	443.872 ^a	.120	.204

a. Estimation terminated at iteration number 6 because parameter estimates changed by less than .001.

Hosmer and Lemeshow Test			
Step	Chi-square	Df	Sig.
1	11.625	8	.169

Variables in the Equation							
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	RD - During Last Fiscal Year, Establishment Spent on R&D (Excl Market Research)?	.811	.323	6.313	1	.012	2.250
	AGE Year Establishment Began Operations	.017	.009	3.100	1	.078	1.017
	COUNTRY CODE			28.166	4	.000	
	COUNTRY CODE(1)	-.851	.357	5.692	1	.017	.427
	COUNTRY CODE(2)	-2.931	.637	21.154	1	.000	.053
	COUNTRY CODE(3)	-.910	.330	7.624	1	.006	.402
	COUNTRY CODE(4)	-1.546	.546	8.001	1	.005	.213
	TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?			11.842	4	.019	
	TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(1)	-.796	.488	2.665	1	.103	.451

TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(2)	-1.081	.473	5.217	1	.022	.339
TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(3)	-.546	.451	1.468	1	.226	.579
TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(4)	.115	.415	.077	1	.781	1.122
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption			5.845	4	.211	
CORRUPTION OBSTACLE - How Much of an Obstacle:Corruption (1)	-1.121	.654	2.934	1	.087	.326
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(2)	-.159	.474	.112	1	.738	.853
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(3)	-.141	.435	.106	1	.745	.868
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(4)	-.634	.393	2.606	1	.106	.530
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability			2.324	4	.676	
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(1)	-.465	.561	.686	1	.407	.628
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(2)	-.026	.492	.003	1	.958	.975
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(3)	.047	.456	.011	1	.918	1.048
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(4)	-.359	.382	.886	1	.347	.698
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?			2.101	4	.717	

INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?(1)	.488	.496	.965	1	.326	1.628
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?(2)	.624	.476	1.716	1	.190	1.867
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?(3)	.307	.454	.457	1	.499	1.359
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?(4)	.213	.390	.297	1	.586	1.237
Constant	-.522	.507	1.059	1	.303	.593

Step four:

Omnibus Tests of Model Coefficients				
		Chi-square	df	Sig.
Step 1	Step	67.803	24	.000
	Block	67.803	24	.000
	Model	67.803	24	.000

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	159.888 ^a	.286	.422

a. Estimation terminated at iteration number 6 because parameter estimates changed by less than .001.

Hosmer and Lemeshow Test			
Step	Chi-square	Df	Sig.
1	8.549	8	.382

Variables in the Equation							
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	SKILLED WORKERS - Num. Of Permanent, Full-Time Highly Skilled Production Workers, Last Fy	.032	.012	7.270	1	.007	1.032
	INFORMAL ORIGIN - Was Establishment Formally Registered When it Began Operations?	1.539	.705	4.771	1	.029	4.661
	RD - During Last Fiscal Year, What Amount Did the Establishment Spend on R&D (Excl. Market Research)?	2.214	.588	14.185	1	.000	9.152
	AGE Year Establishment Began Operations	-.001	.020	.005	1	.945	.999
	COUNTRY CODE			17.485	4	.002	
	COUNTRY CODE(1)	-2.676	.719	13.860	1	.000	.069
	COUNTRY CODE(2)	-1.935	.926	4.365	1	.037	.144
	COUNTRY CODE(3)	-2.130	.625	11.619	1	.001	.119

COUNTRY CODE(4)	-1.851	.782	5.605	1	.018	.157
TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?			6.766	4	.149	
TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(1)	-1.202	.967	1.545	1	.214	.300
TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(2)	-.605	.942	.414	1	.520	.546
TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(3)	-.539	.921	.342	1	.559	.583
TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(4)	.534	.863	.382	1	.536	1.705
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption			8.069	4	.089	
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(1)	-1.114	1.128	.974	1	.324	.328
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(2)	-.119	.739	.026	1	.872	.888
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(3)	-.502	.709	.502	1	.479	.605
CORRUPTION OBSTACLE - How Much Of An Obstacle: Corruption(4)	-1.692	.677	6.247	1	.012	.184
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability			2.562	4	.634	
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(1)	.209	.896	.055	1	.815	1.233
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(2)	.757	.777	.948	1	.330	2.131
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(3)	.719	.716	1.008	1	.315	2.052

POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(4)	-.119	.645	.034	1	.854	.888
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?			6.200	4	.185	
INFORMAL COMPETITORS - How much of an Obstacle: Practices of Competitors in the Informal Sector?(1)	1.137	.872	1.699	1	.192	3.117
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?(2)	.812	.826	.967	1	.325	2.253
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in Informal Sector?(3)	.740	.845	.768	1	.381	2.096
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?(4)	-.345	.717	.231	1	.631	.708
Constant	-1.101	1.223	.810	1	.368	.333

Regression analysis of financial resources and level of SMEs exports in LDCs:

Step one:

Omnibus Tests of Model Coefficients				
		Chi-square	df	Sig.
Step 1	Step	85.949	22	.000
	Block	85.949	22	.000
	Model	85.949	22	.000

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	402.886 ^a	.150	.249

a. Estimation terminated at iteration number 6 because parameter estimates changed by less than .001.

Hosmer and Lemeshow Test			
Step	Chi-square	Df	Sig.
1	5.623	8	.689

Variables in the Equation							
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	BORROWED FROM BANKS % of Working Capital Borrowed from Banks	.851	.269	10.045	1	.002	2.342
	CAPITAL FINANCED % of Working Capital Financed by Other(Money Lenders, Friends, Relatives, Etc)	-1.722	.774	4.949	1	.026	.179
	AGE Year Establishment Began Operations	.008	.010	.698	1	.403	1.008
	COUNTRY CODE			25.417	3	.000	
	COUNTRY CODE(1)	-.764	.355	4.634	1	.031	.466
	COUNTRY CODE(2)	-2.976	.644	21.358	1	.000	.051
	COUNTRY CODE(3)	-.958	.341	7.914	1	.005	.384
	TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?			15.598	4	.004	

TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(1)	- .611	.514	1.413	1	.235	.543
TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(2)	-1.180	.506	5.433	1	.020	.307
TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(3)	-.223	.472	.223	1	.637	.800
TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(4)	.376	.444	.718	1	.397	1.457
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption			3.079	4	.545	
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(1)	-.993	.681	2.124	1	.145	.371
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(2)	-.138	.497	.077	1	.781	.871
CORRUPTION OBSTACLE - How Much of an obstacle: Corruption(3)	-.181	.462	.155	1	.694	.834
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(4)	-.424	.418	1.028	1	.311	.654
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability			4.996	4	.288	
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(1)	-.720	.576	1.560	1	.212	.487
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(2)	-.424	.514	.681	1	.409	.654
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(3)	-.335	.487	.472	1	.492	.715
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(4)	-.827	.408	4.096	1	.043	.437

INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?			3.100	4	.541	
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in Informal Sector?(1)	.591	.511	1.335	1	.248	1.806
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?(2)	.844	.497	2.887	1	.089	2.325
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?(3)	.368	.469	.614	1	.433	1.444
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?(4)	.433	.403	1.159	1	.282	1.543
Constant	-.509	.541	.883	1	.347	.601

Step two:

Omnibus Tests of Model Coefficients				
		Chi-square	df	Sig.
Step 1	Step	62.552	22	.000
	Block	62.552	22	.000
	Model	62.552	22	.000

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	345.996 ^a	.112	.208

a. Estimation terminated at iteration number 6 because parameter estimates changed by less than .001.

Hosmer and Lemeshow Test			
Step	Chi-square	Df	Sig.
1	12.549	8	.128

Variables in the Equation							
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	BORROWED FROM BANKS % of Working Capital Borrowed from Banks	.611	.299	4.176	1	.041	1.842
	CAPITAL FINANCED % Of Working Capital Financed by Other (Money Lenders, Friends, Relatives, Etc)	.208	.508	.168	1	.682	1.231
	AGE Year Establishment Began Operations	-.012	.012	.931	1	.335	.988
	COUNTRY CODE			5.437	3	.142	
	COUNTRY CODE(1)	-.246	.421	.342	1	.558	.782
	COUNTRY CODE(2)	-.525	.439	1.429	1	.232	.592
	COUNTRY CODE(3)	-.930	.408	5.183	1	.023	.395
	TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?			4.804	4	.308	

TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(1)	.261	.572	.207	1	.649	1.298
TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(2)	-.730	.561	1.696	1	.193	.482
TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(3)	.004	.523	.000	1	.995	1.004
TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(4)	-.213	.500	.181	1	.670	.808
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption			22.190	4	.000	
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(1)	-3.081	.870	12.544	1	.000	.046
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(2)	-1.457	.524	7.736	1	.005	.233
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(3)	-2.047	.547	14.014	1	.000	.129
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(4)	-.674	.404	2.781	1	.095	.509
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability			8.445	4	.077	
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(1)	.726	.605	1.440	1	.230	2.066
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(2)	-.414	.655	.400	1	.527	.661
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(3)	-.782	.635	1.514	1	.218	.458
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(4)	.356	.429	.690	1	.406	1.428

INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?			10.712	4	.030	
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?(1)	1.231	.670	3.376	1	.066	3.426
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?(2)	1.783	.637	7.836	1	.005	5.947
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?(3)	1.634	.595	7.556	1	.006	5.126
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?(4)	1.640	.532	9.503	1	.002	5.157
Constant	-1.820	.701	6.746	1	.009	.162

Step three:

Omnibus Tests of Model Coefficients				
		Chi-square	df	Sig.
Step 1	Step	74.450	22	.000
	Block	74.450	22	.000
	Model	74.450	22	.000

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	443.872 ^a	.120	.204

a. Estimation terminated at iteration number 6 because parameter estimates changed by less than .001.

Hosmer and Lemeshow Test			
Step	Chi-square	df	Sig.
1	11.625	8	.169

Variables in the Equation							
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	RD - During Last Fiscal Year, What Amount Did the Establishment Spend on R&D (Excl. Market Research)?	.811	.323	6.313	1	.012	2.250
	AGE Year Establishment Began Operations	.017	.009	3.100	1	.078	1.017
	COUNTRY CODE			28.166	4	.000	
	COUNTRY CODE(1)	-.851	.357	5.692	1	.017	.427
	COUNTRY CODE(2)	-2.931	.637	21.154	1	.000	.053
	COUNTRY CODE(3)	-.910	.330	7.624	1	.006	.402
	COUNTRY CODE(4)	-1.546	.546	8.001	1	.005	.213
	TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?			11.842	4	.019	
	TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(1)	-.796	.488	2.665	1	.103	.451

TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(2)	-1.081	.473	5.217	1	.022	.339
TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(3)	-.546	.451	1.468	1	.226	.579
TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(4)	.115	.415	.077	1	.781	1.122
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption			5.845	4	.211	
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(1)	-1.121	.654	2.934	1	.087	.326
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(2)	-.159	.474	.112	1	.738	.853
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(3)	-.141	.435	.106	1	.745	.868
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(4)	-.634	.393	2.606	1	.106	.530
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability			2.324	4	.676	
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(1)	-.465	.561	.686	1	.407	.628
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(2)	-.026	.492	.003	1	.958	.975
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(3)	.047	.456	.011	1	.918	1.048
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(4)	-.359	.382	.886	1	.347	.698
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?			2.101	4	.717	

INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?(1)	.488	.496	.965	1	.326	1.628
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in Informal Sector?(2)	.624	.476	1.716	1	.190	1.867
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?(3)	.307	.454	.457	1	.499	1.359
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in Informal Sector?(4)	.213	.390	.297	1	.586	1.237
Constant	-.522	.507	1.059	1	.303	.593

Step four:

Omnibus Tests of Model Coefficients				
		Chi-square	df	Sig.
Step 1	Step	90.711	23	.000
	Block	90.711	23	.000
	Model	90.711	23	.000

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	388.829 ^a	.160	.266
a. Estimation terminated at iteration number 6 because parameter estimates changed by less than .001.			

Hosmer and Lemeshow Test			
Step	Chi-square	df	Sig.
1	7.416	8	.492

Variables in the Equation							
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	BORROWED FROM BANKS % of Working Capital Borrowed from Banks	.806	.275	8.598	1	.003	2.238
	CAPITAL FINANCED % Of Working Capital Financed by Other (Money Lenders, Friends, Relatives, Etc)	-1.992	.822	5.870	1	.015	.136
	RD - During Last Fiscal Year, What Amount Did the Establishment Spend on R&D (Excl. Market Research)?	1.016	.350	8.436	1	.004	2.763
	AGE Year Establishment Began Operations	.012	.010	1.462	1	.227	1.012
	COUNTRY CODE			24.986	3	.000	
	COUNTRY CODE(1)	-.805	.363	4.921	1	.027	.447
	COUNTRY CODE(2)	-2.961	.649	20.835	1	.000	.052

COUNTRY CODE(3)	-979	.351	7.784	1	.005	.376
TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?			15.270	4	.004	
TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(1)	-.753	.518	2.114	1	.146	.471
TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(2)	-1.142	.506	5.086	1	.024	.319
TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(3)	-.313	.477	.431	1	.512	.731
TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(4)	.403	.443	.828	1	.363	1.496
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption			2.868	4	.580	
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(1)	-.573	.710	.652	1	.419	.564
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(2)	.125	.515	.059	1	.807	1.134
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(3)	.108	.487	.049	1	.824	1.114
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(4)	-.354	.430	.677	1	.411	.702
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability			6.589	4	.159	
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(1)	-.951	.588	2.619	1	.106	.386
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(2)	-.557	.524	1.131	1	.288	.573
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(3)	-.409	.496	.679	1	.410	.665

POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(4)	-.968	.414	5.475	1	.019	.380
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?			2.146	4	.709	
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?(1)	.404	.524	.593	1	.441	1.497
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?(2)	.654	.504	1.684	1	.194	1.923
INFORMAL COMPETITORS - How much of an Obstacle: Practices of Competitors in the Informal Sector?(3)	.170	.481	.125	1	.724	1.185
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?(4)	.172	.413	.173	1	.678	1.187
Constant	-.584	.548	1.135	1	.287	.558

Regression analysis of technological resources and level of SMEs exports in LDCs

Step one:

Omnibus Tests of Model Coefficients				
		Chi-square	df	Sig.
Step 1	Step	46.891	22	.002
	Block	46.891	22	.002
	Model	46.891	22	.002

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	208.377 ^a	.187	.277

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

Hosmer and Lemeshow Test			
Step	Chi-square	Df	Sig.
1	3.988	8	.858

Variables in the Equation							
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	TECHNOLOGY LICENSING -Do You Use Technology Licensed from a Foreign-owned Company?	1.175	.545	4.647	1	.031	3.239
	AGE Year Establishment Began Operations	.005	.017	.108	1	.742	1.005
	COUNTRY CODE			15.537	4	.004	
	COUNTRY CODE(1)	-1.521	.559	7.409	1	.006	.218
	COUNTRY CODE(2)	-1.835	.876	4.383	1	.036	.160
	COUNTRY CODE(3)	-1.441	.493	8.549	1	.003	.237
	COUNTRY CODE(4)	-2.572	.777	10.949	1	.001	.076
	TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?			7.804	4	.099	

TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(1)	-.508	.815	.388	1	.533	.602
TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(2)	-.872	.814	1.147	1	.284	.418
TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(3)	-.377	.751	.253	1	.615	.686
TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(4)	.620	.726	.731	1	.393	1.859
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption			5.868	4	.209	
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(1)	-1.141	.893	1.632	1	.201	.320
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(2)	-.330	.646	.262	1	.609	.719
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(3)	-.622	.631	.973	1	.324	.537
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(4)	-1.253	.582	4.639	1	.031	.286
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability			1.876	4	.759	
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(1)	-.271	.765	.125	1	.724	.763
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(2)	.158	.695	.052	1	.820	1.172
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(3)	.179	.645	.077	1	.782	1.196
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(4)	-.436	.586	.553	1	.457	.647

INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?			3.909	4	.418	
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?(1)	1.151	.795	2.096	1	.148	3.160
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?(2)	1.252	.760	2.711	1	.100	3.498
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?(3)	1.000	.753	1.761	1	.184	2.717
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?(4)	.525	.631	.691	1	.406	1.690
Constant	.130	.910	.020	1	.886	1.139

Step two:

Omnibus Tests of Model Coefficients				
		Chi-square	df	Sig.
Step 1	Step	34.334	22	.045
	Block	34.334	22	.045
	Model	34.334	22	.045

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	146.371 ^a	.141	.256

a. Estimation terminated at iteration number 20 because maximum iterations had been reached. Final solution cannot be found.

Hosmer and Lemeshow Test			
Step	Chi-square	df	Sig.
1	10.063	8	.261

Variables in the Equation							
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	TECHNOLOGY LICENSING - Do You Use Technology Licensed from a Foreign-owned Company?	.946	.636	2.211	1	.137	2.576
	AGE Year Establishment Began Operations	.002	.022	.008	1	.929	1.002
	COUNTRY CODE			.975	4	.914	
	COUNTRY CODE(1)	.394	.756	.272	1	.602	1.484
	COUNTRY CODE(2)	-.070	1.012	.005	1	.945	.932
	COUNTRY CODE(3)	.126	.694	.033	1	.856	1.134
	COUNTRY CODE(4)	-.463	.859	.290	1	.590	.629
	TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?			4.843	4	.304	
	TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(1)	.064	.912	.005	1	.944	1.067

TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(2)	-1.577	.983	2.572	1	.109	.207
TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(3)	-.192	.799	.058	1	.810	.826
TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(4)	-.328	.784	.175	1	.676	.721
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption			3.605	4	.462	
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(1)	-2.295	1.233	3.466	1	.063	.101
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(2)	-.292	.798	.134	1	.714	.747
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(3)	-.355	.778	.209	1	.648	.701
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(4)	-.315	.622	.256	1	.613	.730
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability			2.862	4	.581	
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(1)	.456	.838	.296	1	.586	1.578
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(2)	-19.526	6209.771	.000	1	.997	.000
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(3)	-.649	.790	.673	1	.412	.523
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(4)	.389	.600	.421	1	.517	1.476
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in Informal Sector?			2.566	4	.633	

INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?(1)	-.202	1.047	.037	1	.847	.817
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?(2)	1.055	.889	1.407	1	.236	2.871
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?(3)	.186	.916	.041	1	.839	1.204
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?(4)	.582	.691	.708	1	.400	1.790
Constant	-1.657	1.084	2.334	1	.127	.191

Step three:

Omnibus Tests of Model Coefficients				
		Chi-square	df	Sig.
Step 1	Step	74.450	22	.000
	Block	74.450	22	.000
	Model	74.450	22	.000

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	443.872 ^a	.120	.204

a. Estimation terminated at iteration number 6 because parameter estimates had changed by less than .001.

Hosmer and Lemeshow Test			
Step	Chi-square	df	Sig.
1	11.625	8	.169

Variables in the Equation							
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	RD – During the Last Fiscal Year, the Establishment Spent How Much on R&D (Excl. Market Research)?	.811	.323	6.313	1	.012	2.250
	AGE Year Establishment Began Operations	.017	.009	3.100	1	.078	1.017
	COUNTRY CODE			28.166	4	.000	
	COUNTRY CODE(1)	-.851	.357	5.692	1	.017	.427
	COUNTRY CODE(2)	-2.931	.637	21.154	1	.000	.053
	COUNTRY CODE(3)	-.910	.330	7.624	1	.006	.402
	COUNTRY CODE(4)	-1.546	.546	8.001	1	.005	.213
	TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?			11.842	4	.019	
	TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(1)	-.796	.488	2.665	1	.103	.451

TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(2)	-1.081	.473	5.217	1	.022	.339
TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(3)	-.546	.451	1.468	1	.226	.579
TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(4)	.115	.415	.077	1	.781	1.122
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption			5.845	4	.211	
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(1)	-1.121	.654	2.934	1	.087	.326
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(2)	-.159	.474	.112	1	.738	.853
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(3)	-.141	.435	.106	1	.745	.868
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(4)	-.634	.393	2.606	1	.106	.530
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability			2.324	4	.676	
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(1)	-.465	.561	.686	1	.407	.628
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(2)	-.026	.492	.003	1	.958	.975
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(3)	.047	.456	.011	1	.918	1.048
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(4)	-.359	.382	.886	1	.347	.698
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?			2.101	4	.717	

INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?(1)	.488	.496	.965	1	.326	1.628
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?(2)	.624	.476	1.716	1	.190	1.867
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?(3)	.307	.454	.457	1	.499	1.359
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in Informal Sector?(4)	.213	.390	.297	1	.586	1.237
Constant	-.522	.507	1.059	1	.303	.593

Step four:

Omnibus Tests of Model Coefficients				
		Chi-square	df	Sig.
Step 1	Step	57.288	23	.000
	Block	57.288	23	.000
	Model	57.288	23	.000

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	191.852 ^a	.227	.337

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

Hosmer and Lemeshow Test			
Step	Chi-square	df	Sig.
1	9.745	8	.283

Variables in the Equation							
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	TECHNOLOGY LICENSING -Do You Use Technology Licensed from a Foreign- Owned Company?	.951	.558	2.902	1	.088	2.589
	RD - During the Last Fiscal Year, the Establishment Spent How Much on R&D (Excl. Market Research)?	1.665	.504	10.900	1	.001	5.283
	AGE Year Establishment Began Operations	.008	.018	.207	1	.649	1.008
	COUNTRY CODE			16.870	4	.002	
	COUNTRY CODE(1)	-1.921	.603	10.141	1	.001	.146
	COUNTRY CODE(2)	-1.921	.902	4.536	1	.033	.146
	COUNTRY CODE(3)	-1.714	.524	10.697	1	.001	.180
	COUNTRY CODE(4)	-2.401	.777	9.553	1	.002	.091

TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?			6.729	4	.151	
TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(1)	-.568	.838	.458	1	.498	.567
TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(2)	-.677	.855	.626	1	.429	.508
TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(3)	-.449	.789	.325	1	.569	.638
TRANSPORT OBSTACLE- How Much of an Obstacle: Transport?(4)	.683	.753	.822	1	.365	1.980
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption			6.650	4	.156	
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(1)	-.724	.892	.659	1	.417	.485
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(2)	-.189	.665	.080	1	.777	.828
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(3)	-.540	.645	.700	1	.403	.583
CORRUPTION OBSTACLE - How Much of an Obstacle: Corruption(4)	-1.440	.613	5.512	1	.019	.237
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability			3.376	4	.497	
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(1)	-.573	.803	.510	1	.475	.564
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(2)	.231	.716	.104	1	.747	1.259
POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(3)	.073	.663	.012	1	.912	1.076

POLITICAL OBSTACLE - How Much of an Obstacle: Political Instability(4)	- .694	.605	1.314	1	.252	.500
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?			4.661	4	.324	
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?(1)	1.121	.814	1.898	1	.168	3.068
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?(2)	.996	.782	1.624	1	.203	2.708
INFORMAL COMPETITORS - How much of an Obstacle: Practices of Competitors in the Informal Sector?(3)	.962	.775	1.539	1	.215	2.617
INFORMAL COMPETITORS - How Much of an Obstacle: Practices of Competitors in the Informal Sector?(4)	.159	.649	.060	1	.806	1.173
Constant	.201	.921	.048	1	.827	1.223