

**INTERNAL DRIVERS OF INNOVATION AND SUSTAINABILITY IN SOUTH  
AFRICAN MANUFACTURING SMALL AND MEDIUM ENTERPRISES**

**by**

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## **DEDICATION**

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I wish to dedicate this thesis to my late mother Susan Maditaba Letsela/Mbele.

She taught me perseverance and prepared me to face challenges with faith and humility. She was constant source of inspiration to my life. Although she is not here to give me strength and support, I always feel her presence that used to urge me to strive to achieve my goals in life.

Her wise words will live with me until we meet again that side of Jordan. Amen!!!

## DECLARATION

This work has not previously been accepted in substance for any degree and is not being concurrently submitted in candidature for any degree.

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### STATEMENT 1

This thesis is being submitted in fulfilment of the requirements for the degree of Doctor in Business Administration: Business

### STATEMENT 2

The thesis is the result of my own independent work or investigation, except otherwise stated. Other sources are acknowledged by giving explicit references. A bibliography is appended.

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### STATEMENT 3

I hereby give consent for my thesis, if accepted, to be available for photocopying and for interlibrary loans and for the title and summary to be made available to outside organisations.

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## ABSTRACT

The study aimed to analyse the relationship between internal management systems, innovativeness, and the sustainability of Small and Medium Enterprises (SMEs) within the South African manufacturing sector. Most of the studies in this regard were mainly focusing on large and well-established companies, and the focus would be found to be aligned to only one variable. Studies with reference to SMEs where a linkage amongst the variables is clearly established are limited, thereby providing an impetus to conduct this study. As a result of the changes taking place daily in technology and business operational policies, SMEs typically have to revisit their internal management systems, level of innovativeness, and sustainable measures. Such methods are intended to promote their existence, survival, and growth into the unforeseeable future.

A quantitative method based on a positivistic research paradigm was adopted in undertaking the study. The sample consisted of 500 respondents, who were owners, managers, and employees of SMEs in Gauteng Province. The collected data were tested using descriptive and inferential statistics, including Exploratory Factor Analysis, Pearson Correlations and Regression Analysis. Application of factor analysis led to the extraction of two additional SME sustainability factors, namely Employee Training Outcomes and Corporate Compliance to Policy. Of the three internal management systems, only two factors, namely infrastructure development and employee training outcomes, exerted a significant positive influence on innovation. In turn, innovation exerted a significant positive influence on two SME sustainability factors, namely the nature of the product and social sustainability.

The study has several implications. Theoretically, the study provides information on how internal management systems relate to innovation. As indicated in the results, only infrastructure development and employee training outcomes exert an influence on innovation and should thus be prioritised when attempting to improve the extent of innovation within SMEs. Likewise, innovation in SMEs results in benefits in terms of the nature of the product and social sustainability only. Practically, the study recommends that there is a need by the South African government through the Small and Medium Enterprise Development Department to review their approach on SMEs so that they can obtain adequate resources to enhance their business success.

Additionally, there is a need for both governmental and non-governmental organisations to develop initiatives where SMEs go through the incubation process. During this process, training and business advisory services will be offered for free to equip owner-managers with the relevant business skills. Areas of further research, as well as limitations, were also discussed.

**Key words:** Small and Medium Enterprises; resource mobilisation; infrastructure development; employee training; innovativeness; sustainability of SMEs.

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## LIST OF ACRONYMS

AGFI	Adjusted Goodness of Fit Index
AMOS	Analysis of Moment Structures
AVE	Average Variance Extracted
BBBEE	Broad-Based Black Economic Empowerment
BBSDP	Black Business Supplier Development Programme
BEE	Black Economic Empowerment
CC	Climate Change
CCP	Corporate Compliance to Policy
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CG	Corporate Governance
CMIN/DF	Degree of Freedom
CR	Composite Reliability
CSR	Corporate Social Responsibility
DCT	Dynamic Capabilities Theory
EC	European Commission
ECB	European Central Bank
EEA	European Economic Area
EF	Economic and Financial Sustainability
EFA	Exploratory Factor Analysis
EN	Environmental
ET	Employee Training
ETO	Employee Training Outcomes
GDP	Gross Domestic Product
GEAR	Growth, Equity and Distribution
GEM	Global Entrepreneurship Monitor
GFI	Goodness of Fit Index
GS	General Sustainability
IDC	Industrial Development Corporation

IFI	Incremental Fit Index
IN	Infrastructure Development
IV	Innovativeness
KMO	Kaiser-Meyer-Olkin
NDA	National Development Agency
NFI	Normed Fit Index
NP	Nature of Product
OECD	Organisation for Economic Corporation and Development
RBV	Resource Based View
RBV	Resource-Based View
RDP	Reconstruction and Development Programme
RM	Resource Mobilisation
RMSEA	Root Mean Square Error of Approximation
SC	Social
SEM	Structural Equation Modelling
SMEs	Small and Medium Enterprises
SMMEs	Small Medium and Micro Enterprises
SPSS	Statistical Package for Social Sciences
TEA	Total Early-Stage Entrepreneurial Activity
TLI	Tucker-Lewis Index
TOC	Theory of Constraints
TR	Employee Training
USA	United States of America



# CHAPTER 1

## INTRODUCTION AND BACKGROUND

### 1.1 Introduction

This study dwells on the relationship that exists amongst the internal management systems, innovativeness and sustainability of SMEs within the manufacturing sector of South Africa. This is an introductory chapter to the study where background and motivation are outlined before articulating the problem statement. Both objectives are also stated; accordingly, that is, theoretical and empirical ones and the statement of the hypotheses. This is followed by an articulation of the theoretical and conceptual framework to outline a link amongst the set variables. A brief outline of the review of related literature on the main aspects anchoring the study is given. Research methodology is also discussed in brief on aspects such as research approach, design, sampling, validity and reliability, and ethical considerations. The chapter outline is given before the conclusion.

### 1.2 Background to the Study and Motivation

In the past few decades, small and medium enterprises (SMEs) have emerged as major drivers of socio-economic growth across the globe (Chimucheka, 2015:3; Langwell & Heaton, 2016:16; Venkatasubramanian & Ramanakumar, 2018:18). Tshikhudo (2012:8) opines that SMEs are repeatedly considered the root leading to the creation of big enterprises, besides being the fuel of economic engines. Supporting this view, Fu, Zhu, Yu, and He (2013:85) suggest that SMEs have provided many employment opportunities that have made significant contributions towards economic development worldwide. Fiseha and Oyelana (2015:281) assert that SMEs have historically been the leading players in the economy, especially as large providers of employment, and hence they are a generator of primary and secondary sources of income for many households. Ehtesham (2011:4) indicates that SMEs are crucial to the process of overcoming poverty and increasing the level of livelihood in many societies. Other scholars (Ginji, 2014:1857; Manyani, Hove, Mudzura & Chiriseri, 2014:10) have observed that they contribute to economic growth and sustainable economic development by reducing poverty, ensuring equitable income distribution, and reducing unemployment. Al-Mahrouq (2010:91) and Aremu and Adeyemi (2011:16) assert

that SMEs are significant drivers and indices for the level of industrialisation, modernisation, urbanisation, and gainful and meaningful employment for all those who are able and willing to work, as well as for income per capita, equitable distribution of income, and the welfare of the citizenry and the quality of life it enjoys. Thus, SMEs contribute immensely to the creation of national wealth and the generation of economic growth and have been cited as major drivers of employment creation (Makanyeza & Dzuze, 2015:198).

In South Africa, SMEs play a pivotal role in creating jobs and wealth in the economy. They employ almost half of the working population and contribute 50% of the gross domestic product (GDP) (Fatoki, 2011:193; Rogerson, 2013:7). Some scholars (Aigbavboa, Tshikhudo & Thwala, 2014:350; Muyengwa, Mukhuba, Battle & Mbohwa, 2013:244) concur, as they hold the widely held view that SMEs in South Africa have the potential to reduce the rate of unemployment, that they contribute between 52% and 57% to the GDP, and provide about 61% of employment opportunities. Aigbavboa *et al.* (2014:350) confirm this assertion when they state that 91% of formal business entities in the South African manufacturing industry are SMEs, while a report by Deloitte (2013:1) states that the manufacturing industry employs around 1.7 million people and is currently the second-largest sector in the economy. Tshikhudo (2016:9) asserts that the industry consistently features among the top three sectors with the highest multiplier effect in terms of output, employment, export earnings, and fiscal revenue for every one rand invested. Thus, SMEs play a significant role in the socio-economic development of the nation.

It may be argued that the acknowledged contributions of SMEs call for owners and managers of such enterprises to develop advanced knowledge in the management of such enterprises' operations to ensure their survival and success. According to Kumar (2015:4), one way of ensuring that SMEs maintain their position in the economy is through the provision of an enabling environment for them to be sustainable. Governments have a major responsibility of ensuring that SMEs are operating within a conducive environment for them to make effective contributions to their economies. Additionally, SMEs themselves have to ensure that customers or clients are treated with respect and high levels of efficiency and effectiveness and that they display high levels of integrity and innovativeness (Wiese, 2014:3). Customers or clients themselves require SMEs to provide unique and distinct products and services from larger businesses, which is part of customer pride (Mafini & Muposhi, 2017:9). Business performance and market position are regarded as the

main objectives that SMEs are eager to achieve, as these factors are the major determinants of either success or failure within the sector (Alafeef, 2015:4).

In typical operations, businesses often aim at being more competitive than their rivals in order to secure a better place in the overall market (Stucke, 2013:162). However, gaining a competitive advantage remains a significant challenge as most SMEs fail to reach such goals, thus negatively affecting both their survival and the larger economy (Rogerson, 2013:6). In order to ensure the continued existence and sustainability of SMEs, they must embrace management best practices, as well as nurture innovativeness and creativity within the sector, which can be achieved through both access to adequate resources and comprehensive training (Hove, Sibanda & Pooe, 2014:12). It was the intention of this study to examine how management practices and innovativeness can be harnessed to boost the sustainability of SMEs in the South African manufacturing environment.

According to Chimucheka and Mandipaka (2015:5), the existence of SMEs is susceptible to threats emanating from operational and management discrepancies, which create various challenges in the business environment. Inadequate resources, including human, financial, physical, technological and informational resources, are some of the main reasons behind the failure of SMEs in most developing economies (Alafeef, 2015:10; Chimucheka, 2015:4). Within South Africa, in addition to the lack of resources, SMEs are susceptible to other challenges related to a lack of adequate skills required for understanding how to develop innovative ideas and provide unique products and service offerings to the market (Bushe, 2017:3). These skills include marketing, forecasting customer needs and trends, planning, marketing research, and analytical skills (Mafini & Muposhi, 2017:16). Baleseng (2015:7) asserts that SMEs are vulnerable to challenges related to marketing, geographical location, competition, and knowledge of the operating environment. Baleseng, Shankar, Kumar and Kannan (2016:9) add that the challenges facing SMEs emanate from the internal and the external environment of the specific industry within which the business belongs and that these challenges range from the availability of resources to the intensity of competition. Moreover, as a result of the lack of adequate planning and understanding of customer needs, SMEs fail to develop the innovative business ideas required to provide unique services to customers (Kumar, 2015:6). This leads to numerous problems, given that it is through creativity and innovativeness that SMEs in various geographical areas manage to create unique products and services, which is necessary to sustain their operations.

The above discussion suggests that although SMEs in South Africa and the rest of the world play a pivotal role in the growth of the economy, there are always challenges that cause most of these enterprises to fail. The failure of these SMEs is linked to the underperformance of the national economy, as shown by an increase in poverty levels and unemployment in many developing countries (Masocha & Fatoki, 2018:10). Hence the need for further investigation into the sustainability of SMEs in the South African manufacturing industry.

### **1.3 Problem Statement**

The aim of this study is to investigate the internal drivers to innovation and sustainability in manufacturing SMEs in South Africa. South Africa has numerous entrepreneurial ventures that are either being established or are already in operation, which collectively forms part of the SME sector. Widana, Wiryono, Purwanegara and Toha (2015:10) report that 97% of South African business enterprises are SMEs and that the sector contributes 35% towards the country's GDP, on aggregate. Some studies (for example, Chimucheka, 2015; Wiese, 2014; Zindiye, 2010) have been conducted in different economies in an attempt to prove that SMEs are critical contributors to ensuring economic growth and development. Such studies show how vital the SME sector is to national economies and that as such, it should be embraced by creating a sustainable SME environment. Larger businesses develop from these SMEs, thereby creating space for new players to enter the SME sector. However, this can only be achieved if there is the provision of a sustainable environment in which SMEs can operate. A sustainable SME environment allows full-capacity utilisation as a result of the presence of all the fundamental business inputs (Matsoso, 2014:9). There is a direct relationship between the survival and growth of SMEs and economic growth, where the growth of the SME sector is the controlling factor (Kruger, 2011:208).

In attempting to embrace a sustainable SME environment, the South African government has been involved in several initiatives as a way of promoting the growth and development of SMEs (Hove, Sibanda & Pooe, 2014:15). Some support structures have been put in place by the government of South Africa under the new dispensation, that is, the post-apartheid administration, as a way of empowering the marginalised black people. These include legislative mechanisms developed to economically empower previously marginalised groups, such as Black Economic Empowerment (BEE) and its successor, known as Broad-Based Black Economic Empowerment (BBBEE)

(Department of Small Business Development, 2010:1). Another important initiative by the government is the National Small Business Act of 1996, which has acted as the guiding principle on how SMEs operate in terms of regulations and the relevant support offerings (Mafini & Muposhi, 2017:12). All of these legislative frameworks were approved in parliament as a way of ensuring that SMEs develop while trying to curb the effects of colonialism, such as poverty and inequality. The South African government continues to provide financial aid, either directly or indirectly, to SMEs through a cost-sharing grant for equipment, tools, machinery, and business development, known as the Black Business Supplier Development Programme (BBSDP) (Kruger, 2011:207).

However, despite the government's interventions mentioned above, SMEs in South Africa still face sustainability problems, which explains why there is suppressed growth in the sector (Urban & Naidoo, 2018:8). Several researchers (for example, Fatoki & Smit, 2011; Mafimidiwo & Iyagba, 2015; Mafini & Muposhi, 2017; Mago & Toro, 2013) acknowledge the high failure rate of businesses within the SME sector in South Africa. Unfortunately, the problem continues, as shown by a consistently high rate of SME failure, which calls for investigation into the sustainability of SMEs in the South African manufacturing industry. In addition, it is notable that despite the numerous studies on the SME sector in South Africa, there is a general lack of evidence on the relationship between internal management systems, innovation, and SME sustainability. This points to a significant research gap that has to be addressed as part of the solution to the lack of growth and the persistent failure facing the SME sector in the country.

## **1.4 Objectives of the Study**

Research objectives form the fundamental guidelines to the intended study, and, as such, they act as a basis for what the study intends to achieve in the end. Three forms of objectives, namely, primary, theoretical and empirical objectives, are relevant for this study.

### **1.4.1 Primary objective**

The primary objective of this study is to investigate the relationship between internal management systems, innovation, and sustainability among SMEs in South Africa.

### **1.4.2 Theoretical objectives**

The following theoretical objectives were developed:

1. to explore the literature on manufacturing SMEs in South Africa;
2. to review the literature on internal management systems, such as resource mobilisation, infrastructure development, and employee training;
3. to analyse the literature on innovation; and
4. to examine the literature on sustainability.

### **1.4.3 Empirical objectives**

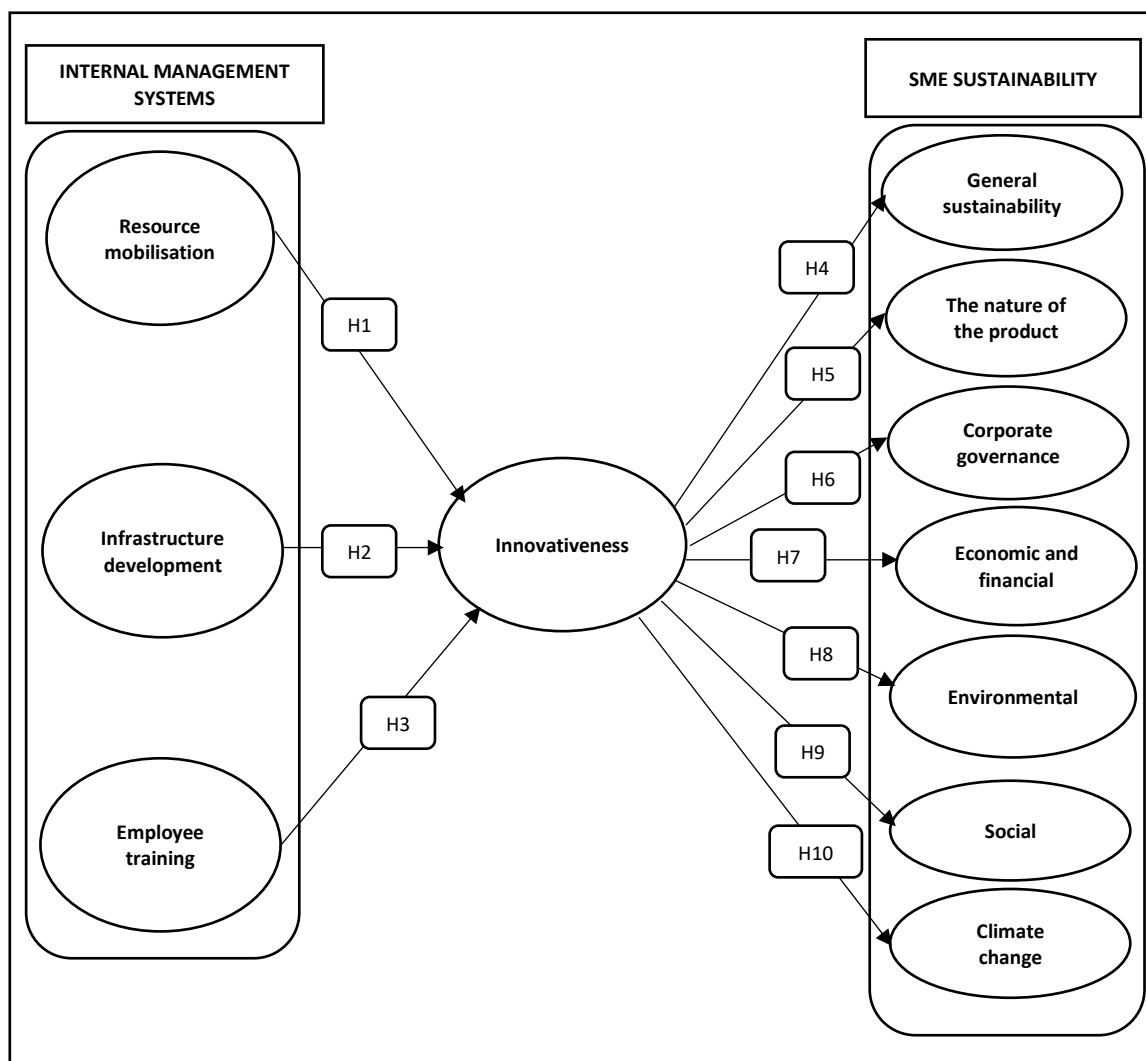
The following empirical objectives were set for the study:

- to explore the perceptions of SME owner-managers in the South African manufacturing sector regarding the implementation of internal management systems in their businesses;
- to analyse the perceptions of SME owner-managers in the South African manufacturing sector regarding the levels of innovation in their businesses;
- to examine the perceptions of SME owner-managers in the South African manufacturing sector regarding the sustainability of their businesses;
- to determine the relationship between internal management factors and innovativeness among SMEs in the South African manufacturing sector;
- to establish the relationship between innovativeness and sustainability among SMEs in the South African manufacturing industry; and
- to develop a model for internal management systems, innovativeness, and sustainability among SMEs in the manufacturing industry of South Africa.

## **1.5 The Conceptual Framework**

As outlined in Figure 1.1, the conceptual framework for the study is shown, together with its fundamental elements, including the predictor, the mediator, and the outcome variables. These elements form the basis of the study, with a clear outline of the relationships that exist between the variables. The framework has one predictor, which is internal management systems. There are three dimensions to internal management systems, namely, resource mobilisation, infrastructure development, and employee training. The outlined framework also shows that there is one

mediating variable, which is innovativeness, which links with one outcome variable, namely, sustainability of SMEs. Sustainability of SMEs has seven dimensions, namely: general sustainability; the nature of the product; corporate governance; economic and financial sustainability; environmental sustainability; social sustainability; and the consideration of climate change. The relationships within the conceptual framework show that successful implementation of the three internal management systems, namely, resource mobilisation, infrastructure development, and employee training, leads to innovativeness within SMEs. In turn, innovativeness within SMEs can lead to sustainability in the indicated seven areas.



**Figure 1.1: Conceptual framework for internal management systems, innovativeness, and SME sustainability**

### **1.5.1 Hypotheses statements**

The hypotheses formulated in this study are based on the relationships that exist in the conceptual framework, stated as follows:

**H1:** There is a significant positive relationship between resource mobilisation and innovativeness among SMEs in the South African manufacturing industry.

**H2:** There is a significant positive relationship between infrastructure development and innovativeness among SMEs in the South African manufacturing industry.

**H3:** There is a significant positive relationship between employee training and innovativeness among SMEs in the South African manufacturing industry.

**H4:** There is a significant positive relationship between innovativeness and general sustainability factors among SMEs in the South African manufacturing industry.

**H5:** There is a significant positive relationship between innovativeness and the nature of the product among SMEs in the South African manufacturing industry.

**H6:** There is a significant positive relationship between innovativeness and corporate governance among SMEs in the South African manufacturing industry.

**H7:** There is a significant positive relationship between innovativeness and economic and financial sustainability among SMEs in the South African manufacturing industry.

**H8:** There is a significant positive relationship between innovativeness and environmental sustainability among SMEs in the South African manufacturing industry.

**H9:** There is a significant positive relationship between innovativeness and social sustainability among SMEs in the South African manufacturing industry.

**H10:** There is a significant positive relationship between innovativeness and the consideration of climate change among SMEs in the South African manufacturing industry.

## **1.6 Theoretical Framework**

This section discusses two theories, namely, the resource-based view and the dynamic capabilities theory, which were employed as a way of establishing a basis for the study.

### **1.6.1 The Resource-Based View**

The resource-based view (RBV) is aimed at providing insight to managers during their process of making strategic decisions for the organisation, where strategic resources are identified that have



the potential to present a comparative advantage to the organisation (Madhani, 2010:203). The theory is aimed at ensuring that the different resources at the organisation's disposal allow the company to develop a sustainable competitive advantage. In this theory, an organisation determines its success or failure by providing allowance for it to check and review its disposable resources and decide how best it can bundle them to outplay its industrial counterparts (Kolade, Obembe & Salia, 2018:184). According to the RBV, organisations acquire the ability to have sustainable value chain addition, new product development, and new market penetration, hence organisational expansion (Madhani, 2010:206). The theory facilitates consideration of the resources that are at the organisation's disposal to unlock the capabilities that are within the organisation, and thus promote organisational competitiveness (Wuyts, Rindfleisch & Citrin, 2015:122). This is a move to offer and equip the organisation with a competitive advantage. The RBV applies to this study in that the three internal management systems under consideration, namely resource mobilisation, infrastructure development, and employee training, are taken to be internal resources that can be harnessed to enable an organisation to become more competitive than its competitors. Likewise, both innovativeness and sustainability are considered to be dynamic capabilities.

### **1.6.2 The Dynamic Capabilities Theory**

In this study, the dynamic capabilities theory (DCT) is considered to apply to both innovativeness and sustainability, which are the mediator and the outcome variables, respectively, in the study. The theory was initially introduced by Teece and Pisano in 1994 after they discovered the limitations of the RBV (Gizawi, 2014:1). Eisenhardt and Martin (2000:1105) state that the dynamic capabilities framework emerged from the RBV. The RBV directly associates organisational business outcomes with organisational resources in a relatively stable and predictable atmosphere. This is also noted by Teece and Pisano (1994:538) and Teece *et al.* (1997:510), who note that although the RBV is the best theory for recognising the mechanisms that enable competitive advantage, it does not attempt to explain how these mechanisms operate. Hence the emergence of the DCT.

Teece and Pisano (1994:552) define dynamic capabilities as the ability of a firm to achieve new forms of competitive advantage by being flexible and fast in dealing with changing market

environments. This is supported by Wang (2015:26), who notes that dynamic capabilities are often defined as the firm's ability to adapt, given changes in the environment. They enable a firm to quickly create, enhance or realign its resources to create or maintain a competitive advantage in a dynamic environment. Other scholars (Faizal, Zaidi & Othman, 2012:367; Owoseni & Twinomurinzi, 2018:3) highlight that the purpose of dynamic capabilities is to effect stability by renewing, recombining, redeploying, replicating, retrenching and retiring resources or capabilities in a volatile business environment towards business gains.

The DCT expands on two fundamental issues: the firm's ability to renew competencies to adapt to changes in the business environment and the capacity of strategic management to use these competencies to match the requirements of the environment (Gizawi, 2014:2). The main argument behind the DCT is that how organisations develop specific competencies to respond to changes in the business environment is ultimately related to the firm's business processes, market positions and opportunities (Teece *et al.*, 1997:518). These three factors form the basis for determining dynamic capabilities, namely, processes, positions, and paths. Processes encompass the way things are done in organisations, and they have three roles: coordination, learning, and reconfiguration (Teece *et al.*, 1997:581). Positions are defined as the specific endowment of technology, intellectual property, complementary assets, customer base, and external relations with suppliers, while paths refer to the strategic alternatives available to the firm, and they are defined by path dependencies and technological opportunities (Gizawi, 2014:2). Faizal *et al.* (2012:368) identified the three dimensions of the perspective: adaptive capability, absorptive capability, and innovative capability. The DCT applies to this study because it enables organisations to be innovative in their operations, leading to sustainability and improved performance.

## **1.7 Literature Review**

### **1.7.1 Definitions of small and medium enterprises in South Africa**

There is no general definition of small and medium enterprises (SMEs) as they differ from country to country, but the most common measure used to define them is a quantitative measure, such as the number of employees, the size of the enterprise, the annual turnover, and total assets (Perera & Chand, 2015:1). According to Zindiye (2008:56), the term "SME" refers to an entity that is owned and operated independently and whose activities are not dominant in the field of operation.

Other scholars (European Commission, 2005:5, Manyani *et al.*, 2014:10) view SMEs as formal entities that employ up to 250 employees. Strydom (2015:305) defines SMEs as those businesses that employ up to 200 people and have a turnover of R64 million a year. A common feature of the definitions above is that an SME is a formal enterprise with an annual turnover. Hence, the working definition of an SME in this study is a registered entity that employs not more than 250 employees and whose activities are not dominant in the sector in which it operates. This is in addition to the definition of a small business which the National Small Business Act of 1996 defines as a business entity that is separate and distinct, which might be either a corporate or a non-governmental organisation, either incorporated or not operating under the management of one or more owners, with the inclusion of its branches, if any, or its subsidiaries, for the sake of catering for the interests of the establisher.

### **1.7.2 Internal management systems**

Competing in the global economy demands that organisations should be able to establish and implement internal management systems according to international standards (Karapetrovic & Willborn, 1998:256). Internal management systems are unique mechanisms and techniques implemented in the organisation to ensure it remains competitive (D’Ortenzio, 2012:16). Such systems are initiated from within the organisation, including resource mobilisation, infrastructure development, employee training, employee motivation, risk management, and quality management systems within the organisation, to mention a few (D’Ortenzio, 2012:16). However, in this study, three internal management systems, namely, resource mobilisation, infrastructure development, and employee training, are considered since they are considered the major mechanisms initiated from within the organisation.

Resource mobilisation refers to all activities involved in securing new and additional resources for an organisation and making better use of and maximising existing resources (Kozlenkova, Samaha & Palmatier, 2014:9). Resources in a business set-up consist of tangible and intangible elements bundled together to achieve the business’s stipulated goals, ranging from profitability to progressive existence to sustainability to wealth maximisation to market domination (Lamprecht, 2011:30; Yasuda, 2015:8). Specific examples of resources include financial, human, physical and informational resources and intellectual capital (Langwell & Heaton, 2016:16). According to

Reypens, Bacq and Milanov (2021:2), small business ventures' decisions regarding resources determine their short-term survival. Regarding human resources mobilisation, Sun, Chang-Richards, Kleinsman, and Innes (2021:3) believe that information technology could provide an effective mobilisation solution, especially for post-disaster recovery.

Infrastructure development refers to ensuring that facilities required to perform business activities are available and suitable for economic use (Suh & Lee, 2018:21). Examples of infrastructure include basic and organisational structures, such as buildings, plants, roads, and power supplies (Venkatasubramanian & Ramanakumar, 2018:5). Infrastructure development is a key activity for any enterprise, given that all business activities, from manufacturing to contact with customers, occur within specific facilities (Aboelmaged, 2018:8). There is close interaction between resources, infrastructure, innovation and creativity within the SME sector (Masocha & Fatoki, 2018:6). Hence, infrastructural developments are a prerequisite for well-established and sustainable innovation and creativity within the SME, enabling such businesses to compete on an equal footing, allowing them to grow, develop, and sustain themselves (Ceptureanu, Ceptureanu, Bologa & Bologa, 2018:8).

Employee training is a factor of human resources, which implies that people in an organisation and their efforts, skills acquired, or innate knowledge are used to influence the organisation's activities (Sula & Banyar, 2015:20). As a result of the presence of human resources, there is a need to extend the knowledge and skills in possession to align with the current production or service offering trends, which can only be enhanced through training (Van Tonder, 2016:18). There is a continual change in technology and production methods and a need to keep abreast of these changes, thus aiding the firm's competitive advantage (Abbott, Goosen & Coetzee, 2013:1). As long as all inputs for productivity purposes are available, training of employees becomes essential to ensure that they can effectively and efficiently turn the resources into outputs, which can be converted to the organisation's revenue (Bekele & Worku, 2013:540). By so doing, education and training stimulate innovation and creativity within the employees, which makes the firm a success due to its unique product or service offerings to the market (Kyei & Bayoh, 2016:171).

### **1.7.3 Innovativeness**

Although innovation has many scholarly opinions emerging from its study, the central argument has been aligned towards the fact that innovation stimulates organisational performance (Taques, López, Basso & Areal, 2021:12). Innovation is the creation of new ideas, products, processes and systems for the growth and success of the organisation (Nedelko & Potocan, 2013:35; Rampa & Agogué, 2021:212). Innovation is essential in business operations as there is a continual change in how businesses operate, consumer taste, and the general business environment (Hao, Ilan & Yu, 2013:131). These changes make the business environment challenging and call for the survival of the fittest, such that only those organisations with high adaptability levels, innovation, and creativity survive (Lamprecht, 2011:26). There is, therefore, a need to ensure that employees are encouraged to use and accept the innovative processes in place and continually embrace change, as well as be innovative in their work (Kariv, 2012:168; Millicent & Reginald, 2014:60). The ongoing global integration of economic and financial systems credited for facilitation increased innovation in most key sectors (Baloch, Ozturk, Bekun & Khan, 2021:177).

According to Booyens (2013:66), there is a relatively high innovation rate within the SME sector, which makes them on top of the innovation chain in the world. However, there is a problem in that policy-makers within the government have inadequate knowledge of the operations of small businesses and thus fail to develop and impose policies that promote innovation in the SME sector (Sula & Banyar, 2015:15). Additionally, Terziovski (2012:220) states that there is a need for SMEs to compete and align with the big companies as they are characterised by proper planning and organisation; and if these aspects are combined with innovation, the entire economic cluster will flourish. Furthermore, Laforet (2012:752) states that for SMEs to survive, there is a need to be creative and innovative in whatever business activity they embark on to produce unique products and services so that they can attain a competitive edge. Therefore, both the performance and the survival of SMEs are enhanced by the high innovation rate and capabilities they possess.

### **1.7.4 The sustainability of small and medium enterprises**

Hatten (2012:12) defines sustainability in business as an enabling environment that allows the business to survive and grow economically and socially. It is further defined as the firm's ability to maintain cash flow and be able to maintain profitability in the long run (Sula & Banyar,

2015:89). Business sustainability is driven by several factors, such as skilled labour, government regulations, and management practices. These aspects also work in line with the ease of access to finance, the ability to manage risks effectively, and have industrial or sectoral competition. Sustainable factors are not born from outside the organisation but are internally driven, such as human resource management, innovation, financial management, risk management, managing the business environment, and investment decisions (Vieira, 2013:45).

In this study, the dimensions considered are the sustainability of SMEs, namely, general sustainability; the nature of the product; corporate governance; economic and financial sustainability; environmental sustainability; social sustainability; and the consideration of climate change. According to Makki and Lodhi (2014:305), corporate governance is a mechanism for achieving maximum efficiency, which plays a critical role in sustainability, productivity, and profitability to meet the new challenges of the quota-free global environment. Meressa (2017:32) defines corporate governance as a set of mechanisms, processes, and relations by which firms are controlled and directed and is arranged to accomplish the firm's objectives. It can be viewed as a set of rules, regulations, and structures that aim to achieve optimum performance by implementing appropriate, effective methods to achieve corporate objectives. The dimension of economic and financial sustainability relates to how organisations prosper and perform financially, and minimise expenditure (Aslam, Ahmad, Amin, Usman & Arif, 2018:285).

The dimension of environmental sustainability relates to a viable business model, which involves comprehensive strategic efforts to strictly control the quality and the improvement of the organisation, as well as supporting and taking into consideration the factors that affect the ecological environment in which the organisation operates (Matinaro, Liu, Lee & Poesche, 2019:1154). Social sustainability considers the norms, values, and standards in which the organisations operate, including how individuals, communities, and societies live with each other and societal provisions and expectations (Matinaro *et al.* 2019:1154). The consideration of climate change relates to changes in weather patterns, which may impact organisations positively or negatively (Eustace & Martins, 2014:4). It may refer to natural weather phenomena and the organisational climate, which relates to perceptions of organisational structures and how it feels to be a member of the organisation (Eustace & Martins, 2014:4).

## **1.8 Research Design and Methodology**

A research methodology is defined as a means to solve research problems; it is regarded as the science of how research is conducted, where the steps followed by the researcher in understanding a research problem and the logic behind it are outlined (Kumar, 2015:5). Thus, the research methodology provides a guide on how to conduct a research project. In this study, the research methodology encompasses the research design, the research approach, the data-collection method and measuring instruments, the method of data analysis, the reliability and validity of the measuring instruments, and ethical considerations.

### **1.8.1 Research approach**

The research approach relates to the plans and the procedure for the research, which range from broad assumptions to detailed methods of data collection, analysis and interpretation (Creswell, 2014:105). The three common research approaches are the quantitative research approach, the qualitative research approach, and the mixed-methods research approach.

This study adopted a quantitative approach. According to Supino and Borer (2012:10), the quantitative approach involves measuring parameters that have been attained under standardised conditions by structured or semi-structured instrumentation, which may be subjected to formal statistical analysis. Kothari (2014:5) states that the quantitative approach involves generating data in a quantitative form, which can be subjected to formal and rigid quantitative analysis. The quantitative approach allows testing of the hypothesised relationships between the constructs. The benefits of the quantitative approach are that the results are likely to be generalisable to an entire population since it involves a large sample (Rahman, 2016:106).

### **1.8.2 Research design**

Tavakoli (2012:546) defines a research design as the arrangement of conditions for the collection and analysis of data in a manner that aims to combine relevance with the research purpose. The research design is the blueprint for data collection, measurement and analysis, and decisions related to the “what”, the “where”, the “when”, and the “how” of the research, and by what means a research study is conducted. Bryman (2012:46) contends that a research design provides a framework for collecting and analysing data.

This study employed a descriptive survey research design. Descriptive research provides a picture of the exact details of a situation, social setting or relationship (Neuman, 2014:38). Surveys involve the use of a questionnaire in the collection of data from large groups of respondents (Collis & Hussey, 2014:18). The descriptive survey design is the preferred choice because its use usually yields rich data collected in large amounts and analysed using quantitative approaches. This was achieved in the present study, where large numbers of respondents are expected, and quantitative statistical techniques were used to analyse the collected data. The research design involved a literature review in collecting secondary data and an empirical study in which primary data were collected.

### **1.8.3 Literature review**

A literature review refers to the examination of previous material relevant to the current study. It is conducted to summarise and explain the complete state of current knowledge on a limited topic (Loseke, 2017:20). A literature review was conducted in this study in which previously available information relevant to manufacturing SMEs, internal management systems, innovativeness, and sustainability was examined. This information was sourced from academic books, journals, magazines, official government and company documents, and other sources. Both hard copy and Internet-based platforms were used to obtain the information for the literature review.

### **1.4 Empirical study**

An empirical study collects data from the respondents selected for the current study (Check & Schutt, 2012:23). It involves selecting the sample, procedures for data collection, data analysis, and measurement of the psychometric properties of the measurement scale.

#### **1.8.4.1 Sampling design**

Kothari (2014:55) defines a sampling design as a plan for obtaining a sample from a defined population. The sampling design is, therefore, the technique adopted to select elements for the sample. It consists of the target population, the sampling frame, the sample size, and the sampling method.

#### **1.8.4.2 Target population**



According to Leavy (2017:264), a population refers to a collection of elements about which the researcher might later make judgements. Thus, the target population defines the elements to which the results of the study are meant to be generalised. The target population for this study is SMEs in the manufacturing sector in the selected South African province, namely, Gauteng. Gauteng was selected because it is the economic hub of South Africa.

#### **1.8.4.3 Sampling frame**

A sampling frame is defined as the full list of all the available units in the universe, and each unit will need to be surveyed (Zikmund & Babin, 2013:184). Thus, the sampling frame is the entire list of units of interest. The sampling frame is generally defined by geographical listings, maps, directories, administrative records, membership lists, or telephone or other electronic formats (Leedy & Ormrod, 2015:259). Due to the lack of reliable information related to the number and the location of manufacturing SMEs in the three selected provinces, there was no sampling frame used in this study. However, the online South African Small Business Directory was used to identify the available SMEs and their contact details.

#### **1.8.4.4 Sample size**

Sekaran and Bougie (2016:396) define a sample size as the actual number of subjects chosen as a sample to represent the population's characteristics. In other words, it is the total number of units selected for the actual study. Since the study used the correlations and regressions procedure to analyse data, sample size recommendations were applied in this study. According to Kline (2011:11-12) and Hair, Black, Babin, Anderson and Tatham (2014:573), a minimum of 200 cases is required. Based on these recommendations, the sample size for this study was set at  $n = 500$  respondents.

#### **1.8.4.5 Sampling method**

A sampling method is a procedure for collecting a sample from the population (Burns & Burns, 2008:60). Sampling methods are classified into two types, namely, probability sampling and non-probability sampling. In this study, a non-probability sampling technique was used. According to Lavrakas (2008:621), non-probability sampling implies that all population elements have unequal chances or an unknown chance of being included in the sample since the selection is based on the

subjective judgement of the researcher. Specifically, the convenience sampling technique was used in this research. Tavakoli (2012:591) asserts that sampling elements are selected in the convenience sampling technique based on their availability and accessibility. This technique was used since there is no single database of respondents to be used as the sampling frame in this study.

#### **1.8.5 Method of data collection and measurement instruments**

Data collection is the process of collecting and measuring information from the sample. According to Yaya (2014:138), a measurement instrument refers to the various methods by which a researcher obtains data from respondents in a research project. Data for this study were gathered using surveys in the form of questionnaires. Questionnaires were used because they are easy to construct, are highly versatile, and are uniquely capable of gathering a large amount of information quickly from a large group of respondents in a readily processable form (Tavakoli, 2012:512). The questionnaires were either be emailed or hand-delivered to respondents. Respondents were given a period of two weeks to complete the questionnaires.

The questionnaire that was used in the study was divided into four sections. Section A elicited information on the demographic profile of the respondents. Section B of the questionnaire elicited information on internal management systems. The availability of resources was measured using five items adapted from Wuyts, Rindfleisch and Citrin (2015). Infrastructure was measured using five questions adapted from Li, Zheng, Li, Jin and Xu (2017), while training was measured using five questions adapted from Asfaw, Argaw and Bayissa (2015).

Section C of the questionnaire used five items adapted from Wang (2012) to measure innovativeness. Section D elicited information on the sustainability of SMEs. To achieve this, questions on general sustainability were measured using six questions adapted from studies by Berstrom *et al.* (2014) and Yang, Sun, Zhang, Wang and Cao (2017). Questions on the nature of the product, corporate governance, and consideration of climate change were adapted from Laskar and Maji (2017). Questions on economic and financial sustainability were adapted from Amrina and Usof (2011), while questions on environmental sustainability were adapted from Vinodh and Chintha (2010), and those on social sustainability were adapted from Chardine-Baumann and Botta-Genoulaz (2014). The questions in sections B and C were presented in Likert-type scales anchored by 1 = strongly disagree and 5 = strongly agree. The questions in section D were be

presented in Likert-type scales anchored by 1 = decreased significantly and 5 = increased significantly.

### **1.8.6 Data-analysis approach**

According to Leavy (2017:111), the data analysis process allows the researcher to determine the results of the study. The data-analysis process leads to the statistical interpretation of the data, which is generally represented in a set of tables or charts, followed by a discussion. Data were analysed using both descriptive and inferential statistics. Descriptive statistics were applied to explore the respondents' demographic profile and examine the respondents' perceptions regarding the research constructs. Inferential statistics were applied in the form of correlations and regressions. The procedures were used to test the hypothesised relationships between the variables are the correlations and regression (Niemczyk, 2014:208).

### **1.9 Reliability and Validity**

The CFA procedure was applied in testing for the reliability, validity and model fit of the measurement scales (Brown, 2015:43). “Reliability” and “validity” are two terms that are used to evaluate the quality of results from quantitative research (Leavy, 2017:113). According to Kumar (2011:314), the concept of reliability refers to the consistency of the research instrument. A research tool is considered reliable if it is consistent and stable, hence predictable and accurate, and the greater the degree of consistency of the research instrument, the greater its reliability. To check for validity in this research, two tests, namely, the Cronbach’s alpha and composite reliability were applied. A minimum value of 0.7 for both tests were required in order for a scale to be considered reliable (Leavy, 2017:114; Tavakoli, 2012:287).

Validity refers to the proof that the instrument, the technique, or the process used to measure a variable does indeed measure the intended variable (Sekaran & Bougie, 2016:398). Three types of validity were checked in this study. The first one is face validity, which tested through a panel review of the questionnaire by experts in the field of business management. The second one is content validity, which was tested through a pilot review of the questionnaire using at least 40 respondents. The third type is construct validity, which has two forms. The first form is convergent validity, which was tested through factor loadings, using minimum threshold values of 0.5 for factor loadings (Anderson & Gerbing, 1988:411). The second form of construct validity is

discriminant validity, which was tested through correlations between constructs. Positive correlations below 0.8 were accepted as indicators of satisfactory discriminant validity (Anderson & Gerbing, 1988:411).

### 1.10 Ethical Considerations

The term “research ethics” refers to the moral principles that guide the conduct of research and bind all researchers to the ideals of ethical practice, as demonstrated in government regulations and professional associations’ codes of ethics (Lapan, Quartaroli & Riemer, 2012:189). This study adhered to the following ethical principles:

- Efforts were made to ensure that respondents were not victimised for participating in this study;
- Respondents were given informed consent forms to declare their participation in the study;
- Efforts were made to ensure the confidentiality and anonymity of information provided by respondents.
- Permission was requested from the relevant authorities before conducting the research.

### 1.11 Definitions of terms

This section presents the definitions of all the constructs and terms that were applied in this research.

**Table 1.1: Definitions of Terms**

<b>Term</b>	<b>Definition</b>	<b>Author</b>
<b>Small to medium enterprise</b>	“SME” refers to an entity that is owned and operated independently and whose activities are not dominant in the field of operation.	Suh & Lee (2018:21).
<b>Manufacturing Sector</b>	the branch of manufacture and trade based on the fabrication, processing, or preparation of products from raw materials and commodities	Mets (2006:70).
<b>Internal management systems</b>	is defined as the set of procedures, organisational structures and related activities aimed at ensuring, through an adequate process of identification, measurement, risk management and monitoring,	Venter (2014:20).

<b>Term</b>	<b>Definition</b>	<b>Author</b>
	correct company management consistent with the established objectives.	
<b>Resource mobilisation</b>	Resource mobilisation refers to all functions involved in securing new and additional resources for an organisation. It also involves making better use of and maximising existing resources. Resource mobilisation is often referred to as 'New Business Development.	Theriou & Chatzoudes, (2013:360).
<b>Infrastructure development</b>	Infrastructure development is the construction of basic foundational services in order to stimulate economic growth and quality of life improvement	(Kozlenkova, Samaha & Palmatier (2014:9).
<b>Employee training</b>	Employee training involves programmes that enable employees to learn precise skills or knowledge to improve performance	Sula Banyar, (2015:20)
<b>SME Sustainability</b>	SME Sustainability is the capacity to endure in a relatively ongoing way across various business domains of the organisation.	(Kozlenkova, Samaha & Palmatier (2014:9).
<b>General sustainability</b>	Sustainability can also be defined as a socio-ecological process characterized by the pursuit of a common ideal	Hahn (2019:23).
<b>Corporate governance</b>	Corporate governance is the structure of rules, practices, and processes used to direct and manage a company. A company's board of directors is the primary force influencing corporate governance	Theriou & Chatzoudes (2013:360).
<b>Environmental sustainability</b>	Environmental sustainability is defined as responsible interaction with the environment to avoid depletion or degradation of natural resources and allow for long-term environmental quality.	Makki & Lodhi (2014:305)
<b>Economic and financial sustainability</b>	Financial and economic sustainability is understood as the ability of organisations' administrations to continue now and in the future policies without causing the debt to rise continuously.	Burritt & Schaltegger (2010)
<b>Social sustainability</b>	“Social sustainability occurs when the formal and informal processes; systems; structures; and relationships actively support the capacity of current and future generations to create healthy and liveable communities. Socially sustainable communities are equitable, diverse, connected and democratic and provide a good quality of life	Afonso Jalles, (2015)
<b>Climate change</b>	Climate change is the global phenomenon of climate transformation characterised by the changes in the usual climate of the planet	Makki & Lodhi (2014:305)

Term	Definition	Author
	(regarding temperature, precipitation, and wind) that are particularly triggered by human activities. As a result of unbalancing the weather of Earth, the sustainability of the planet's ecosystems is under threat, as well as the future of humankind and the stability of the global economy.	

## 1.12 Outline of the Study

The following is an outline of how the chapters are organised in the final thesis document:

### Chapter 1: Overview of the study

This chapter provided a full framework for the study. It explained the problem statement, the purpose of the study, the objectives of the research, and the justification for the study, and provided an abbreviated literature review and an overview of the research methodology.

### Chapter 2: A literature review of manufacturing small and medium enterprises in South Africa

This chapter discussed the role of SMEs in the manufacturing sector of South Africa. It explored the achievements and challenges facing these SMEs as they operate in this sector. In addition, it explored previous research on manufacturing SMEs in South Africa.

### Chapter 3: Theoretical Foundations

This chapter analysed literature on the research theories applicable to this study, as well as the concept of internal management and its three dimensions, namely, availability of resources, infrastructure, and training.

### Chapter 4: Literature review of innovation and sustainability

This chapter explored the literature on innovation and sustainability. The literature considered all the dimensions of sustainability that are applied in this research. These are general sustainability, the nature of the product, corporate governance, economic and financial sustainability, environmental sustainability, social sustainability, and the consideration of climate change. The chapter also formulated the research hypotheses based on the literature review.

## **Chapter 5: Research methodology and design**

This chapter offered an in-depth discussion of the research methodology adopted in this study. This included discussions on the research reasoning, paradigm, approach, design and strategy, sampling design, data collection, data analysis, and ethical considerations.

## **Chapter 6: Data analysis and results**

This chapter presented, analysed and interpreted the results with regard to both descriptive and inferential statistics.

## **Chapter 7: Conclusions and recommendations**

This chapter discussed the conclusions drawn from the results and offered some recommendations that apply to manufacturing SMEs. The chapter also discussed the study's contributions and the limitations of the study, and it provided directions for future research.

### **1.13 Conclusion**

This introductory chapter to the study gave an outline of the relationship between the internal management systems, innovativeness and sustainability of SMEs within the manufacturing sector of South Africa. Its background and motivation were outlined before an articulation of the problem statement. Both theoretical and empirical objectives were also stated accordingly, as well as the statements of the hypotheses. This was followed by an articulation of the theoretical and conceptual framework, which outlined a link amongst the set variables. A brief outline of the review of related literature on the main aspects anchoring the study was also given. Research methodology was also briefly discussed, on aspects such as research approach, design, sampling, validity and reliability as well as the ethical considerations. A chapter outline was given before the conclusion.

## **CHAPTER 2**

### **A LITERATURE REVIEW OF MANUFACTURING SMALL AND MEDIUM ENTERPRISES IN SOUTH AFRICA**

#### **2.1 Introduction**

A literature review on manufacturing small and medium enterprises in South Africa is discussed in this chapter. Since the study is anchored on the small and medium enterprises, it is eminent that there is a need to establish an understanding of small and medium enterprises from the perspective of the authorities that undertook the same or related study before this study, since it is foundational to the overall research activity. In this chapter, an extensive consultation of various sources forms part of the literature review process, from the local and global literature sources that tackle the various issues pertaining to manufacturing small and medium enterprises. It starts by categorically outlining literature on the overview of manufacturing small and medium enterprises. This is followed by the definition of the main terms in the study, such as small and medium enterprises from local and international points of view for clarity purposes. The subsequent section outlines literature concerning the role played by SMEs in the global economies before reducing it to the South African economy. Literature on the various challenges that affect the success of the small and medium enterprises sector will also be outlined before giving the various support strategies offered by the government in enhancing small and medium enterprises' survival, growth and continuity. Ultimately, the chapter proposes possible solutions to challenges facing small and medium enterprises from a literature review point of view. This chapter is designed to enhance understanding of the various aspects of manufacturing by small and medium enterprises from local to global standpoints, which forms its main aim.

#### **2.2 Overview of the Small and Medium Enterprises Sector**

Since time immemorial, SMEs have been the main drivers of economies globally, which is enhanced by the accumulation of their small contributions through the various sectors of origin (Ayyagari *et al.*, 2007:419; Balshaw & Goldberg, 2014:67; Fatoki & Garwe, 2010:735). The synergy theory is the one that makes the SMEs sector to be of great importance towards the success of economies dotted across different continents. According to Balshaw and Goldberg (2014:89),



the synergy theory implies that the accumulation of small and unnoticeable activities that various small organisations do significantly impact the socio-political and economic activities. Thus, SMEs are directly responsible for reducing the high unemployment rate, poverty alleviation, aid efficiency within the economy, convenience provision to customers and clients, equality provision in terms of distribution of resources, and consumer liberty (Santarelli & Vivarelli, 2007:460). These contributions have called for governments to shift their focus from promoting large corporations and public institutions to support the SMEs industry due to the notable impact they cause on the economic, socio-political status of the country (Rogerson, 2013:67). Large companies have lower contributions than the SME sector, and as such, the latter has become the primary influence or contributing factor towards economic growth and development (Fatoki, 2011:195).

However, the various activities of the SMEs sector have led to a call from the global community to ensure that the management of SMEs have the appropriate knowledge in their operations and the impact they make to maintain a lead in the economy (Ayyagari *et al.*, 2007:420). One of the important ways to ensure that SMEs maintain their position in the economy is to provide a viable environment for them to be sustainable (Katua, 2014:465). It is both the private and public sector's responsibility to ensure that the SMEs are operating within a conducive environment for them to make effective contributions to the economy. Furthermore, it is also the SMEs' responsibility to ensure that the customers or clients are treated with respect, displaying high efficiency, effectiveness, integrity, and innovativeness (Katua, 2014:470). The customers or clients need unique services and products for differentiating purposes from the rest of the world, which forms part of customer pride (Mafini & Omuruyi, 2013:149). Business performance and market position are the main elements that SMEs are eager to achieve, as these aspects are the major determinants of success or failure within the industry (Kumah & Omilola, 2014:89).

In normal business operations, businesses aim to be above the other market participants by securing a larger market share than rivals. The same businesses are not immune to operational challenges that result in their failure to reach the stipulated goals, which has a multiplier effect on economic affairs (Rogerson, 2013:72). In concurring with Fatoki (2011:195), Herr and Nettekoven (2018:66) outline that SMEs are prone to challenges that emanate from the business's internal and external environments. Furthermore, because of a lack of adequate planning and understanding of customer needs, SMEs fail to devise innovative business ideas that offer unique

products and services (Kumah & Omilola, 2014:54). It is through creativity that SMEs in various industries strive to innovate continuously in the manufacturing sector. Therefore, for the sustainable existence of SMEs, there is a dire need to understand and embrace innovativeness and creativity within the industry, which can be influenced by the presence of adequate resources and comprehensive training (Ladzani & Netswera, 2009:230).

Although it is evident that SMEs play a pivotal role in the growth of the economy with reference to South Africa and the rest of the world, there is always a high failure rate because of an unsustainable SME working environment that, in turn, creates SME failure (Chinomona & Pretorius, 2011:175). The failure of the SMEs means the failure of the economy, as shown by an increase in the poverty levels and overall economic derailment (Ndabeni, 2008:260). A number of studies were carried out in different economies in trying to prove that SMEs are the pivotal players towards ensuring economic growth and development (Balshaw & Goldberg, 2014:56). As a result, the sustainable growth and development of the SME sector have a positive impact on the overall performance of the economy. This can be achieved if the economy provides a sustainable environment in which the SMEs operate; and should permit full capacity utilisation because all the fundamental business inputs are present (Fatoki & Garwe, 2010:732). There is a direct relationship between the survival and growth of SMEs and economic growth, with SME sectorial growth being the controlling factor. In trying to embrace a sustainable SME environment, the South African government came up with a number of initiatives as a way to promoting the growth and development of SMEs (Katua, 2014:470). However, despite government action, SMEs are still facing sustainability problems, which is why there is no growth in the industry (Ng, 2012:200).

South Africa has many entrepreneurial activities that are taking place, which collectively fall under the SME sector. As a result, 97% of South African business comes from SMEs and the sector contributes 35% towards the gross domestic product in aggregate (Ladzani & Netswera, 2009:236). This shows how important the SME sector is to the economy of South Africa and as such, it needs to be embraced through the creation of a sustainable working environment. It is from these SMEs that growth to big businesses and thus larger scale operation than before takes place, thereby creating space for new players to enter the SME sector (Balshaw & Goldberg, 2014:63).

According to Nieman and Nieuwenhuizen (2014:302), there is a high failure rate within the SME sector even though the government is trying to provide aid by making operational resources available, either directly or indirectly. A number of bills were passed in parliament in trying to ensure that the SMEs develop while curbing the colonial side-effects, such as poverty and inequality. The initiatives from the government include the National Small Business Act of 1996 that acted as the guiding principle on how SMEs operate with reference to regulations and the relevant support offered (Mafini & Omuruyi, 2013:150). A number of support structures were put in place by the government of South Africa under the new dispensation, that is, in the post-colonial era as a way of empowering formerly marginalised people.

## **2.3 Definition of Small and Medium Enterprises**

The main terms that anchor the framework of this chapter are defined accordingly under this section. Thus, aspects such as the manufacturing sector, characteristics of the manufacturing SMEs will be presented.

### **2.3.1 Definition**

The definition of SMEs is given in two distinct ways, that is, from a global perspective and from a South African perspective. This is because of the differences that surround the way in which SMEs are defined and factors such as location, economic status, beliefs, size of the economy and exposure levels which lead to such differences. The following is a discussion of the two dimensions regarding the definition of SMEs:

#### **2.3.1.1 Small and Medium Enterprises on a global perspective**

The SME sector constitutes nearly 90% of the aggregate industry composition within any given economy (Kumah & Omilola, 2014:62). The report issued by Deloitte in 2009 reveals that there are more than 60 definitions regarding the term SMEs which are being used in over 75 countries across the globe. As a result, this clearly shows that there is no distinct acceptable definition of SMEs in a worldview, hence giving the SMEs aspect are broad variability in usage and application.

However, under the European Union perspective, an SME is seen as an organisation that has a maximum of 250 full-time employees, with a maximum turnover of up to nearly R700 million as expressed in South African terms on an annual basis. The definition also entails that the net assets

as per the statement of financial position must not exceed R486 million annually, and in terms of ownership, a maximum of 25% must be in ownership of a large company that does not fulfil the definition of SMEs (Nieman & Nieuwenhuizen, 2014). In a European context, an SME is regarded as an organisation that has the capacity to employ up to 250 full-time employees (Katua, 2014:463).

**Table 2.1: European Union Enterprise Categories**

Enterprise Type	Total Employees	Annual Turnover or Statement of Financial Position (Euros)
<b>Micro</b>	Maximum of 10	Maximum of 2 million
<b>Small</b>	10 to 49	10 to 49 million
<b>Medium</b>	50 to 250	Above 50 million

**Source:** Baleseng (2015:13).

Table 2.1 reveals that the concept of SMEs is defined in different dimensions within Europe where the factors that are focal to the definition are inclusive of the total number of full-time employees, the annual turnover or the total size of the statement of financial position. Based on the information given in Table 2.1, it is evident that one would find a proper reason not to categorise an enterprise with 260 employees as SME, but rather a large firm since one of the factors is not fulfilled. This categorisation helps enterprises to know where they actually belong in the definition of SMEs – if it is still a small, medium or micro enterprise by looking at the performance in financial terms.

Furthermore, the readily available literature concerning the definition of SMEs depicts that some of the African and North American states with countries such as Ghana, Zimbabwe and the United States of America (USA) define SMEs by the total number of full-time employees at any given time. For instance, in Ghana, enterprises with either less than or more than 10 employees are both identified as SMEs (Abor & Quartey, 2010:222). However, this is different from the way Zimbabwe and the USA categorise their SMEs. In both of these countries, they are defined as enterprises with less than 100 full-time employees, while medium-sized enterprises possess a maximum of 500 employees (Kumah & Omilola, 2014:89). It can therefore be noted that the global definition of SMEs is mostly determined or defined in terms of the total number of full-time employees.

Various definitions were propounded regarding SMEs from different economic perspectives as well as the overall defining criteria on a global scale. The main reason for embarking on this exercise was based on outlining the different dimensions employed in defining them, as well as establishing the definition's common ground on a global perspective. Thus, it is evident that the definition of SMEs cannot be the same, given a situation where economies are sub-divided into developed, developing and under-developed. From an individual economies' point of view, the definition will always be different.

### **2.3.1.2 Small and Medium Enterprises in South African perspective**

This section follows the view of SMEs in the South African economy together with the categorisation criteria where qualitative and quantitative terms are used to help define the concept. It is evident that South Africa has SMMEs and SMEs, a distinction that was made through the review of related literature in South African terms.

**Table 2.2: Figurative Definition of Small and Medium Enterprises**

Category	Total Employees	Annual Turnover	Statement of Financial Position
<b>Small</b>	1 to 49	Less than R13 million	Less than R5 million
<b>Medium</b>	51 to 200	Less than R51 million	Less than R19 million

**Source:** Fatoki and Garwe (2010:732)

Table 2.2 shows the quantitative nature of the SMEs sector as per the stipulations of the National Small Business Act of South Africa of 1996. It is also evident that the medium enterprise category is the dominant one concerning the number of employees, with productivity, as shown by the turnover and the total assets found in the statement of financial position. It is imperative that the medium enterprises be seen as quite influential to the economy of South Africa, hence a need to embrace and promote them.

### **2.3.2 Manufacturing Small and Medium Enterprises**

The manufacturing sector has drawn much attention in recent years with reference to the SME sector as a result of their immense and notable contribution to the GDP (Mafini & Muposhi, 2017:8). There is a shift in the production and manufacturing processes from manual ways to the digitalised manufacturing processes because of the high innovation rate and a rapid change in technology in a move to create a sustainable environment (Aboelmaged, 2018:14). This is meant to reduce the side-effects of traditional manufacturing activities that range from environmental degradation, water and air pollution and their social and economic impact. In the manufacturing process, there is a need to embrace sustainable ways of production, which originate from the design of the product, encompassing technology, stock management, quality maintenance, packaging, and procurement (Baleseng, 2015:3). Sustainability can be enhanced through investing in human capital and ensuring that the human resources are adequately trained and equipped with the relevant skills to aid productivity and change management (Mafini & Muposhi, 2017:10).

According to Matsoso (2014:16), the manufacturing sector contributes more than 20% to air pollution globally. Environmentally conscious strategies were put in place in order to curb the effects of the manufacturing industry on the environment while ensuring that they exist in a sustainable manner. The strategies are inclusive of reuse, remanufacture and recycle to ensure that the few resources at disposal are put to use several times as a way of embracing green manufacturing (Langwell & Heaton, 2016:7). Cost-effectiveness strategies, better quality, effective delivery channels, and high flexibility standards were employed to enhance operational efficiency within the manufacturing sector. SMEs manufacturing sustainability practices are meant to ensure that there is an environmental revival since the same resources are used for production purposes. Emphasis is placed on the manufacturing SMEs because the majority operate informally, while at the same time, they leave a negative mark on the environment due to failure to fulfil compliance issues (Wiese, 2014:9).

However, for there to be sustainable SMEs, there is a need to ensure a high level of innovativeness and creativity within the sector by making use of the readily available resources, together with infrastructure (Yasuda, 2015:14). The innovation is meant to cater for the continual change in customer taste and preferences as a way of aligning with the latest production methods that are

more effective and efficient than before (Aboelmaged, 2018:6). Since SMEs are flexible to the extent that innovation is easy to incorporate within their operations, global economies have given SMEs a chance to utilise every disposable resource towards making a positive impact in the surrounding communities (Kumar, 2015:17). Thus, through offering a conducive environment to the SMEs, stakeholders promote their success and sustainability as resources, infrastructure, and training facilities are at their disposal.

### 2.3.3 Composition of Manufacturing Small and Medium Enterprises

The National Small Business Act that was promulgated on the 12th of November 1996 outlines the standard industrial classification where all sectors are included in trying to distinguish them. Thus, all the various types of business that fall in the small business category were clearly outlined accordingly, with reference to small, very small, medium, and micro-enterprises. In this regard, the study only focuses on the manufacturing sector under the standard industrial classification category. The distinguishing characteristic features are aligned to the size or class of the SME, total number of full-time paid employees, aggregate annual turnover, and the gross asset value with the exception of the fixed assets. All the values are given at the maximum level as per the stipulations of Table 1.

**Table 2.3: Characteristics of Manufacturing Small and Medium Enterprises**

Class	Medium	Small	Very small	Micro
<b>Maximum number of full-time paid employees</b>	200	50	20	5
<b>Gross annual turnover at maximum (R million)</b>	40	10	4	0.15
<b>Gross asset value (R million)</b>	15	3.75	1.5	0.10

**Source:** National Small Business Act (1996)

Table 2.3 shows the various classes of business that fall under the small business category with reference to the manufacturing sector. It is categorical that in terms of the various outlined distinctions, the medium SME is the biggest in all aspects, with the micro being the smallest, as clearly articulated in Table 2.3. For one organisation to be called a medium, small, very small, or micro-enterprise, it has to satisfy all of the outlined characteristic features with regards to employee

size, turnover and asset value in gross terms. This is an addition to the definition of small business that is in the National Small Business Act (1996), which stipulates that it is a business entity that is separate and distinct, which might be either a corporate or non-governmental organisation, either incorporated or not, operating under the management of one or more owners, with the inclusion of its branches, if any, or subsidiaries thereof for the sake of catering for the interests of the establishers.

#### **2.3.4 Small and Medium Enterprises structure and their function**

Prior to this section, the definition was articulated and followed by a description in broad terms of the SMMEs within the South African context. Thus, it identified the various forms of SMMEs that are inclusive of survivalist, micro, very small, as well as medium enterprises as per the stipulation of the South African's National Small Business Act of 1996 (Sidik, 2012:375). Evidence from the review of related literature on the SME sector shows how important they are to the economic aspects of any given nation in numerical terms. The SMEs are dominant in agricultural, retail trade, manufacturing, as well as the services industry at community, social and personal levels. In South African terms, the construction sector is at "Number six", which considers the contributions and composition of SMEs within the economy, which proves how immensely important their contribution is to the overall economy (Balshaw & Goldberg, 2014:57). It should be noted that the SME sector is quite influential in the South African economy since it has a presence in every economic sector of the country, which has offered the nation diversity regarding economic activities, as well as the creation of the much-needed jobs towards the enhancement of citizens' lives. However, it is evident that 76% of South Africa's SMEs are located in four out of the nine provinces, which includes the Eastern and Western Cape, KwaZulu Natal, and Gauteng. Additionally, 20% of the SMEs have a notable track record in the rural areas of the country, hence making a positive contribution to economic growth and development (Nagarajan *et al.*, 2013:786).

According to the study undertaken by Balshaw and Goldberg (2014:63), it is evident that white people are dominant in SME ownership in South Africa; and while 88% are in micro-enterprises, 63% are operating as survivalist enterprises dominated by black people. By merely looking at the results in relation to the racial denomination, it can be noted that the main reason why there is large black ownership in survivalist enterprises can be related to the ease of accessing financial



resources. Thus, blacks have limited access to financial resources, which hinders their entrepreneurial capacity. Financial resources are the main ingredients in sustaining business operations for an unforeseeable period.

Furthermore, it is clear that family-related and close entities play a pivotal role within the South African economy. They have 84% representation in the overall registered businesses within the nation. Out of the 1.1 million registered family businesses in South Africa, nearly 330 000 are up and running effectively, while the remainder, 870 000, is active in the form of sole traders and partnerships (Balshaw & Goldberg, 2014:52). Development Bank of Southern Africa undertook a study in 2005, and it was found that 900 700 entities are constituted with SMMEs out of the total of 906 700, and the remaining 6 000 were constituted by large firms (Pellissier & Nenzhelele, 2013:3). These figures are a clear reflection of how the SMEs sector is in the overall economy at national, continental and global levels. SMEs are the source of the economic power of a nation, which is the main reason why developed economies managed to attain such a status.

The literature incorporated in this section established that there is a slim distinction between SMMEs and SMEs. The differentiating factors were clearly outlined, that SMMEs represent a broader picture of the SMEs within the South African context. The SMMEs were found to be encompassing the survivalists, small and very small, micro and medium enterprises. However, under the SMEs concept, there is no involvement of very small, micro and survivalists as sub-categories of the SMMEs. Both of these sectors are quite influential in determining the economic power of a nation.

## **2.4 Role of Small and Medium Enterprises**

The growth and the development of the South African economy can directly be linked to the existence and presence of the SME sector. Thus, there is a notable presence regarding SMEs' activities nationally, since 80% of the overall businesses in South Africa fall within the SME category (Mahembe, et al., 2011). Additionally, the SMEs sector is known to be contributing approximately 35% on a yearly basis towards the Gross Domestic Product (GDP) (Rwigema & Venter, 2004:102). They are also involved in the generation of 40% of the total economic activities (Ladzani & Seeletse, 2012:230) while creating more than 50% of employment opportunities within South Africa (Katua, 2014:468). The following section contains an outline of the various roles

SMEs play in the economy of South Africa and on a global scale, while emphasis is placed on the contribution it makes to the GDP, employment creation as well as societal value.

#### **2.4.1 Small and Medium Enterprises on Gross Domestic Product**

Newmarket creation forms one of the main roles played by the SMEs, thereby positively influencing the activities of an economy, thus SMEs help in the creation of exports that are a vital component in the creation and earning of foreign currency. They are also involved in the revitalisation of the idle industries of an economy as well as embarking on the development of a sustainable commercial culture (Herr & Nettekoven, 2018:83). The next sections outline the contributions made by SMEs to the GDP from a local and global perspective to show how the sector is important to global economic development and growth.

##### **2.4.1.1 Gross Domestic Product on a global scale**

SMEs contribute a significant and notable impact to the developed economies. SMEs have been the reason behind the significant rise of the world greatest economies, such as the United Kingdom, where 99.8% of the GDP contribution comes from the SME sector (Sidik, 2012:375). This shows how dominant the sector is within the overall UK economy. GDP is an economic measure that shows if there is economic growth, stagnancy or decline, which is measured by comparing the current year's GDP with the previous year's one, or the base year (Mabunda, 2018:12). Thus, SMEs are of great importance to the European states as they are the powerhouse towards reducing the unemployment rate and economic growth. As a result, there is a need to ensure that the SME sector has maximum attention from both the public and private sectors towards promoting their sustainable existence and growth, leading to the strengthening of the nation's competitive edge (Turner & Ledwith, 2018:480). Sustainable and continued economic growth is proven to emanate directly from the existence of a sustainable SME sector.

The impact of SMEs shown from a global perspective is also notable on the impact it had on the Romanian economy, where there was a drastic change in its economy between 2000 and 2010, thereby showing that the SMEs' concept is successfully tried and tested on a broad aspect (Herr & Nettekoven, 2018:72). The sudden economic change in Romania was necessitated by a well-established and supported SME sector bundled with high productivity levels on a macro business environment. There was a rapid rise in the country's GDP, as shown by a shift from 65.6% in the

year 2000 to 71.3% in the year 2010 (Balshaw & Goldberg, 2014:42). Additionally, the role played by SMEs on the individual economies' GDP can also be traced on the African continent, where there are 90% of businesses under private ownership, thereby contributing more than 50% of the overall continental GDP. In a more specific view, while looking at Ghana only, the SMEs sector constitutes approximately 92% of the country's aggregate business annually while leading to a 70% towards the total GDP of the nation (Abor & Quartey, 2010:225).

The various contributions made by the presence of the SMEs sector within different economies is a true reflection of how small businesses are vital to the affairs of any given economy across the globe. Thus, small businesses are a key factor in stimulating economic growth and development in various countries that can offer a sustainable working environment to SMEs

#### **2.4.1.2 Gross Domestic Product in South African context**

In essence, SMEs have been the main contributors to the national GDP through the various activities that they are involved in within the economy (Pellissier & Nenzhelele, 2013:2). Thus, on an overall basis, the SME sector makes a 45 to 50% contribution to the country's GDP (Sidik, 2012:375). This is a reflection of how important SMEs are to the South African economy, as they have the ability to be the continental or global economic harbour vested in the health status of the sector. SMEs form one of the main ingredients towards the growth and development of the economy that promotes economic diversification, from a focus on the public sector to the private sector, where SMEs and big companies reside.

According to the study undertaken by Abor and Quartey (2010:222), it was found that SMEs' contributions towards the South African GDP are between 52 to 57% annually. These figures show the unique contribution made by SMEs to the South African economy, hence making a huge input in the creation of national wealth and taking the nation towards the achievement of its international acknowledgement goals. It also reveals the ability of the various sectors to have the capacity to improve the national and global competitiveness of the individual economy.

This section has outlined the various aspects of the SMEs sector's contributions from a local and international perspective; South Africa's economy was also discussed separately. It was noted that SMEs have the ability to contribute towards more than 50% of the country's GDP, and as such,

some countries that were given as points of reference were, but not limited to, Spain, France and many more. SMEs locally were found to be contributing more than 57% of the local economy's GDP, thereby revealing how important the sector is towards the welfare of the South African economy. In addition to these results, it then calls for the government to devise sustainable strategies and policies to effectively implement towards ensuring the growth and sustenance of the SMEs sector. This is for the sake of promoting economic competitiveness in a global view.

#### **2.4.2 Small and Medium Enterprises on employment creation**

According to Mafini and Omuruyi (2013:150), the main component towards the success of any given economy is aligned to the wellness of the SMEs sector; as it leads to the growth and development while playing a major role in the generation of employment as well as promoting an improvement in the reduction of poverty. Thus, the SMEs sector is also responsible for ensuring and promoting economic competitiveness, thereby taking it towards a developed status, or if in that category already, it will help maintain the position. The subsequent chapters give an outline of the benefits of the SMEs sector in the creation of employment from a South African perspective to a global view.

##### **2.4.2.1 Small and Medium Enterprises on global employment generation**

Despite the notable contribution, SMEs play in enhancing the GDP, they are also actively involved in the generation of new employment opportunities (Ladzani & Netswera, 2009:227). In the view of the EU, SMEs are major players, as shown by their total coverage in the European Economic Area (EEA), where there are approximately 20.5 million enterprises. Switzerland's SME sector provides employment to 122 million people. This is further converted into 93% of the SMEs that fall within micro-enterprises that are characterised with 0 to 9 employees, 6% towards small enterprises with 10 to 49 employees, less than a percent lying within the medium enterprises with 50 to 249 employees (Nagarajan *et al.*, 2013:795). In Europe, countries such as Italy and Greece have the SME sector playing a pivotal role in employment creation where their contribution towards the national job creation is 48% and 57%, respectively, of the overall national employment status.

Table 2.4 is an outline of the percentage level of employment that is brought in by different business sizes in the EU. This is meant to see the impact SMEs have on employment creation within the world's economies.

**Table 2.4: Employment Level per Business Size**

Size	Number of Employees	Employment Level (%)
<b>Micro</b>	10	93.0
<b>Small</b>	10 – 49	5.9
<b>Medium</b>	50 – 249	0.9
<b>SMEs</b>	-	99.8
<b>Large</b>	249+	0.2

**Source:** Katua (2014:464)

Table 2.4 is a reflection of the various contributions that are made by the different enterprises within an economy with specific reference to the generation of employment. Thus, it is evidenced by the figures given in Table 2.5 that SMEs are the main employment creation avenues in comparison with large firms. Even if within the SMEs category, there are various sub-categories together with the different contributions they make towards employment creation. Thus, under SMEs, the micro-enterprises have the highest contribution towards employment creation, hence making the basis of the SME sector despite their small size in terms of the structure. It is evident that these micro-enterprises offer a reliable form of employment due to their ability to meet the industrial workforce demands.

According to Nagarajan *et al.* (2013:788), the Malaysian economy was raised by the presence of the activities of SMEs, thus providing a viable employment creation avenue. There was the generation of around 3 million employment opportunities, that is, about 65.1% of the total employment base, that is, equivalent to 4.6 million from the three key sectors. Thus, the sectors are inclusive of services, manufacturing and agriculture, with an employment base of 2.2million, 740 438; and 131 130, respectively (Katua, 2014:464). SMEs were also of notable influence on the African continent with specific reference to Tanzania and Kenya, where there was

approximately 50% of the total employment opportunities coming from the SME sector in Tanzania. In the Kenyan economy, SMEs have significantly led to the creation of employment opportunities where small enterprises with an employee base of 10 to 49 provide for 23% of overall employment, the middle-sized enterprises with an employee base of between 50 to 99 constituted 15.2% of the national employee base, while large enterprises with 100 and above employees had 55.5% of the total employment base (Ndabeni, 2008:262). This is evidence of the contribution the SME sector can make to the economy if given the much-needed support for their sustenance. SMEs are a source of both viable employment opportunities creation as well as a skills development avenue that is needed in the creation of a competitive edge to the nation on a global basis.

#### **2.4.2.2 Small and Medium Enterprises on South African employment generation**

The South African economy is at its current status because of the various roles that were played by the presence of the SME sector. Thus, they were there in ensuring the creation of reliable employment opportunities vital in the sustainable growth in the country's economy (Fatoki & Garwe, 2010:732; Kumah & Omilola, 2014:62). Thus, the positive contributions of the SME sector are still notable and are continuing even today.

In South African terms, the SME sector has on its own contributed to the creation of 61% employment opportunities out of the national employment base. It is evident that 77% of them are within the tertiary sector that has a 57% employment composition. SMEs in the primary and secondary sectors have a sectorial workforce of 22% and 21%, respectively (Ladzani & Seeletse, 2012:91). On an overall basis, the SME sector within South Africa has a 55% in total employment, which is a real sign of their impact on the economy's wellness. The competitive capabilities of the nation are enhanced by the presence of the contributions that are made by the SMEs sector, which includes employment creation. This in turn, leads to the improvement in the socio-economic status of a nation as a result of poverty alleviation and crime reduction.

#### **2.4.3 Small and Medium Enterprises on societal value**

One of the core aspects enshrined in the corporate governance strategy of any organisation, despite its size, is aligned to corporate social responsibility. This is done to ensure that the well-being of the various communities that are within reach of the organisation is ensured, promoted and maintained (Fatoki, 2011:197). As such, it is the duty of the SMEs and large organisations to

ensure that they develop and offer relevant support to the surrounding communities in their social value initiative. A discussion on the role played by SMEs in South Africa and the rest of the world in ensuring that social values and the environment are supported follows in the subsequent sections.

According to Santarelle and Vivarelli (2007:460), all types of businesses that comprise big businesses and SMEs must be in a position to embark on a restructuring process that lures them not only to focus on a profit-making aspect but to consider the emergence of various strategies that could be effectively implemented and continuously developed towards embracing societal values in the various surrounding communities. This is part of both big businesses and SMEs' moral strategy implementation towards the enhancement of good business practices. This shows that the organisations have communities' wellness at heart and would undertake their business activities in a sustainable working environment created through the observance and respect of societal values. As a result, this would lead to the creation of much-needed employment opportunities, thereby helping in the reduction of criminal activities in surrounding communities. It was, however, noted that SMEs in South Africa have a challenge in supporting the surrounding communities mainly because they have a lack of adequate resources, management incompetence, and a failure to realise the benefits associated with offering such support (Ladzani & Seeletse, 2012:93). This always leaves a question mark regarding SMEs' capability and ability to offer sustainable support to the surrounding communities, which would promote the socio-economic development of a nation.

In economies such as the UK, SMEs have since started to embark on supporting and embracing societal values because of the benefits associated with such an endeavour, which include an increase in the competitive edge on an individual entity in relation to its counterparts (Kumah & Omilola, 2014:53). A study with regard to the Corporate Social Responsibility (CSR) undertaken in Romania outlines that the SMEs and large institutions have progressed at different rates because of the rates of applying their societal values implementation strategies (Herr & Nettekoven, 2018:102). Thus, those entities that were conscious of societal values progressed better than ignorant ones. CSR as a strategically large institution has since started to somehow embrace and enhance its competitiveness in the market, hence its profitability and achievement of organisational goals (Ayyagari *et al.*, 2007:419).

However, in consideration of the above-highlighted points, it can be argued that despite the fact that some organisations, for example, in the case of the UK, are making considerable efforts to ensure that they offer sustainable societal help, it is a way of embracing social wellness within their operating environments (Mabunda, 2018:13), SMEs in South Africa are struggling to embark on such a move and maintain it responsibly as a result of the challenges that are linked to limited access to the resources; managerial incompetence; and lack of technical know-how that form part of the important elements in identifying and taking advantage of such opportunities (Kumah & Omilola, 2014:72).

The CSR aspect forms one of the main tools that was used by SMEs and large organisations in ensuring that they provide sustainable support systems to the surrounding communities, thereby realising the benefits associated with such (Fatoki & Garwe, 2010:732). However, there has been a challenge in the South African SMEs sector in embracing and ensuring societal values, mainly due to a lack in resources as well as managerial expertise. This is why there have been reports that SMEs are not responsive when it comes to making social value contributions.

## **2.5 Challenges Faced by Small and Medium Enterprises**

SMEs in South Africa are seen to be quite contributory towards the wellness of the economy (Nieman & Nieuwenhuizen, 2014:96); however, the sector is prone and exposed to a number of challenges that have resulted in the high mortality rate of the participants within the sector (Fatoki, 2011:195). It is impossible to come up with the exact figure regarding the SME mortality rate because of data inaccuracy related reasons (Maloka, 2013:45). Even if there is a challenge in coming up with accurate measures, it is, however, alleged that the SMEs failure rate is between 70 to 80% (Mafini & Omuruyi, 2013:153).

According to Fatoki and Garwe (2010:731), new entrances or formation rates in the SME sector are measured through Total early-stage Entrepreneurial Activity (TEA), and the results reveal that South Africa has one of the lowest rates compared to the rest of the world. South Africa's new firm activity rate, as shown by the entities with above 3.5 years, is on number 38 out of 43 countries, and this is a sign of high levels of SMEs death rate before they reach 3.5 years (Sidik, 2012:375). Thus, South African SMEs would be rendered successful when they manage to survive for the first two years upon formation as characterised by the ability of the owners to have met



their set goals (Katua, 2014:469). However, despite the low rate of new entrances into South Africa's SMEs sector, it is evident that 75% of the available SMEs fail to make it beyond two years after formation (Fatoki & Garwe, 2010:736).

The Global Entrepreneurship Monitor (GEM) reveals that the probability of newly formed SMEs' existence for a period of beyond 42 months is quite low in South Africa than in the rest of the GEM participants (Ayyagari *et al.*, 2007:423). The survival rate varies with the sector, which also applies to the SMEs that would have managed to surpass the 42 test months (Rogerson, 2013:70). The SMEs success rate is more visible in the manufacturing service sectors than in the retailing and wholesale sectors (Katua, 2014:466). According to Mabunda (2018:12), the success rate in the SME sector is based on location factors since it was noted that those entities situated in home areas are prone to high risks, hence their higher mortality rates than those situated in industrial areas. However, Turner and Ledwith (2018:482) are of the view that the SMEs in industrial areas are prone to lower growth rates than the home-based entities, due to government-related harassment of the easily accessible firms.

### **2.5.1 Causes of Small and Medium Enterprises failure**

An outline of the various factors that lead to the high SMEs failure rate is made under this section in attempting to tease out the views of other authorities regarding SMEs' failure. This is followed by a discussion that incorporates the relevant literature.

#### **2.5.1.1 Managerial incompetence and uncondusive operating environment**

According to Fatoki (2011:197), there are many challenges that SMEs are exposed to, and that appears to be a hindrance during the formation level, thereby leading to a high level of failure rate among new SMEs. In addition, Mabunda (2018:13) is of the view that "lack of administrative know-how, incompetence, personal merits, as well as factors such as unpleasant economic conditions, incoherent business strategies and resource scarcity are found as the focal reasons why new firms fail". Managerial skills are vital in the sustenance of SMEs, and a lack thereof leads to the failure of business initiative (Penrose, 1959:211). According to Chinomona and Pretorius (2011:419), Makhado (2015:72), Santarelle and Vivarelli (2007:460), the SMEs that have managed to surpass the standards of survival are the ones with exceptionally well-educated managers who have the ability to formulate and implement effective strategies, although these

enterprises are a fraction of the entire SME sector. Thus, it implies that most SMEs within South Africa is managed by uneducated and people without entrepreneurial experience, thereby leading to their demise at an early stage. Even if there are various efforts the South African government has put in place to equip entrepreneurs with the right skills and knowledge, hence promoting SMEs growth and sustenance, there is a continued high failure rate in the sector. The support offered by the government is a result of the benefits associated with the survival of SMEs as well the creation of new participants in the market that could lead to economic wellness. However, the government's intended results are not received through the support structures it offers to the SMEs, that of accelerated economic growth (Pretorius & Van-Vuuren, 2003:420).

South Africa is highly diverse, hence its high exposure to social and economic instability, which results in the suffering of the SME sector and the process that permits the development of new firms (Makhado, 2015:66; Mofokeng, 2015:37; Ng, 2012:200). The economic instability associated with the South African economy creates an inhospitable environment towards the wellness of SMEs (Fatoki, 2011:197), thus the economy is bundled with continued inflation rates, unstable interest rates and declining currency value in the foreign exchange market (Herr & Nettekoven, 2018:176). Additionally, high poverty levels and resource distribution inequity have led to a negative impact on the growth and development of the SME sector (Mahembe *et al.*, 2011:68). Thus, the available SMEs are found to exist as a result of necessity reasons as opposed to enrichment, which leads to the construction of unfruitful business plans pursued by gamblers in the sector (Ladzani & Netswera, 2009:229). This scenario comes into being as a result of a lack in managerial skills and education from the entrepreneurs' side, thereby leading to the inability of a start-up to cope up with the industrial related challenges.

The survival rate of any enterprise is determined by both the external and internal environments of the business (Balshaw & Goldberg, 2014:54). The internal factors of an organisation include financial and human resources, time, communication technology, networking and overheads, as well as location (Herr & Nettekoven, 2018:220). Additionally, the external environment comprises policies, contractual relationships with other organisations as well as informational frameworks (Katua, 2014:465). However, there is no proper or visible distinction between SMEs ownership and management, which leads to the entrepreneur is responsible for every action within the organisation as well as providing direction to the organisation to meet a growth prospect, which

makes the success rate or failure to be in the arms of the entrepreneur (Sidik, 2:376; Turner & Ledwith, 2018:480), thus making the owner's capacity, capability, availability and ability to be quite pivotal towards the success of the entity (Ayyagari *et al.*, 2007:426). A study was undertaken of the SMEs' high failure rate in the South African SMEs sector is directly linked to a lack of managerial expertise and education (Abor & Quartey, 2010:223). According to Katua (2014:466), there are certain qualities that act as a hindrance towards the success of SMEs, which include skills and information deficiency, destructive management style application as well as counterproductive perception, and a lack of a sense of appreciation. According to Nagarajan *et al.* (2013:788), the key aspects towards the success of SMEs are linked to the availability of human capital as well as training. Results from various studies undertaken on the wellness of SMEs reveal that there is a positive correlation between the availability of education and training platforms and SME success (Ayyagari *et al.*, 2007:430; Fatoki, 2011:197; Kumah & Omilola, 2014:74; Mahembe *et al.*, 2011:106).

#### **2.5.1.2 Poor networking and labour related problems**

It is evident from the results obtained from various studies that management education alone within an organisation is not enough; there are other important aspects that permits both individual learning and organisational growth, which can only be networking (Herr & Nettekoven, 2018:76). Networking is the art of developing and managing privately oriented relationships with other institutions in the market and this is established and embraced by the owner (Santarelle & Vivarelli, 2007:472). There are two types of networks, which include entrepreneurial and public support; where entrepreneurial network offers personal and specialised support while social network provides public support (Makhado, 2015:62).

According to Penrose (1959:120), there is a dependency syndrome within the SME sector on other institutions within the industry for aspects such as marketing and employee training. Networking offers SMEs the ability to obtain funding, new business and suppliers, ideas, tapping into new supply chain networks, attracting professionals, as well as gaining access to the latest technology (Abor & Quartey, 2010:225). Networking permits firms to be aware of their environments, thereby enhancing the entity's wellbeing, although this is not the case with the South African SMEs as they do not make use of, or take advantages that are associated with networking (Turner &

Ledwith, 2018:482). As a result, the SMEs block themselves from gaining access to various business management related benefits that are associated with such an endeavour, hence their failure to grow (Katua, 2014:468). Networking is known and used by owners that have the right skills and expertise in running businesses, noted in the prior section, which is why there is a high mortality rate in the SME sector (Kumah & Omilola, 2014:72).

South African SMEs are exposed to an environment that is characterised with low productivity while having a huge supply of uneducated and unknowledgeable employees that are also faced with poor managerial systems (Fatoki & Garwe, 2010:732). According to Kumah and Omilola (2014:73), 36% of the total labour force in South Africa is without skills and formal education, which poses a threat to the SME sector, as it cannot employ scarce labour skills characterised by high costs from the entity's side. In a way to align to the labour related regulations in South Africa, skilled labour has become very expensive, which some SMEs cannot afford (Nieman & Nieuwenhuizen, 2014:245), which has impacted significantly on the growth of the sector (Abor & Quartey, 2010:225). The labour union of South Africa has led to this predicament through the imposition of minimum wage rate, employee dismissal policies and a bargaining process that is in favour of the trade unions (Rogerson, 2013:72).

### **2.5.1.3 Government related actions**

The government of South Africa has since embarked on a process of promoting entrepreneurship through its various initiatives to ensure their survival, growth and development (Fatoki & Garwe, 2010:732), which it has done for the sake of promoting economic development from the benefits associated with their growth (Maloka, 2013:73). Thus, through SMEs development, the government would be eradicating poverty that has heavily burdened the surrounding communities, promoting and distributing equitable resources to all citizens (Fatoki, 2011:196). Previously, the South African government promoted economic and social development through its various policies and strategies (Maloka, 2013:92), but it was made clear through the White Paper that it was not its responsibility to embark on such an initiative (Ndabeni, 2008:262). As such, the Accelerated and Shared Growth Initiative South Africa was supposed to be supported by SMEs with a mandate to grow by 5% over a ten-year period (2004 to 2014).

The study undertaken by Mafini and Omuruyi (2013:152) reveals that the government is doing the opposite of what it should be doing, as shown by its actions of devising policies that restrict the survival, growth and development of SMEs. SMEs have always complained about the erratic and suppressing strategies that the government is implementing against SMEs growth (Fatoki & Garwe, 2010:731). This is mainly because of the poor communication strategies used by the government when embarking on policy formulation initiatives; there is no consultation, hence the emergence of destructive strategies (Sidik, 2012:377). The SMEs view the government as a stumbling block towards their success as it is bundled with poor service delivery, poor policy formulation, lack of communication, and too much bureaucracy in the process of formalising the businesses (Maloka, 2013:212), hence leading to difficulties to establish themselves (Katua, 2014:468).

#### **2.5.1.4 Stiff competition**

Competition in the business society leads to increased efficiency in product and service delivery, although it leads to the destruction of the SME sector (Santarelle & Vivarelli, 2007:460). The country's exposure to the global market through open trade has adversely exposed SMEs to excessive competition, hence placing a great burden on them as well as dealing with local competition from large entities (Pellissier & Nenzhelele, 2013:4). Competition leads to new start-ups operating at a loss for a long time because of competing prices in the market, which deprives some SMEs of growing, or which might lead to the closure of such a business. In the case of existing SMEs, it is a challenge for them to survive in the market and grow as a result of the economic exposure to the global market that brings in cheap imported products (Santarelle & Vivarelli, 2007:470).

Stiff competition results in the demise of the SME sector (Nieman & Nieuwenhuizen, 2014:198), thus it calls for them to not rely on one strategy to survive in the market, but rather be quite flexible in adjusting to current market trends for survival and continuity purposes (Herr & Nettekoven, 2018:76). The extent to which SMEs use the readily available information to their advantage forms one of the main factors that leads to their success (Rwigema & Venter, 2004:122), together with strategic marketing implementation (Ayyagari *et al.*, 2007:212). According to Sidik (2012:12), there are problems faced with SMEs in South Africa in trying to cope with "increased competition,

understanding the market, its size and demand, conducting effective marketing, competing against rivalries, identifying the suitable location and the ability to identify the target market.” Therefore failure to address these issues within the SME sector can lead to its demise.

#### **2.5.1.5 Lack of financial resources**

Financial resources represent the lifeblood of any given entity, and a lack thereof leads to the malfunctioning of the entire institution (Penrose, 1959:123). In the views of both developed and developing economies, it has been observed that access to financial resources is a challenge within SMEs despite locality (Herr & Nettekoven, 2018:203). Although SMEs play a pivotal role in the growth of economies with specific reference to the developed ones, they are prone to difficulties in accessing financial resources to use towards growth and investment purposes (Mahembe *et al.*, 2011:72). As a result of capital rationing in South Africa, banks have used this as an excuse not to provide funding to SMEs. Thus, the financial institutions do not want to invest their funds in what they call high risky projects because they fear a loss of the capital invested, hence depriving SMEs of the right to acquire funding to enhance their operations (Ng, 2012:197). SMEs do not have the collateral security needed for them to gain access to funding, and banks were found not to offer to fund to previously disadvantaged groups and those living in the areas redlined by the financial institution (Nieman & Nieuwenhuizen, 2014:218).

Availability of financial resources to SMEs permits them to make use of the business opportunities to their advantage as well as reduce the burden that is caused by liquidity problems (Ndabeni, 2008:263). Finance is a necessity to SMEs, as they need funding for operational and expansion purposes, new product development, acquiring professionals, as well as the necessary operational tools (Makhado, 2015:124). Financial restrictions are the main cause behind the failure of SMEs within five years of establishment, even if the South African government has put across strategies to improve financial access to SMEs (Pellissier & Nenzhelele, 2013:3).

#### **2.5.1.6 Criminal and corrupt activities**

Local and international investment within South Africa has been crippled by the high criminal activity within the nation (Abor & Quartey, 2010:225). According to the study undertaken by Rogerson (2013:76), it was noted that 30% of the SMEs were of the view that criminal activities are impeding their operations, hence blocking economic investment. Also, it was noted that the

business sector is the one deeply affected by criminal activities, which can be linked to the criminal reports issued by the police commission, revealing that other types of criminal activities have had a drastic decline in the past decade, although business-related crimes are increasing extensively (Turner & Ledwith, 2018:477). At the same time, there is also a notable increase in corrupt activities within both the private and public sectors of South Africa (Katua, 2014:469) that are emanating from poor governance, nepotism, and personal enrichment (Pellissier & Nenzhelele, 2013:2). A report issued by the World Bank reveals that South Africa's legal system is weak in comparison to the developed economies (Kumah & Omilola, 2014:212). In addition, the law enforcement agencies' incapacity and unreliability have led to the compromising of the legal system, thus bringing in great uncertainties regarding personnel safety and asset security (Fatoki, 2011:196). In an environment that is crippled with a high crime rate and criminal activities, SMEs' high mortality rate is inevitable.

## **2.6 Lack of Government Support**

The strength of a country's economic sectors and industries varies considerably (Santarelle & Vivarelli, 2007:462). Some sectors obtain their strength from the opportunities associated with globalisation (Abor & Quartey, 2010:223), although this causes a challenge to the SMEs through extensive exposure to intense competition (Ng, 2012:195). Globalisation has led to the suppression of the South African SME sector through an increased risk of market share reduction exposure. However, globalisation has its own advantages that it brought to the SME sector (to be precise), which came about through the import and export function. The growth and survival of SMEs is dependent upon the country's specific economic, social and political situation, which factors are pertinent towards the success of the sector (Mafini & Omuruyi, 2013:155), thus providing them with access to managerial skills and education, ready markets, and major business resources that an entity needs for the enhancement of operational activities (Katua, 2014:469).

The South African government has since embarked on different initiatives in a move to promote the sustainable growth and development of the SME sector (Abor & Quartey, 2010:223), and amongst them is the Reconstruction and Development Programme (RDP), Growth, Equity and Distribution (GEAR) (Nieman & Nieuwenhuizen, 2014:202). These reforms were put into place to promote the creation of employment as the core mandate of the government, that of equitable

distribution of income and widening the industrial base to ensure that all the basic needs of the citizens are effectively availed (Katua, 2014:463). For these objectives to be met, there is a need for new entries into the SME sector, as shown by their contributions to the economic, socio-political environment of the nation (Ng, 2012:193). It is evident from the study undertaken that improving the employment base could be achieved through the development of new participants as opposed to the growth of already existing SMEs in the sector (Ladzani & Seeletse, 2012:230).

## **2.7 Ways to Promote Small and Medium Enterprises Sector Growth**

The previous section endeavoured to outline the various roles the SME sector plays globally to the South African perspective. Despite the various contributions made by the SME sector to the nation, it was noted that there are various challenges that they are exposed to, thereby making them unable to offer the outlined benefits to the economy. As such, discussion continues where an outline of the various strategies and policies could be implemented to ensure that sustainable growth and development of the SMEs sector is made.

### **2.7.1 Education and skills development**

In consideration of the factors that hinder the success of the SME sector in South Africa, it was noted from the studies undertaken from various economies across the globe that there are many strategies that can be employed in trying to ensure that the SMEs reach their internal and external goals oriented nationally and globally (Mahembe, *et al.*, 2011:72), and thus reduce the SME mortality rate (Sidik, 2012:379). Education and managerial and personnel skills development can be used to aid efficiency levels in the SME sector. Education implies the process of acquiring the relevant knowledge regarding a certain area of interest, while skills imply the factors that are meant to ensure the success of any business set-up through empowering owners with the capability to undertake effective business operations and who can tap into the readily available business opportunities (Fatoki & Garwe, 2010:735). It was also noted that when an SME has educated owners, its operations tend to be quite successful as they can convert the expertise into meaningful business operations (Ayyagari *et al.*, 2007:430), therefore there is a positive correlation between education and training and the prosperity of the SME sector.

There is a need for SMEs to be conversant with the surrounding environment within which they operate, which equips management with the skills on how best the business can be done effectively



in such an environment, which aids the competitiveness of the entity in the market (Maloka, 2013:53). The business operating environment has become so volatile that management needs to adjust quickly and align with the latest business operational trends (Makhado, 2015:72). This can only be achieved in SMEs with well-educated management (Mabunda, 2018:13). The main differentiating factor between successful SMEs and those struggling is the level of education and skills that the SME owners possess (Ndabeni, 2008:262).

### **2.7.2 Inter-organisational relationship**

SMEs are advised to engage in business collaborations to learn from each other and thus give them the power to tap into new and untapped business avenues (Rwigema & Venter, 2004:197), hence enjoying the benefits associated with it the theory of synergy (Herr & Nettekoven, 2018:163). SMEs also must be in a position to get into other global markets while they collaborate, thus increasing business through exports as a market development strategy (Balshaw & Goldberg, 2014:105). SME collaborations can be a good avenue for them to gain access to new business operational technology that can lead them towards the discovery of new information, new markets, and exposure to new expertise that is influential in equipping their management with relevant business management knowhow (Ng, 2012:201). This call for SMEs to embrace control measures is meant to ensure that opportunists do not take over the market at their expense as well as having an outstanding collaborative performance within the SMEs sector (Balshaw & Goldberg, 2014:123).

### **2.7.3 Pursuing optional financial avenues**

The GEM report published in 2004 stated that there is a need to embrace all the various stakeholders to provide support to SMEs and give sustainable support to the private sector as this is where it resides towards its growth and development (Pellissier & Nenzhelele, 2013:5). This can be achieved through embracing a viable and broad-based fiscal policy (Fatoki, 2011). According to Katua (2014:468), SMEs' viability can be promoted through the provision of easily accessible external financial platforms that are free from bureaucracy for the purposes of unleashing the potential in the sector. The commonly known forms of externally oriented finance are debt and equity (Ayyagari, *et al.*, 2007:420), where debt finance is available to those SMEs with collateral security (Ng, 2012:195), which offers a guarantee to the fund provider on the capital advanced to

the loan seeker as it will represent a claim over the collateral security in case of default (Makhado, 2015:72). In the case of an entity that is heavily invested in physical assets, it will be easy for the entity to gain access to a cheap source of funding as the assets offer a guarantee whereby making the entity less risky (Fatoki, 2011:200).

The government of South Africa has embarked on an exercise to promote the creation of financial institutions that can provide funding to SMEs with a challenge to access funding from banks that include the National Development Agency (NDA), National Empowerment Fund, and Industrial Development Corporation (IDC) (Makhado, 2015:78). It is, however, evident that the problem with SMEs' funding is not on accessibility but on the application when accessed (Ladzani & Seeletse, 2012:90) although finance remains an important aspect towards the success of the SME sector (Maloka, 2013:62).

#### **2.7.4 Corporate engagement**

There is a need for SMEs to engage in networks with other entities and partners for them to gain access to information and knowledge, financial resources as well as the latest technology (Santarelli & Vivarelli, 2007:460). Although there are many reports on South African SMEs' inability to engage with each other in business, Abor and Quartey (2010:220) are of the view that such associations are of importance towards the wellness of SMEs, as it is a platform where new knowledge regarding other viable opportunities can be accessed and embrace mutual support. SMEs' legitimacy is obtained through business networking, which makes them enjoy the advantages associated with such (Makhado, 2015:63). Furthermore, business networking offers security amongst firms as well as fund-providers due to the presence of transparency and familiarity (Sidik, 2012:375) and also exposes firms to other funding avenues such as government funding programmes (Turner & Ledwith, 2018:487).

#### **2.7.5 Technological accessibility**

In recent business trends, technology plays a major role which was brought about by the emergence of globalisation, thereby offering easy product and service access to anyone across the globe (Santarelli & Vivarelli, 2007:462), which linked exceptional performing firms to the effective incorporation of technology in their operations (Pellissier & Nenzhelele, 2013:4). It is also evident that facilitating composite business strategies not only benefits those associated with the use of

technology but also leads to the maximisation of business opportunities (Balshaw & Goldberg, 2014:85). There has been slow incorporation of technology in South African SMEs (Ladzani & Seeletse, 2012:92), which is attributed to new SMEs as opposed to well-established ones that are characterised with a low mortality rate (Makhado, 2015:56).

As such, there is a need for SMEs to make use of the readily available platforms offered by the government to ensure that they have access to the latest technology that can aid and sustain their business operations (Pretorius & Van-Vuuren, 2003:420). Connectivity and business mobility is enhanced through the usage of technology within the sector regardless of whether it is new or already established (Pretorius & Van-Vuuren, 2003:421). In order for SMEs to witness the benefits associated with technology, they need to ensure that there is a clear business strategy in place and that is properly aligned to the technology while having the rightful expertise and are in a position to have adequate financial support in business operations (Turner & Ledwith, 2018:479).

## **2.8 Conclusion**

The views of preceding authors who addressed issues relating to the manufacturing SMEs, both in and out of South Africa, were outlined in this chapter. To achieve this, various aspects were tackled, which are in line with the set research objectives of the study. An overview of the SME sector was given, followed by a brief definition of major terms that anchor the chapter. The definition of terms was meant to provide direction and aid understanding to the users of the information that is embraced regarding manufacturing SMEs' sustainability. The various roles played by the SME sector up to a global scale were also outlined, as well as articulating the support structures available to enhance SMEs' continuity. The various challenges that are driving SMEs away from undertaking their roles effectively were presented, followed by a clear stipulation of the previously suggested solutions to curb their challenges. The next chapter discusses the research theories and the literature pertaining to internal management systems.

## **CHAPTER 3**

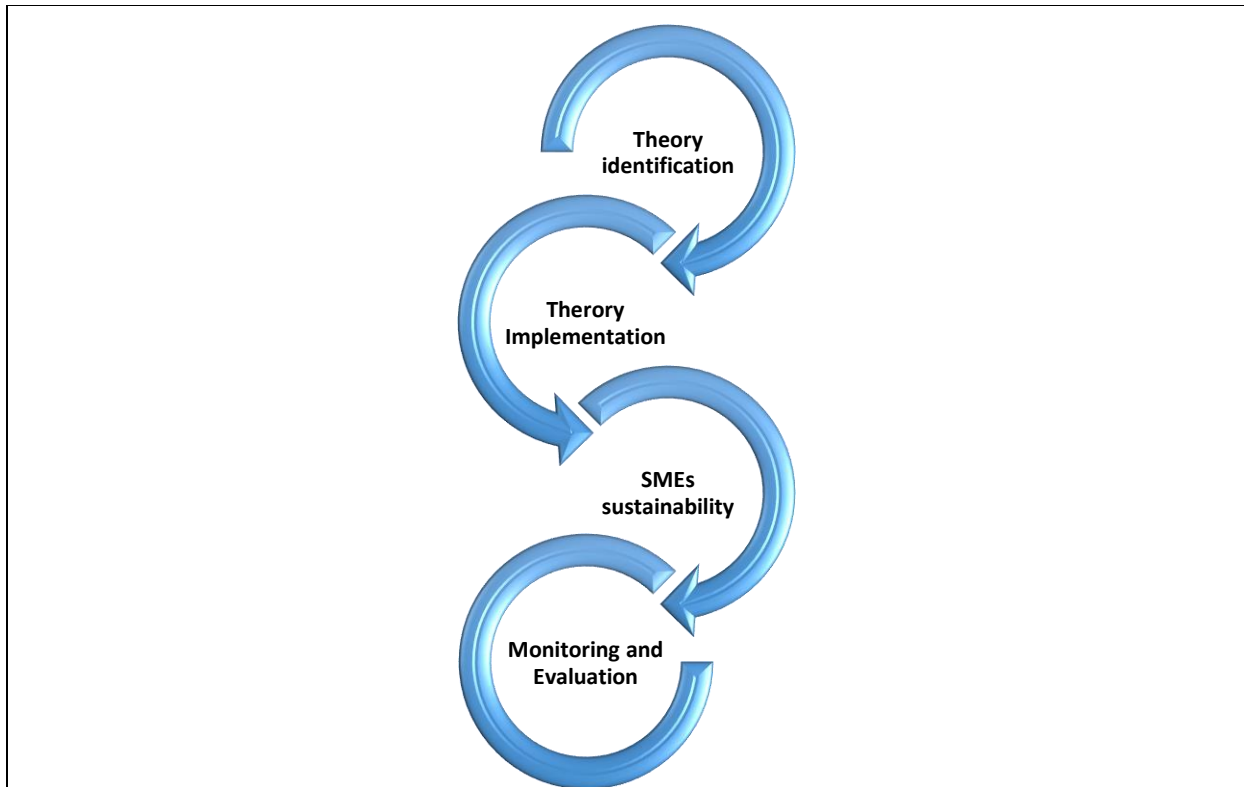
### **THEORETICAL FOUNDATIONS**

#### **3.1 Introduction**

This chapter follows a discussion of the literature with regard to research theories and internal management systems viewed within small and medium enterprises. Since the research is primarily focused on the small and medium enterprises' internal management systems, the various theories based on the readily available literature are articulated. Thus, the theories emphasise the internal management system's main elements as identified in the study's constructs. In doing this, it engages with various sources of literature from the local and international publications that reflect the research theories as well as the internal management systems within small and medium enterprises' perspectives. The chapter starts by giving an outline of the various theories as identified in the study that include but not limited to Institutions Theory, Resource Dependency Theory, and Human Capital Theory, which are discussed, following their backgrounds, application in line with the research framework, and the relevance to the study. Thereafter, an outline of the literature pertaining to the research constructs, that is, resource mobilisation, infrastructure development and employee training is also given. It defines the constructs as well as their meaning, their importance as well as their relevance to the study. Finally, an outline of the main aspects is given to anchor the chapter in a summarised form. The purpose of this chapter is therefore designed to impart knowledge pertaining to the research theories and the internal management systems within the viewpoint of small and medium enterprises.

#### **3.2 Research Theories**

The various research theories applicable to the study include Resource Based View Theory (RBV), Institutions Theory, Resource Dependency Theory, Human Capital Theory, Demand Side Theory of Infrastructure, Theory of Constraints (TOC), Collaboration Theory, and Systems Theory, which are all presented under this section. Figure 3.1 shows the impact research theories have on the SME sector.



**Figure 3.1: Impact of Research Theories on Entrepreneurial Activities**

**Source:** Initiated by Researcher

Figure 3.1 shows the interaction that exists amongst the components outlined in that the various theories must be put into action through a process called implementation. This is done for the sake of ensuring that the entrepreneurial activities within an economy become sustainable due to the employment of the various aspects as institutionalised by the theories. The process is followed by a continuous monitoring and evaluation process to align the theories with the latest economic conditions by considering the excessive change in technology, customer preferences and tastes. Evaluation helps in the identification and elimination of flaws in the process for sustainable application purposes.

### **3.2.1 Resource Based View Theory (RBV)**

This section gives an outline of the RBV on aspects ranging from the origins, importance of the theory based on the previous studies, weaknesses of the theory, to the importance of the theory to the current study.

### 3.2.1.1 Origins of RBV theory

David Ricardo propounded the resource-based theory (RBV) in the 19<sup>th</sup> century (Abbrey, Bagah & Wulifan, 2018:92). The study that was undertaken by Edith Penrose in the 1950s illuminated the RBV as it was meant to undertake an investigation into the relationship that exists between firm's exposure and accessibility of resources in relation to its growth prospective (Abdulsaleh & Worthington, 2019:38). This led to the derivation of a conclusion that states that the organisation's internally and externally oriented growth and development can only be inevitable in a situation where an organisation can effectively exploit its main resources (Abor, Agbloyor & Kuipo, 2017:98). Similar to this ideology were the findings by Wenerfelt in 1984, stating that an organisation's profitability level is determined by the availability of resources as well as its capability to turn those resources into meaningful terms, that is, in meeting and achieving the organisation's short, medium and long term oriented goals (Abrahám, Strielkowski, Vošta, & Šlajs, 2017:52). The work of Wernerfelt had a significant impact on the RBV theory, which Lippman and Rumelt further embraced in 1982 and Barney in 1986, where the theory was made relevant, hence brought into success through implementation.

In addition, Barney came up with a framework that encompassed the core principles, anchoring the theory as well as the resource dimensions and the competitive advantage associated with the adoption of the theory in business operations in the study undertaken in 1991 (Agbenyegah, 2013:36). Resources that bring success to an organisation are characterised by immobility, inimitability and intangibility, which define the organisation's competitiveness and high performance when measured through performance appraisal. From the viewpoint of Agwu and Emeti (2019:105) concerning the RBV's theory core aspects, it can be noted that a business is exposed to various distinct resources that might be quite exceptional. These might be in the form of both tangible and intangible resources that are there for the purposes to enable the organisation to be highly competitive and achieve high levels of profitability in the long run (Agyapong & Obro-Adibo, 2018:4), although this can only be achieved only and if the resources are used and managed effectively (Agyemang, Deh & Asuamah, 2017:37).

### **3.2.1.2 Importance of RBV theory on previous studies**

Various investigations that were scientifically oriented have made use of the RBV theory, which might be in areas such as marketing in devising a marketing strategy as well as its effective implementation (Ahad, Dyson & Gay, 2019:7; Ahmeti & Marmullaku, 2019:57), global marketing (Akgün, Keskin & Byrne, 2017:33; Akhter & Sumi, 2019:4), and in marketing innovation (Akugri, Bagah & Wulifan, 2016:5; Almutairi & Sathiyarayanan, 2016:23), as well as in supply chain (Amoah-Mensah, 2019:3; Amyx, 2015:12). By merely looking at the literature with regard to the RBV theory, one could figure out the importance of the concept within business operations. Thus, the theory permits organisations to understand the major role played by the availability of resources, as they are an important ingredient towards the creation of a sustainable corporate competitive advantage. Organisational success is dependent on the availability of resources at any given time within a corporate environment (Anders, Vladimir & Peter, 2019:101).

RBV theory plays a pivotal role at an institutional level as it permits organisations to identify the important unlocking key to business success as well as the vital internally oriented resources that allow them to have sustainable success in their various industries of speciality (Abdulsaleh & Worthington, 2019:40). This further extends to the notion that organisational accessibility and exposure to the rightful resources gives institutions the ability to grow and be highly profitable in their endeavours (Andrew, 2017:5).

### **3.2.1.3 Weaknesses of RBV theory**

However, the RBV theory has its own disadvantage in that it lacks a sound measurement of the intangible organisation's resources that are bundled with the tangible ones. Thus, it results in the unreliability associated with the framework in trying to offer consistent, sound and comprehensive findings that can substantiate the theory's relevance (Ansari, Mirdamadi, Zand, & Arfaee, 2018:29). However, there are limitations as not all of the readily available organisational resources are strategic, and that class of resources would not offer the organisation a competitive advantage (Saksonova, 2018:116). Competitive advantage can only be achieved where the resources are heterogeneous and immobile (Baleseng, 2015:97). The resource-based view theory is based on the organisation's ability to invest in its internal capabilities without straining its financial position

which is to attain the much-needed competitive advantage to the organisation for its survival and sustainable growth (European Commission (EC), 2017:55).

#### **3.2.1.4 Importance of RBV theory to the current study**

The RBV applies to this study. The three internal management systems under consideration, namely, resource mobilisation, infrastructure development, and employee training, are considered internal resources that can be harnessed to enable an organisation to become more competitive. Likewise, both innovativeness and sustainability are considered dynamic capabilities. The main aim is on providing sustainable business operations by incorporating and making use of the resource-based view theory. The primary determinant of an organisation's performance is the resources in possession of that particular organisation and will be a major input to its competitiveness (Organisation for Economic Corporation and Development (OECD), 2017:37).

### **3.2.2 Institutions of Theory**

This section gives an outline of the institutions of theory on aspects ranging from the origins, importance of the theory based on the previous studies, weaknesses of the theory, and its importance to the current study.

#### **3.2.2.1 Origins of the institutions of theory**

The institutional theory outlines that the environment in which the institution is built around can influence formal structure development within an organisation and can have a considerable impact more than the one obtained through market pressures (Ocloo & Tsetse, 2013:289). Through an innovative organisational structure that can improve the technical efficiency in organisations that can undertake an early adoption within the ever-changing operating environment (Baleseng, 2015:302). When innovation comes into being and is available to everyone in that it becomes common to everyone, it becomes unreasonable for some organisations not to adopt it. It would be a normal business operation. A lack of thereof causes an organisation to lose its competitiveness. It is believed that organisational legitimacy implies its survival; however, on the other hand, organisational myths are incorporated ceremoniously for the organisation to be merely legitimate within the operating environment (Madhani, 2010:240). As such, the organisations are using the



structural vocabulary applicable in that specific environment, for instance, job titles, roles, and procedures in communication after legitimising.

#### **3.2.2.2 Importance of the Institutions of Theory on previous studies**

This concept helps SMEs grow in transitional economies, such as South Africa, due to the development of reforms by the relevant authorities, such as the Local and Economic Department, in enhancing SMEs' sustainable growth and development. Thus, for example, the Department of Finance would embark on a move to revise the repo rate in a way to influence the prime lending rate by the financial institutions downwards. This is a move to promote cheap sources of funding to the nation, thereby making it easy for SMEs to gain access to a loan that they can afford. The same applies to the Department of Revenue, where the authorities will use the institutions' theory towards the growth and development of SMEs through revising their tax laws and ensuring administration simplicity. Thus, there will be the elimination of complex tax laws to implement revenue collection strategies that favour economic growth and consequently promote SMEs and their immense contribution.

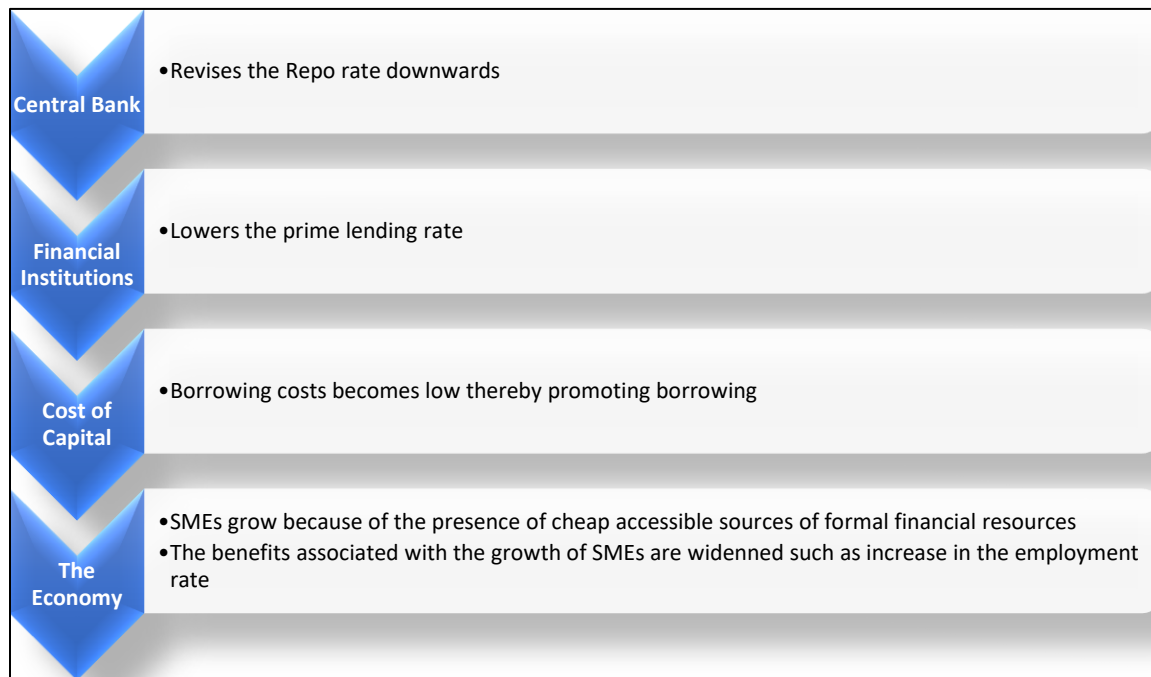
#### **3.2.2.3 Weaknesses of the Institutions of Theory**

It is legitimacy that helps to ensure organisational survival in a given environment (Alafeef, 2019:189). By being trapped in legitimacy, the organisational aura is preserved on the notion of good faith. Unfortunately, legitimacy can reduce organisational efficiency and thus hinder its competitiveness within a technical environment (Mafini & Muposhi, 2017:118). As a negative effective reduction strategy, organisations tend to decouple the legitimised structures from their technical cores for competitiveness and sustainability's sake. By so doing, organisations tend to minimise evaluation and set aside programme implementation to retain the external and internal confidence within the formal structures as a strategy of reducing the impact on organisational efficiency (Madhani, 2010:239).

#### **3.2.2.4 Importance of the Institutions of Theory onto the current study**

The institutions of theory act as a tool towards providing a hint to the government on how it suppresses the SME sector growth, which would lead to the elimination of bureaucracy regarding

the formalisation of SMEs. Figure 3.1 shows the impact of policy change implementation on the growth of the SME sector.



**Figure 3.2: Impact of Policy Change**

**Source:** Initiated by researcher

Figure 3.2 shows the impact of policy change to the overall economy with the main emphasis placed on the SMEs sector. This is in support of the execution of the institutions of theory in the operations of the SMEs. If the monetary institutions can implement tools in support of the economy, there will be SMEs' sustainable growth and development, as one of the main challenges faced by them is a lack of access to formal financial resources. This is as a result of either affordability or structural related reasons making SMEs unable to have access to finances for their growth.

### **3.2.3 Resource Dependency Theory**

This section gives an outline of the Resources Dependency Theory on aspects ranging from the origins, importance of the theory based on the previous studies, weaknesses of the theory, and its importance to the current study.

#### **3.2.3.1 Origins of the Resources Dependency Theory**

The resource dependency theory by Pfeffer and Salancik of 1978 focuses on the ability of the firm to access and mobilise resources from other stakeholders in the business environment and also describes how a shortage of resources forces firms to seek new innovations that use alternative resources (Chimucheka & Mandipaka, 2015:311). The theory also suggests that the survival of SMEs depends on their ability to acquire and retain resources from stakeholders within the task environment. According to Andrew (2017:14), the resource dependency theory places emphasis on the importance of the external environment for acquiring the necessary resources for the organisation's survival. The theory argues that environmental uncertainty occurs when firms rely heavily on their environments for resources that are vital for their survival.

#### **3.2.3.2 Importance of the Resources Dependency Theory on previous studies**

The theory was used in various instances in different economies such as India and China during their economic development phases (Abor *et al.*, 2017:222). These economies placed their main emphasis on the growth and development of the SME sector because of its impact on the wellness of the economy. In addition, Almutairi and Sathiyarayanan (2016:76) view that collateral security deficiency and a lack of support from the various stakeholders, such as the government, are some of the reasons impeding the growth and development of SMEs. SMEs do not have the privilege to gain access to the basic resources like their counterparts, large organisations. SMEs have demonstrated their inability to get started officially, show progress, be able to compete, and live longer than expected (Colardyn, 2016:35), which also applies to SMEs that have exposure to some of the relevant resources that support their survival as well as complying with the government regulations and procedures (Ansari *et al.*, 2018:48).

#### **3.2.3.3 Weaknesses of the Resource Dependency Theory**

It is imperative that an economy must have an environment that is fair enough to promote entrepreneurial activities, that is, “encouraging citizens to start their own businesses as opposed to looking for employment in large firms and in the public sector, to be eager to try new business ventures through undertaking calculated risks, and to be able to survive and grow in their different business endeavours” (Shapira, Roessner & Barke, 2019:78). The economic environment’s conduciveness can be enabled through the provision of adequate business resources and entrepreneurial, supportive policy formulation and implementation, to mention a few.

#### **3.2.3.4 Importance of the Resources Dependency Theory to the current study**

The resources dependency theory is of great importance to both SMEs and relevant stakeholders. It awakens them all on what they are supposed to do to ensure the growth and survival of the SME sector. Thus, an adequate resource provision is an ingredient towards the creation of a conducive environment for SMEs, and it will be their responsibility to bundle the readily available resources (Arogundade, 2017:102). This can be done by using the entrepreneur’s expertise to effectively use the resources at her/his disposal since resource mobilisation poses a great challenge to SMEs. Maximum exposure to business resources enables SMEs to create, operate, and manage the resources effectively, thus creating employment opportunities within the economy and making individual economies compete globally due to their growth potential (Beck & Demirgüç-Kunt, 2018:57). A manufacturing business requires an organisation to have adequate resources together with the unfailing support from both the private and public sector where there is a provision of the relevant infrastructure such as property, plant and equipment, good road networks, technology, and effective communication infrastructure (Agwu & Emeti, 2019:98). All of these aspects are meant to ensure that SMEs continue to work while growing as a sign of effective business operations.

#### **3.2.4 Human Capital Theory**

This section outlines the Human Capital Theory on aspects ranging from the origins, importance of the theory based on the previous studies, weaknesses of the theory, to its importance to the current study.

##### **3.2.4.1 Origins of the Human Capital Theory**

In 1982 the human capital theory was established after identifying a deficiency within the SME sector: the availability of competent human resources and the development of the readily available human resources through training and development (Oncioiu, 2019:92). The theory was used in various countries, including Vietnam in the 1990s, in a move to grow the economy through active SME support. According to Kolade, Obembe and Salia (2018:8), the main cause for a failure in the SME sector is the failure by the owners to invest in human resources, which, as such, forms part of the organisation's capital, and their skills can be converted into monetary resources. The absence of the requisite skills is the main reason behind SMEs' failure, which is obtained through education and training. Most entrepreneurs start businesses without skills; they are led by their passions instead of their profession, thereby leading to a failure in sustaining the business over a long period (Alafeef, 2019:12). Acquiring business skills is the only way of ensuring the sustainability of SMEs and thus permitting the owner to be conversant with all business functional areas.

#### **3.2.4.2 Importance of the theory to the previous studies**

The Human Capital Theory led to the derivation and enactment of various policies such as the Human Development Policy of 1993, where certain stipulated funding was to be contributed by every worker as a move to promote human expertise development. The same applies to the South African Skills Development Act of 1996, which was anchored to ensure the development of previously marginalised people during the apartheid era by granting them access to training and education (Mafini & Omoruyi, 2013:152). All these policies were meant to develop the general citizens to empower them towards pursuing business initiatives as part of the economic growth agenda.

#### **3.2.4.3 Weaknesses of the theory**

The human capital theory implies that developing human skills within an entity is the key to enhancing the firm's competitiveness and sustainable growth in support of the research model under employee training, a construct in the research framework. In recent business trends, there is a need for technologically literate human resources to keep abreast of the daily business operational changes (Venkatasubramanian & Ramanakumar, 2018:8).

#### **3.2.4.4 Importance of the theory to the current study**

However, the human capital theory is of great importance as it outlines the important skills that need to be in possession of the business owners who are risk and innovation; and they are the ones that determine the success or failure of any business venture (Langwell & Heaton, 2016:7). The human capital theory entails that there is a need for the development of skills and education as part and parcel of the human capital development strategy, and it is meant to positively affect productivity, organisational profitability, effectiveness and efficiency of human resources (Chimucheka & Mandipaka, 2015:18). This is an initiative towards the sustainable existence of the various entrepreneurial activities within the economy towards ensuring that it enjoys the broad benefits associated with the creation, growth and development of the SME sector.

### **3.2.5 Demand-side Theory of Infrastructure**

This section gives an outline of the Demand-side Theory of Infrastructure Theory on aspects ranging from the origins, importance of the theory based on previous studies, weaknesses of the theory, to its importance to the current study.

#### **3.2.5.1 Origins of the theory**

Frischmann in 2005 developed and applied a theory that reveals a strong economic argument for managing and sustaining openly accessible infrastructure (Baleseng, 2015:86). The Chinese empire used the demand-side theory of infrastructure during the 1962 agricultural revolution as a sectorial development initiative when there was a huge growth in the general infrastructure within the economy. The demand-side theory relates to consumers being able to realise value from quality and accessible infrastructure. For an SME to survive, it should be able to meet consumer demands through delivering products or services where the consumer can access them easily (Kariv, 2019:14).

#### **3.2.5.2 Importance of the theory on previous studies**

Thus, the theory greatly contributed towards the Chinese empire as there was an immense construction of main roads linking all areas and feeder roads, in a move to promote trade through timeous access to markets efficiently and effectively. There was also great development in the communication and technological infrastructure, water infrastructure and storage, only to mention a few. All sectors benefited from such an initiative, that is, from primary to tertiary. According to

OECD (2017:69), infrastructure is one of the most crucial factors for economic development, since it interacts with the economy through the production processes. The quality of infrastructure available for production greatly impacts the production and performance of an organisation's levels of output, income, profits and employment creation in the economy (Booyens, 2013:19).

#### **3.2.5.3 Weaknesses of the theory**

Just as any other theory, the Demand-side Theory of Infrastructure is no exception to weaknesses. Thus, the theory only focuses on the accessible infrastructure, and it means that there will be no way out to ensure progress in the absence thereof. The accessible infrastructure might be of poor quality that might be a burden to the institutions and other relevant stakeholders (Colardyn, 2016:55). The theory needs to be supportive by the relevant stakeholders through policy formulation that supports infrastructural development that is followed by implementation. A failure results in the irrelevance of the theory.

#### **3.2.5.4 Importance of the theory to the current study**

In this study, one of the constructs under internal management implies infrastructural development as a tool to enhance SME creation, growth and development. This comes in through an effective policy formulation, implementation and review, and monitoring towards ensuring economic development through the various entrepreneurial activities. An enabling economic environment is a vital tool towards entrepreneurship, which has made the most powerful countries what they are today, such as India's fastest-growing economy. This is because there is a direct link between the quality of infrastructure and productivity or profitability.

### **3.2.6 Theory of Constraints (TOC)**

This section outlines the TOC on aspects ranging from the origins, importance of the theory based on the previous studies, weaknesses of the theory, and its importance to the current study.

#### **3.2.6.1 Origins of the TOC**

In 1980, Goldratt developed the Theory of Constraints (TOC) concept. It was meant to provide a continued and stable strategy improvement that is designed in such a way that permits it to deal with any identified constraint that might cause a discrepancy in the manufacturing capability of

any given organisation (Brusco & Righi, 2016:102). Goldratt, in 1990, outlined the five distinct steps that form the basis of the TOC which are seen as main components of the framework aimed at resolving constraints that negatively influence the manufacturing process of any given organisation. The main characteristic feature is aligned with the organisation's ability to continuously explore the problem by trying to resolve the subsequent constraints as soon as one is addressed, irrespective of how important the upcoming constraint is (Colardyn, 2016:56). The focusing steps as per the stipulations of Goldratt are outlined as follows:

- 1: Systems restraints identification;
- 2: Decision making regarding how to resolve the identifiable constraints;
- 3: Link everything to the decision made in step 2;
- 4: Uplift the system's constraints;
- 5: In case of a breakage in any of the constraint management steps, there is a need to go back to the first step while being conscious of the fact that inertia does not become another constraint.

### **3.2.6.2 Importance of the TOC on previous studies**

In addition, the Theory of Constraints has had considerable attention from various scholars (Cycle, 2018:114), and as such has its footprints in various fields of studies across the board, as shown by its rate of success in areas such as healthcare (European Central Bank (ECB), 2018:34), operations management (Abrhám *et al.*, 2017:54; Ayanda & Laraba, 2019:13), as well as supply chain management (Abbrey *et al.*, 2018:36; Andrew, 2017:7; Shapira, *et al.*, 2019:65)

### **3.2.6.3 Weaknesses of the TOC**

However, one of the weaknesses associated with TOC is that it is not applicable in a proactive culture of an organisation in change management, but it is only there to resolve an existing constraint as well as changing a faulty system only and if it is identified. Thus, TOC deals with and resolves what is in existence as opposed to providing a caution on the futuristic problems in the system (Brusco & Righi, 2016:106).

### **3.2.6.4 Importance of the TOC onto the current study**



One of the core advantages associated with TOC is aligned to its ability to unpack all the system components for the sake of giving an allowance to allocate adequate resources in trying to resolve a given constraint (Agwu & Emeti, 2019:106). In addition, the TOC has the capability and capacity to identify and make a distinction between the intangible and tangible constraints within any given system. The TOC also allows organisations to provide and allocate adequate resources towards addressing an identified constraint (Amoah-Mensah, 2019:8).

### **3.2.7 Collaboration Theory**

This section outlines the Collaboration Theory on aspects ranging from the origins, importance of the theory based on the previous studies, weaknesses of the theory, and its importance to the current study.

#### **3.2.7.1 Origins of the Collaboration Theory**

In 1989, Gray proposed the Collaboration Theory. The theory postulates that the core solution to addressing any given problem within an economy is through the use of a collaborative strategy approach (Abbrey *et al.*, 2018:42). Collaboration under the collaboration theory guidelines implies the pooling together of resources that are tangible or appreciations, for example, but not limited to information, money and labour by more than one stakeholder for the sake of resolving a set of identified problems that cannot be solved by individual parties (Agbenyegah, 2013:45). In this regard, collaboration is defined by a decision that is undertaken by various ventures jointly in designing strategies that result in resources sharing together with the strategic plans, ideas and corporate strategy (Krugman, 2018:78). The ultimate goal is on being able to resolve organisational constraints and challenges that cannot be solved on an individual basis (Shapira *et al.*, 2019:70).

In a study undertaken by Gray in 1989 to find common ground for various stakeholder problems, five characteristic features are aligned to collaboration that include:

- collaborated parties are totally independent parties;
- a mutual understanding and cooperation in coming up with solutions to the notified challenges and problems;
- each party makes a contribution during the decision-making process;

- it is the responsibility of all parties to take part in the strategy development; and
- it is mandatory for the various stakeholders to be well aware of the salient point engraved in the strategic plan since it is the core for managing and dealing with the environmental uncertainties within which the entities operate in.

In addition, McCann's study of 1983 was based on the articulation of social problem-solving design guidelines, Gray further went on to widen the study by identifying the basis on which the collaboration is anchored, that is, a three-stage model with the three components outlined as follows:

- 1: Problem setting – this is the initial stage in the establishment of the collaboration process where there is an identification and recognition of the nature of the problem or the challenge at the organisation's hand. In line with this study, it is in line with issues that are hampering the internal management systems, innovativeness and the sustainability of SMEs in the manufacturing sector.
- 2 and 3: Direction and implementation – in these two stages, the organisations are involved in the appreciation of the collaboration concept while establishing sense and value. The organisations will also ensure that the strategic plans are being implemented properly in a way to meet their set objectives for the sake of addressing the challenges that the stakeholders are facing.

### **3.2.7.2 Importance of the theory on previous studies**

Collaboration is an important theory that feeds into the academic sector where an explanation on studies are in line with the “transaction planning, open decision making, partnerships and co-management models” (Abbrey *et al.*, 2018:42; Abrahám *et al.*, 2017:53; Agwu & Emeti, 2019:109; Akhter & Sumi, 2019:10; Amoah-Mensah, 2019:6), and is aligned to the mutual understanding amongst the parties and the joint collaborative interchange (Colardyn, 2016:78). The collaboration concept was also applicable in various areas that are inclusive of “organisational behaviour, sociology, anthropology, tourism” as outlined by Amyx (2015:30; Anders *et al.* (2019:103); Beck and Demirgüç-Kunt (2018:307); and ECB (2018:57).

### **3.2.7.3 Weaknesses of the theory**

On the other hand, the concept is prone to criticism as a result of its lack of a precise definition with regard to the conceptualisation and the general application from an individual, organisational perspective (Abdulsaleh & Worthington, 2019:42; Agbenyegah, 2013:67; Akhter & Sumi, 2019:8). Thus it ends up not fitting to a specific organisation but a theory that only exists on an overall basis.

#### **3.2.7.4 Importance of the theory on the current study**

However, for the purposes of this study, the collaboration theory plays a pivotal role as it entails the bundling of various business enabling factors such as human resources, infrastructure, and employee training and development. This is a move towards the creation of sustainable business initiatives that has support from both the public and private sector. One of the main advantages associated with the incorporation of the collaboration theory in an organisational environment is aligned to the capacity provided in the facilitation of effective innovation creativity as well as an all-inclusive problem resolution formulation amongst the business partners (Abor *et al.*, 2017:100; Agyapong & Obro-Adibo, 2018:6).

### **3.2.8 Systems Theory**

This section gives an outline of the Systems Theory on aspects ranging from the origins, importance of the theory based on the previous studies, weaknesses of the theory, to its importance to the current study.

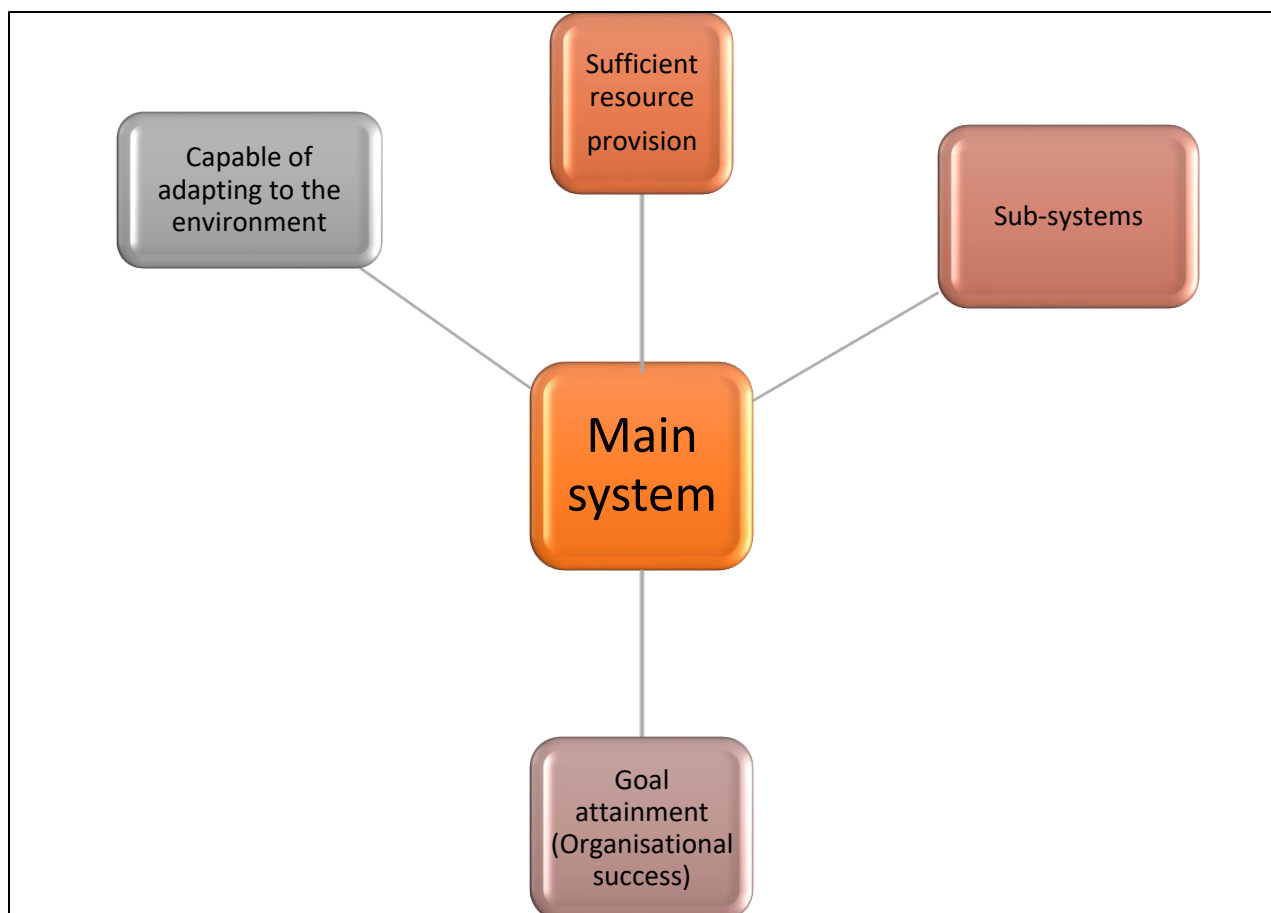
#### **3.2.8.1 Origins of the theory**

System theory was brought into being by a biologist named Ludwig von Bertalanffy in 1969 in his study of the general systems within organisations. He realised that a system is made up of different components or elements, and there is an interactive activity amongst them, thereby making a functional system (Arogundade, 2017:15). Thus, a system is as a result of the combination of different factors brought together to achieve a stipulated goal. On the same issue, the world is seen as a system that is made up of different components that work together in ensuring that it becomes conducive for human, plant and animal survival (Ayanda & Laraba, 2019:13). Thus, the world is impacted and different elements interact through the environment that provides materials as well

as other vital resources that are there to enable an effective system operation (Ayyagari *et al.*, 2018:52).

### 3.2.8.2 Importance of the theory on previous studies

In addition to Ludwig von Bertalanffy's invention on the systems theory, Miller further developed it in 1978 by outlining the fact that since a system interacts with its environment, there is a need to have a "reproducer, boundary, ingestor, distributor, converter, producer, matter-energy storage system, extruder, motor, supporter, input transducer, internal transducer, channel or net, decoder, associate, decider, encoder, and output translator" (Ansari *et al.*, 2018:28). There was also a further advancement of Miller's work by Yourdon in 1989 with regard to information systems, where there was a provision of a significant insight in the conceptualisation of the concept as well as its dimension. Figure 3.3 shows the elements that lead to the success of any organisation through the systems theory.



### **Figure 3.3: System Theory on Organisational Success**

**Source:** Initiated by researcher

#### **3.2.8.3 Weaknesses of the theory**

In support of Figure 3.3, Yourdon (1989) outlined the four principles anchoring the general systems theory in relation to the information systems, outlined as:

- 1: A system has low chances of adapting with the volatile environment if it is sophisticated or complex.
- 2: A lot of resources are required in order to support a system that is large with an increase that is non-linear.
- 3: A system is usually a component of a large system when it contains other systems.
- 4: A system implicates principle 2 as it grows.

It can therefore be noted that system theory is prone to improvement, solving known problems or providing an explanation on certain issues that might be inherent in the business operational activities. Thus, business activities result from a chain of activities that are intertwined towards achieving organisational goals.

A number of scholars have paid attention towards the system theory in various fields that are inclusive of science, for example, Abrehám *et al.* (2017:56), business, for example, Agyapong and Obro-Adibo (2018:11; and Agyemang *et al.* (2017:39), marketing, for example, Ayanda and Laraba (2019:14) and Arogundade (2017:17), supply chain, for example, Abbrey *et al.* (2018:45) and Brusco and Righi (2016:106) Oncioiu (2019:520 and Shapira *et al.* (2019:70).

#### **3.2.8.4 Importance of the theory on the study**

For the sake of this study, the systems theory helps in ensuring that the internal management system with its components resource mobilisation, infrastructure development, and employee training are bundled together so that there will be innovation in the SMEs sector, which further results in the sustainable operation of SMEs. From the review of related literature, it can be noted that the systems theory framework is an important aspect in business that is widely used in various disciplines. The framework provides the importance of the interrelatedness of the components within a system as well as the sub-systems attached to the large system (Amyx, 2015:26). In this

regard, it can also be noted that the interconnectivity of the various elements making up a system within any given organisation is there to provide a solution to a known problem, thereby permitting each element the ability and capability to effectively and efficiently resolve the problem at hand (Ayanda & Laraba, 2019:17).

### **3.3 Research Constructs**

In this section, the study outlines the literature with regard to the constructs as stipulated in the research framework. It is of great importance to establish a review of the identified framework constructs as it enables the provision of scientific evidence as well as the outcome on the study's variables. Thus, there will be a clear stipulation on the relevance of the variables to the study. The study has actually identified resource mobilisation, infrastructure development and employee training as the framework's constructs that have an influence on the SMEs' innovativeness in a way to enhance their sustainability. These constructs are identified as vital components of the internal management systems within organisations.

#### **3.3.1 Internal management systems**

As a result of globalisation, the business society has been exposed to intense competition, which calls for organisations to embrace themselves to survive in their respective industries of denomination (Amoah-Mensah, 2019:6; Ansari *et al.*, 2018:29). Thus, there has been a call for them to undertake their businesses while aligning their internal management systems to the international standards (Booyens, 2013:34; Cycle, 2018:120). Internal management systems imply a stepping stone for organisations as they are made up of mechanisms as well as techniques that are put into effect for the sake of ensuring that the organisation remains competitive in the globalised oriented market (Oncioiu, 2019:49). As such, the systems are internally originated through the contributions put across by the strategic management personnel within an organisation, which include, but are not limited to resource mobilisation, infrastructure development, employee training, quality control systems, personnel morale, as well as risk management (OECD, 2017:42). Moreover, for the purposes of this study, only an outline and discussion of three components of the internal management systems that are on the research framework are given, which include resource mobilisation, infrastructure development and employee training. These aspects are considered as they are internally generated from an organisation's perspective.

### **3.3.1.1 Resource mobilisation**

According to Lamprecht (2011:30), resources in a business setup comprise tangible and intangible elements that are bundled together for the sake of achieving business stipulated goals, ranging from profitability, progressive existence, sustainability, wealth maximisation, to market domination. Success or failure of any business setup is entirely hinged on the availability and the ability to use the readily available resources (Langwell & Heaton, 2016:16). Most of the firms are faced with the problem of being unable to use the available resources to the benefit of the organisation, which makes it not an obvious issue that the presence of resources is a licence to business success (Yasuda, 2015:8). The African continent is rich in natural and human resources, but the problem is with the continent's inhabitants in bundling the resources to their own advantage (Aboelimged, 2018:13)

According to Kozlenkova, Samaha and Palmatier (2014:9), a firm is an intertwined bundle of resources that is to be converted into meaningful business activity to influence the surrounding communities. It is the firm's disposal that is used to influence business performance, which is where creativity and innovativeness and building relationships with the customers come in to influence market behaviour. It is a competitive advantage that is earned out of the firm's ability to have a progressive resources' capability such that other market participants would not be able to duplicate the product (Makadok, 2011:12). The development of SMEs is hinged on the capability of the entities to use the readily disposable resources to enhance development and growth and thus be sustainable (Matsoso, 2014:14).

There are various types of resources that an organisation needs for its establishment, survival and growth; and SMEs are not an exception in this regard. The resources identified for the sake of this study are inclusive of financial, human resources, informational, and physical.

#### **(i) Financial resources**

A financial resource in business terms refers to any form of asset that is easily convertible into cash when the need arises (Abdulsaleh & Worthington, 2019:40), thus the definition incorporates the liquidity aspect regarding the asset in that form of financial nature (Saksonova, 2018:116; Shapira *et al.*, 2019:70). In another definition, financial resources refer to the monetary resources an organisation has in the form of bank and liquid cash reserves that can be easily accessed by the

organisation in case of need (Cycle, 2018:117). Thus, for the purposes of this study, financial resources shall be seen as the monetary resources in cash or bank, or any form of current assets an organisation can easily use for the sake of ensuring business continuity. This follows the conversion of the financial resources in growing the business by curbing opportunities as they arise as well as ensuring the smooth flow of business activities. Financial resources play a pivotal role to both the business and the entrepreneur or business owner (Abbrey *et al.*, 2018:42) as they are a vehicle that enables an organisation to acquire the vital resources (Agwu & Emeti, 2019:108) that enhances the smooth flow of the business activities (Andrew, 2017:9; Ayanda & Laraba, 2019:13; Beck & Demirgüç-Kunt, 2018:340). It is the responsibility of the entrepreneur to determine and observe the nature of the financial resources that the organisation needs for it will be an avenue towards the determination of the way in which the financial resources can be obtained (Cycle, 2018:117; EC, 2017:61).

Additionally, there is a need for financial resources for the business to start operating sustainably and profitably. It is evident from the developing countries' point of view that the availability of financial resources is the main factor behind the success or failure of business entities (Alafeef, 2019:18). Funding limits the capacity of SMEs to grow and exist on an on-going basis (perpetuity) with specific reference to developing nations' SMEs (Millicent & Reginald, 2014:60). However, even if financial resources are available through the financial services sector, the challenge remains the same in terms of accessing and securing funding as most of the financial institutions follow secure lending practices.

An SME does not have the much-needed collateral security to act as a guarantee to the repayment of the advanced loan when it falls due (Moaisi, 2014:18). This has forced SMEs to be funded by personal savings and loans from friends and relatives, making the SMEs' operations unsustainable, as one cannot meet the business requirements with such a low capital investment. The larger the capital investment, the greater the return since it is aligned with a number of advantages that include the ability to buy in bulk, access the latest technology, employment of skilled and competitive human resources (Wiese, 2014:37). The other forms of resources such as human, physical and informational are dependent on the availability of financial resources and thus make the financial resources a key controlling factor in the success or failure of the SMEs.



- **Financial resources constraint**

It is evident from a business perspective that for any form of a business venture to survive, financial resources must be available as they represent the lifeblood of the organisation (Arogundade, 2017:17). Thus, financial resources are needed by the business for trading purposes as well as promoting organisational growth in terms of the size of its human resources, the statement of comprehensive income, and the statement of its financial position (Agwu & Emeti, 2019:107). An organisation with a large deposit in financial resources has the ability to tap into readily available opportunities before the rivals, which offers an organisation a competitive advantage within the market of origin (Akhter & Sumi, 2019:7).

According to Oncioiu (2019:52), a lack in financial resources by entities is ranked second before education and training as the main cause of SMEs' failure in the global perspective. This is a major sign of the nature of the financial institutions operating at the global level that offers support to the SME sector, which calls for the relevant authorities to shift their attention from other minor activities towards devising strategies on how best SMEs can gain access to financial resources (Abdulsaleh & Worthington, 2019:40) so that they can continue to make positive contributions to global economies (ECB, 2018:67). In the South African context, it is evident that approximately 75% of SMEs' bank loan applications are declared unsuccessful for the reasons best known by the financial institutions (Ansari *et al.*, 2018:29). The latter have actually labelled SMEs a high-risk lending criterion, hence charging exorbitant interest rates that are out of reach of SMEs. It is the cost of funding that determines if one can take a loan or not, and the same applies to the few SMEs that would have been granted the loan (Krugman, 2018:90).

It was further noted that in South Africa, only 2% of the start-ups have the ability to gain access to financial resources through formal ways (Beck & Demirgüç-Kunt, 2018:315). Thus, it is quite difficult for SMEs to access loans through banks as the requirements are out of their reach. This is attributed to a lack of collateral security that can be used as a guarantee so that in case of default, the bank repossesses the pledged asset (Baleseng, 2015:89). In addition, banks require SMEs to have bank deposits or to have a clear and well-serviced credit record for them to assess if the loan applicant has the ability to repay them, basing on previous loan records (Booyens, 2013:59). In most cases, SMEs fail to fulfil this requirement, preventing them from entering the business sector.

Another reason aligned to a failure by SMEs to gain access to financial institutions related loans is the SMEs' inability to present an effective business plan, as it is a roadmap to what the institution needs to achieve while outlining how it intends to get to the stated goal (OECD, 2018:92).

- **Financial resources as a measure of performance**

Financial information of any given organisation is an important ingredient to measure what is actually transpiring within the business, which is called financial performance measurement (Amyx, 2015:23). The main two sources of financial information at the institutional level include a financial statement and the report from the analysis of various ratios (Agbenyegah, 2013:68). Profitability is an umbrella to finding out how an organisation is performing in financial terms, which forms part of the profit and utility maximisation goals of an organisation (Abdulsaleh & Worthington, 2019:45). These two aspects form the cornerstone of various economic theories on a global scale. According to Amoah-Mensah (2019:8), the success of SMEs is determined by measuring organisational profitability as the first component to be considered when finding out an organisational accomplishment rate.

In the case of organisations that are profit-oriented, there is always a need for them to devise strategies on how they can maintain high profitability levels, which could be achieved by ensuring that the firms are involved in the production of exceptional quality products that can easily be converted into sales for revenue generation purposes (Ansari *et al.*, 2018:29). This could be done by establishing a robust marketing strategy that is very effective and highly efficient to overrule the rivals' trading activities. In addition, for an organisation to achieve maximum sales level, it has to be conscious of the product life cycle for it to take advantage of the activities in various stages (Agwu & Emeti, 2019:109). Thus, an organisation can maximise sales during the growth stage, which is a hint to SMEs in ensuring profitability maximisation. There are various financial measures that can be used to determine the level of SMEs activities in accounting terms, which include "profitability, creditors, stock control, business goals achieved and business sustainability" (Oncioiu, 2019:49).

- **Financial resources in the study**

Financial resources exist in different forms because of the various sources within which they can be obtained (Chimucheka & Mandipaka, 2015:23). There are generally two categories of sources of finance, namely, debt and equity (Baleseng, 2015:45). However, they are prone to pros and cons associated with their usage (Akugri *et al.*, 2016:45), and it is the responsibility of the acquirer to be conversant of the information regarding the two broad categories (Kolade *et al.*, 2018:13) for the purposes of making informed decisions that will be in favour of the organisation (Langwell & Heaton, 2016:120). This information will be helpful in that the entrepreneur will be alert to the various ways in which the business can be impacted by either decision for the sake of devising strategies to adequately address a predicament (Anders *et al.*, 2019:103). Financial resources take different forms, including “start-up capital, long and short-term loans, trade credit, start-up grants and investments by the owners of the organisation as defined by shareholders, partners or sole traders” (Amyx, 2015:32; Beck & Demirgüç-Kunt, 2018:314). It has come to the corporate world’s attention that there is a need for organisations to effectively manage financial resources at their disposal since it was noted that a poorly managed cash flow had become the main source of SMEs’ failure (Kolade *et al.*, 2018:14).

## **(ii) Human resources**

Human resources imply the summation of people affiliated to the organisation, together with their “efforts, skills, knowledge (acquired or implied) and the insights that they contribute towards the overall performance of the organisation” (Amyx, 2015:20; Amoah-Mensah, 2019:9). Human resources can also be further defined as all the personnel who contribute to the organisation’s manufacturing, service offering or trading commodities, either directly or indirectly for the sake of ensuring growth and sustenance of the organisation (Kariv, 2019:13). For the purposes of this study, human resources imply the skills, expertise, and views embraced within the people in an organisation for the sake of ensuring that the qualities outlined are used towards sustainable growth and development of the entity. Thus, human resources are there to bring in a difference in the organisation through innovation, hence allowing it to curb new opportunities as part of its growth prospects. As a result of globalisation, organisations are exposed to extreme rivalry action that compromises their operations regarding market share, which calls for continuous advancements in the expertise in possession of the firm’s personnel (Mafini & Omoruyi, 2013:152). Thus, entrepreneurs are called to provide education and training to the human resources for them to align

with the current business operation trends as well as the volatile technological environment (OECD, 2018:67). Additionally, it is also the responsibility of the management to ensure that employees are kept motivated through the effective implementation of various strategies to positively influence their performance (Mafini & Muposhi, 2017:42). In support, Oncioiu (2019:52) is of the view that there are various ways that an organisation can employ to grow its human capital, which include “education and training, innovation, emotional intelligence, wisdom and other job-related skills that are pertinent to ensuring organisational productivity”.

- **Impact of human resources**

It is evident from a business operational perspective that for any organisation inclusive of SMEs to effectively undertake business activities through exceptional performance and sustainable growth, there is the need for exposure to qualified, skilled and highly motivated human resources (Colardyn, 2016:53; Ocloo & Tsetse, 2013:55; Shapira *et al.*, 2019:65). However, as a result of the financial constraint that SMEs are exposed to, they have limited access to qualified and competitive human resources as they come with a high cost to the organisation (Shapira *et al.*, 2019:72). This has been the problem that is continually prevalent to SMEs and can only be overcome if they gain access to financial resources, giving them access to a skilled workforce that can change the operations of the organisation (OECD, 2017:40). In addition to the existing challenges within SMEs regarding human resources, it is categorical that employees could be hired while abiding by the labour regulations that stipulate the minimum wage rate that might be out of the reach of the SMEs’ financial ability (Abor *et al.*, 2017:99). An example of such employment regulation is the Employment and Minimum Wage Regulation. For the sake of this study, human resources are quite important as they convert the services and products through their expertise into monetary resources (profit). Thus, innovation is in the hands of human resources that is a source of SME sustainability. Human resources’ importance in the organisation should note if there is the employment of appropriate candidates with the right skills or take inexperienced candidates who then embark on a training and development initiative to unleash their inert capabilities.

- (iii) **Informational resources**

Information means the raw data that was analysed, scrutinised, and assessed to eliminate and errors in it for the sake of fulfilling a stated goal (Agbenyegah, 2013:38). Information can be described

as facts put together to give direction to any given endeavour (Almutairi & Sathiyarayanan, 2016:31). For the sake of this study, information can be used to mean any form of data that was analysed and assessed for the sake of proving factual contributions towards the success of SMEs. Information plays a pivotal role in the success of any form of business entity. It takes skilled employees to use the information to enhance successful business operations (Alafeef, 2019:78; OECD, 2017:45). If there is a lack of information within the business environment, entrepreneurs cannot undertake appropriate decisions within their SMEs. There are two sources of information in the corporate environment: internal and external, where the former is bound to originate from within the organisation, and the latter emanates from the outside of the business (Almutairi & Sathiyarayanan, 2016:29). Internal and external sources of information are vital in business operations as they permit the entrepreneur to curb opportunities and develop effective strategies from an informed point of view for them to remain competitive and improve organisational performance (Anders *et al.*, 2019:102). In current business trends, information resources have become broad. Therefore, there is a need to pay special attention to an organisation's information resources (Agbenyegah, 2013:38), which now comprises computer-related technology, patents, the internet, and emails (Booyens, 2013:49). If incorporated effectively, information technology can be a good source of competitive advantage since its application differs from one organisation to another (Ocloo & Tsetse, 2013:23).

- **Challenges in accessing relevant information**

Investment in information technology has become one of the main focus areas within the finance departments of organisations to ensure that they keep abreast with the latest technology (Shapira *et al.*, 2019:71). This move has become important to every participant in the corporate world and business today (Amoah-Mensah, 2019:5). Effective business development is now heavily dependent on the organisation's exposure to technology since it helps businesses connect globally and open up more business opportunities than before (Booyens, 2013:34). Thus, technology has had a positive impact in improving an organisation's sales volume when effectively put into use.

However, it has to be considered that technology poses a huge expenditure on the organisation's budget since there is a need to acquire hardware and software that needs to be installed (Arogundade, 2017:15). Businesses have been exposed to the additional expense that has become

a prerequisite for any organisation to succeed in its operations. As a result, since many SMEs do not have access to financial resources, it poses a challenge towards their survival and growth as they cannot keep abreast with the latest technology (Mafini & Omoruyi, 2013:158).

For the sake of this study, information is regarded an important element as it is the one that is used as a competitive advantage tool an organisation can use against the other. Easy access to genuine information can be used to curb untapped opportunities before anyone else can, thereby using it to gain a larger market share and thus become profitable. Profitability extends to business growth and sustainable existence hence resulting in multiple effects that impact the overall economy.

#### **(iv) Physical resources**

Physical resources are referred to as the organisation's operating resources (Abdulsaleh & Worthington, 2019:39) and include the tangible assets an entity has that include property, plant and equipment, which exists on a long term basis (Almutairi & Sathiyarayanan, 2016:31). Physical resources can be termed as the tangible resources that permit human resources to effectively and efficiently undertake their jobs at hand (Arogundade, 2017:13). For the sake of this study, physical resources mean the assets in possession of an organisation that is meant to be used by the human resources for productivity enhancement purposes. Physical resources are not limited to long term assets of an organisation but extend to the short-term assets such as raw materials that are vital in ensuring business continuity as they are turned into finished products and services that are ready for public consumption (EC, 2017:62). General suppliers used to enhance the business's operations are also categorised as the physical resources an organisation can have (Saksonova, 2018:117). The presence of physical resources permits the organisation to be able to curb opportunities within its reach for the purposes of ensuring and promoting business growth and development. The physical resources are used as a vehicle towards reaching the organisational goals through conversion.

#### **3.3.1.2 Infrastructure development**

According to Kolade, Obembe and Salia (2018:5), there is a distinction between developed and developing countries with reference to infrastructural development, which exposes SMEs operating in either environment to differentiated challenges. This calls for them to operate in either environment to have different strategies on how to overcome and be sustainable in the long run

(Aboelmaged, 2018:8). Thus, SMEs in developed countries have fewer infrastructural challenges compared to those in the developing economies and are exposed to other challenges that are internally originated, such as management incompetence, poor location, inefficiency, poor governance, and lack of integrity (Mafini & Muposhi, 2017:15).

Venkatasubramanian and Ramanakumar (2018:5) add that due to poor infrastructural development in developing countries, there is low institutional development that further causes SMEs to have barriers or challenges in terms of access to financial resources. This is aligned to poor property rights and ownership in the context of developing economies, thereby limiting innovation within the SME sector. Financial institutions perform secured lending of SMEs, and as a result, they fail to secure funding due to a lack of collateral security that is directly linked to infrastructural challenges (Suh & Lee, 2018:21). SMEs' development and growth are enhanced by training, technological skills, and human and financial resources and thus foster sustainability within the manufacturing sector.

There are various types of infrastructural developments that are vital towards the development of the SME sector, which include technological infrastructure, roads, buildings, drainage systems, and warehouses, just to mention a few. They play an important role in the enhancement of the SMEs sector.

#### **(i) Technological infrastructure**

Technological, infrastructural developments are a prerequisite for well-established and sustainable innovation and creativity within the SME sector, thus aiding the sustainability of SMEs. They provide a conducive innovation environment to the SMEs, thereby making them compete on even grounds that permit their growth, development and sustenance (Ceptureanu *et al.*, 2018:8). It is the responsibility of the government to ensure that there is the proper and fully-fledged infrastructure that has the ability to ensure innovation within the SME sector, and failure to offer that support is the main reason behind the unsustainability of SMEs (Van Tonder, 2016:17). The government intervenes in the market through infrastructural development and support to the firms within the economy. There is a close interaction between resources, infrastructure and innovation and creativity within the SMEs sector, and as such, there is a need for resources for innovation as well as infrastructure (Masocha & Fatoki, 2018:6).

There is a positive relationship between technology infrastructural availability and the manufacturing SMEs sustainability, backed up by aspects such as information, networking and manufacturing technology (Aboelmaged, 2018:11). Technological, infrastructural development and growth make the manufacturing industry sustainable as it aids in the operations with reference to water, power and waste management, as well as material movement along the production line (Ceptureanu *et al.*, 2018:13). The availability of technological infrastructure in the organisation aids organisational competitiveness since it is how recent businesses now operate as part of a firm's operational trends. This incorporation is quite influential towards the sustainable growth of the SME sector.

## **(ii) Buildings**

Buildings imply the physical and permanent structures that are constructed for the purposes of enhancing business processes (Abdulsaleh & Worthington, 2019:71). Thus, buildings at the organisation encompass the offices, storerooms, warehouses, computer rooms, control rooms, plants, only to mention a few. These structures are important to the organisation as they accommodate its vital equipment that is used to facilitate business processes and production (Agyapong & Obro-Adibo, 2018:176). Buildings are also used to accommodate employees so that they can undertake their daily job activities in a safe and secure environment free from outside temperature changes that might impact the way employees work (Beck & Demirgüç-Kunt, 2018:134). Thus they protect products from moisture and direct sunlight that might compromise the quality. SMEs, just as any other businesses, need buildings to be able to undertake their operations effectively. However, this has always been a challenge for SMEs to start with operations as they do not have the buildings to start their business. The buildings are either acquired or rented through a lease agreement, but all these terms require funding since buildings are expensive to buy or rent (Kariv, 2019:108). This is because of a lack of capital to acquire such, and most SMEs have decided to do their business in their backyards in a way to cut rental costs.

## **(iii) Roads**

A road is a hard surface used by human beings and vehicles for travelling purposes. Roads link different areas and a proper road network is a mechanism for the enablement of economic development (Agbenyegah, 2013:82). Developed economies are characterised by a well-advanced



road network that has the capacity to handle vehicles within the nation, together with foreign vehicles, without leading to traffic jams. A proper road network aids business efficiency as products can reach their destination timeously hence giving clients the guarantee and confidence that they have access to products and services within a stipulated time (Ayanda & Laraba, 2019:24). Well maintained road networks are a tool that helps protect the vehicles of organisations by lowering maintenance costs as a result of the evenness of the roads. It is the responsibility of the government to ensure that there is a good road network within the nation with the aid of the private sector that will be sub-contracted to maintain roads (Krugman, 2018:48). It is the responsibility of the organisation to establish internal roads that are linked to the main roads and that require the organisation to have adequate financial resources to establish such. This allows them to gain access to their input products from their suppliers as part of the supply chain channel process as well as distribute their finished products to the intended customers in time and in the right condition (Arogundade, 2017:62). It is a competitive strategy used by organisations, and SMEs are not an exception in this regard. SMEs gain access to suppliers and markets through the presence of a good road network.

### **3.3.1.3 Employee training**

Training is a factor of human resources, which implies that people in an organisation, together with their efforts, skills acquired or inborn, and knowledge is used to influence the activities of the organisation (Sula & Banyar, 2015:20). There is a need to extend the acquired knowledge and skills of an organisation's human resources in alignment with current production or service trends, which can only be enhanced through training. There is a continuous change in technology and production methods, therefore the necessity to keep abreast of those changes and thus aid in the firm's competitive advantage. Employee training and education are the key factors to the success in any given organisation, which is the main problem with the SMEs since as they do not pay attention to the advancement of human resources (Kozlenkova *et al.*, 2014:9).

Training and education are a source of employee motivation as it is a visible sign that the organisation values its employees and it has a long-term relationship with them. Motivated employees are more effective than demoralised ones, and for an organisation that invests well in human resources, its success is inevitable (Bekele & Worku, 2013:540). As long as all inputs for

productivity purposes are available, employees' training can effectively and efficiently turn the resources into outputs that can be converted to the organisation's revenue. By so doing, education and training stir innovation and creativity within the employees and make the firm a success due to unique products or service offerings to the market (Ocloo & Tsetse, 2013:19).

Additionally, according to Lamprecht (2011:32), there is a challenge in SMEs aligned to poor management skills of the enterprise's owner. This forms the major reason behind the failure of many SMEs, as many organisations of this nature are not established with skills but the passion for doing business and the need for a source of living. A combination of managerial skills and business knowledge is a recipe for SMEs' sustainability and knowledge, acquired through reading, together with the skills (Van Tonder, 2016:18). This calls for training as a preliminary requirement for one to start a business venture for sustainability purposes.

#### **(i) Lack of employee training and education**

In the South African context, education has been one of the main burdens towards the establishment of successful entrepreneurial activities (Agbenyegah, 2013:76; Booyens, 2013:32). It was found that there is a positive relationship between education and entrepreneurial activities; entrepreneurial activities are a dependant variable while education is the independent variable (Colardyn, 2016:60). Training and education are not limited to employees but extend to the management and owners of the organisation, and it is evident that lack of skills is also prevalent in the management and owners of SMEs as a result of a lack of education and training (Amoah-Mensah, 2019:8). Education and training are very important to the organisation as they help develop management related competencies that are vital in the success of the SMEs (Kolade *et al.*, 2018:17). Well-trained employees and management are well informed regarding the way business operate and have the ability to convert the opportunities surrounding them towards the success of the organisation (Mafini & Omoruyi, 2013:151).

Managerial competencies are defined as the "set of knowledge, skills, behaviours and attitudes that can contribute to the personal effectiveness" (Chimucheka & Mandipaka, 2015:25). Business survival and its growth are as a result of the presence of management competencies and a lack of thereof results in the destruction of the venture. Agbenyegah (2013:30) outlines that education and training deficiency has resulted in the reduction of the capacity of managers to effectively

undertake their roles within SMEs situated in South Africa. A high failure rate in the SME sector is directly attributable to the lack of education and training in new establishments in particular, as well as a low level of entrepreneurial creativity (Chimucheka & Mandipaka, 2015:28).

## **(ii) Types of training**

SMEs have many attributes that are similar to those of large organisations, and in the eyes of large firms, they are not considered a failure (Colardyn, 2016:28). However, when looking at these in qualitative terms, small organisations need to be managed differently from large organisations, although several business managerial aspects have to be adopted from the large businesses' way of operation (Alafeef, 2019:92). Thus, SMEs are prone to information and resources deficiency because of a lack of economies of scale when investing in such (Abrahám *et al.*, 2017:56), and have a blurred sustainability vision because they are so much obsessed to survival (Agyemang *et al.*, 2017:39). They also have a masculine way of thinking as a result of their one-man operation nature that is usually the investor; therefore, business success is hinged on the contributions of the owner (Langwell & Heaton, 2016:107), who has inadequate learning mechanisms, mainly because of a lack in the requisite resources (Booyens, 2013:45). The main reason behind the existence of this situation within SMEs is because of a lack of a timeous long-term investment strategy formulation and implementation and other resources, which places their main effort to be hinged on survival aspirations only (Baleseng, 2015:45). However, SMEs stand a better chance of success in relation to large organisations because of their quick decision-making attributes as opposed to large firms that need to consult several stakeholders in order to make a decision (Agwu & Emeti, 2019:106).

In many instances, SMEs are quite reluctant to implement training reforms even if they are aware that if they increase employee productivity, they can enhance the firm's competitiveness (Ayanda & Laraba, 2019:13). It is evident that 36% of the SMEs population in South Africa do not have formal training activities (Agbenyegah, 2013:67; Mafini & Omoruyi, 2013:160), which is mainly caused by a lack of understanding, inadequate financial resources to invest in human resources training and development as well as inadequate usage of time resources (Shapira *et al.*, 2019:72). The various forms of employee training are outlined as follows:

## **(iii) Problem-based learning or on the job education and training**

Problem-based learning is an initiative that is used in higher learning institutions that is constructive in nature towards student learning, usually under the direct control of a teacher or a lecturer who is a specialist in that area of study (Abbrey *et al.*, 2018:38). This type of learning was proved effective by looking at the outcomes, and it has led to the development of the much-needed skills in the current world of business which requires “problem-solving, logical thinking and creative thinking skills” (Oncioiu, 2019:47).

Under the problem-based learning initiative, the student figures out a problem in an organisation of choice and comes up with a research project towards an investigation into that specific problem for the sake of devising solutions towards the identified problem (Abor *et al.*, 2017:99). By so doing, the problem-based learning offers a number of advantages to the SMEs in that it is “cheap to execute, provision of an instant return on investment, on the job education and training offering that suits a particular organisation, source of innovation and independent thinking, it is suitable and related to SMEs needs and sustaining organisation’s competitive advantage, offers a deeper understanding of a topic due to interactive learning and engaging in the material, and it increases motivation to learn more and thus developing a learning culture” (Ahmeti & Marmullaku, 2019:34; Arogundade, 2017:16; Brusco & Righi, 2016:107). Through the use of a problem-based learning initiative within SMEs, it results in the development of critical thinking skills, effective communication and leadership as well as problem-solving techniques applicable in future business endeavours (Mafini & Muposhi, 2017:62). SMEs can make use of the problem-based learning method of employee training since it offers the organisation sustainable development by permitting the organisation to resolve urgent business issues while building up skills that can be used in futuristic business problems as they emerge (Ayanda & Laraba, 2019:19).

#### **(iv) Web-based training**

Any form of training offered through web-based technologies is called web-based training (Abbrey *et al.*, 2018:41). This type of training is advantageous to SMEs as it does not need one to be physically available at the training place, but learning is done remotely via the internet at one’s own free time, thereby preventing job delays when someone attends training services (ECB, 2018:61). It offers great convenience to the trainee, and it leads employees to focus on the core business and undertake training activities in their free time (OECD, 2017:45). As a result of a

continuous improvement in technology, it has become easy to gain access to web-based training services, and there is free training content that suits each company's needs with knowledge being shared by prestigious experts in the area of training (Shapira *et al.*, 2019:72). This has permitted organisations to gain access to the latest information regarding an organisation's individual training needs.

#### **(v) Social learning**

A social learning concept was brought into being by Bindura in 1977, when he denoted that learning was enhanced through observation, social interaction, formal and informal engagement (Ayanda & Laraba, 2019:16). This was found to be the best method to SMEs that like interacting and approach on-the-job learning as an incentive to formal learning initiatives (Kariv, 2019:112). It is imperative for SMEs to cultivate a culture where employees teach each other at work as this is helpful in case there is no one in the house to take employees through formal training activities (Langwell & Heaton, 2016:76). Thus, other employees in need of training activities will simply engage with the ones with the expertise and will learn from them. As a result of the presence of social media, employee learning has become easy as one can go on these platforms to ask any area of interest (Oncioiu, 2019:49). Social media has brought in a number of benefits to SMEs if used properly, and some of them provide the latest information needed by the organisation at any given time (Booyens, 2013:45) as well as offer an allowance to interact with the relevant expertise when the need arises for the sake of widening the organisation's skills base (Baleseng, 2015:36).

#### **(vi) Mobile learning**

Mobile learning permits SME human resources to gain access to real-time information regarding any area of concern. As a result of the continuous upgrade in technology, mobile devices can now offer "texting, internet connection, diary, email, word processing packages, bar code readers, e-signature and many more" (Ocloo & Tsetse, 2013:23). This development has helped companies hold people in a certain geographical place to work or have training services but it can be done through tele-contact (OECD, 2017:39).

### **3.4 Conclusion**

This chapter attempted to establish a literature review concerning the research theories and internal management systems. The various theories outlined are inclusive of Resource-Based View Theory (RBV), Institutions Theory, Resource Dependency Theory, Human Capital Theory, Demand Side Theory of Infrastructure, Theory of Constraints (TOC), Collaboration Theory, and Systems Theory. They were discussed based on their origins, the studies in which they were used as well as their importance to the study. Those identified were found to be the basis towards the sustainable growth of the SME sector if applied consistently and effectively. The theories were based on the constructs of the study, that is, resource mobilisation, employee training and infrastructural development. The study has identified resource mobilisation, infrastructure development and employee training as the framework's constructs that have an influence on the SMEs' innovativeness to enhance their sustainability. Sub-categories of the constructs were also identified, outlining their importance towards the establishment, survival and growth of SMEs.

Literature relating to the various theories and used as a basis of this study was reviewed, together with the various constructs that anchored this study. In doing so, the theories were meant to show how they are applicable in today's corporate situation as well as the study at hand. The theories were discussed, describing their backgrounds, application in line with the research framework, and relevance to the study. In addition, the review of related literature was extended towards the discussion and addressed to the constructs, as shown in the framework of the research. They include resources mobilisation, infrastructure development as well as employee training, which are the various elements in the internal management system. The next chapter presents the literature pertaining to SME innovativeness and sustainability.

## CHAPTER 4

### LITERATURE REVIEW OF INNOVATION AND SUSTAINABILITY

#### 4.1 Introduction

This chapter outlines the literature on innovation and sustainability in small and medium enterprises. The focus at this juncture is on these aspects, which, because they form the basis of the study, need to be understood by consulting the literature. Thus, it incorporates the various literature sources from the international and locally oriented viewpoints that tackle innovation and sustainability. The chapter begins by giving brief definitions of the main terms anchoring the study, that is, innovation and sustainability. Thereafter, it discusses the aspects pertaining to the small and medium enterprises innovativeness together with the requirements for them to be innovative. The succeeding section focuses on the sustainability of small and medium enterprises, followed by a discussion of the literature pertaining to the dimensions of sustainability. In closing, it gives an outline on the conceptual framework and hypothesis testing. The chapter's main purpose is to undertake an in-depth review of related literature on the innovation and sustainability of small and medium enterprises.

#### 4.2 Definition of Terms

This section provides an outline of the various scientific reviews regarding the different definitions of the main words anchoring the study to provide a concise understanding to information users. It defines innovation and sustainability from the SMEs' point of view since they are the main aspects in this chapter.

##### 4.2.1 Innovation

According to Burch (2018:3), innovation is defined from a manufacturing sector point of view as the way in which a product is designed, manufactured, its technical aspects, how it is managed as well as the various commercial activities involved during the marketing process of a product or service, or an improvement thereof, or the initial use of a process or equipment for commercial purposes, or an improvement. In addition, Batista and Francisco (2019:32) view that innovation is not limited to the new product or service conceptualisation or an improvement of an existing product or service, but it also extends to the successful marketing of the product or service. This

point of view is based on ensuring that the organisation achieves its set goals that are to curb a large market share, thereby converting it into profit for organisational sustainable operations, existence, growth, and development (Anser, Zhang & Kanwal, 2019:5).

#### **4.2.2 Sustainability**

Sustainability from an SMEs' perspective implies an action in which the readily available resource usage is aimed at meeting current organisational needs (Ashley, 2018:16) at the same time being cognisant and considerate of the environment in which it operates (Hosoda, 2019:34), not only for the sake of fulfilling the needs of the present moment but for future generational needs (Rothwell, 2018:40). This means that the operations of an organisation exist in perpetuity while existing in the same environment as before with the same resources used by earlier organisations to achieve the set goals (Xiaoying, 2018:28). The Brundtland Commission is known to be the most user of the term sustainability, which has been defined according to the commission as the most popular definition in the world of business operations (Gladwin, Kennelly & Krause, 2018:5); and thus, it means a type of development meant to meet present-day needs while not compromising the ability of the future generations to meet their demands (Aguado & Holl, 2019:23). There are two aspects that are emphasised by the definition in that there is the "concept of needs, in particular the essential needs of the world's poor, to which overriding priority should be given and the idea of limitations imposed by the state of technology and the social organisation on the environment's ability to meet the present and the future needs" (Arruda, De Jesus Lameira, Quelhas, & Pereira, 2019:57; Anser *et al.*, 2019:7). In this regard, the organisation's continued existence to an unforeseeable duration, together with its various stakeholders, is important in the world of business (Bansal, 2019:15).

#### **4.3 Small and Medium Enterprises Innovativeness**

The small and medium enterprise sector, on a global perspective, is an important and powerful aspect towards individual state economies as it enhances social development (Ashley, 2018:46), while playing a pivotal role in technologically oriented innovation, employee creation and development, market expansion and efficiency through competition, as well as the maintenance and enhancement of national social stability and justice (Chinomona & Hove, 2015:24). However, there are various aspects that lead to the SMEs' inability to make these benefit the economy (Choi,



Kim & Yang, 2019:13), which include the impact of various international environments that they are exposed to, such as the financial market, an ecological system together with its flaws (Cuihong, 2018:27), thereby exposing SMEs to globally and locally oriented challenges that hinder their sustainable development, mostly with regard to the area of sustainable innovation (Burch, 2018:4).

Long term growth and development of the SME sector requires its ability to sustain an economic boom; remain firm in the competitive world by having continued revenue growth; to expand the market, and maintain good public relations. (Aguado & Holl, 2019:22) It also requires being considerate of the effective and efficient usage of the natural resources and the ability to protect the immediate environment together with the maintenance of the ecological balance. (Cuihong, 2018:27; Dey & Petridis, 2019:70). However, during the innovation process, which entails a move from poor utilisation of resources to an efficient and effective usage (Hahn, 2019:22), under such conditions, if an enterprise decides to stick to the old ways of operations as well as improper organisational regulations while being ignorant to embark on innovation, would expose the entity to a situation whereby it would not be able to enjoy the benefits associated with being competitive (Guokun, 2019:21). This shows that innovation is the key to organisational success and is the fundamental path towards an entity's competitiveness (Honglie, 2019:4), and resembles a great source of power towards the sustainable development of SMEs (Madzik, Budaj & Chocholáková, 2018:46).

#### **4.3.1 Requirements for SMEs innovation**

The main aim of the government is to ensure that there is a sustainable SME sector establishment, growth, maintenance, and development (Terziovski, 2017:72) for the sake of ensuring that the benefits associated with such are enjoyed by the state (Mafini & Muposhi, 2017:15). In doing so, there are various requirements that have to be met to ensure and promote innovation in the SMEs sector, which is a competitive strategy towards their continued existence (Oluwajoba, 2019:62).

##### **4.3.1.1 Management**

The fundamental basis towards establishing sustainable organisational development is anchored on the enterprise management's innovation (Xiaoying, 2018:34). Some steps have to be followed to ensure that organisational innovation is enhanced through management. First and foremost, in accordance with the stipulations of the strategic planning for SMEs, the management should widen

their thoughts and be able to listen to the views of various strategic partners' suggestions (Vilke, 2019:10) for the purposes of focusing on making the organisation competitive as a primary goal (Aguado & Holl, 2019:23). Thus, the management would be there to formulate strategies that are focused on a real enterprise situation and stream of times (Anser *et al.*, 2019:8).

Secondly, there is a need to create a new management style to run away from the flaws associated with the usage of an old management system, leading to professional entity management through corporate governance alignment (Ashley, 2018:18). It is also imperative to establish a firm system that is rooted in all operational levels such as finance, human resources, operations, logistics, production, and marketing (Bansal, 2019:15) to fully utilise the merits that come with engaging with individuals and thus be flexible; to improve the internal and external business environments, and devise the clearly established business goals to guide the SME towards sustainable development with a big businesses mentality in place (Batista & Francisco, 2019:32).

Ultimately, there is a need to establish an SME based on a learning-style concept (Burch, 2018:5) because a learning culture within an organisation inevitably leads to its survival and development (Aguado & Holl, 2019:26). It is paramount to build a diversified and open learning culture to ensure responsibility; prioritise promotion and organisational innovation; be able to study and enhance product development; improve quality; innovate areas of science and technology, as well as have a large market share for establishing a communication platform that permits the sharing of learning-oriented resources (Burch, 2018:7); ensure employee growth and that of the entrepreneur; and improve the core an SME's competitiveness (Chinomona & Pretorius, 2011:175).

#### **4.3.1.2 Culture**

Corporate culture strategic planning is meant to create an exceptional enterprise value by building a refined culture, resulting in a famous brand creation with a unique character and power (Chinomona & Hove, 2015:35). To embrace SME innovation through culture, various aspects have to be considered and put into action. Thus, to start with, there is a need to build a corporate culture that is people-centric through the action of the manager (Choi *et al.*, 2019:13) as well as advance the core values of the organisation while ensuring to incorporate the unique characteristics of the SME (Chun & Shin, 2018:38). It is very important to place focus on the values of employees by honouring and taking great cognisance of them, followed by building the SME's core values to

establish a synergistic relationship between the enterprise and its staff members. The establishment of a strong team working culture is thus embraced through the enhancement of fair competition and employee improvement on its quality (Honglie, 2019:7). This would create a situation where there is a highly motivated workforce, where workers feel that their work environment is their second home for the purposes of establishing the SME's core competence in the overall market (Ashley, 2018:56).

Secondly, there is a need to revise and change the family-oriented type of enterprise management by devising and putting into action the empirical management system; to embrace an enterprise governance mechanism, and operating the business and managing human resources by taking cognisance of the modern business operating systems. Thus, it is necessary to revamp all responsibilities and authority, honouring legal rights and employee welfare to ensure that the organisation operates within a healthy business situation (Aguado & Holl, 2019:27; Burch, 2018:2; Chun & Shin, 2018:40). Thirdly, the need to establish strategic goals together with the relevant mechanisms towards the formulation of corporate culture and ensure that human resources have the ability to accept the organisation's values. These would be enhanced by using the traditional educational avenues and organisational culture to embrace a healthy corporate culture (Gladwin *et al.*, 2018:7; Hosoda, 2019:35; Mafini & Muposhi, 2017:23).

Finally, it is imperative to ensure that there is the maintenance of a good corporate image, a brand establishment based on corporate culture, which includes the idea of organisational credibility and integrity, as well as the credit system to improve the SME's ability to influence both the internal and external organisational environment (Lalangui, Garcia & Rio-Rama, 2019:42). By so doing, this could result in the emotional empowerment of employees and thus make them have pride and a sense of belonging. This would unify their minds and regulate their way of operation, resulting in unionisation, orderly functioning, and a positive organisational attitude that would enhance the SME longevity and competitiveness (Dey & Petridis, 2019:69; Hosoda, 2019:38; Tinoco, 2018:5).

#### **4.3.1.3 Technology**

It is now clear that in both developed and developing economies science and technology is the main driving force towards production (Bansal, 2019:15). For SMEs to experience sustainable development and have a continued competitive edge, they should embrace technology during

production to increase product profitability (Xiaoying, 2018:34). Thus, SMEs can incorporate technology in their product innovation strategy in three distinct ways. First, there is a need for the SME to be able to learn how to imitate innovation, which is the fundamental stage (Zeng, Xie & Tam, 2017:85). This implies that the entity has to incorporate and edify the advantages associated with such and avoid the design faults and functionality for product perfection purposes, hence improving on product popularity in the market (Wennekers & Thurik, 2017:29).

This is followed by the usage of cooperative innovation, where the entity has to cooperate with its rivals on a higher level, the research faculty, and the supply company that undertakes production and research (Arruda *et al.*, 2019:62). This is done to figure out how rivals allocate their innovative resources and their marketing, which could be used to improve the entity's technology level and power in the market. Lastly, SMEs need independent, oriented innovation to enhance their innovation abilities for organisational competitiveness (Martinez-Conesa, Soto-Acosta & Palacios-Manzano, 2018:96). It is possible through technology usage for SMEs to start building their own research and innovation after securing considerable capital that would permit them to establish raw material supply networks and product sales (El Baz, Laguir, Marais, & Staglianò, 2019:40). This would allow SMEs to determine their own advantages within the competitive market, thereby making themselves unbeatable.

#### **4.3.1.4 Financing**

For there to be sustainable business financing to enhance SMEs' innovativeness, it has to be initiated, starting from the internal functionality to the external organisation, and then to the financing environment (Hahn, 2019:22). The process must first be done to improve the "management quality, financial management level, enterprise information transparency as well as the relation that exists between the bank and the entity" (Panizzolo, 2018:34). This would reinforce organisational quality; have a systematic flow in the production process; ensure transparency in its financial related information; build financial institutions; contain a risk management system for SMEs, and fasten financial institution's innovation; as well as offer fundamental security towards SME development (Rothwell, 2018:42).

Secondly, government support for the SMEs is a requirement towards ensuring their sustainable existence through innovation. This can be achieved when there is formulation and implementation

of supportive laws and regulations that enhance their development, protect them through the law, and form a conducive marketing environment characterised by fair competition (Sachs, 2019:19). The government is also involved in support of SMEs through its creation of preferential tax policies as well as the provision of a financial allowance (Bansal, 2019:23). Ultimately, it is important to have a functional credit rating system that is meant to regulate credit insurance. It is also equally important to devise a robust commercial credit industry to make credit easily accessible to the SMEs (Tinoco, 2018:34).

### **4.3.2 Types of innovation**

Innovation comes in different categories that all need to be incorporated into organisations to ensure that they become successful in their endeavours (Wennekers & Thurik, 2017:35). There are various types of innovation, and it is to the discretion of the entity to see which combination has to be implemented first. The various types of innovation including but not limited to, are: process, product or service, strategy, incremental, radical, modular, and architectural.

#### **4.3.2.1 Process innovation**

Process innovation aims to re-engineer the overall business processes and calls for the drastic improvement on aspects pertaining to the internal organisational operations and enhancing its capacities and capabilities (Burch, 2018:5). Thus, under process innovation, all operations would be revamped to ensure that they align with the latest business operations for the organisation to remain competitive in the market (Arruda *et al.*, 2019:67). It follows a continuous upgrading process as the business environment is kept on advancing due to their exposure to the global market. The organisations that have used process innovation were found to be quite understandable and effective in applying it, thereby stressing the importance of operations that are prone to the threat of closure, as there was a notable improvement and rise in productivity (Tinoco, 2018:46).

#### **4.3.2.2 Product or service innovation**

The product, or service innovation, is regarded as another distinctive source of organisational innovation that has to be taken into consideration when an organisation is looking forward to its success within the market (Batista & Francisco, 2019:33). This innovation is supposed to be incremental so that the organisation aligns with the latest customers' tastes and preferences and

can lure the attention of potential and readily available customers. It places its main emphasis on the improvement of the features as well as the functionality of the product and services already in existence as opposed to futuristic planned products (Moore & Manring, 2019:25). From a different viewpoint, radical product or service innovation is mainly concerned with creating a totally new product or service to give clients and customers a completely new taste (Guokun, 2019:21). Therefore, it was contented that radical product or service innovation was the best when an organisation is looking forward to having a sustainable market share (Hosoda, 2019:42).

#### **4.3.2.3 Strategy innovation**

Strategy innovation entails changing the overall business approach from the traditional family business operations' concept to an emerging new approach that is meant to ensure that the organisation aligns with the latest business operational activities (Terziovski, 2017:79). It calls for a strategy re-invention in order to be able to be competitive in the ever-changing business world. Strategy innovation calls for a business concept innovation that is the core ingredient when an organisation is looking forward to success (Burch, 2018:8), which can be done through a continuous re-invention of the fundamental business strategy (Aguado & Holl, 2019:23). For this to be successfully undertaken within a business environment, it needs to engage in a total re-invention of products and services instead of bringing in the developing the available products and services (Vilke, 2019:13). There is also a need to redefine the business positioning in the marketplace as well as redrawing industrial borders (Hahn, 2019:23).

#### **4.3.2.4 Incremental innovation**

Incremental innovation is that type of innovation that is meant to refine and improve the product and service at hand, or the existing designs in the processes in use within an organisation, which is done through an overall improvement in the system components (Faller & Zu-Knyphausen, 2019:23). Incremental innovation calls for the gradual edification on the knowledge and materials used in the majority of the products and services that need to be enhanced. However, the enhancement of the refinement process takes place in the available components as opposed to a complete change in the system (Ashley, 2018:45). Incremental innovation was found to be the most common form of innovation within the corporate sector due to limitations associated with financial resources as well as time factors (Burch, 2018:3).

#### **4.3.2.5 Radical innovation**

Radical innovation involves the combination of new components and new designs bundled with a totally new architecture that brings the components together in a completely new way (Sachs, 2019:23). However, radical innovation is not common in the business sector, and as such, it is quite rare in the application. Radical innovation is meant to completely change the way the organisation operates and enhances competitiveness in the current and future markets (Xiaoying, 2018:27).

#### **4.3.2.6 Modular innovation**

Modular innovation implies the involvement of new components bundled with a new design meant to give a differentiated product in the market (Bansal, 2019:19). Thus, there is the involvement of new components or totally different ones. The usage of new or different mechanisms in the organisational processes is the main feature of modular innovation, which works well when the mechanisms used in the process incorporates the latest technology (Moore & Manring, 2019:26). The incorporation of new technology in the components would cause a shift in some of the aspects pertaining to how the system operates, although this does not call for a change in the system, or its configuration, or architecture (Dey & Petridis, 2019:72).

#### **4.3.2.7 Architectural innovation**

Architectural innovation entails that the various components within the system and the design concepts are to remain the way they are, but what simply changes is the configuration as a result of the incorporation of new linkages (Hosoda, 2019:39). Through architectural innovation, it is imperative that manufacturers must be in a position to take the chance to refine and make improvements in some of the system components (Ashley, 2018:28). However, the changes in the system are minor, thereby leaving the system components as they were in the original situation, so ensuring that there are new designs and configurations.

### **4.3.3 Innovation enabling factors**

This section presents the factors that lead or permit innovation to take place within the SME sector. These can also be called antecedents of innovation within SMEs. The factors are taken from the

views of different authors that studied different business environments with regard to SMEs' innovation.

#### **4.3.3.1 Market development**

Innovation promotion within SMEs is very important for their sustainable establishment, existence, growth, and development, but the question always remains on how best this can be achieved within SMEs (Aguado & Holl, 2019:45). In doing so, this raises another question that seeks to understand why SMEs must be innovative. The answer is that SMEs embark on innovation for profit-related reasons, which is the main pushing force in their operations (Burch, 2018:14). In doing so, they simultaneously contribute positively to the surrounding communities in various ways, which include, but not limited to: welfare development; employment creation, thereby reducing the crime rate; help preserve community morals; infrastructural development; raising the standard of living of the community members, and many more (Anser *et al.*, 2019:23). On the same note, the level of entrepreneurial engagement in innovation and specialisation is dependent on the size and the level of functionality of the market (Arruda *et al.*, 2019:32). This reveals how important the market is in the development and growth of SMEs, and evident from the poor nations' point of view that they fail this sector because of a lack in developed and functional markets (Ashley, 2018:26).

In developing countries, their markets are characterised by being small, split and quite imperfect as a result of improper and inadequate infrastructure, low household incomes, improper policies on SMEs and general development, and institutional-related constraints (Bansal, 2019:38). The nations have a deficiency in the fundamental requirements towards establishing a functional market due to political unrest, lack of clarity and predictability in market developments, lack of peace, and other institutional pre-requisites for a functional market (Aguado & Holl, 2019:19). The absence of big, united and certainty in the markets always places a burden on entrepreneurial innovativeness. Thus, because of barriers within the system concerning trade, which might be naturally caused by a lack of infrastructure or human-oriented barriers, it is always a challenge for innovation to occur (Burch, 2018:15). As time passes, many economies were introduced to new ideas and technology due to globalisation, making international trade the engine of growth. In a situation where the markets have restrictions that emerge from improper regulations instigated by



monopoly or destructive governments, there is always no incentive to entrepreneurial-driven innovation (Chinomona & Hove, 2015:35). This might also be in the form of the presence of inappropriate property rights as well as contract enforcement, which makes any form of innovation to be risky (Bansal, 2019:60) and leads to low levels of innovation by entrepreneurs within the local market or to the rest of the world (Ashley, 2018:25).

#### **4.3.3.2 Capacity building**

Market broadening may be seen as the pre-condition towards SMEs' innovation, but it is evident that market broadening alone is insufficient (Aguado & Holl, 2019:28). This is because innovation is a skill and knowledge-oriented that is found in human beings (Bansal, 2019:69). As a result of the presence of the positive externalities that come with the investment in knowledge, technology and human capital, it is clear that public policy has an equal core role that is complementary towards promoting entrepreneurial innovation (Burch, 2018:29). Thus, innovation is driven by entrepreneurs who are skilled, well educated, knowledgeable, and experienced and the presence of professional human resources in the form of employees (Choi *et al.*, 2019:52). This makes educational policies and capacity building fundamental public policies towards innovation in the SMEs sector (Chun & Shin, 2018:22). These two complementary policies must be considered with due diligence and the derivation of the appropriate incentives towards ensuring innovation within SMEs. This is why the activities of donors and development organisations are a failure towards the encouragement of innovation.

Trade liberalisation was put in place to ensure that developing countries develop with the assumption that knowledge flows without friction to the developing countries while being ignorant of the need for absorptive capacity (Burch, 2018:43). Donors are also involved in the development of private-sector programmes that are meant to ensure that market development is stimulated (Vilke, 2019:66). On the same note, if then there is too much competition because of the actions of the donors, it poses little chance for the entrepreneurs to have capital growth through their innovative activities (Burch, 2018:32), mainly in a situation where financial markets are not developed, which causes the entrepreneur to reinvest profits in ensuring organisational sustenance and growth (Cuihong, 2018:48). A lack of government intervention as well as proper policy formulation and

implementation might result in underinvestment of knowledge and innovation (Dey & Petridis, 2019:14).

#### **4.3.3.3 National systems of innovation**

In the case of developing nations, there is a close and positive relationship between the benefits of innovation and the characteristics of the innovation system where the entrepreneurs operate within (El Baz *et al.*, 2019:78). Thus, the level of system innovation allows developing nations to tap into the global technology with ease and success as a result of the possibility of knowledge to easily circulate within the nation, which causes it to upgrade its level of technology tolerance swiftly (Guokun, 2019:54). A weak innovation system results in fewer efforts by individual entrepreneurs to contribute towards accelerated local economic development for the purposes of catching up with the level in developed economies (Burch, 2018:16).

Entrepreneurial innovation and economic development come about as a result of the inclination and synchronisation of “market development, systems innovation and government science” (Aguado & Holl, 2019:38). A system that permits innovation results in rapid economic growth and as well as technological advancements, facilitated by the economic level of liberalisation, which has the capacity to create broad market opportunities that have available financial resources has the ingredients for innovation as well as the development of entrepreneurial activities with attention put on venture capital; and the level of private-public partnership instigated by the government, establishment of private organisations as well as initiatives that are there to complement government-related activities towards innovation, as well as broadening the skilled labour base which is a core towards high-tech product and service innovation (Ashley, 2018:27; Batista & Francisco, 2019:34; Chun & Shin, 2018:62).

#### **4.3.3.4 Institutional development**

During the process of creating an innovation system within developing countries that is conducive to ensuring the support for entrepreneurial innovation, it is sometimes good to embark on a complete existing institution overhaul for the sake of removing innovation-related stumbling blocks (Hahn, 2019:20). Sometimes where there is an adverse environment that places a burden on SMEs innovation characterised by intense regulation, exorbitant business establishment and operation costs, poor application of property rights, ill-functioning capital markets as well as

uncompetitive markets as in the case of India, it is hard to find entrepreneurs succeeding in innovation (Ashley, 2018:72). However, in the same scenario, with regard to the Indian software entrepreneurs, for instance, they managed to manoeuvre through a harsh operating environment by creating business models that suited the environment by taking advantage of the large cheap and skilled workforce (Guokun, 2019:27). As a result, the harsh working conditions provided a stepping-stone towards the creation of creativity within the SME sector. Thus, the business sector took the lead in India towards institutional development surrounding the software industry, which brought into relief the burdens in the industry's growth (Hosoda, 2019:45). It necessitated the introduction of capital and labour related reforms, easy access to financial resources, an improvement in the protection of rights, and contract enforcement (Hahn, 2019:56).

#### **4.3.3.5 Talents**

On the verge of intense competition that emanates from globalisation and free trade bilateral agreements amongst states, SMEs' existence and development have been hindered by a lack of effective human resources, which is why they are unable to compete with well-established and large organisations, locally and internationally (Chinomona & Hove, 2015:53). This calls for the SMEs to broaden their approach regarding their way of business operations to survive and grow in the intense business environment brought by competition (Cuihong, 2018:34). Thus, SMEs need to widen their human resources management approach, attract talent and align with the current business environment, as well as come up with the rightful mechanisms for identifying and selecting talent (Ashley, 2018:48). To achieve this, the entity has to have a people-oriented mechanism by finding the right value of talent. The current business trend is now based on the competition of science and technology that is based on talent identification and competition (Bansal, 2019:20).

SMEs are therefore advised to take human resources as their first priority for the sake of empirically developing a human resources management strategy that is people-oriented and to find effective employment and selection mechanisms for the sake of having the right expertise with the ability to bring positive organisational change (Moore & Manring, 2019:25). This gives the organisation the ability to attract excellent potential employees from surrounding societies, thereby allowing the entity to incorporate new blood and ideas into the organisation. Therefore, SMEs are

obliged to embark on continuous employee training for the sake of enhancing their personnel and organisational competitiveness (Tornatzky & Klein, 2017:32). This calls for the management to start developing the entity and the employees by having immediate and long-term training programmes in place. It would be in line with market changes, scientific developments, intelligence and capability development of employees, and the promotion of quality employees within its organisation (Vilke, 2019:12).

Ultimately, there is a need to find a flexible and effective policy to reward employees' efforts accordingly, for the sake of unleashing their potential and creativity (Honglie, 2019:15). Various ways can be used, including encouragement, awards, promotion opportunities in line with the current organisational situation, and the personnel at hand to enhance their enthusiasm (Ashley, 2018:45).

#### **4.3.4 Outcomes of innovation**

Innovation has become a core topic; and researchers have paid considerable attention to innovativeness from individual perspectives, business, national, regional, and international levels in various disciplines. Much attention on innovativeness has emerged as a result of the uncertainties associated with current living and working space. From a business perspective, there have been short cycles in value chain activities, thereby making businesses more creative and efficient than before in attending to the ever-changing and increasing demands (Rothwell, 2018:34). However, the general understanding of the factors underlying innovation are still underdeveloped, despite the research that was and is still undertaken in various disciplines such as management, psychology, economics, and marketing. The following is an outline of the various outcomes associated with SMEs innovation:

##### **4.3.4.1 Better performance**

Despite the fact that most of the factors that enhance firm innovativeness are still under-developed, the bottom line is that those who managed to embrace innovation in their operations perform much better than those who are reluctant to embark on it (Wennekers & Thurik, 2017:38). It is categorical that innovation brings difference, which makes those firms able to stand the impact of competition, as shown by their level of progress from one time to the other (Moore & Manring, 2019:75). There is a link between organisational innovativeness, competitiveness and effectiveness, with the key

controlling factor being innovativeness (Mafini & Omoruyi, 2013:90). Innovativeness implies the organisation's ability to be unique in "systems, processes, products and services, behavioural change, environmental adaptability, and learning and knowledge development" (Honglie, 2019:56). Policy makers have come to an agreement that enterprises that are engaged in innovative business activities, despite their size, are prone to performing better than their counterparts that are reluctant to embark on innovation, with specific reference to the industrial performance of Japan (Hosoda, 2019:48).

#### **4.3.4.2 Economic growth**

Innovation is not only beneficial to entrepreneurs or their enterprises only but goes beyond the national and international level (Guokun, 2019:30). Firms are supposed to grow through their various competitive strategies, with innovation being the most important (Panizzolo, 2018:56) as it leads to the introduction of new systems and products and services that are in line with the changes in customer tastes and preferences (Honglie, 2019:28). As a result, it increases consumption, thereby causing a multiplier effect on the growth of revenue to the organisation as well as an increase in the tax payment to the government that increases the collection of the national revenue (Madzik *et al.*, 2018:35). The same funds would be used for public goods and developing the public infrastructure. Innovation results in an improvement in productivity, especially to industrial innovation as well as efficiency in the provision of goods and services through competition (Vilke, 2019:62). In a situation where the nation is going through governance hardships, the impact spills over to the business sector, which affects the performance of the economy, but those businesses able to embrace the pressure and turn it into business opportunities that prosper despite hardships are the ones capable to develop firm innovation (Wennekers & Thurik, 2017:82).

#### **4.3.4.3 Increased confidence in business**

In the case of Japan, it was in an immense liquidity trap for more than a decade with the lowest recorded interest rates that resulted in the loss of asset values as well as a decline in prices, thereby resulting in an entrenched deflation, yet SMEs remained the source of economic revival (Sachs, 2019:74). Thus, insolvency levels of the Japanese financial sector that was characterised by a bunch of non-performing loans that further led to the strategic paralysis of the politicians resulted

in a considerable loss in confidence of individuals, households and companies (Hosoda, 2019:23). At a later stage, there was an increase in the levels of hope on the nation's economic landscape, which resulted from the continued activities of the SME sector through its innovative strategies that were still in place (Cuihong, 2018:56). Even if there was a drastic and ironic change in the Japanese economy, the SME sector proved to solve the problems through innovative capabilities put into action at the right time, thereby displaying their strengths, as most of the big companies had ceased operating (Moore & Manring, 2019:45). "SMEs have underpinned the development of the Japanese economy, and it is SMEs that have the leading contribution to make economic regeneration" (Sachs, 2019:29).

#### **4.3.4.4 Improvement in industrial activity**

SMEs are seen as the lifeblood of any given economy in any given modern economic situation (Gladwin *et al.*, 2018:35). Much research has mainly focused on the innovativeness of large companies while ignoring the contributions made by the SME sector, which is more significant than those of large corporations (Burch, 2018:56). SMEs have made a considerable impact on the wellness of various economies globally with reference to China, Japan, India and many more. In relation to Japan, 99.5% of the business sector is denominated by SMEs and constitute 72% of the total private sector employment (Moore & Manring, 2019:32). This is necessitated by rapid technological innovation and market diversification, thereby making considerable shifts in industrial activity through transformation from primary output to manufacturing high-value products and a shift from goods production to the offering of services (Hosoda, 2019:13).

Despite the level of development of any given economy, there is a need to develop high value-added goods and services. This is where SMEs come to the fore due to their flexibility, ability to take advantage of that need, be competitive while driving the economy, and incorporate structural changes that enhance sustainability (Rothwell, 2018:47). The industrial development must be anchored on the SME sector that has sufficient technological and managerial know-how (Batista & Francisco, 2019:24). This can be enhanced through the provision of supportive infrastructure to SMEs. Active industrial activity necessitates industrial infrastructural development, which is a prerequisite towards attracting and expanding foreign direct investment, stimulating the formation

of regional networks, thereby leading to regional and domestic economic growth (Moore & Manring, 2019:36).

#### **4.4 SME Sustainability**

According to Bansal (2019:15), most SMEs across the globe are managed and fall under the ownership of their owners, which shows that the success or failure of such SMEs depends on the owner's approach. Thus, aspects of decision-making, functionality, growth and sustainability are influenced by the owner (Burch, 2018:6). Those SME owners with skills and experience on business management have high growth potential rather than those without skills and experience (Mafini & Omoruyi, 2013:152). This implies that SME sustainability lies in the hands of the owner, and as such, she/he must be highly equipped to influence the success of the venture. According to Terziovski (2017:72), the firm's capacity of innovativeness is directly linked to the educational qualifications of the SME owner, and this determines the firm's ability, capacity, and tolerance to innovation. The education of the owner stimulates business growth and survival due to the eagerness of the owner to see success and put the acquired skills into practical terms (Aguado & Holl, 2019:28).

Hosoda (2019:42) defines sustainability in business as an enabling environment that permits the business to survive and grow economically and socially. It is further defined as the firm's ability to maintain cash flows and maintain profitability in the long run (Moore & Manring, 2019:27). Business sustainability is driven by several factors, ranging from skilled labour, government regulations to management practices (Oluwajoba, 2019:70). These aspects also work in line with easy access to finance, managing risks effectively, and industrial or sectorial competition. Sustainable factors are not born from outside the organisation, but they are internally driven, such as human resources management, innovation, financial management, risk management, managing the business environment, and investment decisions (Mafini & Omoruyi, 2013:152). The externally oriented sustainable factors include community, suppliers and customers.

In research done previously, it was found that there is no significant relationship between the operational function of the SMEs and other functions within entities in general (Rothwell, 2018:39). Thus, the relationship is quite poor, resulting in the failure of SMEs in various business activities. It is evident that the various human resources that are directly involved in the operations

management of SMEs do not have the expertise to undertake such operations, as shown by their deficiency in the specific organisational, managerial skills. Furthermore, they are found to be illiterate in the areas of technology that has become the primary source of competitive business strength when appropriately assimilated into a business that becomes organisational culture (Anser *et al.*, 2019:13; Chinomona & Hove, 2015:67). It is indeed evident that the continued survival of SMEs and their growth is vulnerable to operational function hindrances. Thus, those entrepreneurs with strong technical background are prone to having poor management skills with regard to general organisational management and the entity's operations, while successful entrepreneurs have time to invest adequately in their operations and management capabilities for their own empowerment (Batista & Francisco, 2019:36). In other studies that concern SME sustainable development, it was noted that even if entrepreneurs have the right skills and business management expertise within its operations, if there is no training in the operation field, it would limit the organisation's overall success (Honglie, 2019:5). For an SME to be successful, there is a need for a maximum period of five years so as to effectively and adequately develop the necessary business management skills towards the creation of a sustainable business (Oluwajoba, 2019:72).

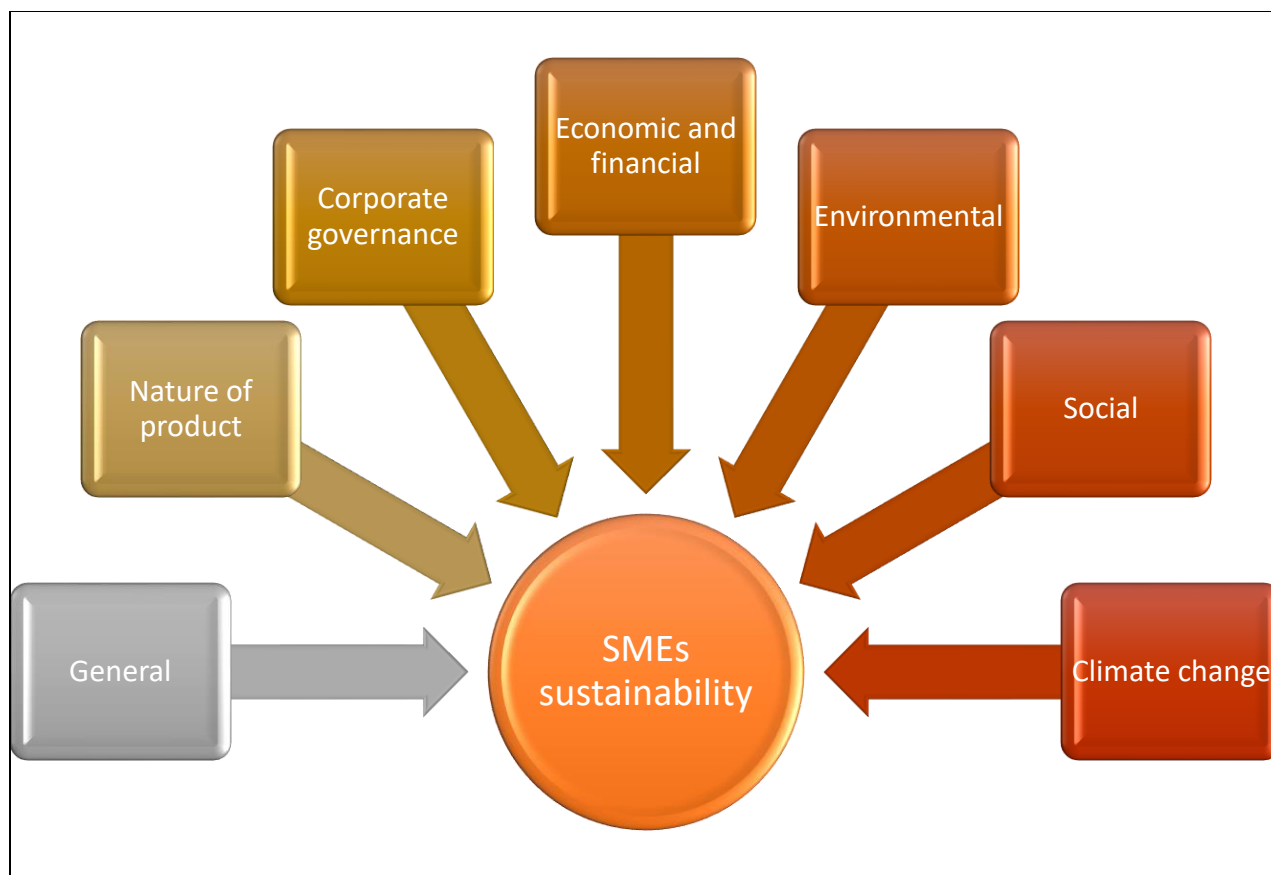
#### **4.5 Dimensions of Sustainability**

This section presents the categories of sustainability that ranges from general, the nature of the product, corporate governance, economic and financial, environmental, social, to climate. If all these dimensions are fulfilled in the operations of an organisation, then success is inevitable, together with its sustainable existence. It is clear that organisations need to be sustainable, that is, able to survive and succeed using the current readily available resources for their business activities while considerate of the future generations and use the same resources and operate successfully in the same environment like today. Further, there is a need to ensure maintenance and growth in the current organisational economic, social and environmental capital base while being considerate of the fact that they need to be actively ensuring political domain sustenance (Aguado & Holl, 2019:25; Ashley, 2018:45; Burch, 2018:7). With specific reference to the developing countries, they need to ensure that there is considerable growth and incorporation of technology in their business operations towards embracing sustainability (Wennekers & Thurik, 2017:29) as technology currently brings in many benefits that are transferred to future generations (Panizzolo,



2018:35). This forms one of the ways in which developing countries can be successful and able to reach developed economic levels such as shown in the Chinese economy.

To witness the technological development within developing and underdeveloped economies, there is a need to have an improved skilled labour base, having capable and committed human resources across the economy that is eager to see their economies growing beyond imagination (Batista & Francisco, 2019:38). Economies such as Malaysia, as part of developing economies that also fall in the middle earning income groups, have a deficiency in available skilled human resources that have the right attributes to push the nation to a developed status in world economic categories (Bansal, 2019:23). A skilled workforce is needed to promote innovation and ensure growth in both the science and technology-oriented industries (Aguado & Holl, 2019:28). Sustainability as a distinct approach is being used at a fast pace by organisations across the globe in conducting businesses; however, it is evident that even if businesses are aware of the benefits, the majority are very slow to adopt the concept (Moore & Manring, 2019:32). Of all the various sustainability dimensions, the readily available literature emphasises the environmental dimension due to its impact on environmental and eco-system resource constraints. The linkages amongst all of the dimensions are integral to the sustainability concept.



**Figure 4.1: Dimensions of Sustainability**

**Source:** Initiated by researcher

Figure 4.1 gives an illustration of the different dimensions of sustainability that can be directly linked to the research framework. The outline is meant to show how SME sustainability can be enhanced. Thus, all the dimensions have to be observed and applied in a way to ensure a sustainable existence of the organisations in question, which gives a complete business package towards ensuring organisational success.

#### **4.5.1 General sustainability**

The general dimension of sustainability encompasses all forms of organisational sustainability in ensuring that the operations of an entity meet its current needs and leave an allowance for future businesses to enjoy the same benefits as before (Hahn, 2019:23). The current business environment is exposed to globalisation, which has been the main reason why there has been such a failure in the SME sector (Bansal, 2019:17). Thus, the international standards have exposed the internal business sector to a harsh environment as it is a new concept in totality to most developing

countries' business activities (Guokun, 2019:25). Doing so has permitted those organisations that can absorb and comply with the business operations' global standards to succeed within the industry. Despite the benefits brought in by the presence of an active SME sector within different economies, there has been a notable failure of such a sector (Aguado & Holl, 2019:28). Even if the government had tried to put in policies and mechanisms in favour of such a sector, the challenge remains the same. The public and private sector efforts towards the SME sector are meant to ensure the creation of sustainable SMEs that have the ability to channel the benefits towards the success of an economy (Rothwell, 2018:42). The failure rate is attributed to the employment of human resources that do not have the relevant skills for the job they would have been employed for as a skilled workforce capable of bringing needed innovation and organisational growth (Vilke, 2019:13).

However, SMEs are found to place more emphasis on organisational innovation and global orientation than on minimising costs, product differentiation, and niche marketing as competitive strategies (Tinoco, 2018:45). This is also directly linked to their failure to invest in research and development as well as on the internet, thereby showing how ineffective the sector is. An investment in research and development can only be effective if there is skilled labour available and the expertise to channel their knowledge towards organisational innovation to create a sustainable SME sector (Honglie, 2019:12). The presence of a robust competitive environment has made human resources a vital tool towards the survival and existence of SMEs, thus providing them with the capacity to provide a hedge towards their profitability and sustainability (Hahn, 2019:21). The presence of a skilled workforce is proven to be the solution towards reviving a dying company together with providing organisational sustainability for healthy operations and continued existence (Moore & Manring, 2019:32). The general sustainability of organisations in the current business environment that is crippled by globalisation has been of great importance. In global terms, SMEs are working towards attaining competitive advantage and sustainable operations through various mechanisms that are meant to develop skilled human resources, together with the establishment of linkages that would help them attain a competitive edge (Hosoda, 2019:38).

Sustainability is a new aspect in most organisations, businesses and industries, referring to the developing economies especially, because of a failure to understand the benefits associated with

the enhancement of sustainable operations (Xiaoying, 2018:34). Even if, in some instances, there is a good track record of knowledge of the sustainable practices with plans in place to implement them, the problem, however, still lies with adopting and embracing such a concept. It was noted that the presence of challenges hinders the incorporation of sustainable business practices within SMEs, including their “lack of financing, low productivity, lack of managerial capabilities, low skilled workforce, inability to adopt technology, lack of information on potential markets and customers and global competition” (Burch, 2018:5). General sustainability encompasses aspects such as a skilled workforce, technology and industrial development capabilities, availability of specialised skills within an organisation, information exchange through organisational linkages, capacity building as well as provision of adequate finances to enhance organisational competitiveness, and government-oriented linkages (Wennekers & Thurik, 2017:36).

#### **4.5.2 The nature of the product**

The nature of the product as a dimension of sustainability places its focus on innovation that is aligned to both the product and its projects that provide a positive impact on sustainability (Gladwin *et al.*, 2018:15). Product innovations entail the qualitatively oriented aspect of a product that arises from the derivation of new products where there is a difference that makes the product look slightly different from the original (Bansal, 2019:19). Product innovation encompasses the product service bundles as opposed to a distinction made on product and services, which makes it difficult to define innovation. The nature of product dimension looks at the product innovation projects that have new ideas and concepts that are different from the usual product, which is characterised by its newness in the market (Tinoco, 2018:67). Sustainability potential can be assessed through the product innovation projects in idealistic terms, since it takes places within the process of innovation, thereby giving an allowance to assess the effects that are already in the development and production phases within product innovation projects (Aguado & Holl, 2019:24).

Under the concept of the constant capital rule, it can be argued that product sustainability entails innovations that result in an increase in the capital stock of an organisation (Chinomona & Pretorius, 2011:178). Sustainable product innovation refers to “better-managed innovations where more target criteria are integrated and made mutually compatible” (Cuihong, 2018:26). From a market-based perspective, it is evident that competitive advantage can be earned through

sustainable operations. Sustainability brings in a number of advantages that include cost reduction due to an increase in efficiency, risk reduction, reliable planning process, legitimacy assurance, new customer attraction from different market segments, and new product development and business segments (Chinomona & Hove, 2015:45). Product sustainability cannot only be seen as a source of competitive advantage but as a core business concept. It can be outlined that there is a positive correlation between the success of business and sustainability (Mafini & Muposhi, 2017:39).

#### **4.5.3 Corporate governance**

Corporate governance as a sustainability dimension refers to a system that is there to act as a guideline towards the management and control of businesses (Vilke, 2019:12). Thus, the corporate governance structure stipulates how the rights and duties are allocated amongst the organisational stakeholders within an organisation and outlines the rules, regulations and procedures in detail towards the decision-making process pertaining to business matters (Panizzolo, 2018:38). The business structure under corporate governance outlines the company goals together with the avenues for achieving them and monitoring their performance. The benefits of corporate governance are not limited to corporate prosperity but also extends to organisational responsibility (Batista & Francisco, 2019:40). As a result of globalisation, where the markets have developed beyond local borders, an increase in the investors' activities is called for, which need high standards in organisational responsibility, conduct and business performance (Hosoda, 2019:42).

There has been an increase in the appetite of investors to seek other business opportunities outside local markets (Oluwajoba, 2019:72). Those companies that try to source externally oriented resources through the international capital markets have actually realised that these resources are only available to those organisations that conform to the international corporate governance standards as well as the published information criterion (Aguado & Holl, 2019:24). This move has led to the improvement in the standards related to corporate governance from an international perspective and has thus brought the business world to convergence. Corporate management is under the direct responsibility of the statutory bodies, which are there to devise strategic goals of the organisation, monitor the realisation of the set goals, supervise management, as well as disseminate information of the steward's duties to the shareholders (Madzik *et al.*, 2018:51).

Corporate governance is also seen as a “process through which companies respond to the rights and duties of stakeholders” (Ashley, 2018:26). Corporate governance is a tool used to achieve economic efficiency and growth, thereby increasing investor trust on an overall basis. Thus, it is a way to resolve problems that arise from the linkages established amongst corporate management boards, administrative consultants, shareholders of the organisation, and other stakeholders involved in business processes (Burch, 2018:7). In relation to the SME sector, there is a disclosure of environmental and social information within annual reports as part of the corporate governance compliance (Gladwin *et al.*, 2018:13).

#### **4.5.4 Economic and financial sustainability**

The economic and financial dimension under organisational sustainability implies the capability of an organisation to ensure value creation as well as enhance the financial wellness of an organisation (Wennekers & Thurik, 2017:32). This has come into the spotlight as a result of the recurrent globally-oriented economic and financial crisis, which has led governments and various organisations in different economies to focus their attention on the economic and financial dimension as a result of the fear of the continuously accelerating unemployment rate as well as high exposure to the financial risks in different ongoing programmes while not forgetting the various projects executed by governments and the business sectors (Sachs, 2019:19).

There are generally two aspects that are aligned to the economic and financial sustainability dimension, which include “cost reductions and economic interests of the external stakeholders such as improvement in economic wellbeing and the cost of living” (Ashley, 2018:37). It is proven that those organisations engaged in information sharing with various stakeholders with regard to their operational wellness of disclosing profits have the ability to achieve long-term business success as well as improve their economic and financial performance that is a pre-requisite ingredient towards the attaining organisational economic and financial sustainability (Bansal, 2019:24).

Economic viability is the core towards sustainable organisational development and is one that is responsible for the generation of profits which extend to generate employment, thereby contributing positively towards the general social welfare of surrounding communities (Lalangui *et al.*, 2019:50). Economic sustainability has two prevalent concerns, which are micro and macro

issues. They are concerned with an organisation's economic performance that includes the financial aspects of sales, turnover, cash flow, profit, and shareholder value (Bansal, 2019:16). Macroeconomic issues entail linkage between the corporate organisational performance with local and global considerations, which show the contributions made by the organisation on employment and GDP.

#### **4.5.5 Environmental**

Another dimension of sustainability is environmental, which has become more pronounced than before since the publication of the Brundtland Commission Report that emphasises the environmental responsibility of nations, organisations and businesses (Batista & Francisco, 2019:35). Environmental responsibility from a firm's perspective implies an organisation that is cognisance of its activities in ensuring that business operations result in a minimal impact on the existing natural environment or devise strategies to prevent such damage for the greater benefit of ecology (Burch, 2018:9). Environmental responsibility from a different perspective refers to the practice put in place by organisations to ensure that it responds to environmentally oriented issues in a manner that is centrally focused on social affairs (Bansal, 2019:32). In addition, to be environmentally responsible entails an effort by various stakeholders to ensure the protection and preservation of the general environment in which they are operating after considering inhabitants in the future (Dey & Petridis, 2019:69).

A business that is environmentally responsible is usually engaged in acts of doing business while being cognisant of the steps in reducing, recycling and the re-using of the waste material; and engaged in the act of minimising transport-related impact to the environment by operating near its source of raw materials as well as looking for locally available alternatives, effective usage in water and energy resources. Thus, using clean power and ploughing back the profits and benefits obtained in the surrounding communities is a way of effectively contributing to the various environmental groups. Furthermore, applying environmental policy (ISO standards) is a move to reduce various categories of pollution (Ashley, 2018:36; Guokun, 2019:28; Moore & Manring, 2019:29). However, various key elements lead to the inability of organisations to compel with environmentally sustainable practices, which include “attitude, awareness, characteristics, and support” (Bansal, 2019:26).

Economies such as South Africa, which is under the developing countries category, are still in its early stages to adopt environmentally sustainable practices (Tinoco, 2018:45). Various issues have been reported in trying to adopt such practices where the government focuses on actions on ensuring and promoting environmentally sustainable practices in the business sector and industries. It is, however, noted that family-owned SMEs are excessively reluctant in adopting new business management practices that are environmentally sustainable compared with modern SMEs (Ashley, 2018:56). Also, those SMEs in the export industries are more conscious of environmental sustainability as they are forced to comply with internationally sustainable oriented standards when doing business compared to those confined to operating within the local market (Wennekers & Thurik, 2017:34).

#### **4.5.6 Social**

A social dimension as part of the sustainability concept is concerned with the societal issues as opposed to the profitability aspect of an organisation. It is anchored on ensuring the wellbeing of the people surrounding the organisation as well as the communities affected by the organisation, which is translated to a non-economic form of wealth (Moore & Manring, 2019:28). The social dimension has had considerable attention, which makes it popular due to people's expectations for organisations to do something visible towards ensuring the wellness of the communities within which they operate. Thus, the organisation affects the community, and the community affects the organisation, thereby creating a cyclical relationship where each part equally wants the other part (Burch, 2018:5). It was found that organisations that are conscious of the social dimension of sustainability stand a better chance of earning a competitive advantage than their counterparts that are reluctant to incorporate such in their operations (Cuihong, 2018:29). Thus, those organisations that have the ability to engage themselves in community wellness-oriented programmes which come in different dimensions, such as addressing socially related problems, ensuring a collaboration during the execution of social and cultural activities, and being committed to ensuring that the community welfare is improved, will have the ability to curb a greater market share (Sachs, 2019:32).

However, the social dimension of sustainability has not had much attention from various authorities, which has led to it being insufficiently defined in the literature. Various researchers



have established a relationship between social sustainability and the legislative, human health and safety-related aspects instead of culture and ethics (Chun & Shin, 2018:39). From another perspective, it was also denoted that social sustainability is based on social dimensions that include social capital, cohesion and exclusion (Aguado & Holl, 2019:23). The Brundtland report outlines that social sustainability is affiliated to social development that comprises seven basic developmental issues such as the accessibility to goods and services that are pivotal to human life and higher-order related needs. Thus, meeting people's basic needs is a prerequisite to addressing the environmental needs and many other secondary related needs (Hosoda, 2019:45).

#### **4.5.7 Climate change**

Climate change as a dimension of sustainability entails the ability of organisations to undertake business that poses a positive impact on climatic conditions, as shown by the recent greenhouse effect on carbon emissions (Anser *et al.*, 2019:9). Thus, it is the responsibility of organisations to take care of their environment for the benefit of future generations, which can be done by honouring planetary boundaries to preserve human life at all costs. The 2030 agenda expressly seeks member countries to “protect the planet from degradation, including through sustainable consumption and production, sustainably managing its natural resources and taking urgent action on climate change, so that it can support the needs of the present and the future generations” (Rothwell, 2018:55). The climate change dimension seeks to enhance ecological sustainability by making it a core policy objective as opposed to it being a marginal one. It also entails that the resources on the planet are limited, and such a constraint cannot be resolved by technology (Xiaoying, 2018:34).

In a situation where public policy is implicitly or explicitly focused on economic activity while being ignorant of the natural, human and social capital, it is highly susceptible to negative externalities emerging, including pollution, emissions, waste and social upheaval (Anser *et al.*, 2019:12). This calls for the creation of a policy that resolves the problem from the root cause to support the sustainable development initiative. To achieve this, there is a need for “reformed institutional frameworks, strengthened capabilities, high-level political commitment, and an inclusive and integrated vision of a sustainable future” (Batista & Francisco, 2019:39). The planet’s carrying capacity is quite limited, as shown by the planetary related changes that have

resulted in, for instance, global warming, climatic changes as well as biodiversity loss. It is clear that the accounting procedures in use by a nation between production and consumption places a considerable impact on the quantity of greenhouse gas emissions and the inequality levels associated with a given nation (Bansal, 2019:22). This implies aspects such as the climate policy measures that result from imposing reductions of national emission targets. Carbon leakage has been evolving, which entails the outsourcing of carbon-intensive production to a carbon haven nation. There has been a considerable reduction in territorial emissions in countries such as the United Kingdom and Germany, undertaken at the expense of the developing countries, where they go and increase territorial emissions (Panizzolo, 2018:34).

#### **4.6 Outcomes of Sustainability**

SMEs constitute a large proportion in terms of employment capability in many economies; they also have a considerable share in the nation's GDP that promotes economic growth. This section presents the outcomes of establishing a sustainable SME sector from various points of views.

##### **4.6.1 Employment and wealth creation**

SMEs that are well managed are a great employment opportunity source and create wealth (Cuihong, 2018:23). As citizens gain from the various activities of SMEs through employment and income. The government also benefits from their activities by tax payment by both owners and the businesses, which is a source of revenue for the government to pursue its national duties and obligations (Mafini & Muposhi, 2017:57). At the same time, it enhances social stability as the government will have enough coffers to cater to surrounding societies' needs. Not all SMEs fall within the formal sector together with the micro-enterprises; some are crowded into the informal sector where they employ the unofficial labour market, which is most prevalent in developing economies (Hosoda, 2019:72). There is a direct relationship between the nation's aggregate income levels and the total number of SMEs. For a nation to have a healthy SME sector, there must be a low level of the informal market, which is commonly known as black-market activity (Guokun, 2019:26). This calls for a strong management strategy of the SME sector to reduce the number of informal businesses in a move to enhance economic development.

#### **4.6.2 Industrialisation**

SMEs are a fundamental element towards the industrialisation of any given economy and is necessitated by their sustainable development and existence (Bansal, 2019:28). This is because some SMEs have well-established business knowledge on resources and the market forces trends, and as a result, they are major suppliers of inputs to large organisations (Burch, 2018:62). This entails that these SMEs promote activity in the business sector. They also act as consumers of most of the products from large firms, thereby promoting business, and also provide various types of products such as “food, clothing, recreation, entertainment, healthcare, education and many more” (Faller & Zu-Knyphausen, 2019:46). These SMEs are also found to be active in economic development through the act of industrial disposal as well as actively producing both primary and intermediate products while being involved in supplying large firms with material (Gladwin *et al.*, 2018:34). They are also involved in the provision of specialised services in the form of personalised services, thus constituting an important source of domestic supply as well as offering a service to large businesses (Honglie, 2019:55).

#### **4.6.3 Newmarket detection**

The presence of a sustainable SME sector helps detect and access tools to the untapped market that is usually out of the reach of large organisations because of their size (Burch, 2018:28). Thus, it is an incentive to large businesses to widen their traditional market through working closely with the SMEs that have access to such types of market (Lalangui *et al.*, 2019:45). This also helps large businesses to widen their profit base too through the SMEs’ various activities. On the same note, SMEs represent a substantial source of innovation in the economy, which is an important aspect in ensuring organisational competitiveness and sustainable operations (Panizzolo, 2018:12). Innovation is an incentive to widen the market by aligning with the rapid changes in consumer tastes and preferences by offering them the best product. SMEs tend to focus on a specialised market segment through niche marketing with exclusive products and services that separate their creativity from the rest of the market (Hosoda, 2019:78). As a result, it leads to the close interaction between SMEs and large companies in doing business through their ability of “re-engineering of products and services to meet market demands, exploring innovative distribution or sale techniques, or developing new and untapped markets” (Tornatzky & Klein, 2017:27).

#### **4.6.4 Economic growth and diversification**

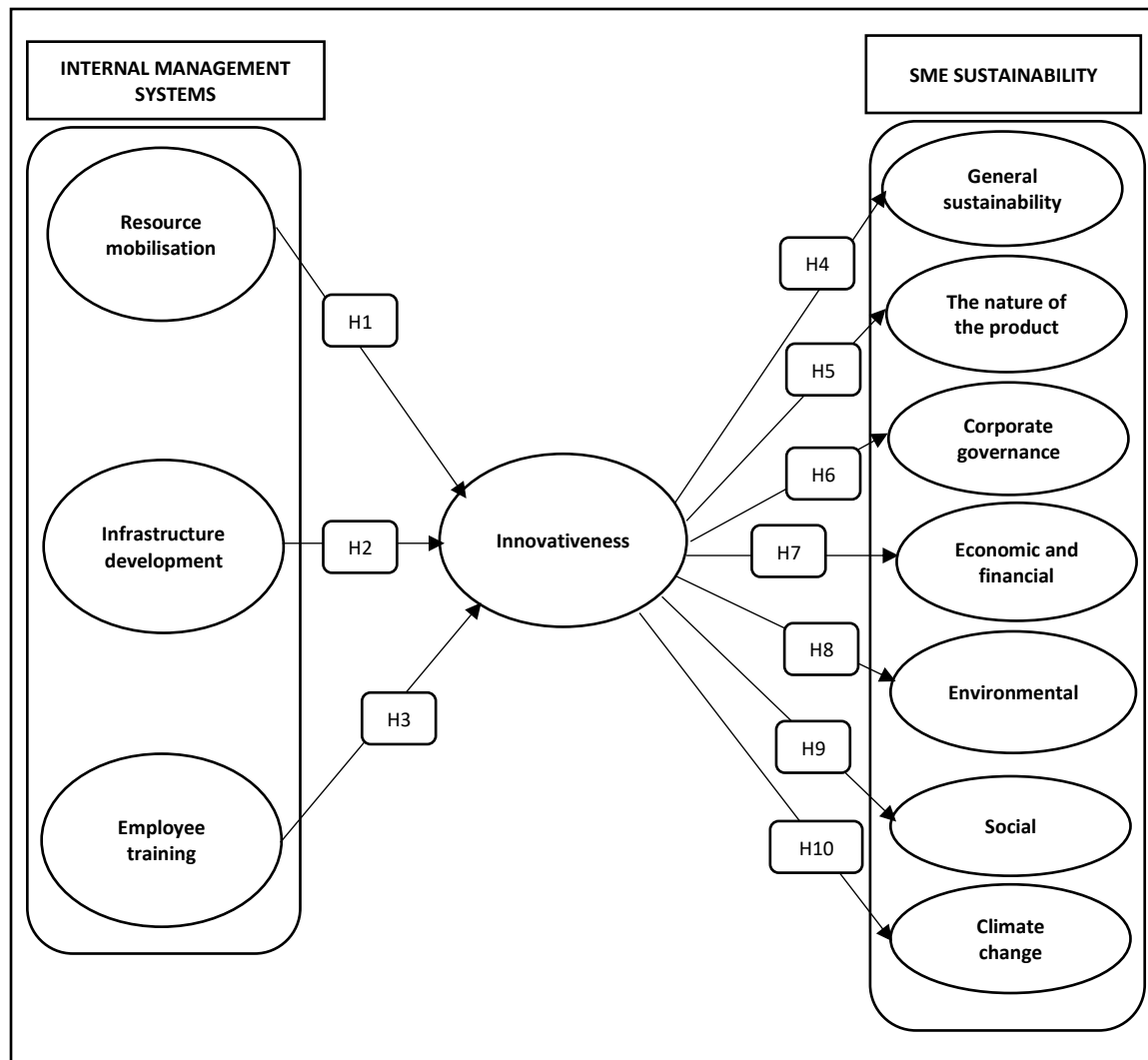
The SMEs sector's main characteristic is its low establishment costs that have a large pool of human resources, thereby making them labour intensive (Hahn, 2019:38). As such, they reduce unemployment, thereby helping push the government's agenda of reducing the unemployment rate by creating employment. By embarking on an employment initiative, SMEs help in making use of the readily available human resources towards productive use, thereby aiding the total national productivity, as shown in the compilation of the GDP (Guokun, 2019:42). SMEs allow many participants to take part in their operations, thereby widening industrial development. Additionally, the SMEs, as a result of their manageable size and simple structure, are automatically associated with flexibility with regard to management styles, and this makes them respond urgently to any changes in the market in a move to adapt to volatile market needs more swiftly compared to large organisations (Hosoda, 2019:62). SMEs have proved to be the main drivers of the “private sector-led economic growth and diversification” in this era where the emphasis is placed on the private sector-driven economy (Rothwell, 2018:20).

### **4.7 Conceptual Framework and Hypotheses Development**

This section articulates the conceptual framework as well as the development of the study's hypotheses. It is more visual and interactive rather than informational because of the diagrams presented as well as establishing the relationship from the variables in the study.

#### **4.7.1 Conceptual framework**

The research framework to this study is outlined in Figure 4.2. It is based on the concepts that were outlined and discussed in Chapters Three and Four. The framework is meant to show the relationship that lies amongst the constructs, mediators, and the outcome of the study that is focused on the SMEs. Thus it illustrates the various aspects that contribute either directly or indirectly to the outcome of the study. The framework consists of resource mobilisation, employee training and infrastructure development as the constructs; innovation is the mediator and sustainability of SMEs is the outcome in its various dimensions. Therefore, ten hypotheses shall be examined under the conceptual framework.



**Figure 4.2: Conceptual Framework**

### 4.7.2 Hypothesis Development

This section outlines that hypothesis development based on the interaction that exists in the research framework as outlined in Figure 4.2.

#### 4.7.2.1 Resources mobilisation and innovativeness

The ability of an organisation to mobilise various forms of resources, which range from human, financial, physical, intellectual, to mention a few, is a prerequisite to an organisation's innovative capability (Xiaoying, 2018:19). SMEs are known for their ability to bundle various types of resources and then convert them into business and thus achieve organisational goals aligned to profitability, societal wellness, organisational growth, owner's wellness, and many more (Batista

& Francisco, 2019:36). Innovation is brought about by the act of human resources that have the right skills to be able to identify opportunities through the creation of products and processes that are unique and differentiated from their rivals.

However, for human resources to use their skills to attain organisational goals, there is a need to have adequate resources, which has been the problem within the SME sector (Tinoco, 2018:28). In addition, the sector is flooded with people without skills or with mismatching skills that are irrelevant to what SMEs are doing, thereby bring innovation to dearth (Burch, 2018:10). Skilled expertise is quite expensive, and because of a deficiency in financial resources within SMEs, they have used labour that is unskilled. Organisational ability to invest in research and development has been one of the factors that are vital for the success of SMEs (Guokun, 2019:25). This is because after robust research, they would need to figure out opportunities available within the market.

Competition is vital for SMEs' human resources to survive and exist, which cautions towards profitability and organisational sustainability (Mafini & Muposhi, 2017:36). Technology has overtaken the business world and require an investment in technological infrastructure as well as the involvement of a skilled and capable workforce towards cultivating organisational innovation and competitiveness (Oluwajoba, 2019:75). Adequate resource mobilisation and provision is a core aspect of ensuring innovation. The following hypotheses were made:

**H1: There is a significant positive relationship between resource mobilisation and innovativeness among SMEs in the South African manufacturing industry.**

#### **4.7.2.2 Infrastructure development and innovativeness**

Infrastructure development enhances the operations of an organisation that offers security to its products, permits effective communication through information technology infrastructure, and permits productivity by offering a conducive working environment to the employees (Terziovski, 2017:78). A conducive working environment is an avenue towards the promotion of innovative ideas to evolve within an organisation. An organisation's sustainability is ensured by its ability to invest in infrastructural development, which requires a considerable commitment to financial resources (Gladwin *et al.*, 2018:17). Unfortunately, as a result of a deficiency in available financial

resources, SMEs have been unable to develop infrastructure, which has hindered their ability to be innovative (Sachs, 2019:25).

A prevalent problem that has affected developing nations is linked to the failure by both private and public sectors to engage in the development of infrastructure (Honglie, 2019:28). There are no proper roads, which are a major ingredient to facilitate an effective supply chain activity within the business sector, which has led the SME sector to suffer (Guokun, 2019:34). As a result, the products do not reach the market at the right time, and if they are to do so, they are not in good condition, as is the case of perishable products. Many times, products do not reach the market, which has made SMEs to be viewed as inefficient, and as such, they are prone to suffer double loss in that they order the products at a cost and transport them at a cost, which is followed by the failure to reach the market as a result of poor roads (Chun & Shin, 2018:57). Despite the absence of an efficient or a well-developed road network, there is also a problem of well-built physical places where customers can interact with the supplier of products, namely, a physical marketplace (Ashley, 2018:89). The premises are the direct responsibility of the government in its role towards the development of infrastructure to the nation, but because of corruption and improper governance, this is not available. Thus, infrastructure development is a vital tool in the sustainable development of SMEs (Sachs, 2019:45).

Infrastructure development also extends to technology where there are supposed to be mechanisms in place to allow the accommodation of technological equipment such as computerised machinery, general computers used for production, wireless gadgets, and many more (Xiaoying, 2018:92). These are essential vehicles for innovation within the business sector, and in the case of the current business environment where the business world is moving towards the 4<sup>th</sup> industrial revolution, there is a need to embrace infrastructural development to cater for such (Vilke, 2019:63). The availability of the proper infrastructure gives momentum to the local industry to be competitive in global terms. This why there is a high failure rate within the SME sector, as they cannot sustain the competition emanating from the local and international side. Thus, for there to be innovation, SMEs need infrastructural development first, which leads to formulating of the following hypotheses:

**H2: There is a significant positive relationship between infrastructure development and innovativeness among SMEs in the South African manufacturing industry.**

#### **4.7.2.3 Employee training and innovativeness**

The imparting of skills can only take place through employee training and development, which can be aligned with current business operations (Dey & Petridis, 2019:72). Employee training is part of organisational investment in its human resources. Through training, employees will be empowered to take initiatives in the operations of the business, which has been a strategy used by companies to unlock the inert potential that might be lying idle in their employees (Rothwell, 2018:45). Trained employees have the ability to make innovative contributions to the organisation, thus making it sustainable. Trained employees are a source of competitive advantage to the organisation and the global market by competing towards attracting skilled expertise (Hosoda, 2019:42).

It is of great importance for SMEs to know the benefits associated with employee innovativeness in the market (Hosoda, 2019:23). Thus, the main contributor towards cultivating an employee's ability to be innovative is aligned to training. Training has formed one of the major aspects of human resource development (HRD) which is the main element emphasised in the strategic management of an organisation (Mafini & Omoruyi, 2013:63). Employees are viewed as one of the main capital elements within an organisation as they are used to convert readily available resources into meaningful business by applying their skills, which is further turned into profitability as one of the organisation's objectives. This further supports the triple bottom line approach in strategic management, which entails that the profit objective is further dropped towards improving the shareholders' wealth in a business environment (Sachs, 2019:35). Training in other terms means the learning and development process that is meant to create a complete and total change at individual employee level that can influence employees' innovative capabilities and on the job performance to ensure that they complete tasks at hand, as well as technically oriented knowhow and skills (Tornatzky & Klein, 2017:42).

Training within SMEs has since been significant in value creation, especially in the case of the current business environment that has an exponential growth in innovation (Aguado & Holl, 2019:31). There are various benefits associated with employee training, which include but is not



limited to process efficiency improvement, improved capability to embrace new technology, skills and operational methods, improved employee job satisfaction levels, and positive change in the behaviour of employees (Honglie, 2019:39). The main aspect is employee innovativeness that results in attaining high profit, which results in the sustainability of SMEs within the market, that is, an improvement in the economy (Moore & Manring, 2019:71). Employee training is a vital element in the operations of an organisation because employees can turn the technology into profitable business operations. This has called for the formulation of the following hypothesis:

**H3: There is a significant positive relationship between employee training and innovativeness among SMEs in the South African manufacturing industry.**

#### **4.7.2.4 Innovativeness and general sustainability**

In an investigation undertaken on the relationship between innovation and the general organisational sustainability on the various business success factors, it was found that those firms that are innovative oriented had the capacity to develop the talents in their human resources, continuously invest in organisational knowledge and adopt new technology (Arruda *et al.*, 2019:62), thus ensuring an organisation's general sustainability in all areas of the business.

A study on the development of innovation through networking reveals that the various networks formed during the firm's early stages are vital towards the development of its capacity to have sustainable innovation (Dey & Petridis, 2019:72). The presence of different types of managerial functions is vital in managing innovation within SMEs. In addition, successful innovation comes as a result of various factors that include "corporate culture, the presence of a department of innovation or formal process for innovation, number of employees which shows the size of the organisation as more employees are linked to high innovation levels, continuous product review" (Rothwell, 2018:42).

As part of general sustainability, the ability of any organisation to be innovative hinges on its capacity and capability of its human resource development level (Ashley, 2018:13). Thus, a sustained employee training has an important role to play in the development of a firm's performance. Organisational creativity is brought about by the ability of an organisation to invest in its employees by offering training services, which extends to employee innovativeness, thus

shaping an organisation towards a knowledge-centric culture that brings in a unique character in the organisation, which is vital as a way to differentiate organisations from the rest of the market participants (Burch, 2018:45). Various strategies that are there for the purposes of stimulating organisational creativity and innovative behaviour are inclusive of training (Hosoda, 2019:19). Organisational success is directly linked to its ability to be exceptional in the market, which is brought about through creativity emanating from the readily available employees (Tinoco, 2018:40).

General sustainability comes about through the interaction between the organisation and various universities for innovation purposes. An organisation's improvement is a result of the usage of better technology in operations, identification and access to new markets, as well as meeting the requirements of customers (Oluwajoba, 2019:77). Government-supported SMEs have the ability to be more innovative in relation to those that do not receive any form of support from the government, thereby enhancing the organisation's general sustainability (Tinoco, 2018:28). Therefore, general sustainability is a result of the innovativeness of SMEs. This has led to the formulation of the following hypothesis:

**H4: There is a significant positive relationship between innovativeness and general sustainability factors among SMEs in the South African manufacturing industry.**

#### **4.7.2.5 Innovativeness and the nature of the product**

The development of a new product is an act of innovation that is aimed at attracting a new market segment from the traditional market (Ashley, 2018:28). Differentiation on the nature of a product is paramount to the life of an organisation as a result of the exposure to the global market where various firms present their products (Honglie, 2019:13). The nature of product differentiation comes from the ability of the organisation to be innovative in the production processes. A product that is user- and environmentally friendly enhances organisational sustainability as it stands a high chance of survival on the global market since it concerns the global product that sets standards (Burch, 2018:8).

The nature of the product on offer by any given organisation depends on the organisation's level and capability towards innovation (Anser *et al.*, 2019:28). The market is attracted to a unique

product that is of high quality while serving the purpose intended by the users. The level of creativity is usually shown by the type of product offered by the organisation and is inseparable from the success of the organisation (Chinomona & Pretorius, 2011:67). This implies that there is a direct relationship between organisational creativity and its success. The survival of SMEs is based on the ability of their employees to innovate and present such results in sustainable operations (Guokun, 2019:34). Innovation is not a once-off activity but is continuous so that the organisation overtakes its rivals in terms of market share. Employees' innovative level depends on their knowledge, which calls for SMEs to extensively and appropriately invest in employee training activities (Hosoda, 2019:13).

The interdependency that exists between organisational sustainability and innovativeness is based on the product level. The nature of the product is the core in the sustainability of an organisation through its differentiation, thereby making it possible to access new markets (Moore & Manring, 2019:33). This calls for the organisation to make continuous efforts to improve the production processes towards sustainable innovations. This calls to the formulation of the following hypothesis:

**H5: There is a significant positive relationship between innovativeness and the nature of the product among SMEs in the South African manufacturing industry.**

#### **4.7.2.6 Innovativeness and corporate governance**

Corporate governance implies the way in which the organisation is ruled and controlled, which is enhanced through the formulation of rules and regulation that control the way an organisation operates from inside and outside (Hosoda, 2019:38). Such principles of governance have been established to create a conducive environment to permit innovation to take place. The innovation that takes place must be within the regulations of the particular organisation, which complies with the social, economic, political and environmental aspects.

Ethical organisational existence, growth and development are of great importance to any given organisation as it will spare the organisation from unnecessary costs associated with non-compliance (Hahn, 2019:56). The way an organisation is governed must be in line with the requirements of that particular industry, and when it invests in its employees for the sake of

enhancing innovation, the organisation will grow in solidarity with organisational ethics (Honglie, 2019:23). Ethical business operations result in a sustainable organisational existence, thus making the shareholders' or owners' value increase for an unforeseeable period in the future. Most organisations are aware of governance aspects, but the problem is on following them, resulting in the businesses' failure (Madzik *et al.*, 2018:78). By ensuring that the organisation follows fair, competitive practices, for example, by staying away from collusion, it will save itself a considerable amount of money in terms of fines as well as preservation of the organisation's goodwill (Gladwin *et al.*, 2018:58). An involvement of fair business practices in offering products that are authentic and not harmful to consumers is a major tool towards an organisation's success and sustainable operations (Oluwajoba, 2019:12).

The link between the board and the other wings of the organisation from within and outside must not suppress organisational innovation but rather promotes it towards ensuring organisational sustainability (Batista & Francisco, 2019:32). The business structure under corporate governance gives an outline of company goals and avenues on how to achieve the stated goals and monitoring performance. The benefits of corporate governance are not limited to corporate prosperity but also extend to organisational responsibility (Terziovski, 2017:79). This has called for the proposition of the following hypothesis:

**H6: There is a significant positive relationship between innovativeness and corporate governance among SMEs in the South African manufacturing industry.**

#### **4.7.2.7 Innovativeness and economic and financial sustainability**

In an investigation on the role of innovation on SMEs' wellness, it was found that innovation plays a pivotal role in the sector's financial sustainability (Choi *et al.*, 2019:13). SMEs' sustainable existence can be enhanced through innovation on customer needs. The ability of an organisation to identify the niche market and its distinct customer needs is the fundamental source for the organisation's innovation (Bansal, 2019:23). Innovation has resulted in a considerable increase in organisational profitability through earning a higher competitive edge in the market. Innovation also leads to creating new contacts within the business world and cooperation with other influential businesses and parties during the innovation process (Gladwin *et al.*, 2018:13).

Economic and financial sustainability is inevitable through innovation within the business world. Innovation with full financial support, resulting in organisational sustainability as financial resources, is used to acquire relevant materials that enhance organisational innovation (Hosoda, 2019:27). For example, an organisation's ability to reward its human resources is fairly is prone to having a highly motivated workforce and results in their increased performance and willingness to go out of their way to ensure that the organisation becomes a success. Thus, they will be quite aware that if the business becomes successful, it implies their success as well, as they are the main assets of an organisation (Guokun, 2019:82).

Financial resources are the main tools towards the success of any given organisation, and for one to be successful, there is a need for extensive investment in business operations (Honglie, 2019:45). Enhancement of the effective and efficient operations of an organisation is based on the level of financial investment. However, for an organisation to experience financial and economic sustainability, it needs to devise and implement strategies that sustain it on top of the market (Burch, 2018:34). The strategies include innovation by investing in available human resources so as to enhance their capabilities which is a viable competitive earning strategy to the organisation (Rothwell, 2018:28). Innovative product offering attracts a new consumer base to the organisation, which has a multiplier effect on the organisation's profitability and owner's wealth (Sachs, 2019:60). However, two main aspects hindering innovation within SMEs are attributed to insufficient financial and time resources.

**H7: There is a significant positive relationship between innovativeness and economic and financial sustainability among SMEs in the South African manufacturing industry.**

#### **4.7.2.8 Innovativeness and environment sustainability**

For decades, the management of globally established companies have increased their attention on issues pertaining to environmentally sustainable development, and they have been drivers of such (Hahn, 2019:24). Through a good track record and incorporation of sustainable innovations, entrepreneurs and managers have substantially managed to shape sustainable markets and societies through their efforts in their operations. The usage of the internet and computers has changed the way the world operates more than ever before, which has become more fundamental to environmental wellness than politically oriented programme implementation (Vilke, 2019:13).

Sustainable innovativeness implies the ability to avail organisational and technical progressions that can sell successfully in the market without compromising the dimensions of sustainability (Aguado & Holl, 2019:26). The market system entails that sustainable development is a result of sustainable innovations that can be brought in by entrepreneurs who are considerate of environmental and social affairs, which can be there due to the superior processes and products that are environmentally friendly. Thus, it results in successful business operation because of the acceptance of the products in the marketplace.

In essence, market innovations, which are a core driver of sustainable development, do not take place by accident but are due to the management's creativity, who entwine it in their core business operations (Honglie, 2019:16). The main aim of management is to create “new products, services, techniques and organisational modes” that can drastically reduce the environmentally aligned impacts and improve the quality of life (Bansal, 2019:17). Sustainable entrepreneurial activities are defined as creative destruction. It entails the destruction of the traditional “production methods, products, market structures and consumption patterns” that are replaced with environmentally-friendly superior products and services (Hosoda, 2019:35).

Thus, the products and the production processes create a progressive environmentally sustainable market dynamic. Environmentally sustainable entrepreneurship resulting from innovation is called ‘ecopreneurship’ (Anser *et al.*, 2019:8). Thus, for there to be environmentally sustainable SMEs, there is a need to have innovation first. As a result, the following hypothesis was formulated in this study:

**H8: There is a significant positive relationship between innovativeness and environmental sustainability among SMEs in the South African manufacturing industry.**

#### **4.7.2.9 Innovativeness and social sustainability**

Sustainable entrepreneurship can be viewed from a different dimension as the level of innovativeness that leads to the supply of socially beneficial products, or product project processes, that is meant to conquer a large market share (Xiaoying, 2018:22). This aspect of availing products or services that are socially sustainable is not limited to SMEs but too large companies since sustainable entrepreneurship exists as well. Socially sustainable business operations create a

substantial successful market bundled with socially beneficial products (Hosoda, 2019:39). Social entrepreneurship was created to ensure that the innovations made during business operations result in social sustainability and societal change. A move to achieve societal goals through entrepreneurship and business approaches were found to result in organisational sustainability (Cuihong, 2018:18).

To achieve social sustainability through entrepreneurship, an organisation needs to devise strategies that lead to the creation of ideas that are totally new to the industry while at the same time not compromising the morals and beliefs of society (Burch, 2018:9). Thus, the organisation has to consider the society in which it operates, which can be done by employing locals, donating to charities, and developing the infrastructure. Sustainable entrepreneurship is seen as an innovative activity that is meant to create societal values by breaking a socially beneficial market. Thus, to have socially sustainable entrepreneurship, there must be innovation first (Ashley, 2018:27). This has led to the formulation of the following hypothesis:

**H9: There is a significant positive relationship between innovativeness and social sustainability among SMEs in the South African manufacturing industry.**

#### **4.7.2.10 Innovativeness and consideration of climate change**

Climate change as an environment category has had considerable attention in business because of the contribution of business activities towards its destruction (Aguado & Holl, 2019:26). Climatic conditions are becoming unsustainable due to careless business activities, and organisations are not complying with the global business operation standards. Climate change sustainability has become the key focus within the international community, and Western countries have devised policies on climate sustainability, such as the European and the UK policy on business operations regarding the environment (Batista & Francisco, 2019:36).

There have been debates on climate change within the public environmental debates and the government policy on how to ensure conducive business sustainability through innovation while being considerate of the climate (Burch, 2018:5). The industrialised communities have taken advantage of the developing nations, which they call carbon emission havens in the production of carbonated products that preserve their territorial climate (Dey & Petridis, 2019:72). There has

been a predominance of government policies on the impact caused by large firms on climate change sustainability while neglecting the contribution made by the SMEs, which is quite devastating.

Understanding the activities of SMEs' impact on the environment and then engaging on general terms as well as on climate change is very important as it is a move to create a sustainable business environment through the preservation of the ozone layer (Hosoda, 2019:40). Social and environmental policies on SMEs are not visible, making them ignorant of social and environmental aspects (Honglie, 2019:16). Coming up with innovative strategies on ways to undertake business operations in an eco-friendly way is the way to ensure sustainable climate change (Anser *et al.*, 2019:19). This has therefore led to the proposition of the following hypothesis:

**H10: There is a significant positive relationship between innovativeness and the consideration of climate change among SMEs in the South African manufacturing industry.**

#### **4.8 Conclusion**

An outline of the literature pertaining to small and medium enterprises innovation and sustainability was given in this chapter. The research focused on innovation and sustainability to establish an understanding of the innovation and sustainability aspects from a literature consultation perspective since it formed the basis of the study. The chapter also incorporated various literature sources from the international and locally oriented viewpoints that tackled innovation and sustainability aspects. It first defined the main terms anchoring the study: innovation and sustainability as an aid to understanding the chapter. Thereafter, it discussed the aspects pertaining to the small and medium enterprises innovativeness together with the requirements for them to be innovative. The succeeding sections focused on the sustainability of small and medium enterprises, followed by a discussion of the literature pertaining to the dimensions of sustainability. In closing, the chapter outlined the conceptual framework and hypothesis testing. The primary purpose of this chapter was to undertake an in-depth review of related literature on the innovation and sustainability of small and medium enterprises. The following chapter presents the research methodology and design.



## CHAPTER 5

### RESEARCH METHODOLOGY AND DESIGN

#### 5.1 Introduction

This chapter focuses on the research methodology and design to clearly outline the various procedures followed in collecting the data for the study. Thus, target data users would be able to assess if the results are authentic or not by following the process as articulated in this chapter. Various aspects that make up the research methodology are discussed, including research paradigm, research design, research approach, sampling design, the procedure for data collection, pilot study, data analysis, and the ethical considerations observed during the data collection process.

#### 5.2 Research Paradigms

According to Bell (2014:78), a paradigm is a “set of interrelated assumptions about the social world, which provides a philosophical and conceptual framework for the organised study of that world”. In research, a paradigm acts as a guideline to the researcher when undertaking philosophical assumptions about a problem under study, with specific reference to the research toll selection, sample selection, and the research method to be used (Bhattacharjee, 2012:64). A research paradigm forms the research methodology framework and is the one that determines the success or failure of any given study. The conceptualisation and classification of the research is aided by the presence of the research paradigm as researchers will have the ability to choose from the different paradigmatic schemas (Brown, 2019:93). There are basically four types of research paradigms, which include positivism, interpretivism, pragmatism, as well as realism (Burns & Burns, 2008:122).

##### 5.2.1 Positivism

Positivism as a subcategory of the research paradigm is a philosophical concept that encompasses aspects such as naturalism, behaviourism and empiricism (Creswell & Garrett, 2011:134). Positivism is scientifically oriented and implies testing of the results from the study in line with what is regarded as the control. Any form of technique that uses scientific methods in addressing

any given problem is embraced by positivism. Positivism views the dualism concept, which includes the mind and substance as separate aspects in research (Bell, 2014:202). Under positivism, the views of the researcher are independent of reality. It uses the outcomes from the reality as opposed to the researcher's views, and it is well known for its dominant characteristic feature of eliminating all non-empirical aspects (Greener & Martelli, 2019:93).

Researchers under the positivism philosophical view take into consideration the fact that the world is unchanging and structured, which makes them only measure the readily available data for the sake of processing the identified information, which is followed by a proposition of recommendations as solutions to the prevailing problem (Divya, 2017:167). This study is quantitatively oriented, which has resulted in the adoption of the positivism research paradigm. Thus, there are independent variables as outlined in the constructs, and the dependant variable is the outcome, that is, sustainability of SMEs in their various outlined dimensions. All these aspects are clearly outlined in the research framework.

### **5.2.2 Interpretivism**

Interpretivism, also known as constructivism, is viewed as an alternative to the positivist paradigm. When comparing it with the positivist paradigm, interpretivism assumes a relativist position that entails "multiple, apprehendable and equally valid realities" (Grover, 2019:202). Interpretivists are of the view that reality emanates from one's mind set up as opposed to it being an independent aspect from the researcher (Gupta & Gupta, 2011:84). Interpretivism follows a hermeneutical approach, which entails that meaning is not conspicuous and for it to be unveiled, there is a need for deep reflection. The unveiling is enabled through a direct interaction between the researcher and the participants to the situation under investigation (Kumar, 2008:111). Thus, constructivism has a dominant characteristic feature, which is the direct involvement of the researcher to the situation under study (Lapan, Quartaroli & Riemer, 2019:213). As a result, this enables the identification of the extensive meaning of the situation to be discovered as there is interaction with cases in the study. By so doing, it creates a mutual relationship between the researcher and the participants in the study, which results in the establishment of easy to follow findings (Lavrakas, 2008:102).

### **5.2.3 Pragmatism**

Pragmatism, also known as critical theory, is meant to unsettle and test the main aspects found in social science. According to Leavy (2017:78), “the critical ideological paradigm is one of liberation and transformation, one in which the researcher’s proactive values are essential to the task, purpose and methods of research”. The important aspect of critical theory as a dimension of a research paradigm is that it is based on the lived experience, which comes in through power relations found in the social and historical environments. The main aspect dominant in pragmatism is the dialectical interaction which results in the liberation from oppression to an egalitarian and democratic setup (Neuman, 2014:67). Pragmatism is facilitated by the direct involvement of the researcher and the participants through a dialogue. The dialogue has to be dialectical in nature for the sake of transforming and ensuring informed consciousness (Pandey & Pandey, 2019:142).

### **5.2.4 Realism**

Realism entails the external reality that comprises structures that are sub-sets of the system in operation and permits those objects to interact with each other (Rahman, 2019:189). Realism is meant to find out the common reality that is within an economic system that is characterised by its inter-dependable functionality. Realists are of the notion that outside the immediate normal living space, there is a real-world to be discovered (Saunders, Lewis & Thornhill, 2016:210). The real world is, however, found to be characterised by imperfection, and it is probabilistic in nature. In addition, the realists have come to accept the difference that lies between the real world and their views that is anticipatory in nature, and they try to come up with various views pertaining to the reality for the sake of figuring out the one that is relatively convenient (Sekaran & Bougie, 2016:112). The aspects to be identified by the researcher under realism are based on the fact that there is an exposure of the researcher to the aspects under study, which came in thorough experience.

## **5.3 Research Methodology and Design**

A research methodology is defined as a means to solve research problems (Kumar, 2008:5). Generally, it is regarded as the science of how research is conducted, outlining the steps followed by a researcher in understanding a research problem and the logic behind it. Thus, the research

methodology gives a guideline on how to carry out a research project. Wickramasinghe (2009:4) asserts that a research methodology consists of the following:

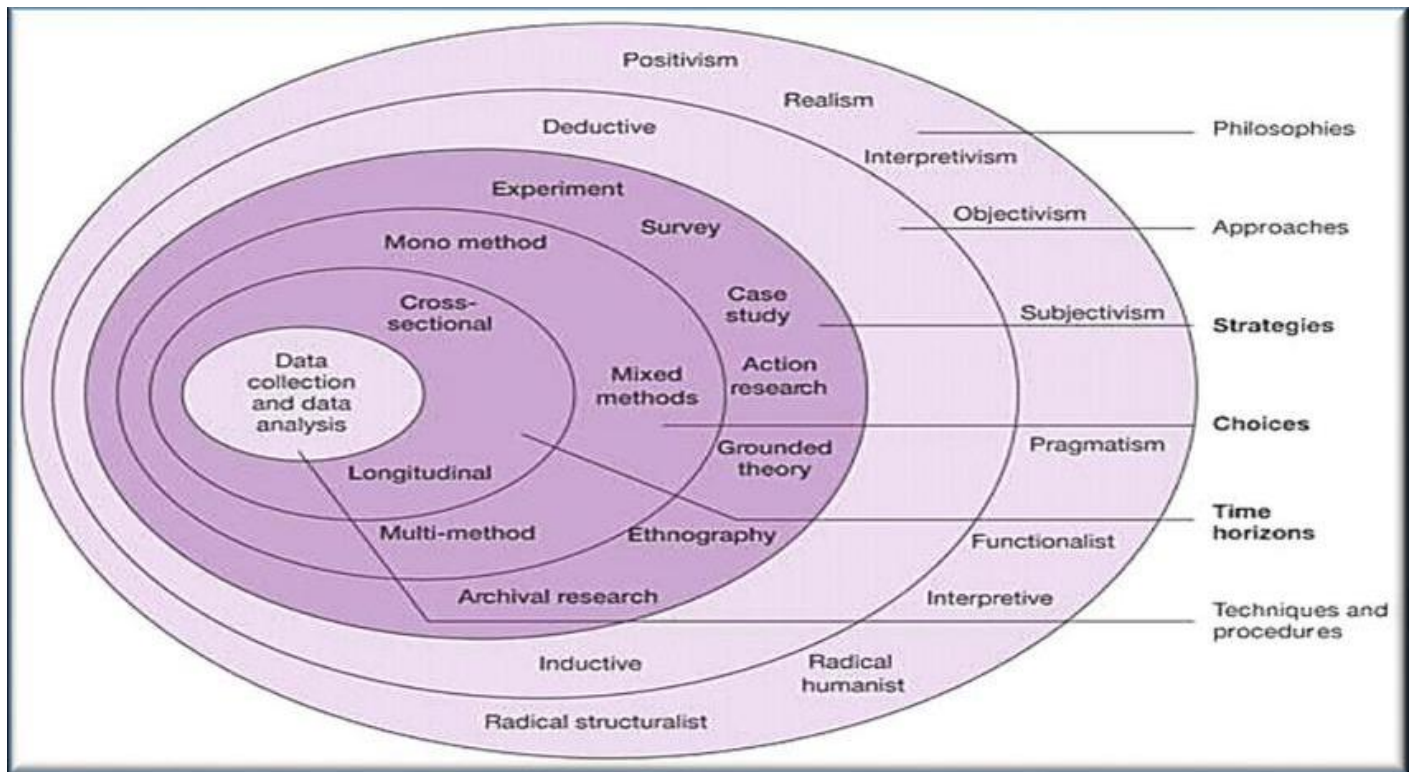
- understanding the ways in which the subjectivity of the researcher interacts with the research process;
- awareness of the unstable and often conflated multiple realities of life and research;
- the influence of assumptions and justifications about knowledge;
- the methods used to collect, construct and analyse data on the topic;
- the theorisations, either applied or made, that generalise or deconstruct research interests;
- the ethical and political inferences about the research process.

#### **5.4 Research Design**

Tavakoli (2012:546) states that a research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose. The research design comprises the blueprint for data collection, measurement and analysis and decisions which relate to what, where, when, how and by what means concerning a research study and usually constitutes a research design. Bryman (2012:46) is also of the view that a research design provides a framework for the collection and analysis of data.

This study employed a descriptive research design. The descriptive research design gives a picture of the exact details of a situation, social setting or relationship (Neuman, 2014:38). Surveys were used to collect descriptive data for this study. The reasons for choosing this design are based on the following underlying benefits:

- Descriptive studies usually yield rich data that is collected in large amounts.
- Surveys can be used by companies and organisations to study the beliefs, attitudes, behaviours and habits of members of a target audience, company or other organisation.

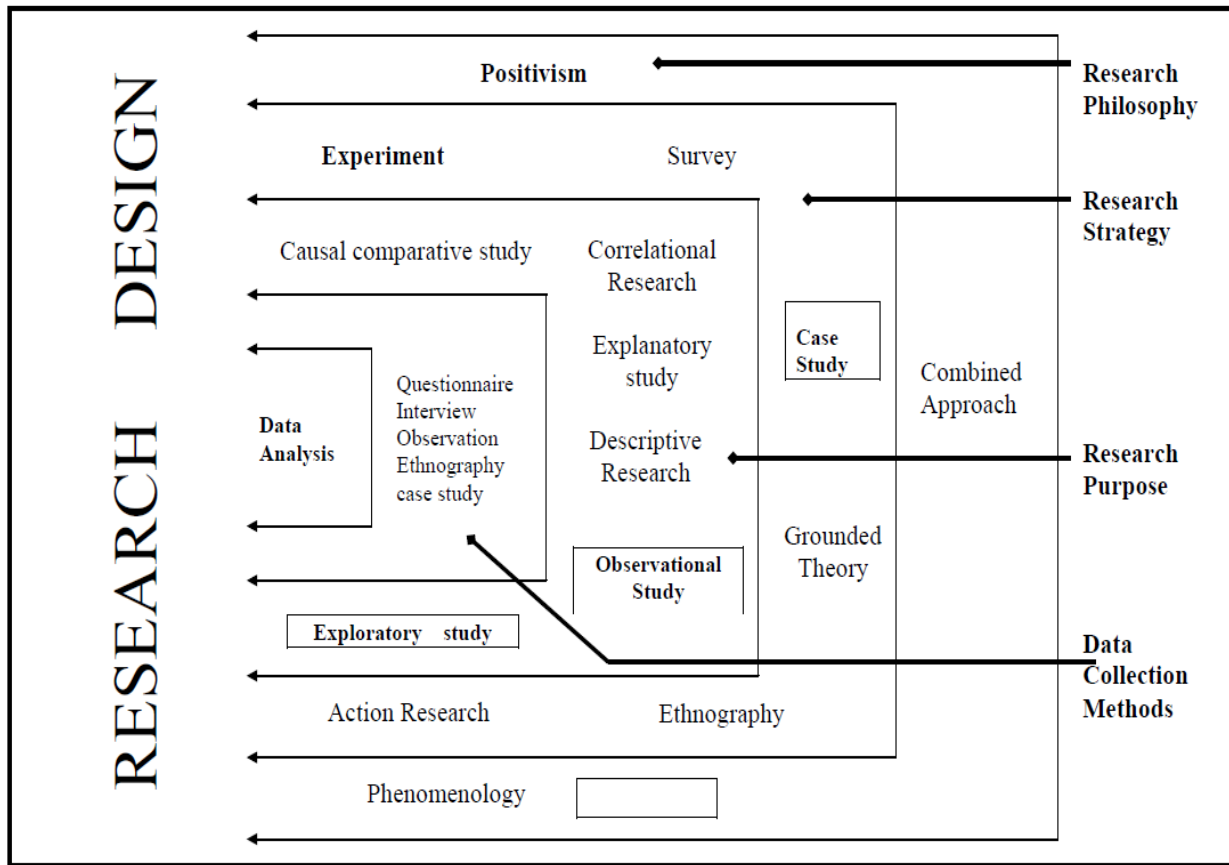


**Figure 5.1: The Research Onion**

**Source:** Saunders *et al.* (2016:223)

The research process as shown in Figure 5.1, gives an illustration of the elements that have to be taken into consideration when undertaking a comprehensive research study. The various layers making up the research onion serve as a fundamental standing point to research, and the following has to be taken into consideration: philosophical orientation employed; research approach used; the appropriate research strategies; the research timeline; research timelines; as well as data collection techniques employed in the study (Brown, 2019:178).

Figure 5.2 shows the research design process that is a blueprint to how the study has to be carried out.



**Figure 5.2: Research Design**

**Source:** Leavy (2017:148)

The research design stipulates the fundamental principles that have to be followed when collecting, measuring, and analysing the information, which is useful for solving a problem at hand (Greener & Martelli, 2019:206). Thus, the research design includes information pertaining to the problem under study, the research objectives, research questions, the specific area of study, the sampling strategy and sampling plan, data collection techniques as well as the analysis (Bell, 2014:156).

## 5.5 Research Approach

The research approach relates to the plans and procedure for research that ranges from broad assumptions to detailed methods of data collection, analysis and interpretation (Grover, 2019:105). The three common research approaches are the quantitative research approach, qualitative research approach and the mixed methodology research approach.

### **5.5.1 Quantitative research**

This study adopted a quantitative approach. According to Supino and Borer (2019:10), the quantitative approach involves the measurement of parameters that have been attained under standardised conditions by structured or semi-structured instrumentation, and that may be subjected to formal statistical analysis. Neuman (2014:5) also states that the quantitative approach involves generating data in a quantitative form that can be subjected to quantitative analysis in a formal and rigid fashion. The quantitative approach will permit the testing of variables (factors that affect the sustainability of SMEs) of the study. Its benefits are that the findings are likely to be generalised to a whole population since it involves a large sample that is randomly selected, and also data analysis is less time consuming as statistical software such as SPSS can be used (Rahman, 2019:106).

Furthermore, quantitative research leads to the derivation of statistics as a result of the use of large-scale survey research (Bryman, 2012:145). The data collection tools under a quantitative research study include questionnaires or structured interviews. The individuals who take part in a quantitative study are known as respondents of the study, and in most cases, they have given questionnaires directly or through the post for them to select the answer from a range of suggestions (Greener & Martelli, 2019:278). Quantitative methodology application has the ability to reach many people in a short period of time, thus leading to the collection of a large base of information (Divya, 2017:192). Also, quantitative research leads to a faster contact with the respondents than a qualitative study. A quantitative research study permits the definition of the research methods early during the planning level. It allows one to know what is needed to be discovered, and it permits one to come up with the best choice on how to gain access to the information needed. Quantitative research also allows one to decide in the early stages of the research process on how many persons one has to get hold of to provide information (Pandey & Pandey, 2019:207).

A quantitative study is meant to measure the identified variables within a study, and these include independent and dependant variables to see the impact of each one on the rest (Walter, 2019:301). Any change in either of the identified variables shall be recorded together with the impact they have on the other variables. In doing so, hypotheses are established that will be used as a standpoint

to prove if the hypothesis was right or wrong at the end of the study (Lapan *et al.*, 2012:112). The data collected is normally used to evolve on a continuous basis.

### **5.5.2 Qualitative research**

Qualitative research dwells on a phenomenon that takes place in a natural setting, which makes the data collected from the phenomena to be analysed through a statistical free process (Divya, 2017:291). A qualitative research methodology is employed in a situation where the participants usually undertake their daily activities, which make the research happen naturally (Creswell & Garrett, 2011:311). The people who are usually engaged in a study where qualitative research methodology is used are called participants. A study that uses a qualitative method is characterised by the researchers' lack of interest in simplifying, objectifying, or quantifying their observations (Brown, 2019:156). However, when undertaking a qualitative study, there is an interpretation and derivation sensed from what the researcher observes. The employment of a qualitative research methodology is based on the premise that there is no single truth to be discovered but there are various positions or suggestions and that each suggestion or opinion has some level of merit (Walliman, 2011:273).

A qualitative methodology implies direct observation or the usage of unstructured interviews to gain access to the data needed within a natural setting (Supino & Borer, 2019:190). The data is collected in a haphazard and open-ended sequence. The data that is collected does not follow any form of pattern and is unstructured. As a result, the method of data collection in a qualitative methodology does not possess any form of notable structure or control compared with a study employing a quantitative methodology (Bryman, 2012:322). Studies that use quantitative research methodology usually view a qualitatively oriented study to be too flexible and thus, its lack of control is viewed as a threat to the reliability and validity of a study. However, the users of qualitative methods in data collection see this as a strength, that is, flexibility and lack of control towards the data collection process (Lavrakas, 2008:402). The users perceive participants as having the ability to adjust as a result of the presence of the researcher, thereby reducing reactivity, and once they do that, the researcher has the ability to reap views from various points of view (Singh, 2012:211). It is evident that most of the methodologies employed by qualitative researchers



are the same that are used by quantitative researchers (Grover, 2019:363). The only difference between the two types of researchers lies in the intention of the study.

In quantitative research, there is an easy to follow laid out process where the researcher starts by establishing a hypothesis, then observes and collects the data that is followed by a statistical analysis of it, which then results in the derivation of conclusions (Sekaran & Bougie, 2016:421). However, in the case of a qualitative study, there is a difference as the researchers are not structured, and they flow with the research setting as well as the participants (Grover, 2019:349). The researcher might decide to change that which they are observing on the basis of the changes taking place in the field setting. Qualitative researchers are usually involved in making passive observations which are followed by a lack of intention to manipulate the causal variable (Bryman, 2012:178). A qualitative methodology has its visible roots in sociology and anthropology, Although it has recently grown in application and popularity in psychology.

### **5.2.3 Mixed methodology research**

The preceding sections outlined the qualitative and quantitative research methodologies separately from each other. The two terms qualitative and quantitative are widely used in the disciplines of business and management research, and the two are distinguished by data collection methods and data analysis processes (Rahman, 2016:330). One main distinguishing factor between the two methodologies is the aspect of the numeric or non-numeric data application (Pandey & Pandey, 2019:256). Thus, one uses numbers while the other one is aligned to the usage of words, that is, quantitative and qualitative, respectively. The quantitative study uses questionnaires for the collection of data, and graphs and statistical analysis towards the data analysis procedure as a result of the usage of numerical data (Saunders *et al.*, 2016:329). On the other hand, a qualitative study uses interviews for data collection and categorises data in the data analysis procedure that result in generating non-numerical data.

However, both research methodologies can be employed in the same study, which is the researcher's choice (Singh, 2012:167). This is normally called multiple methods in research or mixed methodology, which is a hybrid form of research method. The study will possess characteristics from both qualitative and quantitative research studies, and the demerit of the other is superseded by the merits of the other methodology (Tavakoli, 2012:423). The mixed

methodology has become common in the application within business and management spectrums, where one study can employ both qualitative and quantitative research methodologies. The mixed methodology uses a combination of data collection methods in conjunction with the data analysis techniques that are aligned to individual methodological techniques (Wickramasinghe, 2009:186).

A mixed methodology application is known for its ability to provide a better position for one to answer the set research questions and aids in the result's trustworthiness through the evaluation of the researcher (Walter, 2012:293). It also permits the use of different methods in different situations within the same study and allows triangulation to take place. The main drawback of employing a mixed methodology is aligned to the cost factor as it is expensive to utilise (Lapan *et al.*, 2012:306). This is because it needs many independent translators, which might result in a change of the source questionnaire.

## **5.6 Sampling Design**

Neuman (2014:55) defines sampling design as a plan of obtaining a sample from a defined population. Sampling design shows the plan that is used in a quantitative or numeric outline of trends, attitudes or the opinions of the engaged respondents in a study (Brown, 2019:340). The sampling design is, therefore, the technique adopted by a researcher to select elements for the sample. It is imperative that when devising the research design, the researcher has to determine the extent to which the design influences the reliability of the study's results and if there will be any form of the warranty towards the dependability of the study's results (Divya, 2017:212). Sampling design is constituted by the target population, sampling frame, sample size and sampling method. A viable sampling design is characterised by simplicity, easy to apply, must be well organised and has to be generally applicable (Bell, 2014:289).

### **5.6.1 Target population**

According to Leavy (2017:264), a population refers to a collection of elements about which the researcher might later make judgements. The target population implies the entire group within which the study is based on. When determining the target population, it is important to outline clearly the characteristic features that will be applicable to the study (Creswell & Garrett, 2011:197). Thus, the target population defines the elements on which the results of the study are meant to generalise. The target population for this study were SMEs in the manufacturing sector

in Gauteng Province, South Africa. Gauteng province was selected since it is the economic epicenter of South Africa and has the highest number of manufacturing SMEs in the country.

### **5.6.2 Sample frame**

A sampling frame is defined as the full list of all the known units in the universe, and each unit will need to be surveyed (Zikmund & Babin, 2013:184). Thus, the sampling frame is the entire list of units of interest. The sampling frame is generally defined by geographical listings, maps, directories, administrative records, or membership lists, or telephone or other electronic formats (Leedy & Ormrod, 2015:259). Due to the lack of reliable information related to the number and the location of manufacturing SMEs in the three selected provinces, there was no sampling frame used in this study. However, the online South African Small Business Directory was used to identify the available SMEs and their contact details.

### **5.6.3 Sample size**

Sekaran and Bougie (2016:396) define a sample size as the actual number of subjects chosen as a sample to represent the population characteristics. In other words, it is the total number of units selected for the actual study. Since the study used the structural equation modelling (SEM) procedure to analyse data, sample size recommendations for SEM were applied. According to Kline (2011:11) and Hair, Black, Babin, Anderson and Tatham (2014:573), sample sizes for SEM should be at least 200 respondents. Based on these recommendations, the sample size for this study was set at  $n = 500$  respondents.

### **5.6.4 Sample method**

A sampling method is a procedure for collecting a sample from the population (Burns & Burns, 2008:60). Sampling methods are classified into two types, namely, probability sampling and non-probability sampling. In this study, a non-probability sampling technique was used. According to Lavrakas (2008:621), non-probability sampling implies that all elements of the population have unequal chances or an unknown chance of being included in the sample since the selection is based on the subjective judgement of the researcher. Specifically, the convenience sampling technique was used in this research. Tavakoli (2012:591) asserts that in the convenience sampling technique,

sampling elements are selected based on their availability and accessibility. This technique was used since there is no single database of respondents to be used as the sampling frame in this study.

### **5.7 Procedure for Data Collection**

Data collection is the process of collecting and measuring information from the sample. According to Bell (2014:138), a measurement instrument refers to the various methods by which a researcher obtains data from respondents in a research project. Data for this study will be gathered using surveys in the form of questionnaires. Questionnaires were used because they were easy to construct, they are extremely versatile, and they are uniquely capable of gathering a large amount of information quickly from a large group of respondents in a form that is readily processable (Tavakoli, 2012:512). The questionnaires will either be emailed or hand-delivered to respondents. Respondents were given a period of two weeks to complete the questionnaires.

The questionnaire that was used in the study was divided into four sections. Section A elicited information on the demographic profile of the respondents. Section B of the questionnaire elicited information on internal management systems. The availability of resources was measured using five items adapted from Wuyts, Rindfleisch and Citrin (2015). Infrastructure was measured using five questions adapted from Li, Zheng, Li, Jin and Xu (2017), while training was measured using five questions adapted from Asfaw, Argaw and Bayissa (2015).

Section C of the questionnaire used five items adapted from Wang (2012) to measure innovativeness. Section D elicited information on the sustainability of SMEs. To achieve this, questions on general sustainability were measured using six questions adapted from studies by Berstrom *et al.* (2014) and Yang, Sun, Zhang, Wang and Cao (2017). Questions on the nature of the product, corporate governance, and the consideration of climate change were adapted from Laskar and Maji (2017). Questions on economic and financial sustainability were adapted from Amrina and Usuf (2011), while questions on environmental sustainability were adapted from Vinodh and Chintha (2010), and those on social sustainability were adapted from Chardine-Baumann and Botta-Genoulaz (2014). The questions in sections B and C were presented in Likert-type scales anchored by 1 = strongly disagree and 5 = strongly agree. The questions in section D were presented in Likert-type scales anchored by 1 = decreased significantly and 5 = increased significantly.

## SECTION C: INTERNAL MANAGEMENT SYSTEMS

Section E gathered information on internal management dimensions. RM has six measurement items adapted from Wang (2012). ID uses five measurement items adapted from Laskar and Maji (2017). ET incorporate seven measurements adapted from Wang (2012).

**Table 5.1: Scale development and reliability for Internal Management System**

Resource mobilisation			
Item Code	Description	Author	Reliability (Cronbach's Alpha) ( $\alpha$ )
RM1	Our company has enough resources to support service delivery.	Wang (2012)	0.91
RM2	In our company there is enough employee expertise concerning customer needs (intellectual capital).		
RM3	In our company, there is adequate quality technical support personnel.		
RM4	Our company has sufficient funds to pursue new developments in customer support delivery.		
RM5	Our company has adequate capital to acquire necessary resources.		
RM6	Our company has access to the information required to make key decisions on product/service development		
Infrastructure development			
ID1	In our company, development of infrastructure is based on concern for the environment.	Laskar and Maji (2017)	0.77
ID2	In our company, there is well-developed environment sanitation (clean water and adequate sewage disposal).		
ID3	Our company has adequate physical infrastructure and facilities.		
ID4	In our company, there is an advanced infrastructural development strategy.		
ID5	In our company, there is adequate office space.		
Employee Training			
ET1	Our company has regular training programs for its employees	Wang (2012)	0.74
ET2	In our company, training programs are designed based on job requirements.		

ET3	The type of training that is offered within our company is applicable to the job	<b>Vinodh and Chintha (2010)</b>	<b>0.89</b>
ET4	In our company, the objectives of the training are well known.		
ET5	The training performed in our company has led to an increase in job satisfaction among employees.		
ET6	The training implemented in our company has improved the skills and knowledge of employees.		
ET7	The training implemented in our company has led to a change in the attitudes of employees.		

**Source:** Laskar and Maji (2017)

As presented in Table 5.1 the scales used in this study attained Cronbach alpha values more than the minimum 0.7. Vinodh and Chintha (2010) also used the same measurement items and obtained a Cronbach alpha value of 0.89. This confirms that the scale is reliable and suitable for use in this study.

#### **SECTION D: Construct items on SME innovativeness**

Section D seeks responses on innovativeness using five measurement items. These items were developed by Chardine-Baumann and Botta-Genoulaz (2014). This study utilised the measurement scale by Chardine-Baumann and Botta-Genoulaz (2014)

**Table 5.2: Scale development and reliability for SME innovativeness**

<b>Innovativeness</b>			
<b>Item Code</b>	<b>Description</b>	<b>Author</b>	<b>Reliability (Cronbach's Alpha) (<math>\alpha</math>)</b>
IV1	In our company, technical innovations based on research results are accepted quickly.	<b>Chardine-Baumann and Botta-Genoulaz (2014)</b>	<b>0.82</b>
IV2	In our company, importance is given to innovative ideas regarding products and services		
IV3	In our company, innovations are accepted easily in projects.		
IV4	In our company, employees are not punished even if their ideas do not work.		
IV5	Innovativeness is encouraged in the company.		

**Source:** Adapted from Chardine-Baumann and Botta-Genoulaz (2014)

Table 5.2 outlines that Chardine-Baumann and Botta-Genoulaz (2014) obtained a Cronbach's alpha above the minimum threshold of 0.7, thereby authenticating the reliability of scales used. Other previous sources such as Kotzab *et al.* (2014:231) and Allaoui *et al.* (2019:92) who used the measurement items adopted in this study also achieved Cronbach's alphas of acceptable proportions.

## SECTION E: SME SUSTAINABILITY

Section E gathered information on sustainability dimensions. GS has six measurement items adapted from Berstrom *et al.* (2014). NP uses five measurement items adapted from Berstrom *et al.* (2014), CG incorporate seven measurements adapted from Yang, Sun, Zhang, Wang and Cao (2017), EF consists of seven measurements items adapted from Yang, Sun, Zhang, Wang and Cao (2017). EN, which uses five measures, adapted from Sindhuja (2014:273). SS, which uses six measures, were adapted from Yang, Sun, Zhang, Wang and Cao (2017). CC which uses five measures were adapted from Yang, Sun, Zhang, Wang and Cao (2017)

**Table 5.3: Scale development and reliability for SME sustainability**

General Sustainability			
Item Code	Description	Author	Reliability (Cronbach's Alpha) ( $\alpha$ )
GS1	Acknowledgement of the importance of sustainability across the board.	Berstrom <i>et al.</i> (2014)	0.84
GS2	Management support for sustainable development.		
GS3	Concern for environmental compliance and auditing.		
GS4	Responsibility to help in making a difference on environmental issues such as waste and water use.		
GS5	Striving to make a difference on social issues such as health and education.		
GS6	Striving to make a difference on economic issues such as inflation and unemployment.		
Nature of the product			
NP1	Assessment of the health and safety impacts of products and services	Berstrom <i>et al.</i> (2014)	0.81
NP2	Total number of incidents of non-compliance with health and safety regulations in the development and sale of products and services		
NP3	Type of product and service information required by procedures.		

NP4	Total number of incidents of non-compliance with regulations concerning product and service information and labelling.		
NP5	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction		
Corporate governance			
CG1	The total number of business units analysed for risks related to corruption	Yang, Sun, Zhang, Wang and Cao (2017).	0.78
CG2	Number of employees trained in organisation's anti-corruption policies and procedures		
CG3	The total number of legal actions for anti-competitive behaviour, anti-trust, and monopoly practices and their outcomes		
CG4	Public policy positions and participation in public policy development and lobbying		
CG5	Amounts of money paid by the company as fines for -non-compliance with laws and regulations		
CG6	The value of non-monetary penalties paid by the company for non-compliance with laws and regulations		
CG7	The total number of business units analysed for risks related to corruption		
Economic and Financial			
EF1	The amount of profits made by the company	Yang, Sun, Zhang, Wang and Cao (2017).	0.88
EF2	Amount of costs incurred by the company at all levels of operations		
EF3	Overall financial health of the company		
EF4	Ability of the company to meet its financial obligations towards employees		
EF5	Value of financial assistance received from the government		
EF6	Value of money spent on taking care of the environment		
EF7	Amount of money spent in the procurement of products and services from local suppliers		
Environmental			
EN1	Using a life cycle analysis to evaluate the environmental friendliness of products	Yang, Sun, Zhang, Wang and Cao (2017).	0.79
EN2	Using clean production technologies and best practices		
EN3	Promotion and implementation of environmental laws and regulations		



EN4	Environmental laws and regulations for staff education and publicity to raise environmental awareness		
EN5	Regular inspection and maintenance of environmental protection facilities and equipment		
Social			
SS1	Reduction in the impacts and risks to the general public	Yang, Sun, Zhang, Wang and Cao (2017).	0.85
SS2	Improvement in occupational health and safety of employees		
SS3	Providing more positions to the community		
SS4	Improvement in product image		
SS5	Improvement in firm's social reputation		
SS6	Reduction in the impacts and risks to general public		
Climate Change			
CC1	Reduction in waste (water and/or solid)	Yang, Sun, Zhang, Wang and Cao (2017).	0.76
CC2	Reduction in toxic emissions		
CC3	Decrease of consumption for hazardous/harmful/toxic materials		
CC4	Decrease of frequency for environmental accidents		
CC5	Improvement in an enterprise's environmental situation.		

**Source:** Yang, Sun, Zhang, Wang and Cao (2017)

Table 5.3 depicts that Yang, Sun, Zhang, Wang and Cao (2017) obtained a Cronbach's alpha above the minimum threshold of 0.7, thereby authenticating the reliability of scales used. Other previous researchers such as Shin *et al.* (2015:182), Mokhtar, Genovese, Brint and Kumar (2018:2) who used the measurement items adopted in this study also achieved Cronbach alphas of acceptable proportions.

## 5.8 Pilot Study

Tavakoli (2012:468) defines a pilot study as a small-scale trial of the proposed study, which includes procedures, materials and methods. In other words, a pilot study implies a preliminary mini-study that is undertaken for the sake of eliminating any form of error that might be in the research instrument. In other cases, the pilot study includes coding sheets and analytic choices. The purpose of conducting a pilot study is usually to test and often revise and then finalise the

materials and methods for the final study. Burns and Burns (2008:160) state that a pilot study enables problems to be removed before the full study. This study conducted a pilot study with five respondents who did not take part in the main study. A questionnaire was issued to the respondents, and any areas which are not clear were taken note of, and adjustments were made prior to the main study. The advantage of conducting a pilot study is that it provides the researcher with ideas, approaches, and clues that may not have been foreseen before conducting the pilot study. Such ideas and clues increase the chances of obtaining clearer findings in the main study.

## **5.9 Data Preparation**

In research, once the data collection is complete, there is a need to process it so as to derive meaning from the raw data at hand (Sekaran & Bougie, 2016:212). Data preparation must be comprehensive and thorough and requires considerable attention and time to avoid errors and accentuate the relevance of the study (Singh, 2012:123). With specific reference to this study, the data preparation included data editing and coding through Excel spreadsheets.

### **5.9.1 Data editing**

Data editing is the process of examining the data that was collected for any form of errors that might have come from the respondents (Bell, 2014:320). Editing is the act of inspecting procedurally the totality, reliability, and eligibility of the collected data, which is followed by organising as part of the process through the use of a computer (Divya, 2017:119). For the sake of this study, data editing played a pivotal role as it permitted the researcher to effectively clean the readily available data as an aid to the accuracy and reliability of the data. Editing was undertaken on the collected data to figure out the errors available and mistakes made by the respondents during data collection. Identified mistakes were corrected accordingly, which was done to assure its quality. The various objectives towards data editing are inclusive of ensuring that data is:

- Exact.
- Consistent.
- Reliant on measuring tools as well as alignment to other information as found in the questionnaire.

### **5.9.2 Data coding**

Data coding is the act of engaging in a process where raw data is converted into symbols to classify the responses into different distinct categories using code numbers (Bhattacharjee, 2012:178). Data coding is meant to establish a sense of the collected data for analysis. It entails grouping data into certain categories that are established through the allocation of numeric codes to the available responses emanating from the set questions in the questionnaire (Wickramasinghe, 2009:207). The data coding process took place in Excel spreadsheets before engaging in data analysis to derive meaning from the raw data. Data represent the various pieces of unstructured information that simplifies or gives a true reflection of the phenomenon under study which is independent of the one who collected it (Supino & Borer, 2019:98). Coding comes through the allocation of a number to the set questions as reflected in the research instrument to establish a quantitative assessment.

### **5.9.3 Data cleansing**

Data cleansing entails the process involved in ensuring that there is an exclusion of errors from the collected data and any form of irregularity in the data for solving an identified problem (Skinner, Tagg & Holloway, 2000:122). Data cleansing considers the ethical aspects within a study with specific reference to the privacy and confidentiality of the parties engaged in the study. Thus, any form of information that directly relates to the respondents is excluded in totality. According to Walliman (2011:78), “data cleansing consists of defining and determining the type of errors, searching and detecting error instances and correcting the uncovered errors”.

### **5.10 Data Analysis Approach**

According to Leavy (2017:111), the data analysis process allows the researcher to determine the study's findings. The data analysis process leads to a statistical interpretation of the data, generally represented in a set of tables or charts followed by a discussion. Structural Equation Modelling (SEM) was used to analyse data for this study. SEM is a multivariate statistical analysis technique that is used to analyse structural relationships. Data is entered into a spreadsheet programme such as Excel or a statistical software programme such as the Statistical Package for Social Sciences (SPSS 25.0) and Analysis of Moment Structures (AMOS 25.0) to examine the hypotheses. Divya (2017:203) states that SPSS has the advantage of importing data of almost any form and generating tabulated reports, charts, and plots of distribution and conducting complex statistical analyses.

SPSS provides a perfect graphical representation and also an appropriate result for the data that has been entered.

### **5.10.1 Descriptive statistics**

Descriptive statistics is a technique employed for deriving meaning from the basic identifiable features of the collected data in research (Grover, 2019:312). Thus, under descriptive statistics, the summary of the sample selected is provided together with the relevant measures. Descriptive statistics work in conjunction with a simple graphics analysis as both are fundamental in quantitative data analysis (Brown, 2019:178). Descriptive analysis comprises measures of central tendencies that are frequencies, mean, and standard deviation that are normally illustrated through graphs and tables in an attempt to derive summaries to the collected data (Rahman, 2019:189). With specific reference to this study, SPSS was employed to define the frequencies, mean and standard deviations. The various elements of descriptive statistics are discussed in the subsequent sections together with how they were applied in this study.

- **Frequencies**

Frequency implies how the descriptive statistic applied in summary appeared in the study; thus, it measures how often each characteristic occurs in the measuring scale (Lavrakas, 2008:67). In general terms, frequencies are shown using frequency tables as well as frequency graphs that are used to show the summarised data. Frequencies can be displayed in different formats, but the most common one is through the percentage display, followed by an interpretation for the benefit of the data users (Saunders *et al.*, 2016:189).

- **Mean**

As a measure of central tendency, mean implies the average value that is found in a given distribution (Tavakoli, 2012:206). Mean is the most common measure of central tendency in statistical analysis, thus it is found by summing up all the values in question then dividing it by the total number of available elements (Bell, 2014:121). This helps to show the distribution by considering the average number.

- **Standard deviation**

Standard deviation is used to measure the average variance from a given list of scores from the distribution of the dataset that revolves around the average value (Grover, 2019:190). Standard deviation is known for its stability to establish the measurement of variability as it considers every score during its calculation (Sekaran & Bougie, 2016:356). In a situation where the data is not extremely spread across, the sample value will be very close to the mean. In the case where the data is highly spread, the sample value will be very far away from the mean.

### 5.10.2 Correlation analysis

Correlation analysis is a technique used to determine the strength between two given variables (Lavrakas, 2008:89). The closeness of the relationship between identified variables within a study or the variation thereof is measured through the use of correlation analysis. Correlation analysis is applied in a situation where there is a need to establish how one variable affects the other (Leavy, 2017:175). The extent to which one variable's change affects the other variable measures the magnitude of change through correlation analysis (Kumar, 2008:122). In this study Pearson's correlation coefficient was used to measure the strength of the relationship that exists between the variables. Table 5.1 shows how the relationship between variables would be determined.

**Table 5.4: Strength of relationship between variables**

Size of r	Interpretation
<b>0.5 to 1</b>	Strong relationship / high correlation
<b>0.3 to 0.49</b>	Moderate relationship / medium correlation
<b>0.1 to 0.29</b>	Weak correlation / relationship
<b>0 to 0.09</b>	Weak correlation / relationship

**Source:** Sekaran and Bougie (2016:156)

### 5.10.4 Regression analysis

Regression analysis is a set of statistical methods used to estimate the relationship between a dependent variable and one or more independent variables (Leavy, 2017:175). It can be utilised to assess the strength of the relationship between variables and for modelling the future relationship between them. Regression analysis includes several variations, such as linear, multiple linear, and nonlinear (Leavy, 2017:175). The most common models are simple linear and multiple linear.

Nonlinear regression analysis is commonly used for more complicated data sets in which the dependent and independent variables show a nonlinear relationship. In this study, regression analysis was used to measure the relationship that exists between the variables.

## 5.11 Reliability

Reliability and validity are two terms used to evaluate the quality of findings from quantitative research (Leavy, 2017:113). According to Kumar (2011:314), the concept of reliability refers to the consistency of the research instrument. A research tool is considered reliable if it is consistent and stable, hence predictable and accurate and the greater the degree of consistency of the research instrument, the greater its reliability. Reliability tests usually used to check the internal consistency of scales in survey research are Cronbach's alpha and factor analysis (Leavy, 2017:114). Internal consistency reliability is defined as a measure of the extent to which the items or parts of a test are homogeneous, equivalent, or consistent with each other (Tavakoli, 2012:287).

### 5.11.3 Cronbach's alpha test

Cronbach alpha test forms one of the most common reliability measures in both social and organisational sciences (Divya, 2017:295). Cronbach alpha test defines "the reliability of a sum or average of  $q$  measurements where the  $q$  measurements may represent  $q$  raters, occasions, alternative forms, or questionnaire or test items" (Rahman, 2019:123). The Cronbach alpha test is an important measure that is mainly focused on internal consistency reliability measurements where the mean of the possible split-half coefficient is identified that will be a direct result of the splitting of different scale items (Pandey & Pandey, 2019:156). Thus, with internal consistency, there will be a measurement of how the items identified in the questionnaire are measured using the same concept. Correlation under the internal consistency reliability approach measures the relationship that exists between one item to the rest of the items, and it is used for multi-item scales (Bryman, 2012:112). A high level of internal consistency shows that there is a high degree in terms of application of the item across all items within the measurement. Table 5.2 shows the guidelines for the Cronbach alpha coefficient.

**Table 5.5: Guidelines for Cronbach alpha coefficient**

Cronbach's alpha coefficient	Reliability
------------------------------	-------------

0.90	Very highly reliable
0.80 – 0.90	Highly reliable
0.70 – 0.79	Reliable, satisfactory
0.60 – 0.69	Marginal or minimally reliable

**Source:** Grover (2019:145)

As a guarantee to the precision or accuracy of the research instrument, the Cronbach alpha coefficient method was used to test the reliability of the questionnaire.

## **5.12 Validity**

Validity refers to the proof that the instrument, technique, or process used to measure a variable does indeed measure the intended variable (Sekaran & Bougie, 2016:398). Validity implies the extent to which the measuring instrument is appropriate to what it has to measure. Validity is a quality measurement instrument within a study as it checks on the accuracy of the research outcomes. Thus, validity decides whether an instrument is measuring what it is supposed to measure. In this study, validity was enhanced through careful sampling, appropriate instrumentation and appropriate statistical treatment of the data.

### **5.12.1 Content Validity**

Content validity is viewed as the degree to which the statements or the outlined questions in the study signify the aspects that they are intended to measure (Bhattacharjee, 2012:178). Content validity can be measured through the establishment of a comparison between the contents in the measuring instrument with the relevant field for the construct being measured (Saunders *et al.*, 2016:307). Content validity was undertaken through an intense and appropriate engagement with the literature review, comparison with previous research instruments, and engaging academic experts to confirm the relevance of items covered in the research instrument.

### **5.12.2 Construct Validity**

Construct validity implies the extent to which the research conclusions in the research support the theory in the research project (Neuman, 2014:106). The research tool in the study also measures the invisible characteristics, as it is presumed to be based on people's behavioural patterns. Construct validity emphasises how well the available measurements align to the theoretical

expectations (Greener & Martelli, 2019:167). To see if the instrument can produce data that has construct validity, there is a need to ensure that the research tool measures the construct it is meant to measure.

### **5.12.3 Convergent Validity**

According to Leavy (2017:220), “convergent validity is the degree to which items which make up the scale, correlate in the same direction with other instruments measuring the same construct.” A research tool can have a high convergent validity if it can yield comparable results with the other instruments used to collect data in the same or related field (Singh, 2012:145). In this study, factor loadings derived from the exploratory factor analysis procedure to check for convergent validity in the research variables. Minimum factor loadings of 0.5 were used as an indicator of convergent validity (Ibid).

### **5.12.4 Discriminant Validity**

Discriminant validity is defined as the extent to which measures of different characters are unconnected (Leavy, 2017:221). Hence it relates to the point at which constructs that are supposed to be unrelated are distinct from each other. In this study, discriminant validity was ascertained using correlations. Positive correlations below 1.0 between the constructs have to be taken to indicate adequate discriminant validity (Forcino *et al.*, 2015:122).

### **Predictive Validity**

Predictive validity is one method of criterion validity that predicts individual performance on some measure scores administered at a later date (Saunders *et al.*, 2016:307). Predictive validity and concurrent validity are two methods of criterion validity. Criterion validity defines how a test efficiently estimates an examinee’s performance on some outcome measure(s). The outcome measure, called a criterion, is the main variable of interest in the analysis (Greener & Martelli, 2019:167). The test scores are truly useful if they can provide a basis for the precise prediction of some criteria (Singh, 2012:146). Predictive validity is similar to concurrent validity, as both of them are commonly interpreted as correlations between a test and the relevant criteria (Saunders *et al.*, 2016:307). Concurrent validity and predictive validity are only different in the time that the two tests are measured. Although concurrent validity refers to the association between a measure



and a criterion assessment when both were collected at the same time, predictive validity is concerned with the prediction of subsequent performance or outcomes (Saunders *et al.*, 2016:307). Educators, researchers, and practitioners are often interested in how well a test or assessment will forecast an individual's future performance in a particular domain; therefore, predictive validity is an important aspect for demonstrating technical adequacy (Greener & Martelli, 2019:167). It is often determined by correlating the different elements of the method's output (for example, scores obtained on personality tests, technical knowledge tests, or even recommendations resulting from an interview) to the criteria that the method attempts to evaluate (for example, performance levels of new hires in a given role). In this study, there was the usage of regression analysis for the sake of ensuring predictive validity in the research variables.

### **5.13 Ethical Considerations**

According to Burns and Burns (2008:302), ethics refer to the application of moral principles and/or ethical standards that guide our behaviour in human relationships. Thus, research ethics refer to the moral principles that guide the researcher in conducting research. According to Lapan *et al.* (2019:189), ethical guidelines and principles bind all researchers to the ideals of ethical practice as demonstrated in government regulations and professional associations' codes of ethics. This study adhered to the following ethical principles:

- **Ensuring that no harm will happen to participants**

One of the core ethics in research activities entails that 'do not harm' (Neuman, 2014:212). Ensuring that no harm will happen to participants is a fundamental issue that was emphasised by the Hippocratic Oath for doctors (Brown, 2019:189). This ethic is very much concerned with the ability and capability of the researcher to be mindful of the wellness of the participants who take part in the study. Harm appears in different dimensions in that there is physical and psychological harm, and it is the responsibility of the researcher to ensure that the two are not caused to the participants during their time of participation (Supino & Borer, 2019:289). Those individuals who participate are supposed to be guaranteed their safety, which can be ensured through communication with them so that they can participate without fear of their physical and psychological stature (Bryman, 2012:108). In this study, the researcher gave a guarantee to the respondents that there was no physical or psychological harm that could be posed to the

representatives in the study from various organisations that were engaged. In putting this principle into effect effectively, the researcher approached the respondents and requested to meet them in person while giving them insights with regard to the purpose of the study, and thus getting their voluntary participation in the study.

- **Respondents are given informed consent forms to declare their participation in the study**

The consent to take part within a study is not a clear matter in research, and in essence, an act to approach a potential participant is an act to gain consent (Pandey & Pandey, 2019:213). However, this leads to the derivation of a question pertaining to the scope of any consent given. In a situation where one agrees to take part in any given data collection method, it is not a guaranteed consent regarding how the data provided are subsequently used (Divya, 2017:130). Any form of clarity and assurance given by the researcher concerning the participants' anonymity and confidentiality must be an aid to developing an understanding on the nature in which the consent is being entered into; however, this might not be enough in ensuring clarification on the nature of that consent (Neuman, 2014:219). It is clear that consent should lack deception, that it ensures that clarity is provided on the nature of the study, followed by a full understanding of what the participant is expected to face during the data collection process, that it is ensured by getting information from the participants and that it is freely given (Bell, 2014:189). These are the main principles anchoring the informed consent ethic in any given study. In a situation where a questionnaire was distributed to the respondents and returned fully completed, it means implied consent. Informed consent can be enabled through engagement with the participant through verbal or written form. In ensuring that there was informed consent in this study, there was an assurance of a consent letter attached to the first page of the questionnaire, outlining the purpose of the study as well as the expectations.

- **Ensuring confidentiality and anonymity of information provided by respondents**

Anonymity and confidentiality entail the ability to prevent the disclosure of an individual or organisation's information without the consent of the owner (Bhattacharjee, 2012:133). Any information that leads to the direct identification of the participants must be eliminated from the research instrument, which is why a pilot is done so as to refine the research tool. When undertaking a study, there is a need to ensure that there is a guarantee that the information given

shall be in the hands of responsible people who are able to keep the collected data safe (Supino & Borer, 2019:289). There must be no access by the wrong people to the information as they have the ability to use it against the ones who made the contributions. There must not be any form of information that directly links to the participants' identities to promote participation (Divya, 2017;361). A lack of guarantee leads to the participants' withdrawal from the study, thereby bringing the study to fail. For the purposes of this study, there was a maximum assurance towards the confidentiality and anonymity of the parties who were engaged in the study by not revealing their names as well as their organisations of origin. Any information that directly points out the identity of the participants was eliminated during the pilot study.

- **Permission is given by the relevant authorities to conduct research**

Permission is also known as the principle of property, which entails ownership of the information provided (Rahman, 2016:178). Thus, before embarking on any given study, it is imperative that the researcher must seek permission from the organisations in question to collect information (Saunders *et al.*, 2016:189). Thus, the organisation elucidates its terms and conditions to the researcher before permitting the data collection process commencement. This is to ensure that the researcher aligns with the needs of the organisations, which have to be honoured without negotiation. In this study, permission was granted by various organisations for the researcher to collect the data from the sample selected.

## **5.14 Conclusion**

This chapter focused on the research methodology and design to clearly outline the various procedures followed in collecting the data for the study. Various aspects were discussed that make up the research methodology, including research paradigm, research design, research approach, sampling design, a procedure for data collection, pilot study, data analysis, and the ethical considerations observed during the data collection process. The outline and discussion of all these aspects were to aid an understanding of the information users with regard to the principles and procedures that were followed before arriving on recommendations to the study.

## **CHAPTER 6**

### **DATA ANALYSIS AND INTERPRETATION OF EMPIRICAL RESULTS**

#### **6.1 Introduction**

The previous chapter outlined a detailed overview of the methods and techniques that have been employed to collect the research data. It highlighted that this study utilised a structured survey questionnaire to gather primary data from the targeted owners/managers of SMEs in the South African manufacturing industry., and discussed the statistical techniques applied to analyse the data collected. The aim of this chapter is to present the final results from the collected data as well as provide the analysis and interpretations of the research results. All data were analysed using SPSS (Version 25.0) statistical package. The chapter first highlights and discusses the response rate, followed by the descriptive statistics for the demographics of both the respondents and their organisations. This was followed by descriptive statistics for constructs where the mean standard deviation in each item was established to determine the perception of SME owners/managers towards each construct. It also presents the descriptive statistics obtained from the Exploratory Factor Analysis (EFA). The chapter further analyses the results obtained from the correlation analysis, the regression models, and the study's reliability. Lastly, it discusses the link between the results and the research theories.

The chapter begins with determining the response to the survey, which will be followed by the descriptive statistical analysis.

#### **6.2 Results of the Pilot Study**

Before the primary survey was conducted, the research instrument was subjected to a panel review, a pre-test, and a pilot study. According to Mohorko and Hlebec (2016:79), a pre-test of the questionnaire involves improving selected item scales by reducing potential errors and promoting adequate alignment to the context of a study. The pilot was conducted to enhance the quality of the entire questionnaire to ensure that the information requested from the survey is presented and understood without any ambiguity to the respondents (Burns & Kho 2015:198). This is crucial because it facilitates the improved comprehension of the context of a study.

A panel of academics who specialise in business management at a South African university of technology was requested to review the questionnaire. Aspects that were dealt with included the sentencing structure, whereby the wording of the questions was modified and simplified to ensure that the questionnaire was able to capture the information accurately. The review also focused on making sure that the context of the study remains as transparent as possible in guiding the respondents in their understanding of the survey.

The sample questionnaire was then pre-tested using a sample predetermined sample of 10 (n=10) SME owners who were conveniently selected because of their proximity to the researcher's location. Constructive feedback was obtained from the questionnaires, which indicated some minor issues that still needed to be addressed. These ranged from complex and technical terminologies to acronyms that were used. Further revisions were subsequently made in resolving the feedback provided. After the revision of the questionnaire, a pilot study was undertaken to test for the content validity and reliability of the questionnaire. The pilot study was effected by selecting 40 (n=40) SME owners-managers who were conveniently chosen. A total of 50 (n=50) usable questionnaires were used in this analysis of the pilot data. Table 6.1 presents the results of the analysis of the pilot data.

**Table 6.1: Results of the Pilot test**

<b>Scale</b>	<b>Average Mean</b>	<b>Standard Deviation</b>	<b>Average item-total correlation</b>	<b>Number of items</b>	<b>Number of items Deleted</b>	<b>Cronbach Alpha</b>
Resource Mobilisation	4.00	1.78	0.562	6	0	0.756
Infrastructure Development	5.03	1.09	0.654	5	0	0.768
Employee Training	5.02	5.00	0.761	7	0	0.855

Scale	Average Mean	Standard Deviation	Average item-total correlation	Number of items	Number of items Deleted	Cronbach Alpha
General Sustainability	7.01	0.36	0.937	6	0	0.744
Nature of Product	7.22	0.89	0.818	5	0	0.666
Corporate Governance	5.90	1.78	0.654	6	0	0.800
Economic and Financial	5.76	1.09	0.886	7	0	0.670
Environmental	7.02	1.66	0.769	5	0	0.661
Social sustainability	7.55	0.90	0.937	6	0	0.788
Climate Change	6.11	0.70	0.818	5	0	0.671
Innovativeness	6.11	0.70	0.818	5	0	0.658

**Source:** Author's own compilation

The results from the pilot test obtained from the fifty respondents show that there was an average mean score of 6.07, thereby indicating that the respondents were in full agreement with the questionnaire. The standard deviation for resource mobilisation, infrastructure development, employee training, general sustainability, nature of the product, corporate governance, economic and financial, environmental, social sustainability, climate change, and innovativeness had scores 1.78; 1.09; 5.00; 0.36; 0.89; 1.78; 1.09; 1.66; 0.90; 0.70; and 0.70 respectively, which shows that there was a normal distribution on the data obtained. Standard deviation is used to measure the average variance from a given list of scores from the distribution of the dataset that revolves around the average value (Grover, 2019:190). A low standard deviation of less than one implies that the data points are very close to the mean, while a standard deviation of more than one means that the

data points have a wide spread on the data values. The average total item correlation for items resource mobilisation, infrastructure development, employee training, general sustainability, nature of product, corporate governance, economic and financial, environmental, social sustainability, climate change, and innovativeness had scores 0.562; 0.654; 0.761; 0.937; 0.818; 0.654; 0.886; 0.769; 0.937; 0.818; and 0.818 respectively. The results from Cronbach's alpha test imply that items, namely, resource mobilisation, infrastructure development, employee training, general sustainability, nature of the product, corporate governance, economic and financial, environmental, social sustainability, climate change, and innovativeness had scores 0.756; 0.768; 0.855; 0.744; 0.666; 0.800; 0.670; 0.661; 0.788; 0.671; and 0.658 respectively.

### 6.3 Response Rate

A response rate is defined as the total number of completed interviews/ distributed questionnaires divided by the total number of respondents with whom contact was made (Association for Public Opinion Research [AAPOR], 2011:3). The definition resonates with the definition given by Rubin and Babbie (2009:117), who defined it as the number of people participating in a survey divided by the number who were requested to respond. In calculating the response rate, this study used the definition given by Rubin and Babbie (2009:117). The response for this study is presented in Table 6.2.

**Table 6.2: Response rate**

Description	Frequency
Total number of questionnaires distributed	650
The total number of questionnaires returned	517
Total number of questionnaires not returned	133
Unusable responses discarded	17
Valid questionnaires retained	500
Response rate percentage	76.9

**Source:** Author's own compilation

Table 6.1 highlights the total number of questionnaires distributed, returned, discarded, and retained during the survey and data capturing process. A total of 650 questionnaires were distributed to SME owners/managers of manufacturing SMEs in Gauteng province. A total of 517

questionnaires were returned, of which 17 unusable questionnaires were discarded. This culminated in a total of 500 useable responses, which is a 76.9% response rate.

A quick review of survey literature reveals a lack of consistency and benchmark set in the literature regarding the minimum and highest response rate as several authors offer different views. Carley-Baxter, Hill, Roe, Twiddy, Baxter, and Ruppenkamp (2009:1) suggest that there is no absolute threshold for a minimum response rate for sampling elements as no rate is indicative of greater or lesser accuracy utility. Babbie (2007:22) opines that a response rate of 60 percent is desirable and acceptable, while Dong (2012:150) suggests a response rate of 70 percent. However, the proposed thresholds for response rate may be taken to be rough guides that have no statistical basis such that a demonstrated lack of response bias is far more important than the response rate (Rubin & Babbie, 2009:388). As such, the response rate of 76.9 percent obtained in this study may be justified.

## **6.4 Descriptive Analysis**

This section presents the results drawn from the descriptive statistics of the first part of the analysis. The discussion revolves around the data received in Section A of the questionnaire, which seeks to establish respondents' demographic details. The descriptive analysis premised on determining the gender, age, highest qualification, race, and position in the organisation of the respondents.

### **6.4.1 Demographic profile of respondents**

The data about the demographic profiles of respondents were analysed using descriptive statistics, which focused on categories such as gender, age, race, highest qualification, position in the organisation, number of employees in the organisation, number of years in operation, industry, and turnover per annum. The statistical information in Section A of the questionnaire was divided into two categories. The first category sought information on the respondent's gender, age, highest qualification, race, and position occupied in the organisation which is presented in Table 6.3. The second category sought information about the profile of the organisation and solicited information about the number of years in operation, industry, turnover per annum, and the number of employees in the organisation, which constitute Table 6.3. Table 6.2 and 6.3 are followed up with graphical representation and explanations describing the statistics depicted in them.

#### **Table 6.3: Descriptive Statistics Results**



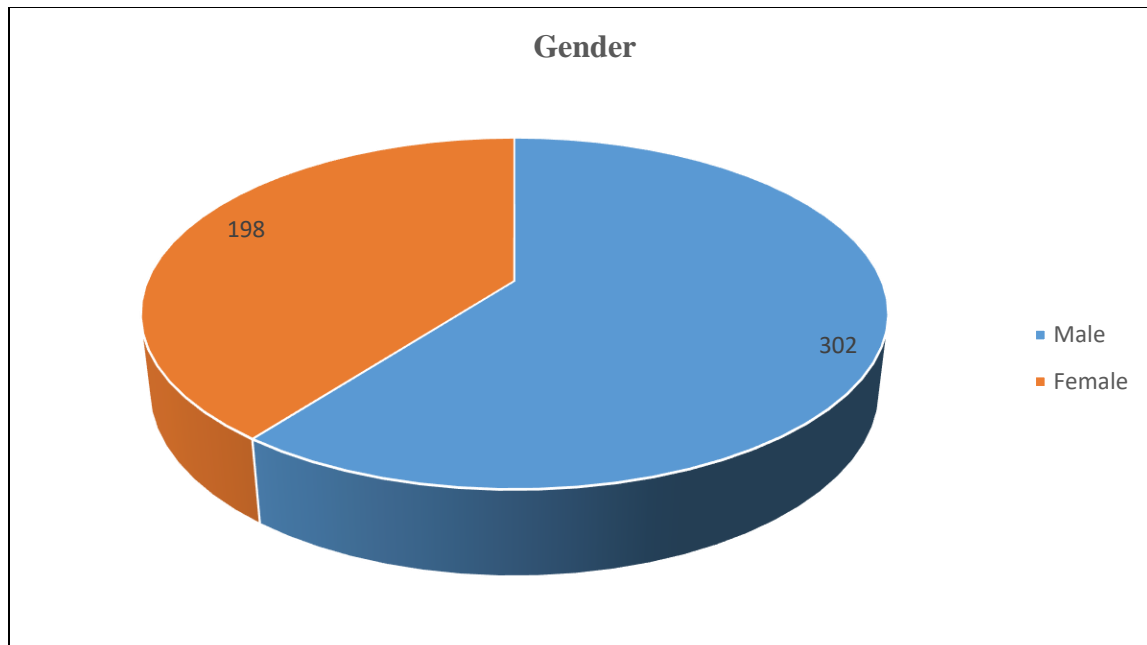
<b>Variable</b>	<b>Category</b>	<b>Frequency (n)</b>	<b>Percentage (%)A</b>
<b>(A1) Gender</b>	Male	302	60.4
	Female	198	39.6
<b>Total</b>		n= 500	100
<b>(A2) Age</b>	Under 30 years	27	5.4
	30-39 years	93	18.6
	40-49 years	193	38.6
	50-59 years	180	36
	60 years and above	7	1.4
<b>Total</b>		n= 500	100
<b>(A3) Highest qualification</b>	Metric or below	1	0.2
	Post metric certificate	19	3.8
	Diploma	136	27.2
	Degree	221	44.2
	Postgraduate	115	23.0
	Professional	8	1.6
	Others (specify)	0	0.0
<b>Total</b>		n=500	100
<b>(A4) Race</b>	Black	236	47.2
	White	194	38.8
	Indian	39	7.8
	Mixed	31	6.2
	Others (specify)	0	0.0
<b>Total</b>		n=500	100
<b>(A5) Position in SME</b>	Owner	19	3.8
	Co-owner	113	22.6
	Manager	151	30.2
	Professional employee	211	42.2
	Other (specify)	6	1.2
<b>Total</b>		n= 500	100

**Source:** Author's own compilation

The discussion of each specific category is provided in section 6.3.1

#### **6.4.1.1 Gender distribution of respondents**

The gender distribution of respondents is presented in figure 6.1.



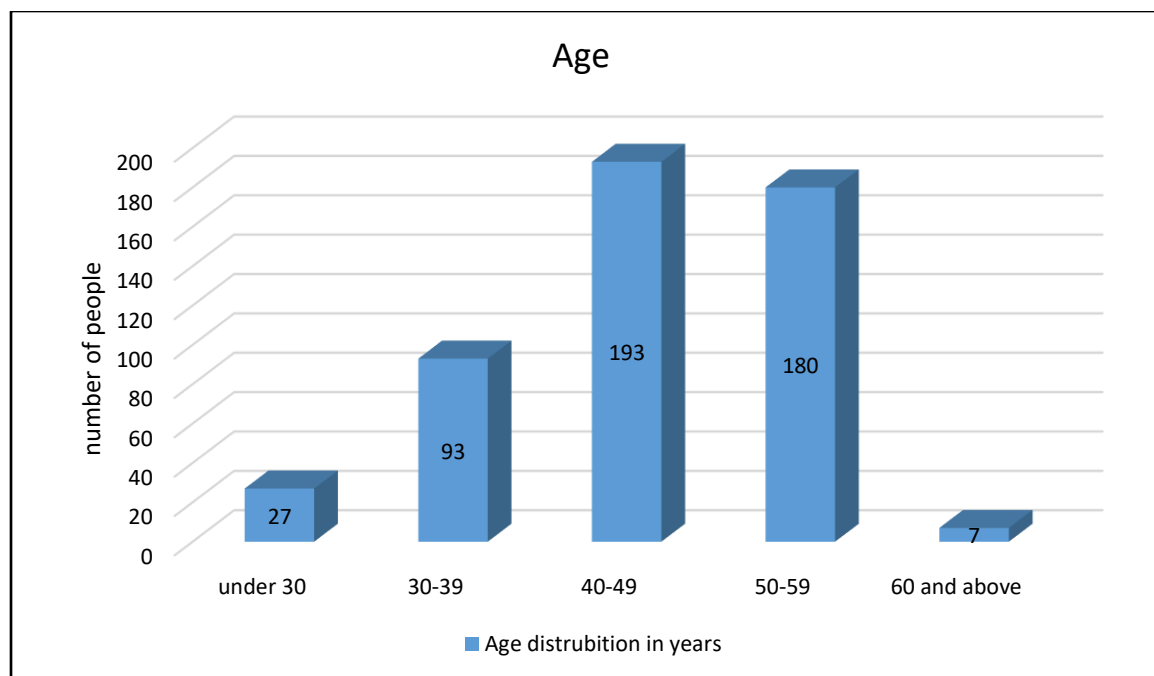
**Figure 6.1: Gender distribution of respondents**

**Source:** Author's own compilation

Figure 6.1 provides a graphical illustration of the gender structure of the surveyed respondents. As depicted in the pie chart (Figure 6.1), the male gender has the principal population, which totals to  $n=302$  (60.4%) respondents, whereas the female gender population registered a total of  $n=198$  (39.6 %) respondents.

#### **6.4.1.2 Age distribution of the respondents**

The age distribution of respondents is presented in Figure 6.2



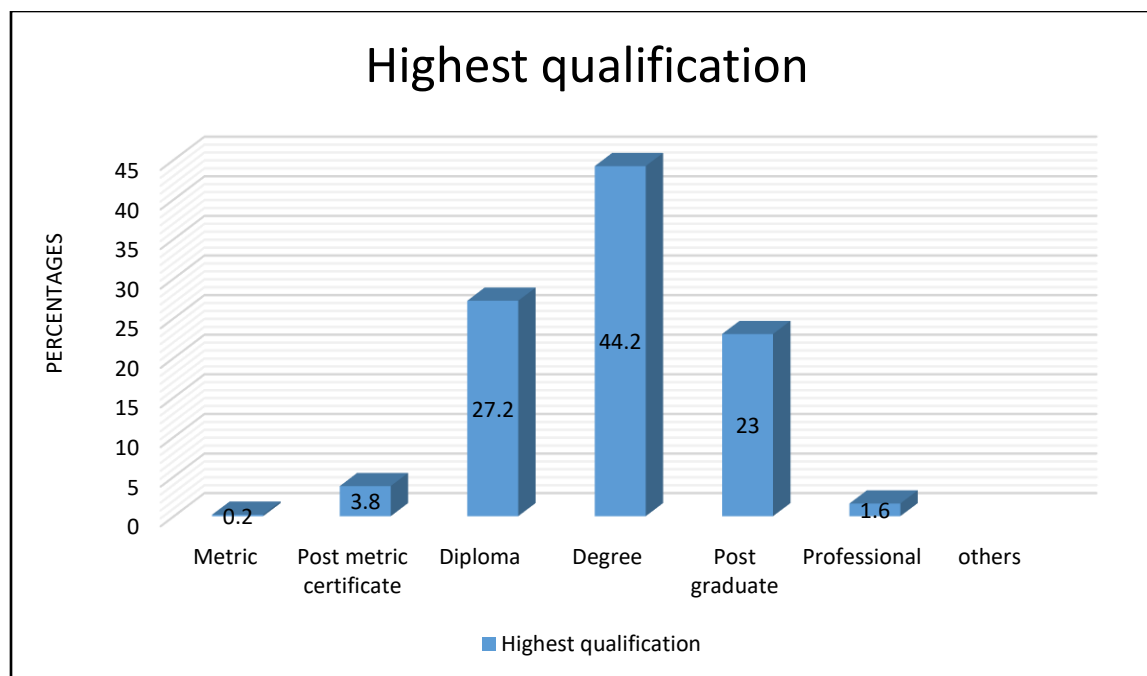
**Figure 6.2: Age distribution of respondents**

**Source:** Author's own compilation

Concerning the age distribution of the respondents as depicted in Figure 6.2, the data proves that adults dominate the manufacturing SMEs industry in South Africa. The results show that a large portion of respondents was aged between 40-49 years (38.6%; n=193). This is followed by those aged between 50-59 years (36%; n=180). A total of 93 respondents (18.6%) of the total sample were aged between 30-39 years. They also revealed that about 5.4 percent of the respondents (n=27) belong to the group of those aged below 30 years, whereas a small percentage of 1.4 percent (n=7) belongs to a group of respondents who are aged 60 years and above.

#### **6.4.1.3 Highest qualification distribution of respondents**

Information regarding the highest qualification distribution is presented in Figure 6.3.



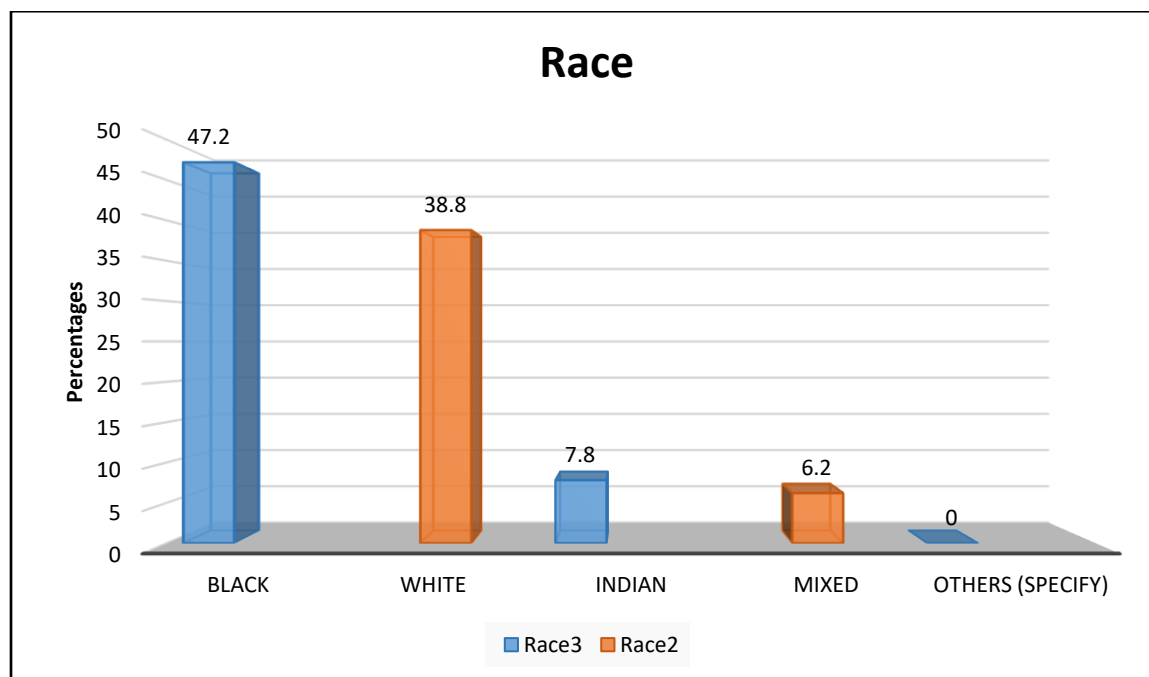
**Figure 6.3 Highest qualification distribution**

**Source:** Author's own compilation

Regarding the qualifications of the respondents, the results of the study show that out of  $n=500$  respondents, only 0.2 percent ( $n=1$ ) are matriculated, whilst 3.8 percent ( $n=19$ ) were certificate holders in terms of qualifications. The results also revealed that respondents who were diploma holders constituted 27.2 percent ( $n=136$ ). The results also show that respondents who are degree holders constitute most of the respondents with a total percentage of 44.2 ( $n=221$ ). Respondents who are holders of post-graduate qualifications constitute 23 percent ( $n=115$ ) of the surveyed population whereas only 1.6 percent ( $n=8$ ) of the total surveyed respondents indicated that they have professional qualifications. Thus, most of the respondents in this study have degrees followed by those who are diploma holders and respondents with post-graduate qualifications are third. Respondents with post matric certificates are fourth and respondents with professional qualifications are fifth whilst respondents with a metric certificate are the least in terms of representation.

#### 6.4.1.4 Race distribution

The discussed results regarding the racial distribution among respondents are reported in Figure 6.4.



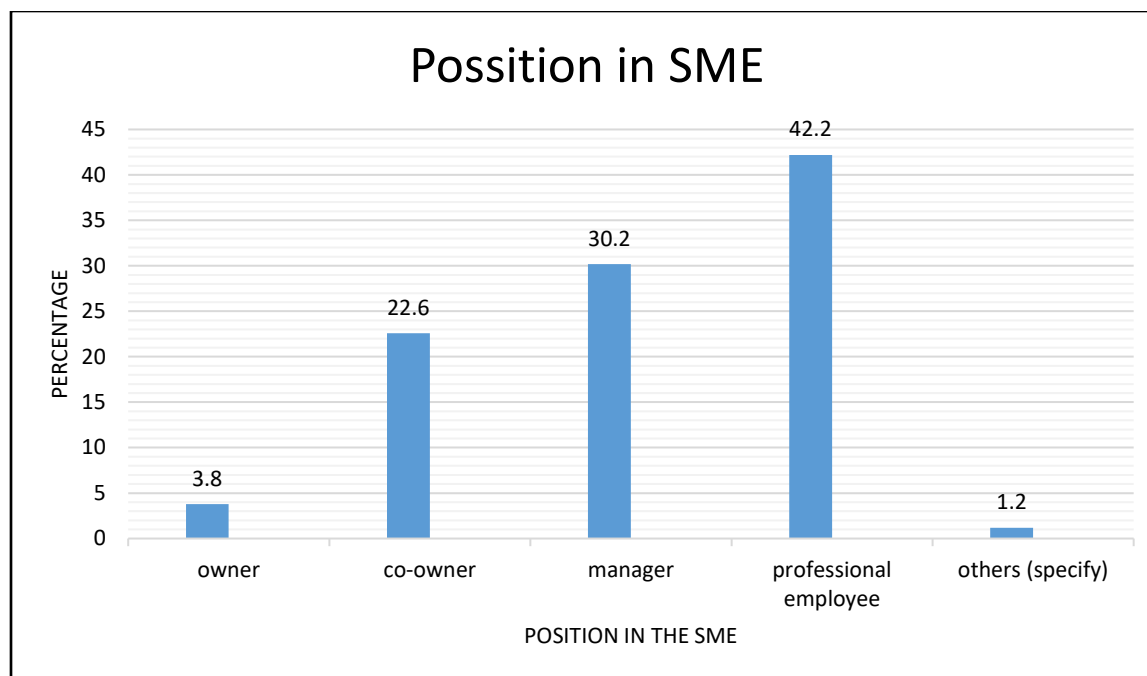
**Figure 6.4: Racial Distribution of the respondent**

**Source:** Author's own compilation

In Figure 6.4, a representation of racial profiles is presented. The highest percentage belonged to the black community, who constitute 47.2 percent (n=236). This indicates that the surveyed population is predominantly black (Africans). The black community was followed by the white community which constituted 38.8 percent (n=194) of the surveyed population. The Indian and the Mixed-race minority communities amassed 7.8 percent (n=39) and 6.2 percent (n=6.2) in that similar order.

#### **6.4.1.5 Position in the Small and Medium Enterprise**

The discussed results regarding the position occupied in the SME among respondents are reported in Figure 6.5.



**Figure 6.5: Position in the Small to medium enterprise**

**Source:** Author's own compilation

In terms of the position occupied in the SME, interesting results were shown. The results presented in Figure 6.5 demonstrate that only 3.8 percent (n=19) of the total surveyed population are the owners of SMEs. The results also revealed that 22.6 percent (n=113) of the respondents are co-owners of SMEs, whereas 30.2 percent (n=151) occupy a manager's position. The results further revealed that most of the respondents in this study occupy the position of a professional employee. Given that the surveyed population is employed in the manufacturing sector, the results that most respondents are professional employees tend to be logical as it is an industry that requires much expertise. The results also revealed that only 1.2 percent (n=6) of the surveyed population occupy other positions in their respective organisations.

#### **6.4.2 Demographic analysis of results on organisational profile**

The second part of the analysis was about the organisation's status and profile, which was established through categories such as number of employees, number of years in operation, industry, and turnover per annum, as presented in Table 6.4.

**Table 6.4: Descriptive statistics of results on organisational profile**

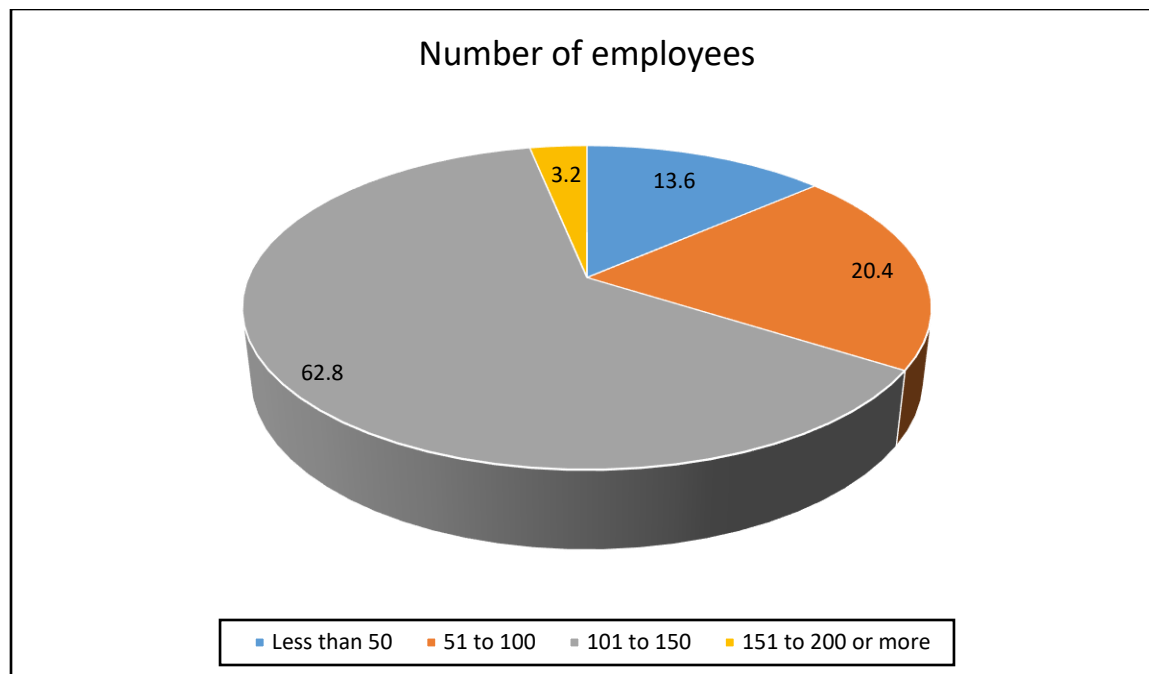
<b>Variable</b>	<b>Category</b>	<b>Frequency (n)</b>	<b>Percentage (%)</b>
<b>(B1) Number of employees</b>	Less than 50	68	13.6
	51 to 100	102	20.4
	101 to 150	314	62.8
	151 to 200 or more	16	3.2
<b>Total</b>		n=500	100
<b>(B2) Number of years in operation</b>	Less than 2 years	7	1.4
	Between 2 and 5 years	34	6.8
	Between 5 and 10 years	200	40
	Between 10 and 15 years	244	48.8
	More than 15 years	15	3.0
<b>Total</b>		n=500	100
<b>(B3) Industry</b>	Agro-processing	86	17.2
	Automotive	100	20.0
	Chemical	63	12.6
	Metals	65	13.0
	Textile, clothing, and footwear	79	15.8
	Construction	34	6.8
	Mining	1	0.2
	Electrical and electronic	43	8.6
	Furniture	29	5.8
	Other (specify)	0	0.0
<b>Total</b>		n=500	100
<b>(B4) Turnover per annum (millions in Rand)</b>	Less than 10m	18	3.6
	Between 11m to 20m	62	12.4
	Between 21m to 30m	192	38.4
	Between 31m to 40m	217	43.4
	Between 41m to 50m and above	11	2.2
<b>Total</b>		n=500	100

**Source:** Author's own compilation

The discussion of each specific category is provided in Section 6.4.2

#### **6.4.2.1 Number of employees in the organisation**

Information regarding the number of employees in the organisation is presented in Figure 6.6.



**Figure 6.6: Number of employees in the organisation**

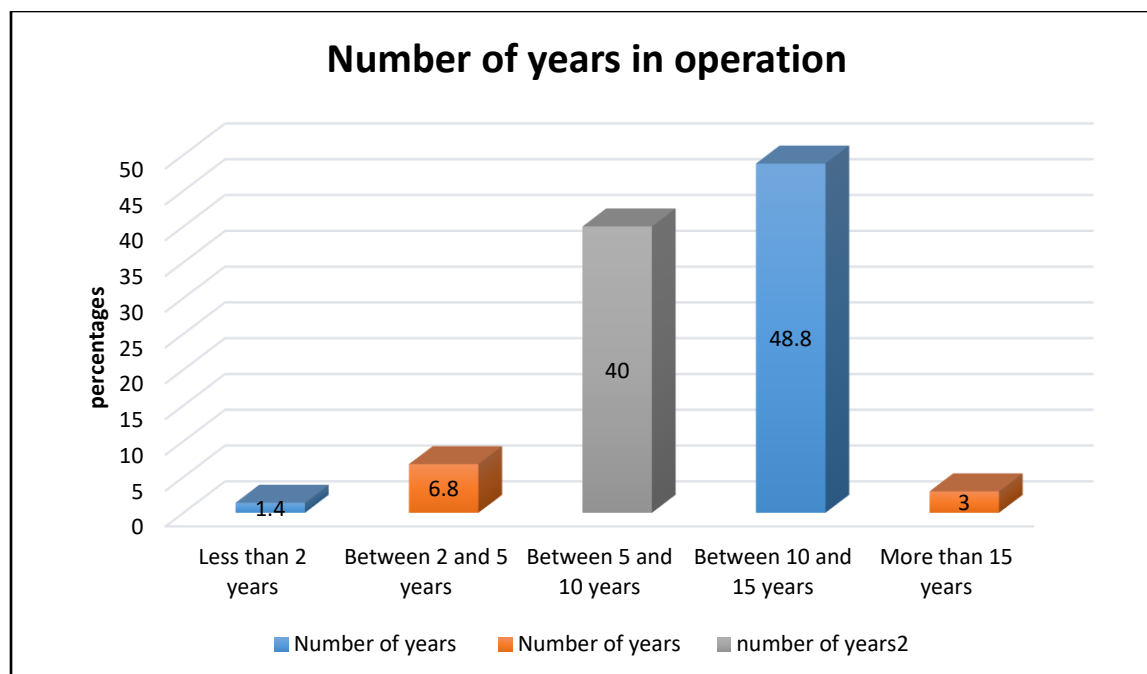
**Source:** Author's own compilation

From the results presented in Table 6.4 and Figure 6.6, 62.8 percent (n=314) of the surveyed manufacturing SMEs employ about 101 to 150 people. These SMEs were followed by those which employ 51 to 100 people who amassed 20.4 percent (n=102) of the total respondents. The results also indicated that SMEs that employ 151 to 200 or more employees constitute only 3.2 percent (n= 16) of the surveyed organisations whilst SMEs are at their infant stages and employ less than 13,6 percent (n=68).

#### **6.4.2.2 Number of years in operation**

Information regarding the number of years in operation is presented in Figure 6.7.





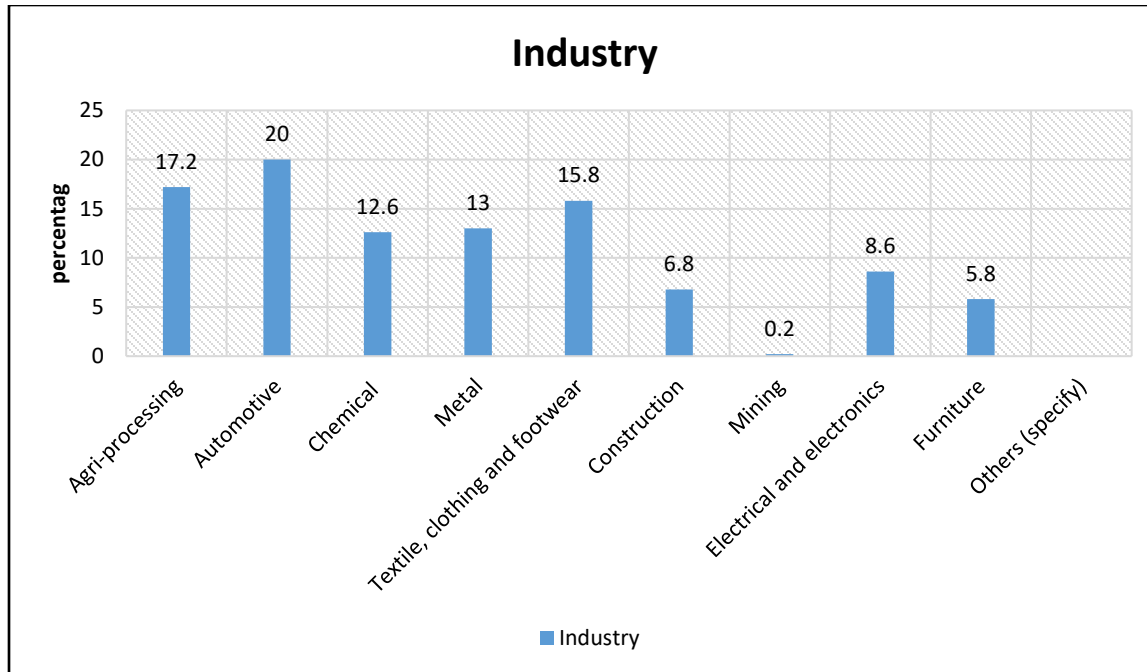
**Figure 6.7: Number of years in operation**

**Source:** Author's own compilation

Pertaining to the number of years in operation of the surveyed respondents, the results in Figure 6.7 show that 1.4 percent ( $n=7$ ) of the SMEs were in operation for less than years 2 years, whereas 6.8 percent ( $n=34$ ) were in operation between 2 and 5 years. The results also indicate that 40 percent ( $n=200$ ) of SMEs were in operation between 5 and 10 years. The study also shows that most of the organisations 48.8 percent ( $n=244$ ) were in operation for a period between 10 and 15 years. The results also revealed that only 3 percent of SMEs were in operation for more than 15 years.

#### 6.4.2.3 Industry

The discussed results regarding the industry in which the SME operates are presented in Figure 6.8.



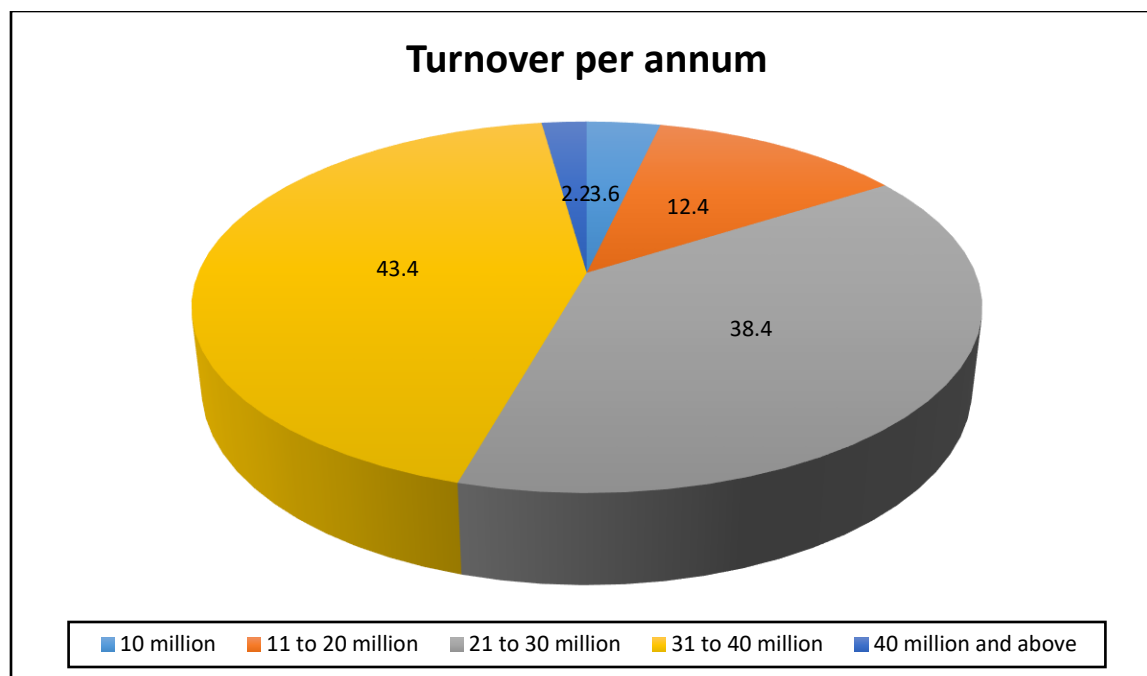
**Figure 6.8: Industry**

**Source:** Author's own compilation

As presented in Figure 6.8, data were collected from SMEs operating in nine (9) manufacturing industries based in Gauteng province. The results of the study revealed that the Agri-processing industry constituted about 17.2 percent (n=86) of the total respondents. The Automotive industry had the highest number of respondents amongst all the 9 industries for they had 20 percent (n=100). SMEs in the Chemical industry constituted 12.6 percent (n=63) whereas SMEs in the Metal industry had 13 percent (n=65). The results also show that SMEs in the Textile, Clothing, and Footwear industry had 15.8 percent (n=79) while Electrical and Electronics had 8.6% (n=43). The results also revealed that SMEs in the furniture industry constitute 5.8 percent (n=29) whilst the mining industry is the least of them, all with only 0.2 percent (n=1).

#### **6.4.2.4 Turnover per annum**

The results regarding the turnover per annum are presented in Figure 6.9.



**Figure 6.9: Turnover per annum**

**Source:** Author's own compilation

The results presented in Figure 6.9 show that most SMEs, 43.4 percent (n=217) have a turnover of 31 to 40 million rand per annum. These SMEs were followed by those with a turnover of 21 to 30 million per annum which constitute about 38.4 percent (n=217). The study also revealed that SMEs with a turnover of 11 to 20 million rand per annum constitute 12.4 (n=62). The results confirmed that SMEs with an annual turnover of 10 million and 40 million rands registered 3.6 percent (n=18) and 2.2 percent (n=11) respectively.

The next section discusses the results of the EFA.

## 6.5 Exploratory Factor Analysis

An exploratory Factor Analysis (EFA) procedure was performed to ascertain the factor structure of the collected data. The EFA procedure is a data-driven analytical method for determining the number of common factors underlying a response set and the relationship between individual items and those common factors (Kline, 2011:5; Chumney, 2016:1). Yong and Pearce (2013:79) described it as a statistical method used to reduce data into smaller sets of summary variables and to explore the underlying theoretical structure of phenomena. Implied in this is that the EFA

procedure is a method used to discover the number of factors influencing variables in a collected data set and to analyse which variables relate to specific latent variables.

Scholars (Williams, Ondman & Brown, 2010:2; Yong & Pearce; Osborne, 2014:1) assert that the EFA procedure aims at achieving several objectives such as evaluating the construct and content validity of the instrument used, reducing the number of variables into smaller sets, identifying unidimensional and multidimensional factors in variables and proving and disproving proposed theories. Chumney (2016:1) also adds that the EFA aims to evaluate the construct validity of scale instruments. In this study, EFA was applied to assess the factor structure of the captured data.

In conducting the EFA procedure, four criteria were applied. The first criterion was to use the factor loadings. Factor loadings pertain to coefficients found in either a factor pattern matrix (Maskey, Fei & Nguyen, 2018:91). Maskey, Fei, and Nguyen (2018:91) further explain that the minimum cut-off value for any factor loadings accepted in the study is 0.5. The second consideration applied is the eigenvalue criterion, which has been defined as the total amount of variance that can be explained by a given principal component (Pituch & Stevens, 2015:349). In this study, only those factors with eigenvalues greater than 1 should be considered as recommended by Guttman (1954:149). The third criterion used is the scree plot formula which provides a pictorial view of the factors that loaded with eigenvalues greater than 1. The fourth criterion is the communalities method which allows researchers to measure the ratio of an item's unique variance to its shared variance. In this study, only communalities with values that were above 0.3 were considered and retained, as suggested by Bilal and Khan (2019:1).

Before the EFA procedure, it was considered necessary to check whether the captured data was factorable, as suggested by Hauben, Hung, and Hsieh (2017:2). To test the factorability, of the captured data, two tests, namely, the Kaiser Meyer Olkin (KMO) Measure of Sampling Adequacy and Bartlett's Test of Sphericity were used. The KMO measure is a test used to measure the sampling adequacy for each variable in the model (Kaiser, 1974:31; Glen, 2016:2). The minimum threshold for the KMO is 0.5 (Kaiser, 1974:31). On the other hand, Bartlett's test of Sphericity is used to test the hypothesis that the correlations represent an identity matrix and should yield a significant cut-off value of no greater than 0.001 (Glen, 2016:2; Chan & Idris, 2017:403). In this study, for data to be considered factorable, Bartlett's test of Sphericity must be significant at 0.000.

The results for the KMO and Bartlett's test for all constructs considered in this study are presented in Table 6.5.

**Table 6.5: The KMO measure and Bartlett's test results**

CONSTRUCTS	KMO MEASURE	BARTLETT'S TEST		
		Approximate Chi-Square	Degrees of freedom	Significance level
RM	0.763	612.055	15	0.000
ID	0.719	761.666	10	0.000
ET	0.700	1036.342	21	0.000
IV	0.616	726.238	10	0.000
GS	0.802	669.525	10	0.000
NP	0.675	1130.716	10	0.000
CG	0.762	2619.602	21	0.000
EF	0.863	2817.227	21	0.000
EN	0.907	3772.913	10	0.000
SS	0.815	1023.838	10	0.000
CC	0.815	928.554	10	0.000
RM= Resource Mobilisation; ID= Infrastructure development; ET= Employee training; IV=Innovativeness; GS= General sustainability; NP= The nature of the product; CG= Corporate Governance; EF= Economic and financial; EN= Environmental; SS= Social; CC= Climate Change				

**Source:** Author's own compilation

As depicted in Table 6.7, the results were all significant at  $p=0.000$  for Bartlett's test. Similarly, the KMO values for all scales used in the study ranged from 0.675 to 0.907, which are above the threshold of 0.5. These results confirm that those captured in this study were suitable for the EFA procedure. The upcoming sections show the results of the EFA procedure performed on resource mobilisation, infrastructure development, employee training, innovativeness, general sustainability, nature of product, corporate governance, economic and financial, environmental, social sustainability, and climate change, respectively.

### 6.5.1 Exploratory Factor Analysis for the Resource Mobilisation Scale

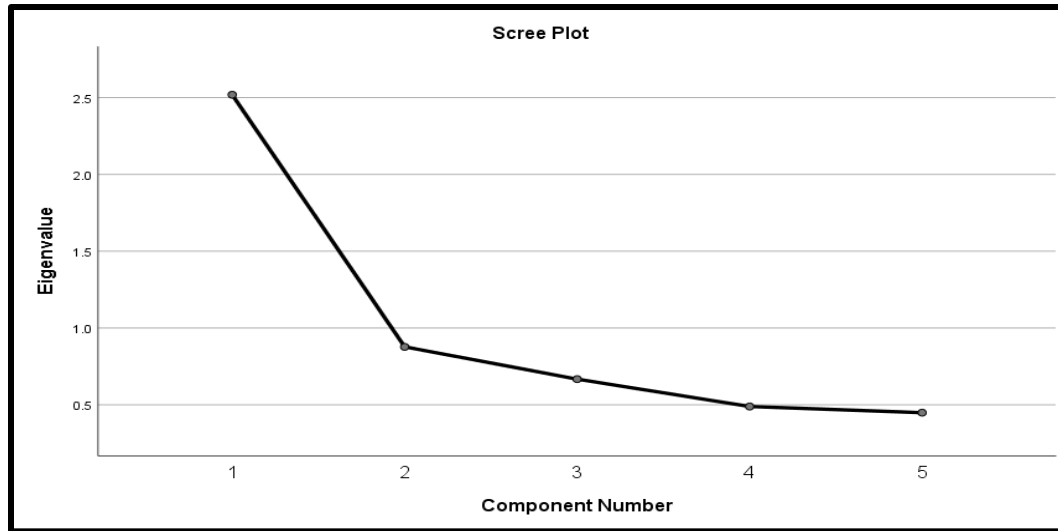
In subjecting the RM data to the EFA procedure, only one factor was extracted. One item RM2 was discarded from the scale due to low communality (0.173) which is below the recommended threshold. The resultant factor structure is presented in Table 6.6.

**Table 6.6: Unidimensional factor structure for the Resource Mobilisation scale**

ITEM CODE	Description	Communalities	Factor
			1
RM1	Our company has enough resources to support service delivery.	0.567	<b>0.753</b>
RM3	In our company, there is adequate quality technical support personnel.	0.427	<b>0.654</b>
RM4	Our company has sufficient funds to pursue new developments in customer support delivery.	0.564	<b>0.751</b>
RM5	Our company has adequate capital to acquire the necessary resources.	0.441	<b>0.664</b>
RM6	Our company has access to the information required to make key decisions on product/service development	0.519	<b>0.721</b>
<b>Eigenvalue</b>			<b>2.519</b>
<b>Total variance explained</b>			<b>50.373</b>
<b>Cumulative variance explained</b>			<b>50.373</b>

**Source:** Author's own compilation

As shown in Table 6.6, only one factor was extracted on the RM scale. The factor was composed of five items which contributed 50 percent of the variance in RM. The remaining 50 percent of the variance is explained by other extraneous factors not considered in this study. The factor loadings accepted in this study ranged from 0.654 to 0.753, which is greater than the minimum cut-off value of 0.5. The communalities valued ranged from 0.427 to 0.567 which too are above the acceptable threshold of above 0.3. The scree plot further supports that only one factor with an eigenvalue greater than 1 was extracted.



**Figure 6.10: Scree plot for RM values**

**Source:** Exported from SPSS (Version 25.0)

Figure 6.10 presents the scree plot for resource mobilisation, further supporting the eigenvalues shown in Table 6.6. It shows the one-dimensionality of the resource mobilisation scale as only one factor was extracted in the EFA procedure. The unidimensional factor structure for resource mobilisation attained an eigenvalue of 2.519. The attainment of a unidimensional factor structure indicates that the resource mobilisation items used in this study measured what they intended to measure.

### 6.5.2 Exploratory Factor Analysis for the Infrastructure Development Scale

In subjecting the infrastructure development data to the EFA procedure, two factors were extracted. However, the second factor was removed and discarded as it contains only two items. The resultant of the factor structure is presented in Table 6.7.

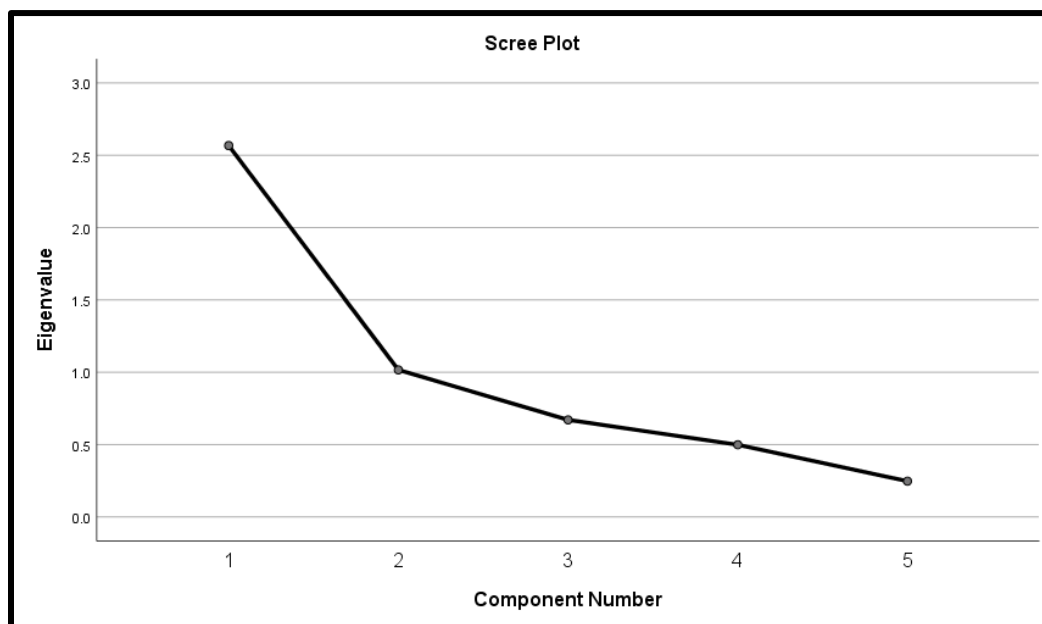
**Table 6.7: Two-factor rotated structure for the ID scale**

ITEM CODE	Description	Communalities	Factor	
			1	2
ID1	In our company, the development of infrastructure is based on concern for the environment.	0.626	<b>0.784</b>	-0.108
ID2	In our company, there is enough employee expertise concerning customer needs (intellectual capital).	0.515	<b>0.715</b>	0.064

ITEM CODE	Description	Communalities	Factor	
			1	2
ID3	Our company has adequate physical infrastructure and facilities.	0.783	<b>0.883</b>	-0.063
ID4	In our company, there is an advanced infrastructural development strategy.	0.672	<b>0.814</b>	0.097
ID5	In our company, there is adequate office space.	0.987	-0.01	<b>0.994</b>
<b>Eigenvalue</b>			<b>2.567</b>	<b>1.016</b>
<b>Total variance explained</b>			<b>51.343</b>	<b>20.325</b>
<b>Cumulative variance explained</b>			<b>51.343</b>	<b>71.668</b>

**Source:** Author's own compilation

As presented in Table 6.7, two factors were extracted in the EFA procedure for the infrastructure development scale. The two factors explained 72 percent of the variance in the infrastructure development scale. Factor one accounted for 51.343 percent of the total variance while Factor 2 accounted for 20.325 percent. The loading for both factors was acceptable and ranged from 0.715 to 0.994, which is above the threshold of 0.5 while the communality values ranged from 0.515 to 0.987 which is above the minimum cut-off value of 0.3. The scree plot further supported that only two factors were extracted since they had eigenvalues greater than 1, as presented in Figure 6.11.



**Figure 6.11: Scree plot for Infrastructure development values**



**Source:** Exported from SPSS (Version 25.0)

As indicated in Figure 6.10, two factors were extracted in the EFA procedure for the infrastructure development scale. However, the second factor was discarded and removed from the scale since it had only one item (ID5). Various scholars (Osborne & Costello, 2009:3; Matsunanga, 2010:97; Samuels, 2016:2) recommend that a factor (latent variables) should at least have three items to be retained, for a factor with less than three items is generally considered weak, unstable, and manned up with identification problems as well as poor/low reliabilities. Following this, the infrastructure development scale used in further analysis of data was composed of items (ID 1, 2, 3 & 4), which explained 51 percent of the variance and had an eigenvalue of 2.567.

### 6.5.3 Exploratory Factor Analysis for the Employee Training Scale

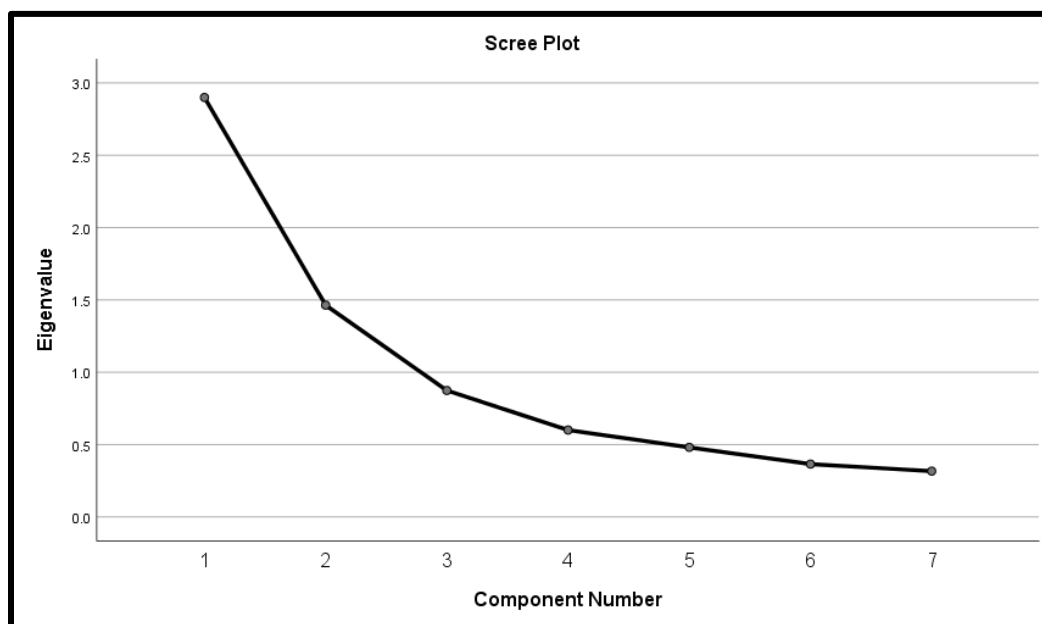
In subjecting the Employee training data to the EFA procedure, a two-factor structure was realised. The results of the factor structure are presented in Table 6.8.

**Table 6.8: Two-factor rotated structure for the ET scale**

ITEM CODE	Description	Communalities	Factor	
			1	2
ET1	Our company has regular training programs for its employees	0.675	<b>0.821</b>	-0.015
ET2	In our company, training programs are designed based on job requirements.	0.720	<b>0.844</b>	0.092
ET3	The type of training that is offered within our company applies to the job	0.491	<b>0.676</b>	0.183
ET4	In our company, the objectives of the training are well known.	0.532	<b>0.647</b>	0.336
ET5	The training performed in our company has led to an increase in job satisfaction among employees.	0.593	0.204	<b>0.743</b>
ET6	The training implemented in our company has improved the skills and knowledge of employees.	0.625	0.129	<b>0.780</b>
ET7	The training implemented in our company has led to a change in the attitudes of employees.	0.728	0.053	<b>0.851</b>
<b>Eigenvalue</b>			<b>2.900</b>	<b>1.464</b>
<b>Total variance explained</b>			<b>41.422</b>	<b>20.913</b>
<b>Cumulative variance explained</b>			<b>41.422</b>	<b>62.335</b>

**Source:** Author's own compilation

As revealed in Table 6.8, two factors were extracted in the EFA procedure in the employee training scale. The two factors explained 62 percent of the variance in employee training. Factor 1 accounted for 41 percent of the total variance while Factor 2 accounted for 21 percent. The remaining 38 percent is explained by other factors that were not considered in the current study. The communalities for both factors were acceptable since they were above the cut-off value of 0.3. Similarly, the factor loadings of both Factor 1 and 2 were acceptable and ranged from 0.647 to 0.851, which is above the cut-off threshold of 0.5. The scree plot further supporting that only two factors were extracted from the EFA procedure for employee training is presented in Figure 6.12.



**Figure 6.12: Scree plot for Employee training values**

**Source:** Exported from SPSS (Version 25.0)

As presented in Figure 6.12, two factors were extracted and were retained. The first of the two extracted factors retained the label Employee training and accounted for 41 percent of the total variance. Factor 2 was labelled Employee Training Outcomes (ETO) and accounted for 21 percent of the variance in Employee training. Factor 1 had an eigenvalue of 2.900, whereas factor 2 (ETO) had an eigenvalue of 2.464. Both factors were retained for use in further data analysis in the present study. Employee Training Outcomes (ETO), according to Andriotis (2020:1), refers to the measurable goals that employees are expected to achieve at the end of a training programme. Training outcomes help in tying a training program with actual business results (Devins, Johnson

& Sutherland, 2004:449), and have an effect on the attitudes of employees, which in turn makes them perform well with proficiency (Sheeba & Christopher, 2020:264). Employee training outcomes aim to elicit various attributes of employees such as innovative work behaviour, affective commitment, work proficiency, and conflict management, leading to improved performance and productivity (Ramli, Anuar, Rosli & Jamaladan, 2018:1; Sheeda & Christopher, 2020:265).

#### 6.4.4 Exploratory Factor Analysis for the SME Innovativeness Scale

The EFA procedure was conducted for the Innovativeness scale, and two factors were extracted, as shown in Table 6.9.

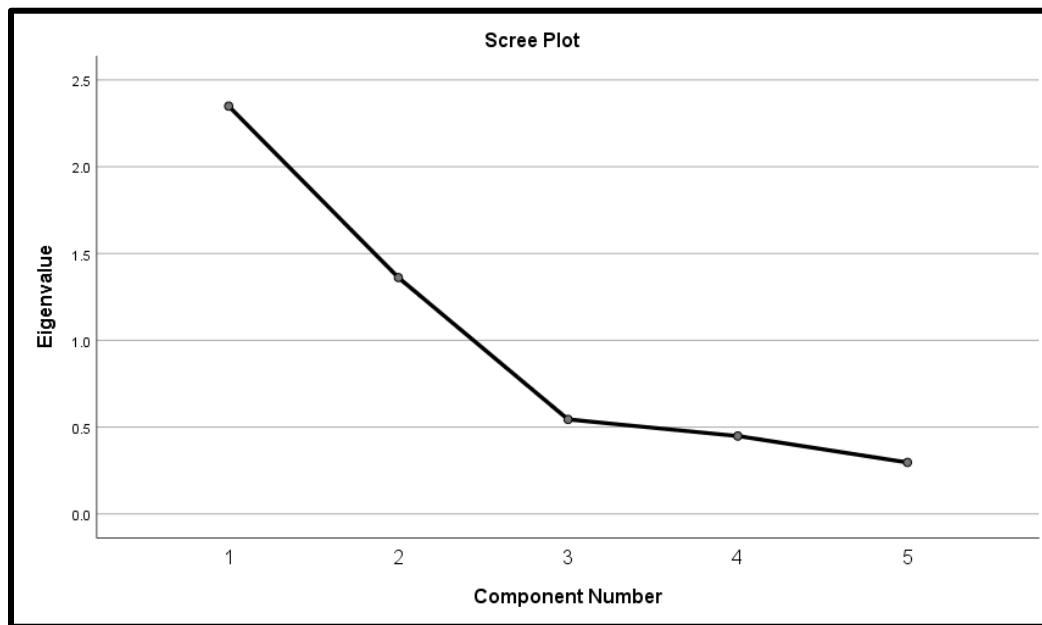
**Table 6.9: Two-factor rotated structure for the Innovativeness scale**

ITEM CODE	Description	Communalities	Factor	
			1	2
IV1	In our company, technical innovations based on research results are accepted quickly.	0.839	-0.023	<b>0.916</b>
IV2	In our company, importance is given to innovative ideas regarding products and services	0.723	0.181	<b>0.831</b>
IV3	In our company, innovations are accepted easily in projects.	0.723	<b>0.850</b>	-0.014
IV4	In our company, employees are not punished even if their ideas do not work.	0.670	<b>0.680</b>	0.455
IV5	Innovativeness is encouraged in the company.	0.755	<b>0.867</b>	0.061
<b>Eigenvalue</b>			<b>2.349</b>	<b>1.361</b>
<b>Total variance explained</b>			<b>46.982</b>	<b>27.229</b>
<b>Cumulative variance explained</b>			<b>46.982</b>	<b>74.211</b>

**Source:** Author's own compilation

As indicated in Table 6.9, two factors were extracted from the EFA procedure for Innovativeness. Factor 1 explained 47 percent of the variance in the Innovativeness scale while Factor 2 explained 27 percent of the variance. The remaining 26 percent of the variance is explained by other extraneous factors that were not considered in this current study. The factor loadings of both Factor 1 and Factor 2 were acceptable and ranged from 0.680 to 0.916, which are all greater than the minimum cut-off value of 0.5. All the communalities values of the Innovativeness scale were acceptable since they ranged from 0.670 to 0.839 and were all above the minimum cut-off value

of 0.3. The scree plot further supports that only two factors with eigenvalues greater than 1 were extracted. This is presented in Figure 6.13.



**Figure 6.13: Scree plot for Innovativeness values**

**Source:** Exported from SPSS (Version 25.0)

As shown in Figure 6.13, the scree plot represents the Innovativeness scale. It demonstrates that the scale for IV consists of two factors that were extracted during the EFA procedure. The first Factor is composed of IV 3, 4, and 5, representing 47 percent of the total variance and an eigenvalue of 2.349. Factor 2 is composed of IV 1 and 2 and represents 27 percent of the total variance and had an eigenvalue of 1.361. However, for further analysis, Factor 2 was discarded and removed from the scales for having two items (IV 1 & 2) as per the recommendations of Samuels (2016:2) that a factor (latent variables) should have at least have three items to be retained in the EFA procedure. Therefore, the Innovativeness scale used in further analysis of data was composed of three items (IV 3, 4, & 5), which explained 47 percent of the variance.

### 6.5.6 Exploratory Factor Analysis for the General Sustainability Scale

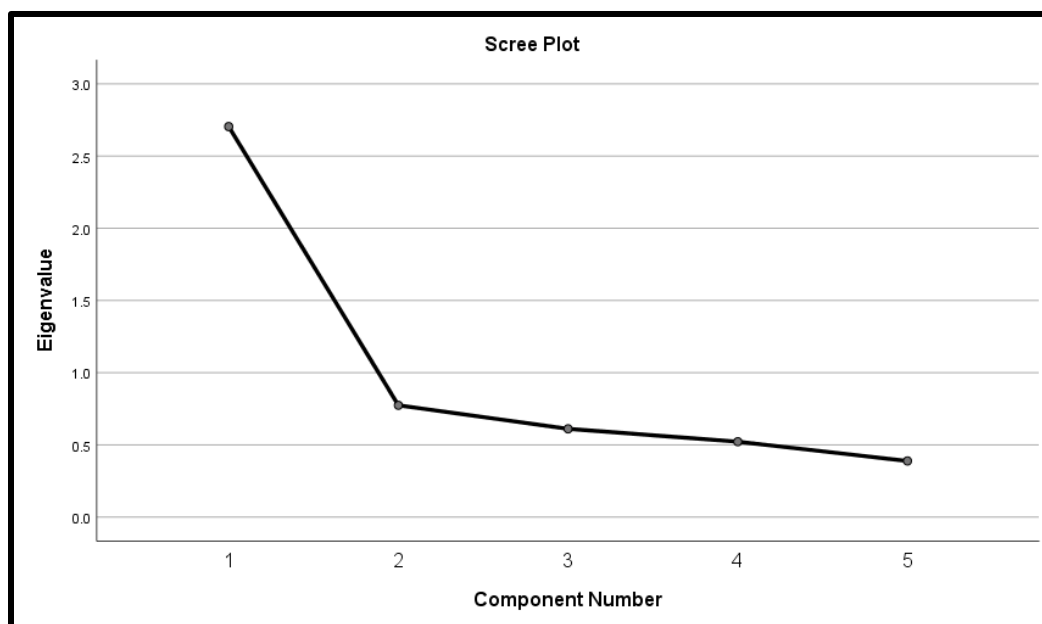
In subjecting the General Sustainability data to the EFA procedure, only one factor was extracted. One item (GS2) was removed and discarded from the scale due to a low communality value of 0.227. the result of the factor structure is presented in Table 6.10.

**Table 6.10: Unidimensional factor rotated structure for the General Sustainability scale**

<b>ITEM CODE</b>	<b>Description</b>	<b>Communalities</b>	<b>Factor</b>
			<b>1</b>
GS1	Acknowledgment of the importance of sustainability across the board.	0.698	<b>0.835</b>
GS3	Concern for environmental compliance and auditing.	0.440	<b>0.663</b>
GS4	Responsibility to help in making a difference on environmental issues such as waste and water use.	0.565	<b>0.752</b>
GS5	Striving to make a difference on social issues such as health and education.	0.525	<b>0.725</b>
GS6	Striving to make a difference on economic issues such as inflation and unemployment.	0.476	<b>0.690</b>
<b>Eigenvalue</b>			<b>2.704</b>
<b>Total variance explained</b>			<b>54.079</b>
<b>Cumulative variance explained</b>			<b>54.079</b>

**Source:** Author's own compilation

As indicated in Table 6.10, only one factor was extracted from the EFA procedure explained 54 percent of the variance in the General Sustainability scale. The remaining 46 percent is explained by other extraneous factors that were not considered in this study. The communalities were acceptable as they ranged from 0.440 to 0.698, which are above the cut-off value of 0.3. In the same way, the factor loadings were acceptable and ranged from 0.663 to 0.835, which is greater than the minimum cut-off value of 0.5. The scree plot further supports that only one factor was extracted since there is greater than 1, as presented in Figure 6.14.



**Figure 6.14: Scree plot for General Sustainability values**

**Source:** Exported from SPSS (Version 25.0)

As indicated in Figure 6.14, the scree plot represents the General Sustainability scale. It demonstrates that the scale for GS has a unidimensional factor structure as it extracted only one factor with an eigenvalue of greater than 1. This shows that the GS items measured what they intended to measure. The General Sustainability factor structure had an eigenvalue of 2.704.

### 6.5.7 Exploratory Factor Analysis for the Nature of Product Scale

In subjecting the Nature of Product data to the EFA procedure, a two-factor structure was realised. Table 6.11 presents the results of the factor structure for Nature of Product.

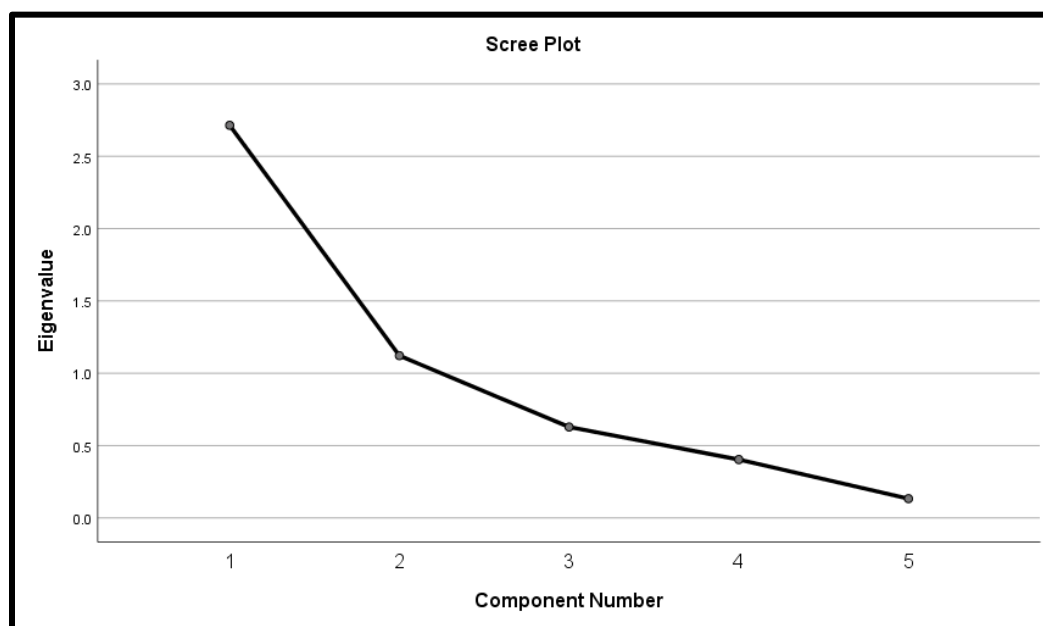
**Table 6.11: Two-factor rotated structure for the Nature of Product scale**

ITEM CODE	Description	Communalities	Factor	
			1	2
NP1	Assessment of the health and safety impacts of products and services	0.722	-0.400	<b>0.750</b>
NP2	Total number of incidents of non-compliance with health and safety regulations in the development and sale of products and services	0.904	<b>0.938</b>	-0.157
NP3	Type of product and service information required by procedures.	0.579	-0.409	<b>0.642</b>

ITEM CODE	Description	Communalities	Factor	
			1	2
NP4	A total number of incidents of non-compliance with regulations concerning product and service information and labelling.	0.896	<b>0.934</b>	-0.154
NP5	A total number of incidents of non-compliance with regulations concerning product and service information and labelling.	0.734	0.090	<b>0.852</b>
<b>Eigenvalue</b>			<b>2.714</b>	<b>1.122</b>
<b>Total variance explained</b>			<b>54.275</b>	<b>22.431</b>
<b>Cumulative variance explained</b>			<b>54.275</b>	<b>76.706</b>

**Source:** Author's own compilation

As presented in Table 6.11, two factors were extracted from the EFA procedure, and they explain 76 percent of the Nature of Product variance. The other 24 percent is explained by other factors that were not considered in this study. Factor one which is composed of 2 items (NP 2 & 4) explained 54 percent of the total variance, whereas Factor 2 was composed of items (NP 1, 3 & 5) explained 22 percent of the total Nature of Product variance. All the communalities were acceptable as they ranged from 0.579 to 0.904 and were above 0.3, which is the minimum cut-off value. Likewise, the factor loadings of all the factors were acceptable as they ranged from 0.642 to 0.938, which are above the recommended cut-off value of 0.5. The scree plot further supports a two factors eigenvalues greater than 1 were extracted.



### Figure 6.15: Scree plot for Nature of Product values

**Source:** Exported from SPSS (Version 25.0)

Figure 6.15 represents the scree plot for the Nature of Product scale, further supporting the eigenvalues in Table 6.10. The scree plot curve indicates that two factors were extracted from the EFA procedure. Factor 1 is composed of two items (NP 2 & 4) which represent 54 percent of the Nature of Product variance and had an eigenvalue of 2.714. On the other hand, Factor 2 is composed of three items (NP 1, 3 & 5) represents 22 percent of the total variance and had an eigenvalue of 1.122. However, Factor 1 was discarded for having two items as recommended by scholars (Osborne & Costello, 2009:3; Matsunaga, 2010:97; Samuels 2016:2) who submit that a factor (latent variables) should at least have three items to be retained, for a factor with less than three items is generally considered weak, unstable and manned up with identification problems as well as poor/low reliabilities. Thereupon, Factor 2 of Nature of Product composed of items (NP 1, 3 & 5) was retained and used for further analysis in the study.

### 6.5.7 Exploratory Factor Analysis for the Corporate Governance Scale

In subjecting Corporate Governance data to the EFA procedure, two factors were extracted. The resultant factor structure for Corporate Governance is presented in Table 6.12.

**Table 6.12: Two-factor rotated structure for the Corporate Governance scale**

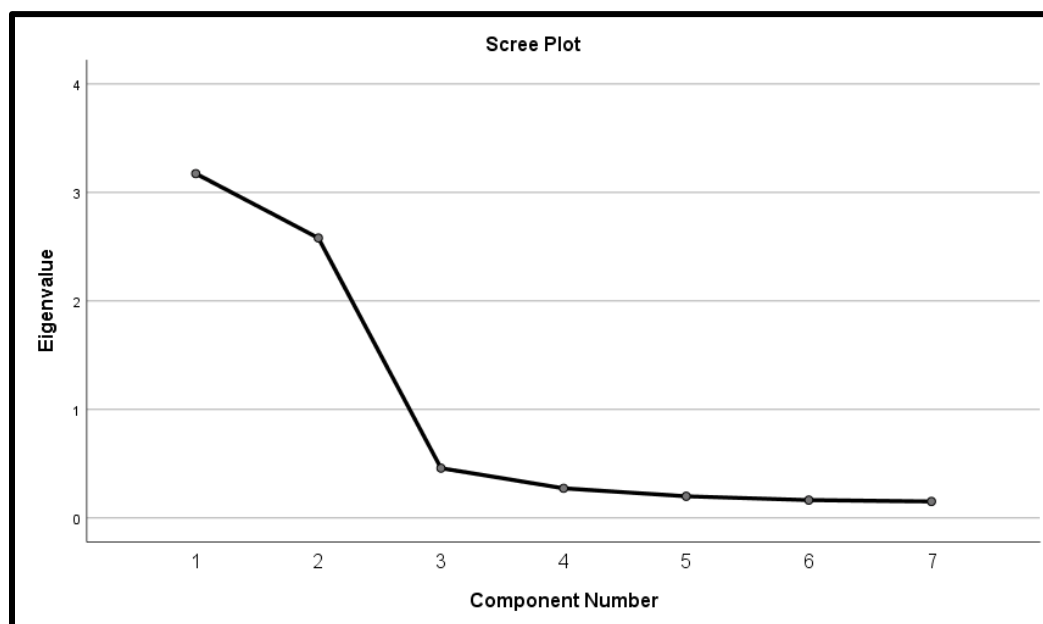
ITEM CODE	Description	Communalities	Factor	
			1	2
CG1	The total number of business units analysed for risks related to corruption	0.774	<b>0.880</b>	0.000
CG2	Number of employees trained in organisation's anti-corruption policies and procedures	0.856	<b>0.920</b>	-0.094
CG3	The total number of legal actions for anti-competitive behaviour, anti-trust, and monopoly practices and their outcomes	0.825	-0.031	<b>0.908</b>
CG4	Public policy positions and participation in public policy development and lobbying	0.713	<b>0.836</b>	0.123
CG5	Amounts of money paid by the company as fines for - non-compliance with laws and regulations	0.877	0.026	<b>0.936</b>
CG6	The value of non-monetary penalties paid by the company for non-compliance with laws and regulations	0.870	0.053	<b>0.931</b>
CG7	The total number of business units analysed for risks related to corruption	0.839	<b>0.916</b>	0.024



ITEM CODE	Description	Communalities	Factor	
			1	2
Eigenvalue			3.174	2.580
Total variance explained			45.339	36.859
Cumulative variance explained			45.339	82.198

**Source:** Author's own compilation

As depicted in Table 6.12, two factors extracted in the EFA procedure explain 82 percent of the Corporate Governance variance. The remaining 18 percent of the variance is explained by other extraneous factors not considered in this study. Factor 1 is composed of items (CG 1, 2, 4 & 7) that accounted for 45 percent of the variance, while Factor 2 is composed of items (GC 3, 5 & 6) that accounted for 37 percent of the variance. The communalities in both factors were above the recommended minimum cut-off value of 0.3 as they ranged from 0.713 to 0.877. Correspondingly, the factor loadings of both Factor 1 and 2 were acceptable as they ranged from 0.836 to 0.936, which is greater than the minimum cut-off value of 0.5. The scree plot further supports that two factors with eigenvalues greater than 1 were extracted, as presented in Figure 6.16.



**Figure 6.16:** Scree plot for Corporate Governance values

**Source:** Exported from SPSS (Version 25.0)

As indicated in Figure 6.16, two factors were extracted in the EFA procedure. The first of the two extracted factors retained the label Corporate Governance and accounted for 45 percent of the variance. Factor 2 was labelled Corporate Compliance to Policy (CCP) and accounted for 37 percent of the variance in Corporate Governance. Both factors were retained for use in further data analysis in the present study. Corporate compliance to policy relates to the adherence to both internal policies and procedures and federal and state laws (Parker & Gilad, 2011:1). Kelly (2019:1) defined it as the ability to lead large groups of people towards achieving specific standards of conduct. According to Andreiscova (2018:53), enforcing compliance helps organisations to get rid of compliance risks, keep the organisation on the right side of the law and preserve the organisation's reputation. Veugelers (2008:218) and Kyobe (2009:30) submit that factors such as perception of high compliance cost, lack of awareness, lack of training on compliance and security, perception of unfair regulation, and possession of inadequate security controls are the key factors that lead organisations to disregard rules and regulations.

### 6.5.8 Exploratory Factor Analysis for the Economic and Financial Sustainability Scale

In subjecting the economic and financial sustainability data to the EFA procedure, two factors were extracted. The resultant factor structure is presented in Table 6.13.

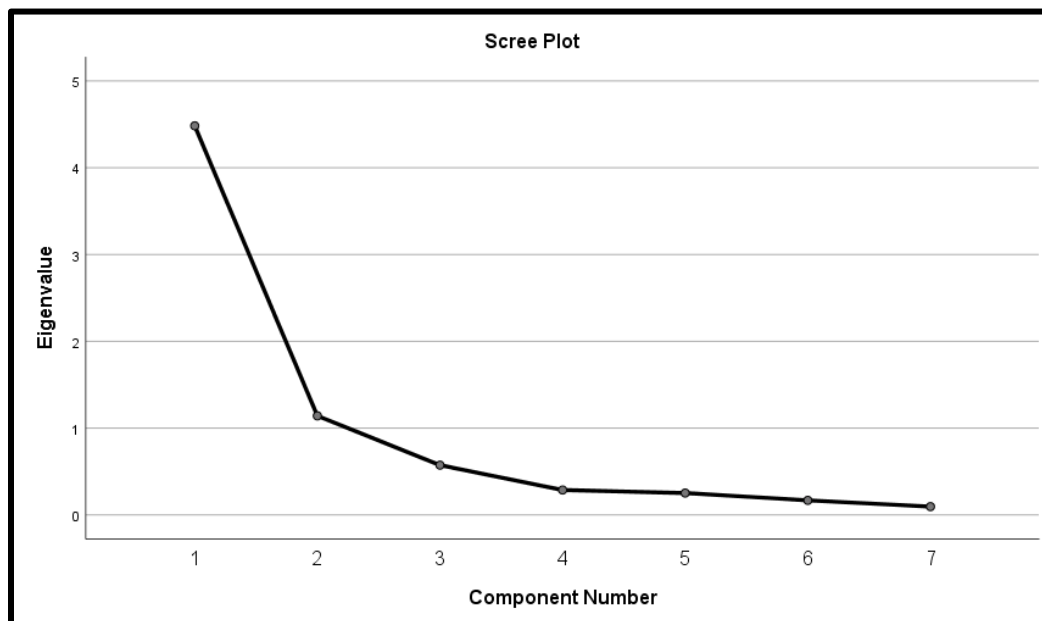
**Table 6.13: Two-factor rotated structure for the EF scale**

ITEM CODE	Description	Communalities	Factor	
			1	2
EF1	The number of profits made by the company	0.813	<b>0.878</b>	0.203
EF2	Amount of costs incurred by the company at all levels of operations	0.768	0.048	<b>0.875</b>
EF3	Overall financial health of the company	0.816	<b>0.851</b>	0.303
EF4	The ability of the company to meet its financial obligations towards employees	0.811	<b>0.792</b>	0.430
EF5	Value of financial assistance received from the government	0.658	0.308	<b>0.751</b>
EF6	Value of money spent on taking care of the environment	0.897	<b>0.944</b>	0.083
EF7	Amount of money spent in the procurement of products and services from local suppliers	0.861	<b>0.924</b>	0.091
<b>Eigenvalue</b>			<b>4.483</b>	<b>1.141</b>
<b>Total variance explained</b>			<b>64.043</b>	<b>16.304</b>

ITEM CODE	Description	Communalities	Factor	
			1	2
Cumulative variance explained			64.043	80.347

**Source:** Author's own compilation

As revealed in Table 6.13, two factors were extracted in the EFA procedure in the economic and financial sustainability scale. The two factors explained 80 percent of the variance in economic and financial sustainability. Factor 1 accounted for 64 percent of the variance, while Factor 2 accounted for 16 percent. The communalities for both factors were acceptable and ranged from 0.658 to 0.897, which is greater than the minimum cut-off value of 0.3. Equally, the factor loadings of both factors were acceptable as they ranged from 0.751 to 0.944, which is greater than the minimum cut-off value of 0.5. The scree plot further supporting that only two factors were extracted since they had eigenvalues greater than 1 is presented in Figure 6.17.



**Figure 6.17: Scree plot for economic and financial sustainability values**

**Source:** Exported from SPSS (Version 25.0)

As presented in Figure 6.17, two factors were extracted from the economic and financial sustainability scale. Although two factors were extracted from the economic and financial sustainability scale, the second factor (composed of EF 2 & 5) was discarded for having 2 items

measuring its scale as suggested by scholars (Matsunanga, 2010:97; Samuel's 2016:2) who recommend that a factor (latent variables) should at least have three items to be retained, for a factor with less than three items, is generally considered weak, unstable and manned up with identification problems as well as poor/low reliabilities. Therefore, the economic and financial sustainability scale used in the further analysis was composed of five items (EF 1, 3, 4.6 & 7), which in total explained 64 percent of the variance and had an eigenvalue of 4.483.

### 6.5.9 Exploratory Factor Analysis for the Environmental Scale

The EFA procedure was conducted for the Environmental scale. Only one factor was extracted, as shown in Table 6.14.

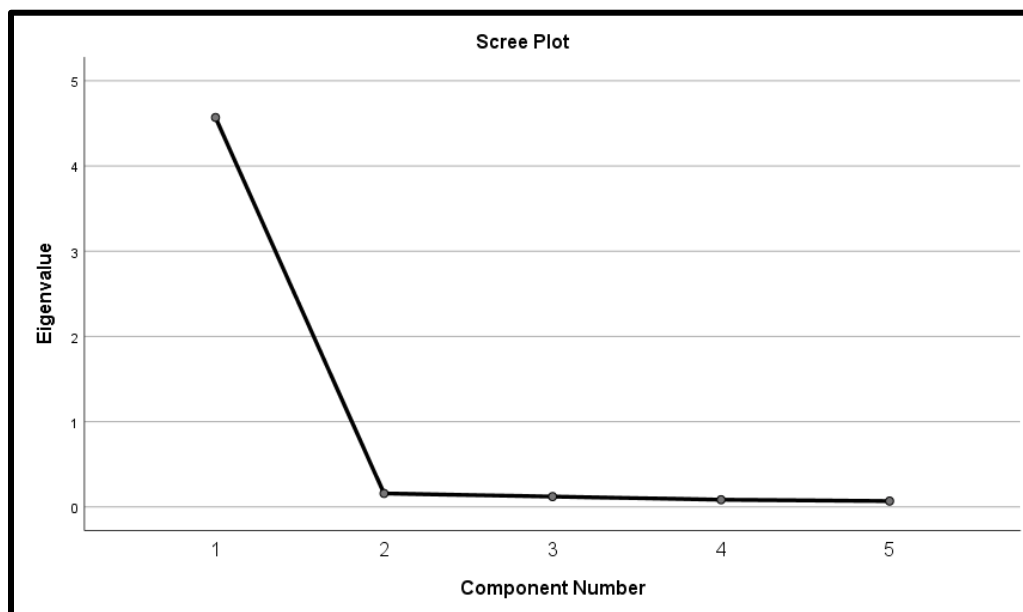
**Table 6.14: Unidimensional factor rotated structure for the Environmental scale**

ITEM CODE	Description	Communalities	Factor
			1
EN1	Using a life cycle analysis to evaluate the environmental friendliness of products	0.900	<b>0.949</b>
EN2	Using clean production technologies and best practices	0.938	<b>0.969</b>
EN3	Promotion and implementation of environmental laws and regulations	0.908	<b>0.953</b>
EN4	Environmental laws and regulations for staff education and publicity to raise environmental awareness	0.915	<b>0.956</b>
EN5	Regular inspection and maintenance of environmental protection facilities and equipment	0.907	<b>0.952</b>
<b>Eigenvalue</b>			<b>4.569</b>
<b>Total variance explained</b>			<b>91.373</b>
<b>Cumulative variance explained</b>			<b>91.373</b>

**Source:** Author's own compilation

As shown in Table 6.14, only one factor was extracted on the Environmental sustainability scale. The factor was composed of five items which contributed 91 percent of the variance in Environmental sustainability. The other remaining 9 percent is explained by factors that were not considered in this study. Factor loadings were acceptable and ranged from 0.949 to 0.969, which is greater than the minimum cut-off value of 0.5. Likewise, the communalities of the Environmental scale were acceptable and ranged from 0.900 to 0.938, which is greater than the

minimum cut-off value of 0.3. The scree plot further supporting that only one factor was extracted, with an eigenvalue greater than 1 as presented in Figure 6.10.



**Figure 6.18: Scree plot for Environmental sustainability values**

**Source:** Exported from SPSS (Version 25.0)

From 6.18 represents the scree plot for the Environmental sustainability scale. It shows that the scale for environmental sustainability has a unidimensional factor structure as it extracted only one factor with an eigenvalue of greater than 1. This indicates that the environmental sustainability items measured what they intended to measure. The environmental sustainability scale had an eigenvalue of 4.569.

#### 6.5.10 Exploratory Factor Analysis for the Social Sustainability Scale

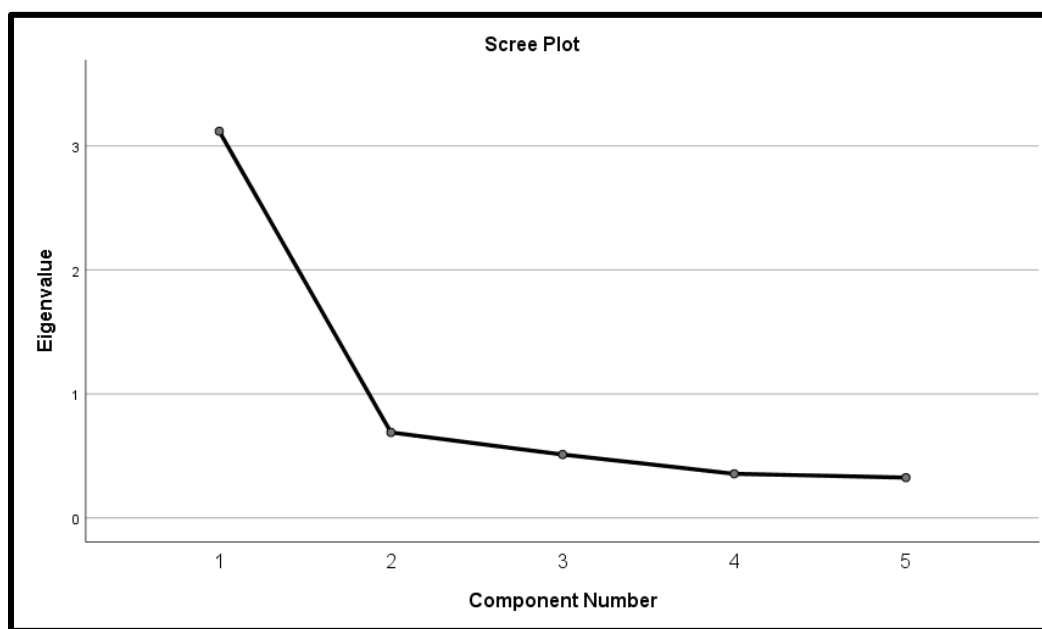
In subjecting Social Sustainability data to the EFA procedure, only one factor was extracted. One item (SS3) was removed and discarded from the scale to low communalities 0.043. the result of the factor structure is presented in Table 6.15.

**Table 6.15: Unidimensional factor rotated structure for the Social Sustainability scale**

ITEM CODE	Description	Communalities	Factor
			1
SS1	Reduction in the impacts and risks to the general public	0.576	<b>0.759</b>
SS2	Improvement in occupational health and safety of employees	0.565	<b>0.751</b>
SS4	Improvement in product image	0.670	<b>0.818</b>
SS5	Improvement in firm's social reputation	0.664	<b>0.815</b>
SS6	Reduction in the impacts and risks to the general public	0.644	<b>0.802</b>
<b>Eigenvalue</b>			<b>3.118</b>
<b>Total variance explained</b>			<b>62.366</b>
<b>Cumulative variance explained</b>			<b>62.366</b>

**Source:** Author's own compilation

As indicated in Table 6.15, only one factor extracted from the EFA procedure explained 62 percent of the variance in the Social Sustainability scale. The remaining 38 percent is explained by other extraneous factors that were not considered in this study. Factor loadings were acceptable and ranged from 0.751 to 0.818, which is greater than the minimum cut-off value of 0.5. Similarly, the communalities of the Social Sustainability scale were acceptable and ranged from 0.565 to 0.670, which is greater than the minimum cut-off value of 0.3. The scree plot further supports that only one factor was extracted, which had an eigenvalue which is greater than 1.



**Figure 6.19: Scree plot for Social Sustainability values**

**Source:** Exported from SPSS (Version 25.0)

Figure 6.19 represents the scree plot for Social Sustainability, further supporting the eigenvalue shown in Table 6.14. the scree plot curve shows that one factor was extracted, and it had an eigenvalue of 3.118. Hence, the Social Sustainability factor structure is unidimensional as shown in Figure 6.19, as there is only one eigenvalue which is above 1.

#### 6.5.11 Exploratory Factor Analysis for the climate change Scale

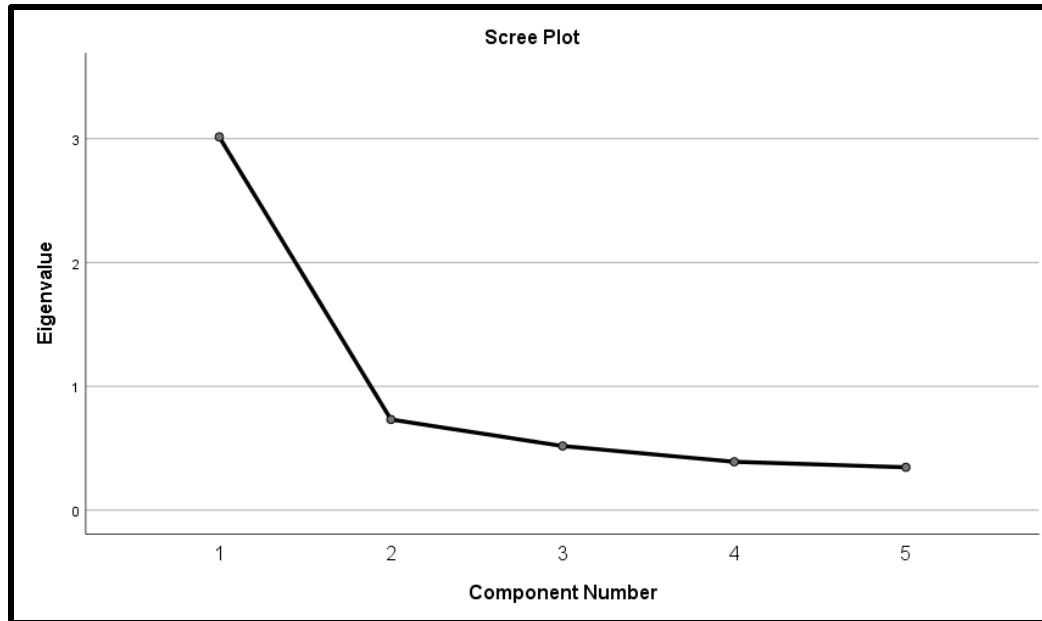
Only one factor was extracted from the data set on the climate change data for the EFA procedure. The result of the factor structure is presented in Table 6.16.

**Table 6.16: Unidimensional factor rotated structure for the Climate Change scale**

ITEM CODE	Description	Communalities	Factor
			1
CC1	Reduction in waste (water and/or solid)	0.516	<b>0.718</b>
CC2	Reduction in toxic emissions	0.590	<b>0.768</b>
CC3	Decrease of consumption for hazardous/harmful/toxic materials	0.692	<b>0.832</b>
CC4	Decrease of frequency for environmental accidents	0.627	<b>0.792</b>
CC5	Improvement in an enterprise's environmental situation.	0.590	<b>0.768</b>
<b>Eigenvalue</b>			<b>3.015</b>
<b>Total variance explained</b>			<b>60.291</b>
<b>Cumulative variance explained</b>			<b>60.291</b>

**Source:** Author's own compilation

As revealed in Table 6.16, the one factor that was extracted from the EFA procedure explained 60 percent of the variance in climate change. The remaining 40 percent is explained by other factors that were not considered in the current study. The communalities for the climate change scale were acceptable and ranged from 0.516 to 0.692, which is greater than the minimum cut-off value of 0.3. Likewise, factor loadings were acceptable and ranged from 0.718 to 0.832, which is greater than the minimum cut-off value of 0.5. The scree plot further supports that only one factor was extracted with an eigenvalue greater than 1.



**Figure 6.20: Scree plot for Climate Change values**

**Source:** Exported from SPSS (Version 25.0)

Figure 6.20 depicts the total eigenvalue for the climate change scale. It shows the unidimensionality of the climate change scale as only one factor was extracted in the EFA procedure. The unidimensional factor structure for climate change attained an eigenvalue of 3.015. The attainment of the unidimensional factor structure shows that the climate change items used in this study measured what they intended to measure.

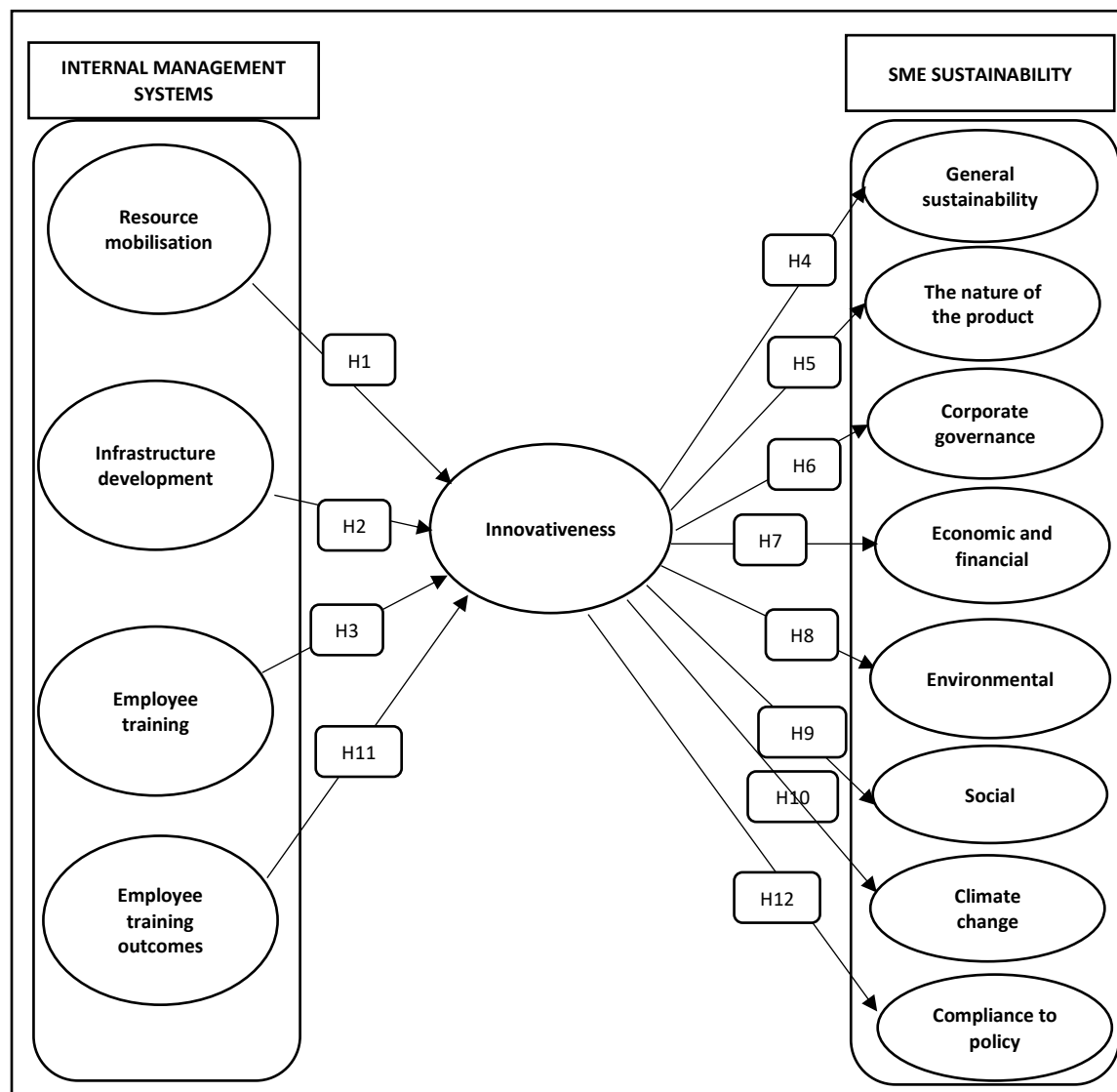
The next section discusses the revised conceptual model developed based on the EFA results.

## 6.6 Revised Conceptual Model Developed Based on Exploratory Factor Analysis

After the EFA procedure, a conceptual model was developed based on the data structure generated. During the EFA procedure, two more factors to Employee training and corporate governance constructs (refer to Section 6. 5.3 & 6,5.7) were identified. The identified factors were given different labels. The first factor in the Employee training construct (item ET1, ET2, ET3, ET4) retained the name Employee training, while the second factor was labelled as employee training outcomes (ETO) (Items ET5, ET6 & ET7). In the Corporate governance construct the first factor (Items CG1, CG2, CG4 & CG7) retained the label Corporate governance while the second factor



was labelled compliance to policy (CCP) (Items CG3, CG5 & CG6). Consequently, a new (revised) conceptual model was developed and is presented in Figure 6.21.



**Figure 6.21: A revised conceptual model for Internal Management Systems, Innovativeness and SME Sustainability in the SMEs manufacturing industry in South Africa.**

**Source:** Compiled by author

As depicted in the revised conceptual model, new hypotheses (H11 & H12) have been formulated, linking Employee Training Outcomes and Innovativeness Compliance to policy. The conceptual model demonstrates the new relationship structure that was followed and examined henceforth in the present study. The 12 revised hypotheses of the study read as follows:

**H1:** There is a significant positive relationship between resource mobilisation and innovativeness among SMEs in the South African manufacturing industry.

**H2:** There is a significant positive relationship between infrastructure development and innovativeness among SMEs in the South African manufacturing industry.

**H3:** There is a significant positive relationship between employee training and innovativeness among SMEs in the South African manufacturing industry.

**H4:** There is a significant positive relationship between innovativeness and general sustainability factors among SMEs in the South African manufacturing industry.

**H5:** There is a significant positive relationship between innovativeness and the nature of the product among SMEs in the South African manufacturing industry.

**H6:** There is a significant positive relationship between innovativeness and corporate governance among SMEs in the South African manufacturing industry.

**H7:** There is a significant positive relationship between innovativeness and economic and financial sustainability among SMEs in the South African manufacturing industry.

**H8:** There is a significant positive relationship between innovativeness and environmental sustainability among SMEs in the South African manufacturing industry.

**H9:** There is a significant positive relationship between innovativeness and social sustainability among SMEs in the South African manufacturing industry.

**H10:** There is a significant positive relationship between innovativeness and the consideration of climate change among SMEs in the South African manufacturing industry.

**H11:** There is a significant positive relationship between employee training outcomes and innovativeness among SMEs in the South African manufacturing industry.

**H12:** There is a significant positive relationship between innovativeness and corporate compliance to policy among SMEs in the South African manufacturing industry.

The next section discusses the results of the analysis of descriptive statistics for the research constructs.

## **6.7 Descriptive Statistics for the Research Constructs**

This section is intended to address the first five empirical objectives of the study which are:

1. to explore the perceptions of SME owner-managers in the South African manufacturing sector regarding the implementation of internal management systems in their businesses;
2. to analyse the perceptions of SME owner-managers in the South African manufacturing sector regarding the levels of innovation in their businesses;
3. to examine the perceptions of SME owner-managers in the South African manufacturing sector regarding the sustainability of their businesses;
4. to determine the relationship between internal management factors and innovativeness among SMEs in the South African manufacturing sector; and
5. to establish the relationship between innovativeness and sustainability among SMEs in the South African manufacturing industry.

Descriptive statistics were applied to address the aforementioned empirical objectives. The descriptive statistics used in the current study included the minimum and maximum values, mean scores, and standard deviations. Minimum and maximum values represent the degree of strongly disagree or strongly agree as provided on the Likert scale. The standard deviation was used to determine how dispersed the data values were from the mean value. Also, Argostino's K-squared test, which considers the skewness and kurtosis. They were applied to establish the normality of data distribution and utilised to establish the normality of data distribution. The study applied the range of -2 to +2 for the skewness test as recommended by Trochim and Donnelly (2006:92) and George and Mallery (2010:22) while the range of -3 to +3 for kurtosis as recommended by Jain (2018:9). Wheeler (2011:9) submits that skewness and kurtosis are indicators of how balanced the data set is against the median but does not offer anything more than that. Therefore, there is minimal need to put much emphasis on skewness and kurtosis statistics.

The descriptive statistical analysis of each construct extracted in the EFA is thus presented in the next section.

#### **6.7.1 Descriptive statistics for Resource Mobilisation**

The descriptive statistics for Resource mobilisation are presented in Table 6.17.

**Table 6.17: Descriptive statistics for resource mobilisation**

Item	Description Valid: (n=500)	Minimum	Maximum	Mean	Standard deviation	Skewness	Kurtosis
RM1	Our company has enough resources to support service delivery.	1	5	<b>4.11</b>	0.873	-0.767	0.306
RM3	In our company, there is adequate quality technical support personnel.	1	5	<b>4.43</b>	0.655	-0.975	1.192
RM4	Our company has sufficient funds to pursue new developments in customer support delivery.	1	5	<b>4.44</b>	0.662	-1.217	2.595
RM5	Our company has adequate capital to acquire the necessary resources.	1	5	<b>4.50</b>	0.662	-1.501	3.793
RM6	Our company has access to the information required to make key decisions on product/service development	1	5	<b>4.57</b>	0.643	-1.804	5.103
Overall scale				<b>4.41</b>	0.567	-1.253	2.600
Likert scale: 1= Strongly disagree, 2= Disagree, 3=Moderately agree, 4=Agree, 5=Strongly agree							

**Source:** Author's own compilation

The five measurement items in Table 6.17 tested the respondent's perceptions of SME owner-managers in the manufacturing industry in South Africa towards Resource Mobilisation. Item RM scored a mean score of ( $\bar{x}$ =4.11: SD  $\pm$  0.873). This result demonstrates that owners-managers in the manufacturing SMEs in South Africa believe that they have enough resources to support service delivery. Regarding item RM3, a mean score of ( $\bar{x}$ =4.43: SD  $\pm$  0.655) was attained, suggesting that SMEs in South African industries are adequately equipped with quality technical support personnel. Item RM4, which measured the perception of owners-managers towards the sufficient funds to pursue new developments in customer support delivery, scored a mean score of ( $\bar{x}$ =4.44: SD  $\pm$  0.662). Item RM5 scored a mean of ( $\bar{x}$ =4.50: SD  $\pm$  0.662), demonstrating that SME owners/managers agree that their companies have adequate capital to acquire necessary resources. Item RM6 scored a mean value of ( $\bar{x}$ =4.57: SD  $\pm$  0.643). This result indicates that SMEs in the manufacturing industries have access to the information required to make key product/service development decisions.

As depicted in Table 6.16, all the scores for the items were above 4.0, and the overall mean score of ( $\bar{x}=4.41$ :  $SD \pm 0.567$ ) which demonstrates an inclination towards the ‘agree’ position on the Likert-scale. This result implies that SME owners in the South African manufacturing industry perceive that they have enough RM capabilities that enable them to achieve their goals. These results are consistent with a study conducted by Jagongo (2017:75), which found that SMEs, led by Kenya, are endowed with enough capabilities to solicit resources. However, a study by Garg and Kumar-De (2013:310) on SMEs in the emerging markets that most SMEs in India and South Africa concluded that there are challenges in resource mobilisation and therefore they should identify bottlenecks hampering them from soliciting enough resources by enhancing and adapting their capabilities according to their expertise. Another study by Farsi and Toghraee (2014:2) on SMEs in Iran observed that many SMEs die an infant death because they lack enough technical support personnel and are starved from enough information that would help them survive the harsh economic conditions.

Additionally, an analysis of the normality measures indicates a skewness range of -1.804 to -0.767 and a kurtosis range of 0.306 to 5.103. The values for skewness fall in the recommended cut of the value of -2 to +2 and only one item RM6 had a kurtosis of 5.103 which is above the recommended threshold of -3 to +3, signifying a distribution close to normality.

## 6.7.2 Descriptive statistics for Infrastructure Development

The descriptive statistics for Infrastructure Development are presented in Table 6.18.

**Table 6.18: Descriptive statistics for infrastructure development**

<b>Item</b>	<b>Description Valid: (n=500)</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Standard deviation</b>	<b>Skewness</b>	<b>Kurtosis</b>
ID1	In our company, the development of infrastructure is based on concern for the environment.	1	5	<b>4.41</b>	0.718	-1.582	4.261
ID2	In our company, there is well-developed environment sanitation (clean water and adequate sewage disposal).	1	5	<b>4.63</b>	0.674	-2.463	8.251
ID3	Our company has adequate physical infrastructure and facilities.	1	5	<b>4.13</b>	0.852	-1.080	1.720

Item	Description Valid: (n=500)	Minimum	Maximum	Mean	Standard deviation	Skewness	Kurtosis
ID4	In our company there is an advanced infrastructural development strategy.	1	5	4.42	0.655	-1.392	3.886
Overall scale				4.40	0.725	-1.629	4.530
Likert scale: 1= Strongly disagree, 2= Disagree, 3=Moderately agree, 4=Agree, 5=Strongly agree							

**Source:** Author's compilation

Table 6.18 provides insights into respondents' perceptions towards the six measurement items for Infrastructure Development in the South African SME manufacturing industry. Item ID1 attained a mean score of ( $\bar{x}$ =4.41: SD  $\pm$  0.718), which demonstrates that SMEs in the manufacturing industry develop their infrastructure based on their concern for the environment. Regarding item ID2, a mean score of ( $\bar{x}$ =4.63: SD  $\pm$  0.674) was calculated, indicating that SMEs in the manufacturing industry are equipped with well-developed environment sanitation to a certain extent. In item ID3, a mean score of ( $\bar{x}$ =4.13: SD  $\pm$  0.852) was recorded, indicating that respondents acknowledge that their companies have adequate physical infrastructure and facilities. Item ID4 recorded a mean score of ( $\bar{x}$ =4.42: SD  $\pm$  0.655), which indicates that SMEs in the manufacturing industry have an advanced infrastructural development strategy.

An overall mean score value of ( $\bar{x}$ =4.40: SD  $\pm$  0.725) was calculated for the Infrastructure Development scale. This mean score leans towards the 'agree' position on the Likert scale. These results indicate that owners-managers in SMEs in the manufacturing industry perceive that they have adequate and enough infrastructure to conduct their business. However, Obokoh and Goldman (2016:) in their study on SMEs in Nigeria conclude that the deficiency of infrastructure negatively impacts the profitability and performance of SMEs. Mugo, Kahuthia, and Kinyua (2019:134) in their study of SMEs in Kenya concluded that SMEs in the textile industry have the reasonable infrastructure to contribute to their business growth. Therefore, having adequate infrastructure in SMEs in the manufacturing industry in South Africa aids them to achieve their goals and manoeuvre their businesses around their problems.

An analysis of the normality of data indicates a skewness range of -2.463 to -1.080 and a kurtosis range of 1.720 to 8.251. However, the kurtosis values for ID 1, ID2, and ID4 were above the range signifying that the data was not normally distributed and had some tails.

### 6.7.3 Descriptive statistics for Employee Training

The descriptive statistics for Employee Training are presented in Table 6.19.

**Table 6.19: Descriptive statistics for employee training**

Item	Description Valid: (n=500)	Minimum	Maximum	Mean	Standard deviation	Skewness	Kurtosis
ET1	Our company has regular training programmes for its employees	2	5	<b>4.43</b>	0.550	-1.500	3.972
ET2	In our company, training programmes are designed based on job requirements.	1	5	<b>4.51</b>	0.665	-1.579	3.815
ET3	The type of training that is offered within our company applies to the job	1	5	<b>4.44</b>	0.721	-1.639	4.260
ET4	In our company, the objectives of the training are well known.	0	5	<b>4.44</b>	0.734	-1.745	5.121
Overall scale				<b>4.46</b>	0.668	-1.62	4.29
Likert scale: 1= Strongly disagree, 2= Disagree, 3=Moderately agree, 4=Agree, 5=Strongly agree							

**Source:** Author's compilation

As indicated in Table 6.19, four items measured the perceptions of respondents on Employee Training in the manufacturing SMEs in South Africa. Item ET1 scored a mean score of ( $\bar{x}$ =4.43: SD  $\pm$  0.550). This result implies that SMEs in the manufacturing industry in South Africa have regular training programmes for their employees. In item ET2 a mean score of ( $\bar{x}$ =4.51: SD  $\pm$  0.665) was calculated, indicating that SMEs in the manufacturing industry plan their training programmes are designed based on job requirements. Concerning item ET3, a mean score of ( $\bar{x}$ = 4.44: SD  $\pm$  0.721) was recorded, which indicates that the type of training offered in SMEs applies to the jobs required. The responses into item ET4 ( $\bar{x}$ = 4.44: SD  $\pm$  0.734) the mean score shows that SMEs in the manufacturing industry objectives of the training are well defined and known.

The overall mean score for Employee Training was ( $\bar{x}$  = 4.46: SD  $\pm$  0.668) which illustrates an inclination towards the ‘agree’ position on the Likert scale. These results imply that SME owners/managers in the manufacturing industry perceive that they initiate enough employee training initiatives in their organisations to capacitate their employees. These results are consistent with the study conducted by Ferreira and Velincas (2016:3), which observed that the pursuit of competitive advantage has made SMEs in Portugal invest in training their employees. Mafini and Omoruyi (2013:156) concluded that well-trained employees are well informed regarding the way business operates and can convert the opportunities surrounding them towards the success of the organisation. Therefore, the remarkable training and development programme in SMEs operating in the South African manufacturing industry enables them to equip their employees with the necessary skills.

An analysis of the measures of the normality of data shows that a skewness range of -1.639 to -1.500 and a kurtosis range of 3.815 to 5.121. The skewness values fall within the recommended cut-off values of -2 to +2, whilst all the values for kurtosis were above the recommended cut-off values of -3 to +3.

#### 6.7.4 Descriptive statistics for Employee Training Outcomes

The descriptive statistics for Employee Training Outcomes are presented in Table 6.20. The construct Employee Training Outcomes is a new construct that was extracted in the EFA procedure. A brief theory about this is provided in Section 6.5.3.

**Table 6.20: Descriptive statistics for employee training outcomes**

<b>Item</b>	<b>Description Valid: (n=500)</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Standard deviation</b>	<b>Skewness</b>	<b>Kurtosis</b>
ET05	The training performed in our company has led to an increase in job satisfaction among employees.	1	5	<b>4.29</b>	0.707	-1.167	2.960
ET06	The training implemented in our company has improved the skills and knowledge of employees.	1	5	<b>4.33</b>	0.787	-1.235	1.862
ET07	The training implemented in our company has led to a change in the attitudes of employees.	1	5	<b>4.25</b>	0.779	-0.868	0.629



Item	Description Valid: (n=500)	Minimum	Maximum	Mean	Standard deviation	Skewness	Kurtosis
Overall scale				4.29	0.758	-1.09	1.82
Likert scale: 1= Strongly disagree, 2= Disagree, 3=Moderately agree, 4=Agree, 5=Strongly agree							

**Source:** Author's compilation

Table 6.20 represents the descriptive statistics for employee training outcomes. The employee training outcomes construct was measured using three items as indicated in Table 6.19. Item ETO5 scored a mean score of ( $\bar{x}$ = 4.29: SD  $\pm$  0.707), which depicts that the training performed in their organisations has led to increased job satisfaction among employees. Regarding item ETO6, a mean score of ( $\bar{x}$ = 4.33: SD  $\pm$  0.787) was calculated, which shows that respondents agreed that the training conducted in their organisations had improved the skills and knowledge of employees. Concerning item ETO7, a mean score of ( $\bar{x}$ = 4.25: SD  $\pm$  0.779) was computed, which shows that the training implemented in their companies has led to a change in the attitudes of employees.

The overall mean score for the employee training outcomes scale was ( $\bar{x}$ = 4.29: SD  $\pm$  0.758) which illustrates an inclination towards the 'agree' position in the Likert scale. These results imply SME owners/managers in the manufacturing industry perceive that the training outcomes in their organisations are well articulated and well defined. However, studies by Lampretch (2011:32) and Cuihong (2018:56) observed that there is a challenge among the SMEs that is aligned to poor skills, and this forms the major reason why most SMEs fail as many organisations are established by passion for doing business and the need for a source of livelihood rather than on skills. Hence, the need for training and development programmes in SMEs. Therefore, SMEs in their need to capacitate their employees should ensure that training outcomes are well defined as they will enable them to measure the effectiveness of the programmes they are implementing.

Additionally, an analysis of the normality measures indicates a skewness range of -1.235 to -0.868 and a kurtosis range of 0.629 to 2.960. These values fall within the recommended cut-off values of -2 to +2 for skewness and -3 to +3 for kurtosis, signifying a distribution close to normality.

### 6.7.5 Descriptive statistics for Innovativeness

The descriptive statistics for Innovativeness are presented in Table 6.21.

**Table 6.21: Descriptive statistics for innovativeness**

Item	Description Valid: (n=500)	Minimum	Maximum	Mean	Standard deviation	Skewness	Kurtosis
IV3	In our company, innovations are accepted easily in projects.	1	5	<b>4.26</b>	0.790	-1.051	1.315
IV4	In our company, employees are not punished even if their ideas do not work.	1	5	<b>3.86</b>	0.784	-0.808	1.665
IV5	Innovativeness is encouraged in the company.	1	5	<b>4.24</b>	0.776	-0.954	1.169
Overall scale				<b>4.12</b>	0.783	-0.938	1.383
Likert scale: 1= Strongly disagree, 2= Disagree, 3=Moderately agree, 4=Agree, 5=Strongly agree							

**Source:** Author's compilation

Table 6.21 represents the descriptive statistical results of the Innovativeness scale. In item IV3, a mean score of ( $\bar{x}$ = 4.26: SD  $\pm$  0.790) was realised. The result demonstrates that SMEs in the manufacturing industry innovations are accepted in their organisations. Item IV4 scored a mean score of ( $\bar{x}$ = 3.86: SD  $\pm$  0.784), which indicates that owners/managers in the SME manufacturing industry moderately agree that their employees are not punished if their ideas do not work. Regarding item IV5, a mean score of ( $\bar{x}$ = 4.24: SD  $\pm$  0.776) was calculated, implying that innovativeness is encouraged in their organisations.

The overall mean score for IV was ( $\bar{x}$ = 4.12: SD  $\pm$  0.783), which illustrates an inclination towards the 'agree' position on the Likert scale. This result implies that there is a decent level of accepting innovativeness in SMEs in the South African manufacturing industry. Similar to the present study, Mulweye and Paul (2018:206) established that the adoption and acceptance of innovativeness in SMEs positively affect SME's performance. The results of this study also align with the study by Exposito and Sanchis-Llopis (2019:115), which highlights that SME managers and innovation decision-makers should accept and allow their employees to explore their ideas without the fear of being reprimanded. As such, the decency adoption of innovative SMEs in the South African

manufacturing industry can propel SMEs to grow big and gain a competitive advantage in the manufacturing industry.

Additionally, an analysis of the normality measures indicates a skewness range of -1.051 to -0.808 and a kurtosis range of 1.315 to 1.665. These values fall within the recommendation cut-off values of -2 to +2 for skewness and -3 to +3 for kurtosis signifying a distribution close to normality.

### 6.7.6 Descriptive statistics for General Sustainability

The descriptive statistics for General Sustainability are presented in Table 6.22.

**Table 6.22: Descriptive statistics for general sustainability**

Item	Description Valid: (n=500)	Minimum	Maximum	Mean	Standard deviation	Skewness	Kurtosis
GS1	Acknowledgment of the importance of sustainability across the board.	1	5	<b>4.16</b>	0.818	-0.946	1.190
GS3	Concern for environmental compliance and auditing.	0	5	<b>4.46</b>	0.688	--1.771	6.719
GS4	Responsibility to help in making a difference on environmental issues such as waste and water use.	1	5	<b>4.53</b>	0.697	-1.851	4.673
GS5	Striving to make a difference on social issues such as health and education.	1	5	<b>4.50</b>	0.683	-1.786	5.164
GS6	Striving to make a difference on economic issues such as inflation and unemployment.	0	5	<b>4.55</b>	0.754	-2.463	8.836
Overall scale				<b>4.44</b>	0.728	-1.76	5.32
Likert scale: 1= Strongly disagree, 2= Disagree, 3=Moderately agree, 4=Agree, 5=Strongly agree							

**Source:** Author's compilation

The five measurement items in Table 6.22 tested the perception of owner's/managers perception of General Sustainability in the manufacturing SMEs in South Africa. Item GS1 scored a mean score of ( $\bar{x}$  = 4.16: SD  $\pm$  0.818), implying that the importance of sustainability is acknowledged across the board in SMEs operating in the manufacturing industry in South Africa. Regarding item GS3, a mean score of ( $\bar{x}$  = 4.46: SD  $\pm$  0.688) was attained, providing a hint that SMEs in the manufacturing industry in South Africa consider concerns for environmental compliance and

auditing. In item GS4 a mean score of ( $\bar{x}$ = 4.53: SD  $\pm$  0.697) was calculated, depicting that manufacturing SMEs also shoulder the responsibility to help in making a difference on environmental issues such as water and waste use. Item GS5 scored a mean value of ( $\bar{x}$ = 4.50: SD  $\pm$  0.683), which shows that respondents agree that SMEs strive to make a difference on social issues such as health and education. In item GS6 a mean score of ( $\bar{x}$ = 4.55: SD  $\pm$  0.754) was scored, implying that SMEs strive to make a difference in economic issues such as inflation and unemployment.

An average mean score of ( $\bar{x}$ = 4.44: SD  $\pm$  0.728) was calculated, which illustrates an inclination towards the ‘agree’ position on the Likert scale. This result implies that managers/owners of SMEs in the South African manufacturing industry perceive a decent level of general sustainability in SMEs. From the results, it can be concluded that most owners/managers in their organisations are striving to make a difference on social issues such as health and education. However, most SMEs fail in most of their activities as they struggle with resources that will enable them to carry their activities. This is acknowledged by Fatoki (2011:126), who points out that adequate resource provision is an ingredient towards creating a conducive environment for SME's growth and survival. Also, factors such as partnerships and collaborations between internal and external stakeholder have been cited by Tsvetkova, Bengtsson, and Durst (2020:1) as factors that have made a difference in Sweden SMEs as they built a sense of responsibility to make a difference on issues such as health, education and environment. Therefore, SMEs in the South African manufacturing industry can build strong partnerships with their stakeholders and make a difference in areas of their establishments.

Also, an analysis of the normality measures indicates a skewness range of -2.463 to -0.946 and a kurtosis range of 1.190 to 8.836. These values of skewness fall within the recommended cut-off value of -2 to +2, while in kurtosis, only one out of five items fall within the range of -3 to +3, signifying a distribution that is not close to normality.

#### **6.7.7 Descriptive statistics for The Nature of the Product**

The descriptive statistics for nature of the product are presented in Table 6.23.

**Table 6.23: Descriptive statistics for the nature of the product**

Item	Description Valid: (n=500)	Minimum	Maximum	Mean	Standard deviation	Skewness	Kurtosis
NP1	Assessment of the health and safety impacts of products and services	1	5	<b>4.41</b>	0.731	-1.768	5.284
NP3	Type of product and service information required by procedures.	1	5	<b>4.54</b>	0.674	-1.850	5.153
NP5	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction	1	5	4.40	0.652	-1.369	4.321
Overall scale				4.45	0.686	-1.66	4.92
Likert scale: 1= Strongly disagree, 2= Disagree, 3=Moderately agree, 4=Agree, 5=Strongly agree							

**Source:** Author's compilation

Table 6.23 provides details of the descriptive statistics regarding the three items measuring the perceptions of SME owners-managers in the manufacturing industry in South Africa. Item NP1 recorded a mean score of ( $\bar{x}$ = 4.41: SD  $\pm$  0.731), a result demonstrating that assessments of health and safety impact the nature of product and service. Regarding item NP3, a mean score of ( $\bar{x}$ = 4.45: SD  $\pm$  0.652) was recorded, indicating that the type of product or service information required is vital to producers. In item NP5, a mean score of ( $\bar{x}$ = 4.40: SD  $\pm$  0.652) was recorded, which shows that respondents agree that SMEs value practices related to customer satisfaction, including results of surveys measuring customer satisfaction.

An overall mean score of ( $\bar{x}$ = 4.45: SD  $\pm$  0.686) was computed for the nature of the product scale which is close to the 'agree' point on the Likert scale. This result implies that SMEs acknowledge the perception that the nature of their products is safe for their customers and they receive enough information that will enable them to satisfy them. Like the present study, Susanty, Sirait, and Bakhtiar (2018:292) established that issues concerning the nature of products, such as health and safety issues, and customer satisfaction can be solved through adequate information sharing and collaborations suppliers. Santarelle and Vivarell (200&:61) also acknowledged that information is an essential element in any organisation as it can be used as a competitive advantage. Also, a study by Matsoso (2014:71) reveals issues such as health and safety impacts of products and services need to be supported by relevant stakeholders and through policy formulation and implementation.

Therefore, to ensure that their products and services are good and safe for their customers SMEs in South African manufacturing need to observe and follow the stipulated rules and regulation and avoid cutting corners in their businesses.

Additionally, an analysis of the normality measures indicates a skewness range of -1.850 to -1.369 and a kurtosis range of 4.321 to 5. 284. The values of the skewness test fall within the recommended cut-off values of -2 to +2 for skewness, whereas the values of the kurtosis test are above the recommended threshold of -3 to +3, signifying a distribution was not close to normality and that the data had a series of tails.

### 6.7.8 Descriptive statistics for Corporate Governance

The descriptive statistics for corporate governance are presented in Table 6.24.

**Table 6.24: Descriptive statistics for corporate governance**

Item	Description Valid: (n=500)	Minimum	Maximum	Mean	Standard deviation	Skewness	Kurtosis
CG1	The total number of business units analysed for risks related to corruption	0	5	<b>3.25</b>	1.291	-0.040	-1.067
CG2	Number of employees trained in organisation's anti-corruption policies and procedures	0	5	<b>3.47</b>	1.382	-0.259	-1.209
CG4	Public policy positions and participation in public policy development and lobbying	0	5	<b>2.95</b>	1.275	0.049	-0.879
CG7	The total number of business units analysed for risks related to corruption	0	5	<b>3.00</b>	1.446	0.064	-1.247
Overall scale				<b>3.17</b>	1.35	-0.037	-1.10
Likert scale: 1= Strongly disagree, 2= Disagree, 3=Moderately agree, 4=Agree, 5=Strongly agree							

**Source:** Author's compilation

Table 6. 24 details the results of the analysis of respondents on the corporate governance scale. Item CG1 recorded a mean score of ( $\bar{x}$ = 3.35: SD  $\pm$  1.291), which shows that respondents moderately agreed that many business units are analysed for risks related to corruption. In item CG2, a mean value of ( $\bar{x}$ = 3.47: SD  $\pm$  1.382) was calculated, signifying that SMEs train several employees in the organisation's anti-corruption policies and procedures. Concerning item CG4, a

mean value of ( $\bar{x}$ = 2.95: SD  $\pm$  1.275) was recorded, which shows that SME owner-managers disagree in issues relating to public policy positions and participation in policy development and lobbying. Item CG7 recorded a mean score of ( $\bar{x}$ = 3.00: SD  $\pm$  1.446), indicating that respondents agree that the total number of business units is analysed for corruption risks.

An overall mean score of ( $\bar{x}$ = 3.17: SD  $\pm$  1.350) was recorded close to the ‘moderately agree’ on the Likert scale. These results illustrate that SMEs managers/owners in the South African manufacturing industry moderately agree that their SMEs consider issues related to good corporate governance. These results are in line with the report by Kauta (2014:61) that concluded that most SMEs managers and owners face the challenge of poor management skills and are easily manipulated. Another study by Lamprecht (2011:32) states that poor management skills in SMEs leave loopholes for corruption and other forms of malpractices that are not sustainable for businesses. Therefore, to survive and ensure that SMEs in the manufacturing industry should have proper setups of accountability and transparency in place and that rules and regulations are followed and train their employees on issues relating to anti-corruption.

Additionally, an analysis of the normality measures indicates a skewness range of -0.259 to 0.064 and a kurtosis range of -1.247 to -0.879. These values fall within the recommended cut-off values of -2 to +2 for skewness and -3 to +3 for kurtosis signifying a distribution close to normality.

#### 6.7.9 Descriptive statistics for Compliance to Policy

The descriptive statistics for Compliance to Policy are presented in Table 6.25. The construct Compliance to Policy is a new variable that was extracted in the EFA. A brief theory about this construct is provided in Section 6.5.7.

**Table 6.25: Descriptive statistics for compliance to policy**

Item	Description Valid: (n=500)	Minimum	Maximum	Mean	Standard deviation	Skewness	Kurtosis
CCP3	The total number of legal actions for anti-competitive behaviour, anti-trust, and monopoly practices and their outcomes	0	5	1.95	1.108	1.044	0.479

Item	Description Valid: (n=500)	Minimum	Maximum	Mean	Standard deviation	Skewness	Kurtosis
CCP5	Amounts of money paid by the company as fines for -non-compliance with laws and regulations	0	5	1.92	1.146	1.201	0.808
CCP6	The value of non-monetary penalties paid by the company for non-compliance with laws and regulations	0	5	1.86	1.112	1.240	0.917
Overall scale				1.91	1.12	1.16	0.735
Likert scale: 1= Strongly disagree, 2= Disagree, 3=Moderately agree, 4=Agree, 5=Strongly agree							

**Source:** Author's compilation

Table 6.25 represents the descriptive statistical results of the Compliance to Policy scale. In item CCP3, a mean score of ( $\bar{x}$ =1.95: SD  $\pm$ 1.108) was recorded, signalling that SME owner-managers in the manufacturing industry strongly disagree on the total number of legal actions for anti-competitive behaviour, anti-trust, and monopoly practices and their outcomes. Regarding item CCP5, a mean score of ( $\bar{x}$ =1.92: SD  $\pm$  1.146) was calculated, depicting that the respondents strongly disagree on the amounts of money paid by their companies as fines for non-compliance with laws and regulations. Item CCP6 recorded a mean score of ( $\bar{x}$ =1.86: SD  $\pm$  1.112) was realised, which shows that respondents disagree with the values of non-monetary penalties paid by the company for non-compliance with laws and regulations.

An average mean score of ( $\bar{x}$ = 1.91: SD  $\pm$  1.12) was recorded for the Compliance to Policy scale. This result leaned towards the 'strongly disagree' position on the Likert scale which signifies that most SMEs in the manufacturing industry fail to comply with rules and regulation. These results are in sync with a study conducted by Ackah and Vuvor (2011:3), which found that most SMEs in Ghana are struggling to comply and cope with the rules and regulations as they feel that they are being suffocated. Also, another study by the Organisation for Economic Co-operation and Development (OECD (2018:2) cited regulations as one of the most important factors affecting SMEs. They cite the complexity of regulatory procedures, covering a wide range of areas such as license, permit systems, insolvency, and tax as significant obstacles, making it difficult for SMEs to comply with policies.



Furthermore, an analysis of the normality measures indicates a skewness range of 1.044 to 1.240 and a kurtosis range of 0.479 to 0.917. These values fall within the recommended threshold values of -2 to +2 range for skewness and -3 to +3 range for kurtosis, signifying a distribution close to normality.

#### 6.7.9 Descriptive statistics for Economic and Financial sustainability

The descriptive statistics for Economic and Financial sustainability are presented in Table 6.26.

**Table 6.26: Descriptive statistics for economic and financial sustainability**

Item	Description Valid: (n=500)	Minimum	Maximum	Mean	Standard deviation	Skewness	Kurtosis
EF1	The amount of profits made by the company	1	5	<b>3.14</b>	1.322	-0.167	-1.258
EF3	Overall financial health of the company	0	5	<b>2.98</b>	1.282	0.024	-1.026
EF4	Ability of the company to meet its financial obligations towards employees	1	5	<b>2.92</b>	1.229	0.065	-0.936
EF6	Value of money spent on taking care of the environment	1	5	<b>3.38</b>	1.579	-0.313	-1.525
EF7	Amount of money spent in the procurement of products and services from local suppliers	1	5	<b>3.41</b>	1.521	-0.275	-1.506
Overall scale				<b>3.17</b>	1.39	-0.133	-1.25
Likert scale: 1= Strongly disagree, 2= Disagree, 3=Moderately agree, 4=Agree, 5=Strongly agree							

**Source:** Author's compilation

Table 6.26 provides insights into the perceptions of respondents towards the five measurement items for Economic and Financial sustainability in the SMEs operating in the manufacturing industry in South Africa. Item EF1 attained a mean score which measured the ( $\bar{x}$ =3.14: SD  $\pm$  1.322), which demonstrates that SME owner-managers moderately agree that the number of profits made by their companies is sustainable. Regarding item EF3, a mean score of ( $\bar{x}$ =2.98: SD  $\pm$  1.282) was calculated, indicating that the owner-managers disagree that the overall financial health of their organisations is sustainable. In item EF4 a mean score of ( $\bar{x}$ =2.92: SD  $\pm$  1.229) was recorded, suggesting that SMEs in the manufacturing industry have limited ability to meet their financial obligations towards employees. Concerning item EF6, a mean score of ( $\bar{x}$ =3.38: SD  $\pm$  1.579) was

calculated, which indicates that SMEs in the manufacturing industry in South Africa consider the value of money spent on skincare of the environment. Item EF7 recorded a mean score of ( $\bar{x}$ =3.41: SD  $\pm$  1.521) was attained, which suggests that SMEs in manufacturing spend amounts of money in the procurement of products and services from local suppliers.

An average mean score of ( $\bar{x}$ =3.17: SD  $\pm$  1.39) was computed for the Economic and Financial sustainability scale, thereby indicating closeness to the ‘moderately agree’ position on the Likert scale. This result implies that SME managers feel that the economic and financial sustainability of their organisations is okay. These results are parallel to the submissions made by Mabunda (2018:156) that the high volatile economic environment compromises most financial positions of SMEs. Another study by El-Baz *et al.* (2019:58) observed that South African SMEs have a challenge in supporting surrounding communities mainly of insufficient resources. Therefore, for SMEs in the South African industry to survive the harsh economic environment, they need to improve their game and enhance the performance of their employees by improving their skills and minimise their expenditures.

Moreover, an analysis of the measures of the normality of the data indicates a skewness range of -0.313 to 0.065 and a kurtosis range of -1.525 to -0.936. These values fall within the recommended cut-off values of -2 to +2 for skewness and -3 to +3 for kurtosis, signifying a distribution close to normality.

#### 6.7.10 Descriptive statistics for Environmental sustainability

The descriptive statistics for the environmental sustainability construct are presented in Table 6.27.

**Table 6.27: Descriptive statistics for environmental sustainability**

Item	Description Valid: (n=500)	Minimum	Maximum	Mean	Standard deviation	Skewness	Kurtosis
EN1	Using a life cycle analysis to evaluate the environmental friendliness of products	1	5	<b>3.38</b>	1.486	-0.203	-1.532
EN2	Using clean production technologies and best practices	1	5	<b>3.48</b>	1.437	-0.230	-1.564
EN3	Promotion and implementation of environmental laws and regulations	0	5	3.41	1.529	-0.289	-1.481

Item	Description Valid: (n=500)	Minimum	Maximum	Mean	Standard deviation	Skewness	Kurtosis
EN4	Environmental laws and regulations for staff education and publicity to raise environmental awareness	1	5	3.42	1.533	-0.320	-1.477
EN5	Regular inspection and maintenance of environmental protection facilities and equipment	1	5	3.46	1.535	-0.334	-1.485
Overall scale				3.43	1.504	-0.275	-1.508
Likert scale: 1= Strongly disagree, 2= Disagree, 3=Moderately agree, 4=Agree, 5=Strongly agree							

**Source:** Author's compilation

Table 6.27 shows the descriptive results regarding the construct of environmental sustainability. Five items were used to measure the perceptions of SME owners-managers in the manufacturing industry in South Africa towards environmental sustainability. Item EN1 recorded a mean score value of ( $\bar{x}$ =3.38: SD  $\pm$  1.486), which suggests that SMEs use a life cycle analysis to evaluate the environmental friendliness of products. Regarding item EN2, a mean score of ( $\bar{x}$ =2.48: SD  $\pm$  1.437) was computed, showing that SMEs in the manufacturing industry use clean production technologies and best practices. In item EN3, a mean score of ( $\bar{x}$ =3.41: SD  $\pm$  1.529) was calculated, showing that SMEs in the manufacturing industry promote and implement environmental laws and regulations. Item EN4 scored a mean score of ( $\bar{x}$ =3.42: SD  $\pm$  1.533) was recorded, which suggests that SMEs in the manufacturing industry have environmental laws and regulations for staff education and publicity to raise environmental awareness. Concerning item EN5, a mean score of ( $\bar{x}$ =3.46: SD  $\pm$  1.535) was computed, indicating that regular inspection and maintenance of environmental protection facilities and equipment are carried out.

An overall mean score of ( $\bar{x}$ =3.43: SD  $\pm$  1.504) was computed for the environmental sustainability scale, close to the 'moderately agree' point on the Likert scale. This result implies that owners/managers of SMEs in the manufacturing industry perceive that their organisation support and takes part in conserving their environment. This is in line with the observation made by Hahn (2019:22) that SMEs in the UK embark on supporting and embracing societal values that promote environmental sanitation. However, Honglie (2019:13) states that SMEs do not respect the environmental laws as they are focused on making a profit at the expense of the environment.

Therefore, SMEs in the manufacturing industry should outline conscious environmental strategies in place as a way to curb the effects of the manufacturing industry on the environment while ensuring that they exist sustainably.

An analysis of the measures of the normality of data indicates a skewness range of -0.334 to -0.203 and a kurtosis range of -1.477 to -1.564. These values fall within the recommended cut-off values of -2 to +2 for skewness and -3 to +3 for kurtosis signifying a distribution close to normality.

### 6.7.11 Descriptive statistics for Social Sustainability

The descriptive statistics for social sustainability are presented in Table 6.28.

**Table 6.28 Descriptive statistics for social sustainability**

Item	Description Valid: (n=500)	Minimum	Maximum	Mean	Standard deviation	Skewness	Kurtosis
SS1	Reduction in the impacts and risks to the general public	1	5	<b>4.08</b>	0.850	-0.692	0.245
SS2	Improvement in occupational health and safety of employees	0	5	<b>4.24</b>	0.764	-1.330	3.465
SS4	Improvement in product image	0	5	4.40	0.790	-1.885	5.537
SS5	Improvement in firm's social reputation	1	5	4.43	0.725	-1.388	2.319
SS6	Reduction in the impacts and risks to general public	0	5	4.47	0.697	-1.811	5.880
Overall scale				4.32	0.765	-1.421	3.489
Likert scale: 1= Strongly disagree, 2= Disagree, 3=Moderately agree, 4=Agree, 5=Strongly agree							

**Source:** Author's compilation

Table 6.28 represents the descriptive statistical results of the social sustainability construct. Item SS1 recorded a mean score of ( $\bar{x}$ =4.08: SD  $\pm$  0.850) was realised. This result demonstrates that SMEs in the manufacturing industry in their endeavours ensure that risks and impacts of their activities to the general public are reduced. In item SS2, a mean score of ( $\bar{x}$ =4.24: SD  $\pm$  0.764) was calculated, which shows that SMEs ensure the improvements in occupational health and safety of employees. Regarding item SS4, a mean score of ( $\bar{x}$ =4.40: SD  $\pm$  0.790) was computed, showing that there are remarkable improvements in product image. In item SS5 a mean score of ( $\bar{x}$ =4.43:

SD  $\pm$  0.725) was realised, which suggests that there is an improvement in the firm's social reputation. Item SS6 attained a mean score of ( $\bar{x}$ =4.47: SD  $\pm$ 0.697) was calculated, showing that reducing the impacts and risks to the general public is a priority.

An overall mean score of ( $\bar{x}$ =4.32: SD  $\pm$ 0.765) was calculated in the social sustainability scale, which is close to the 'agree' point on the Likert scale. This result indicates that SMEs in the manufacturing industry take cognisant and value social sustainability as an aspect of their organisations and communities. In line with these results, a study by Oluwajoba (2019:62) reports that supporting the local community is quite important as it is the immediate community that provides the organisation with demand for products or services.

An analysis of the normality of data indicates a skewness range of -1.885 to -0.692 and a kurtosis range of 0.245 to 5.880. These values of the skewness test fall within the recommended cut-off values of -2 to +2, while the kurtosis test was above the recommended threshold of -3 to +3 except for item SS1, signifying a distribution was not close to normality.

#### 6.7.12 Descriptive statistics for Climate Change

The descriptive statistics for Climate Change are presented in Table 6.29.

**Table 6.29: Descriptive statistics for climate change**

Item	Description Valid: (n=500)	Minimum	Maximum	Mean	Standard deviation	Skewness	Kurtosis
CC1	Reduction in waste (water and/or solid)	1	5	<b>4.31</b>	0.748	-1.383	3.458
CC2	Reduction in toxic emissions	1	5	<b>4.41</b>	0.698	-1.334	2.771
CC3	Decrease of consumption for hazardous/harmful/toxic materials	1	5	4.42	0.716	-1.488	3.347
CC4	Decrease of frequency for environmental accidents	1	5	4.48	0.667	-1.535	3.574
CC5	Improvement in an enterprise's environmental situation.	1	5	4.54	0.676	-1.863	5.118
Overall scale				4.43	0.701	-1.521	3.65
Likert scale: 1= Strongly disagree, 2= Disagree, 3=Moderately agree, 4=Agree, 5=Strongly agree							

**Source:** Author's compilation

Table 6.29 shows details of the descriptive statistics of five items measuring the perceptions of SME owners-managers in the manufacturing industry regarding the climate change construct. Item CC1 scored a mean score of ( $\bar{x}$ =4.31: SD  $\pm$  0.748), a result demonstrating that SMEs in the manufacturing industry intend to ensure climate change sustainability by reducing waste (water or solid). Regarding item CC2, a mean value of ( $\bar{x}$ =4.41: SD  $\pm$  0.698) was calculated, suggesting that SMEs prioritise the reduction in toxic emissions. In item CC3 a mean score of ( $\bar{x}$ =4.42: SD  $\pm$  0.716) was calculated, which demonstrates that SMEs in the manufacturing industry aim to decrease the consumption of hazardous/harmful/toxic materials. Concerning item CC4, a mean score of ( $\bar{x}$ =4.48: SD  $\pm$  0.667) was attained, which demonstrated that SMEs operating in the manufacturing industry ensure improvement in an enterprise's environmental situation.

An overall mean score of ( $\bar{x}$ =4.43: SD  $\pm$  0.701) was computed for the climate change scale, which is close to the 'agree' point on the Likert scale. This result implies that SMEs in the manufacturing industry also work to contribute to activities that are aimed at reducing the impact of climate change. The results resonate with the observation made by Anser *et al.* (2019:9) that it is the responsibility of the organisation to take care of its environment for the benefit of future generations, and this can be done through planetary boundaries to preserve human life at all cost. However, Fatoki (2011:27) submits that most SMEs disregard their activities and are not aware of the environmental degradation they cause. Therefore, SMEs in the manufacturing industry need to educate their employees and assess their activities against the damages they cause to the environment.

An analysis of the measures of the normality of data indicates a skewness range of -1.334 to -1.863 and a kurtosis range of 2.771 to 5.118. These values of the skewness test fall within the recommended cut-off values of -2 to +2, while the kurtosis test was above the recommended threshold of -3 to +3 except for item SS1, signifying a distribution was not close to normality.

The next section discusses the correlations of the constructs.

## 6.8 Pearson's Correlations

Correlations relate to a measure of monotonic association between two variables (Schober, Boer & Schwarte, 2018:1763). Bakdash and Marusich (2017:1) described it as a popular measure to

quantify the association between two variables. It represents the interdependency amongst variables for correlating two phenomena (Pallant, 2016:37; Coloma, 2017:1). In this study, the Pearson's correlation coefficient, which assesses the degree to which variables are linearly in a sample (Schober, Boer & Schwarte, 2018:1764) was used to determine the association between internal management systems (resource mobilisation, infrastructure development, employee training and Employee training outcomes), innovativeness and SME sustainability which constitute (General sustainability, Nature of Product, Corporate Governance, Compliance of Policy, Economic and financial sustainability, environmental, social sustainability & climate change). The Pearson's coefficient of correlation is represented by "r". The results of the correlation analysis are presented in Table 6.30.

**Table 6.30: Pearson's Correlation results**

Factors	RM	ID	ET	ETO	IV	GS	NP	CG	CCP	EF	EN	SS	CC
RM	1.000												
ID	.684**	1.000											
ET	.605**	.627**	1.000										
ETO	.119**	.150**	.371*	1.000									
IV	.160**	.212**	.232*	.407**	1.000								
GS	.003	.001	-.047	-.089*	-.032	1.000							
NP	.571**	.686**	.590*	.171**	.217**	-.079	1.000						
CG	.396**	.418**	.284*	-.141**	-.064	.740*	.306*	1.000					
CCP	-.416**	-.443**	-.370*	.012	.013	.686*	-.441*	.030	1.000				
EF	.413**	.446**	.277*	-.084	-.039	.505*	.305*	.770*	-.061	1.000			
EN	.457**	.562**	.355*	-.100*	-.036	.425*	.419*	.783*	-.193**	.878*	1.000		
SS	.597**	.625**	.548*	.118**	.166**	.057	.542*	.440*	-.381*	.474*	.562**	1.000	

Factors	RM	ID	ET	ETO	IV	GS	NP	CG	CCP	EF	EN	SS	CC
CC	.104*	.108*	.036	-.110*	-.046	.981*	.017	.844*	.562*	.605*	.544**	.159*	1.000
<b>RM</b> = resource mobilisation; <b>ID</b> = infrastructure development; <b>ET</b> = employee training; <b>ETO</b> = employee training outcomes; <b>IV</b> = innovativeness; <b>GS</b> = general sustainability; <b>NP</b> = the nature of product; <b>CG</b> = corporate governance; <b>CCP</b> = corporate compliance to policies; <b>EF</b> = economic and financial financial; <b>EN</b> = environmental sustainability; <b>SS</b> = social sustainability; <b>CC</b> = climate change													
** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).													

**Source:** Author's own compilation

Table 6.30 presents the correlation matrix of the constructs considered in this study. The inter-factor correlations (r) indicate the associations amongst the variables, while the p-value indicates the significance. As depicted in Table 6.29 the strongest correlation occurred between general sustainability and climate change ( $r = 0.981$ ;  $p = 0.000$ ) while the weakest negative correlation was observed between corporate compliance to policies and infrastructure development ( $r = -0.416$ ;  $p = 0.000$ ).

### 6.8.1 Correlations between resource mobilisation and innovativeness

Table 6.30 reveals that there is a weak positive and significant correlation between resource mobilisation and innovativeness ( $r = 0.160$ ;  $p = 0.000$ ) in SMEs in the South African manufacturing industry. This result implies that if resource mobilisation increases in SMEs operating in the manufacturing industry in South Africa, innovativeness slightly improves. The result demonstrates that if resource mobilisation is increased in SMEs, innovativeness positively increases by 16 percent. This result is in line with the findings made in a study by Woschke, Haase, and Kratzer (2017:195), which suggest that resource mobilisation has a positive effect on innovativeness in SMEs. Another study by Bukki, Oguntimehin, and Adeyemi (2019:1) which examined the owner's resource mobilisation and innovative culture in SMEs in the South-West Nigeria region, found that a significant relationship existed between resource mobilisation and innovative culture. The results of the study align with the views of Schaltegger (2011:119), and Hansen and Klewitz (2012:451), who note that the challenges of SMEs include access to fewer resources (human, financial, and information), which can also be difficult for SMEs to implement sustainable driven innovation practices, implying that resource mobilisation predicts innovativeness as it enables SMEs to implement their innovations sustainably.



### 6.8.2 Correlations between infrastructure development and innovativeness

In Table 6.30, it is indicated that there is a weak positive and significant correlation between infrastructure development and innovativeness ( $0.232: p = 0.000$ ) in SMEs in the South African manufacturing industry. Although the result of the study shows that the relationship is weak, the correlation is a positive one. This implies that, indeed infrastructure development influences IV. The results indicate that if the infrastructure development is increased, innovativeness increases by a margin of 23 percent. Also, the result of the study suggests that SME owner-managers in the manufacturing industry perceive that infrastructure development is vital for innovativeness to take place in organisations. A study by Muriithi (2017:36) on the contributions, challenges, and solutions of African SMEs cited challenges such as power shortages, lack of capital, adequate information, and poor infrastructure as challenges to innovativeness and growth. This result implies that proper, sound, and well-developed infrastructure gives SMEs an edge to innovativeness. Obokoh and Goldman (2016:1684), in their study, concluded that infrastructure development is imperative for the sustainability of SMEs as the deficiency in infrastructure negatively impacts the innovativeness, profitability, and performance of SMEs.

### 6.8.3 Correlations between employee training and innovativeness

Table 6.30 shows that there is a positive and significant correlation between employee training and innovativeness ( $r = 0.232: p = 0.000$ ) in SMEs in the South African manufacturing industry. Although the correlation is positive, the relationship is weak, as it falls within the range of 0.10 and 0.39, which is considered weak, according to Schober *et al.* (2018:1765). This result demonstrates that if employee training increases in the SMEs in the South African manufacturing industry, innovativeness increases relatively by about 23 percent. The results also indicate that employee training is a predictor of innovativeness in SMEs operating in the manufacturing industry in South Africa. The results resonate with the conclusion coined by Sheeba and Christopher (2020:266) that employee training and development plays a vital role in improving the performance of the employees through inculcating innovative work behaviours which help in accomplishing non-routine cognitive jobs effectively and innovatively. Sung and Choi (2018:1339) also confirm that a significant correlation exists between employee training and innovativeness as the former respectively affect a firm's innovative performance by enhancing employees' competence and commitment.

#### **6.8.4 Correlations between employee training outcomes and innovativeness**

The results presented in Table 6.30 indicate that there is a moderate positive and significant correlation between employee training outcomes and innovativeness ( $r = 0.407$ ;  $p = 000$ ) in SMEs in the South African manufacturing industry. The results imply that if employee training outcomes are increased in SMEs operating in the South African manufacturing industry, innovativeness increases by a margin of 41 percent, showing a significant correlation between these variables. The result also indicates that employee training outcomes is a vital predictor for innovativeness. The study results reverberate with the findings made by Dostie (2017:64), which confirmed that organisations with clear training outcomes cultivate innovativeness in employees, enabling them to perform better. Mousavifard and Ayoubi (2018:230) opine that training outcomes help the organisation create innovativeness in the employees and ultimately leads to innovative organisations.

#### **6.8.5 Correlation between innovativeness and general sustainability**

Table 6.30 reveals that there are an inverse and insignificant correlation between innovativeness and general sustainability ( $r = -0.032$ ;  $p = 0.477$ ) in SMEs in the South African manufacturing industry. This result implies that if innovativeness increases in SMEs in the manufacturing industry, general sustainability will also decrease by a margin of 3 percent, which is negligibly visible. The result, therefore, shows that IV does not predict the general sustainability of SMEs in the manufacturing industry, albeit negatively. The result of the study aligns with the observation made by Burlea-Schiopoiu and Mihai (2019:2) that innovations in SMEs may curve out new business opportunities and competitive advantage for their businesses. This implies that innovativeness in SMEs comes with consequences that may not be sustainable to business. Hence, the inverse correlation.

#### **6.8.6 Correlation between innovativeness and the nature of the product**

The results presented in Table 6.30 indicate that there is a weak positive and significant correlation between innovativeness and the nature of the product ( $r = 0.217$ ;  $p = 0.000$ ) in SMEs in the South African manufacturing industry. The results demonstrate that if there is innovativeness in manufacturing SMEs, the nature of production increases with a margin of 22 percent. The result, therefore, indicates that innovativeness is a predictor of nature of the product in SMEs in the

manufacturing industry. The result of this study suggests that innovativeness correlates with the nature of the products produced by SMEs in the manufacturing industry. In support of the result is the study by Kaplan (2009:42), which affirms that innovativeness offers several insights to researchers and marketing practitioners in SMEs on building successful brands. This result implies that innovativeness influences the nature of products produced by firms.

#### **6.8.7 Correlation between innovativeness and corporate governance**

The analysis results presented in Table 6.30 indicate an inverse and insignificant correlation between innovativeness and corporate governance ( $r = -0.064$ ;  $p = 0.151$ ) in SMEs operating in the South African manufacturing industry. This result indicates that if innovativeness increases in SMEs operating in the manufacturing industry, corporate governance decreases and vice versa, with a margin of 6 percent, which is a negligible value. Thus, the results indicate that innovativeness and corporate governance move in opposite directions with the same magnitude. The results on this tenet resonate with the studies by Bhagat and Bolton (2013:105), and Bolton and Zhao (2018:3), which found a negative relationship between a firm's innovativeness and corporate governance. Besides, an interesting observation by O'Connor and Rafferty (2012:397) suggests the correlation between innovativeness and corporate governance depends on unobserved effects, or on using instrumental variables to control simultaneity. Controlling these effects sustainably reduces, or eliminates the relationship between governance and innovative activities. Considering this, it is not surprising that an inverse correlation result was obtained in this study.

#### **6.8.8 Correlation between innovativeness and corporate compliance to policy**

Regarding the correlation between innovativeness and corporate compliance to policy, the results of the analysis indicate that there is a negligible positive but insignificant correlation between the variables. The correlation as displayed in Table 6.30, is represented by a coefficient of ( $r = 0.013$ ;  $p = 0.773$ ). This result demonstrates that if IV increases in SMEs in the manufacturing industry, corporate compliance to policy relatively increases with a margin of 1 percent, which is relatively hard to notice if considered. A study by Kyobe (2009:30) submits that factors such as perception of high compliance cost, lack of awareness, lack of training on compliance and security, perception of unfair regulation, and possession of inadequate security controls are the key factors for organisations to disregard rules and regulations. Another study by Veugelers (2008:218)

highlights that although there is a correlation between innovativeness and corporate compliance in SMEs, often the relationship is weak as most SMEs tend to fail on the implementation side. Hence, a weak relationship is brewed.

#### **6.8.9 Correlation between innovativeness and economic and financial sustainability**

The results of the study in Table 6.30, reveal that there is a moderate positive and significant correlation between innovativeness and economic and financial sustainability ( $r = 0.505$ ;  $p = 0.000$ ) in SMEs in the South African manufacturing industry. This result demonstrates that if innovativeness increases in the manufacturing SMEs, economic and financial sustainability increases by about 51 percent, which is a moderate and noticeable value. The result, therefore, indicates that innovativeness is a predictor of economic and financial sustainability in SMEs in the South African manufacturing industry. The results of the study resonate with the findings made by Burlea-Schiopoiu and Mihai (2019:2), which proved that indicators such as innovation, training, and corporate social responsibility as sustainable factors significantly and positively correlate with the economic and financial sustainability of SMEs. Another study by Bessant and Tidd (2007:15) observed that throughout history, organisations that have innovated successfully have typically been rewarded with growth, profits, and access to new markets, which shows that there is a correlation between innovativeness and economic and financial sustainability.

#### **6.8.10 Correlation between innovativeness and environmental sustainability**

Table 6.30 indicates a moderate positive and significant correlation between innovativeness and environmental sustainability ( $r = 0.425$ ;  $p = 0.000$ ) in SMEs in the South African manufacturing industry. This result implies that if innovativeness increases in SMEs in the manufacturing industry, environmental sustainability positively increases with a margin of 43 percent. Therefore, the result shows that innovativeness is a predictor of environmental sustainability for SMEs operating in the manufacturing industry in South Africa. The results of the study align with the findings made by Maier, Maier, Aschilean, Anastasiu, and Gavris (2020:1) that there is a strong correlation between an organisation's innovations and environmental sustainability as they state that innovativeness has been widely acknowledged as a key mechanism for addressing environmental, sustainable concerns. Another study by Masocha (2018:11) observes that

innovativeness, environmental and social aspects as measures of firm performance are herein purported to be influential to environmental sustainability

#### **6.8.11 Correlation between innovativeness and social sustainability**

The study results demonstrate a weak positive and significant correlation between innovativeness and social sustainability ( $r = 0.057$ ;  $p = 0.000$ ) in SMEs in the South African manufacturing industry. This result implies that if innovativeness increases in SMEs in the manufacturing industry, social sustainability increases by a margin of 6 percent. This result, therefore, indicates that innovativeness predicts social sustainability in SMEs operating in the South African manufacturing industry. In support of the results is the study by Abdul-Rashid, Sakundarini, Ghazilla & Ramayah (2017:813), which observed that innovativeness ensures that SMEs simultaneously achieve profits and societal well-being. However, another study by Siti-Nabiha, Azhar, Isa & Siti-Nazariah (2018:205) observes that, unfortunately, SMEs that are innovation inclined are susceptible to being derailed by firms that seldom pay attention to social issues. This justifies a weak positive and significant correlation attained in this present study.

#### **6.8.12 Correlation between innovativeness and climate change**

Table 6.30 reveals that there is a very strong positive and significant correlation between innovativeness and climate change ( $r = 0.981$ ;  $p = 0.000$ ) in SMEs in the South African manufacturing industry. This result demonstrates that if innovativeness is increased in SMEs operating in the manufacturing industry, CC sustainability increases significantly with a margin of 98 percent. This result therefore, indicates that the presence of IV in SMEs in the manufacturing industry predicts climate change. In support of the results obtained in this study, a study by Zilberman, Lipper, McCarthy and Gordon (2017:49) confirmed that there is a solid and significant relationship between innovativeness and climate change, as innovation can complement other forms of adaptation to climate change. Also, a study by Bibi, Khan, Qian, Garavelli, Natalicchio and Capolupo (2020:1) found that a firm's innovativeness has a significant positive relationship with climate change and vice versa.

The next section discusses the regression models of the study.

### **6.9 Regression Analysis**

Regression analysis was also applied to test for the predictive relationships between independent and dependent variables (Sarstedt & Mooi, 2014:194). Casson and Farmer (2014:590) described it as a statistical technique to determine the linear relationship between two or more variables. In this study, regression analysis was performed to check the proposed relationships between constructs. It was applied using the “enter” method in which variables are entered into the model once in a single step. Nine regression models were run since there are nine types of relationships to be tested. In Regression Model 1, four internal management systems (Resource mobilisation, Infrastructure development, Employee training & Employee Training Outcome) were entered as independent variables while IV was entered as the dependent variable. In Regression Model 2, innovativeness was entered as the independent variable while SME sustainability (General Sustainability, Nature of Product, Corporate Government, Compliance of Policies, Economic and Financial, Environment, Social Sustainability & Climate Change) were entered as dependent variables. Each model is presented in an Ordinary Least Squares (OLS) regression equation presented in Table 6.31.

The results regarding Regression Model 1 are presented in Table 6.31.

**Table 6.31: Regression equations for all models**

Regression model	Dependent variable	Independent variables	Equation
1	IV	RM, ID, ET, ETO	$IV = \beta_0 + \beta_1(RM) + \beta_2(ID) + \beta_3(ET) + \beta_4(ETO)$
2	GS	IV	$GS = \beta_0 + \beta_1(IV)$
3	NP	IV	$NP = \beta_0 + \beta_1(IV)$
4	CG	IV	$CG = \beta_0 + \beta_1(IV)$
5	CCP	IV	$CCP = \beta_0 + \beta_1(IV)$
6	EF	IV	$EF = \beta_0 + \beta_1(IV)$
7	EN	IV	$EN = \beta_0 + \beta_1(IV)$
8	SS	IV	$SS = \beta_0 + \beta_1(IV)$
9	CC	IV	$CC = \beta_0 + \beta_1(IV)$

Regression model	Dependent variable	Independent variables	Equation
$\beta_0$ is the constant or intercept, and $\beta_1-3$ are the coefficients of the independent variables <b>RM</b> = resource mobilisation; <b>ID</b> = infrastructure development; <b>ET</b> = employee training; <b>ETO</b> = employee training outcomes; <b>IV</b> = innovativeness; <b>GS</b> = general sustainability; <b>NP</b> = the nature of product; <b>CG</b> = corporate governance; <b>CCP</b> = corporate compliance to policies; <b>EF</b> = economic and financial financial; <b>EN</b> = environmental sustainability; <b>SS</b> = social sustainability; <b>CC</b> = climate change			

**Source:** Author's own compilation

Table 6.31 presents all the nine regression models that were run for this study. An assessment was made regarding the fulfilment of the assumptions of the regression analysis in this study. First, the sample size applied ( $n=500$ ) was considered adequate, based on the recommendation by Hair *et al.* (2010:98). Second, the study considered the possible impact of multicollinearity, which, according to Thompson, Kim, Aloe, and Becker (2017:88), refers to a scenario in which two or more independent variables are correlated to inaccurate predictions between the independent and dependent variables. The Variance Inflation Factor (VFI) and Tolerance values were used to determine the effects of multicollinearity in the study. Tolerance values measure the strength of the relationship between one independent variable and the other independent variables and should be:  $T > 0.5$  (O'Brien, 2017:673). O'Brien (2017:63) further explains that the VFI, which is a measure of the impact of collinearity amongst the variables under consideration in a regression model, should ideally be  $VFI < 10$ . If the VFI is greater than 10, then the collinearity of the independent variables is undesirable.

On that score concerning the current study, the VFI value for the independent variables was above 2, which is in the acceptable range within the 10.0 upper cut-off point. Regression tolerance levels above 0.1 are desirable as they indicate that fewer challenges were encountered in multicollinearity. In the present study, the tolerance levels in all two models ranged from 0.1 to nearly 0.5, suggesting that the multicollinearity did not indicate a severe threat amongst the independent variables in the study. Therefore, the assumptions of the regression analysis were not violated in this study.

### 6.9.1 Regression Model 1

The results regarding Regression Model 1 are presented in Table 6.32

**Table 6.32 Regression Model 1**

Independent variables: internal management systems		Dependent variable: Innovativeness						
		Unstandardised coefficients		Standardised coefficients	Sig.		Collinearity statistics	
		$\beta$	Std. error	Beta	t	p	Tolerance	VFI
Regression	(Constant)	1.610	.282		5.702	.000		
Model 1	RM	.030	.076	.024	.403	.687	.476	2.101
	ID	.166	.066	.150	2.518	.012	.459	2.179
	ET	-.024	.069	-.021	-.354	.724	.473	2.114
	ETO	.409	.046	.390	8.842	.000	.843	1.186
R= 0.435; Adjusted R <sup>2</sup> = 0.183; F = 28.944 p<0.05*								

**Source:** Extracted from SPSS (Version 25.0)

In testing the hypotheses, several multiple regression analyses were computed. In Regression Model 1, the four constructs of internal management systems (adjusted R<sup>2</sup> = 0.183) explained approximately 18 percent of the variance of the internal management systems. The remaining variance is explained by factors not considered in this study. The regression matrix indicates that ID ( $\beta = 0.150$ ;  $p = 0.012$ ) and ETO ( $\beta = 0.390$ ;  $p = 0.000$ ) negligibly contributes positively towards IV. However, RM ( $\beta = 0.024$ ;  $p = 0.687$ ) and ET ( $\beta = -0.021$ ;  $p = 0.724$ ) were statistically insignificant and so did not contribute to IV.

#### 6.9.1.1 Resource Mobilisation and Innovativeness

In regression analysis, Resource Mobilisation exerted a weak positive and insignificant influence on IV ( $\beta = 0.024$ ;  $t = 0.403$ ;  $p = 0.687$ ). The p-value for Resource Mobilisation is greater than the common alpha 0.05, which indicates that the impact of Resource Mobilisation is not a determinant for Innovativeness. The result demonstrates that the innovation in SMEs in the manufacturing industry is not driven by the number of resources owned by the organisation. However, this result is not aligned with the findings of Panizzolo (2018:45), who stated that organisations have a chance to improve their overall production if more resources are availed to them. Other scholars (Booyens, 2013:91; Rothwell, 2018:40) acknowledge the need for resources (physical, financial, and human resources) in innovation, as they submit that without the necessary tools and skills, innovation in



small organisations remains a dream. However, Bessant and Tidd (2007:18) point out that without the proper environment set in many organisations where employees express themselves, innovation will not occur. Therefore, SMEs in the manufacturing industry need to allow employees to express and apply their minds and innovative ideas without the fear of getting punished if they fail. From the results obtained in the analysis, it can be summarised that Resource mobilisation is not a determinant for innovation in SMEs operating in the manufacturing industry in South Africa.

#### **6.9.1.2 Infrastructure Development and Innovativeness**

The result of the study indicates that Infrastructure development has a positive and significant relationship with Innovativeness ( $\beta = 0.150$ ;  $t = 2.518$ ;  $p = 0.012$ ). However, the relationship is weak as it is indicated by a beta value of 0.166. The results of the study are in line with those of Akinson (2018:196), who emphasised the importance of developing basic infrastructure by arguing that ID promotes innovation and growth of SMEs by facilitating the acquisition of all necessary inputs that assist and promote their investment and growth. Another study by Mugo, Kahuthia, and Kinyua (2019:134) found that infrastructure development has a significant positive effect on the growth and innovativeness of SMEs operating in the textile industry in Kenya. The positive relationship can be owed to the better facilities and technology that allows the employee to express themselves clearly and implement their ideas without fear of being punished.

#### **6.9.1.3 Employee Training and Innovativeness**

The results in Table 6.32 show that there is no relationship between Employee Training and Innovativeness ( $\beta = -0.021$ ;  $t = -0.354$ ;  $p = 0.724$ ). Although the results demonstrate that there is no relationship, evidence from the literature by other researchers like Sheehan, Garavan, and Carbery (2014:12) suggest that developing human resources outcomes through training and development influence an organisation's innovation by having a positive impact on employee engagement, leadership, motivation to learn, promoting learning culture and developing social capital. Also, Sula and Banyar (2015:20) argue that there is a need to extend the knowledge and skills in possession to align with current production or service offering trends, which can only be enhanced through training. In addition, Burch (2018:8) asserts that employee training and education are the keys to the success factors in any given organisation, which is the main problem with the SMEs as they do not pay attention to the advancement of human resources. The negative

prediction of Employee Training on Innovativeness in this study may be a result of other factors that were not considered in this study.

#### 6.9.1.4 Employee Training Outcomes and Innovativeness

The results of the regression analysis in Table 6.32 indicates that indeed a relationship exists between Employee Training Outcomes and Innovativeness ( $\beta = 0.390$ ;  $t = 8.842$ ;  $p = 0.000$ ). The result obtained in this study indicates the importance of organisations to clarify and set the objective of their capacity-building initiatives. In support of this is the view made by Dostie (2017:64) that organisations must clearly outline the objectives of their training programmes. If training outcomes are clearly outlined, the training within SMEs will be of significance in creating value in employees and sheds light on those who will be training them as they will have an idea of what they intend to achieve.

#### 6.9.2 Regression Model 2

The results regarding Regression Model 2 are presented in Table 6.33

**Table 6.33: Regression Model 2**

Independent variables: innovativeness		Dependent variable: General Sustainability						
		Unstandardised coefficients		Standardised coefficients	Sig.		Collinearity statistics	
		$\beta$	Std. error	Beta	t	p	Tolerance	VFI
Regression	(Constant)	2.655	.237		11.179	.000		
Model 1	IV	-.041	.057	-.032	-.711	.477	1.000	1.000
R= 0.032; Adjusted R <sup>2</sup> = 0.001; F = 0.506 p<0.05*								

**Source:** Extracted from SPSS (Version 25.0)

Analysis of Regression Model 2 (Table 6.33) revealed that innovativeness (Adjusted R<sup>2</sup> = 0.001) explained approximately 0.001 percent of the variance in General sustainability in SMEs in the South African manufacturing industry. The analysis revealed that innovativeness ( $\beta = -0.032$ ;  $t = -0.711$ ;  $p = 0.477$ ) is not statistically significant and does not contribute towards the GS in SMEs in the manufacturing industry. Empirical evidence from the literature suggests a contrary view to the results obtained in this study. Scholars (Maier, Maier, Ashchilean, Anastasiu & Gavris, 2020:7;

Cloete, 2016:47) in their studies observed that as part of GS the ability of any organisation growth and performance revolves around the innovativeness of its human resources. This, therefore, indicates the importance of innovation towards the general sustainability of SMEs.

### 6.9.3 Regression Model 3

The results regarding Regression Model 3 are presented in Table 6.34.

**Table 6.34: Regression Model 3**

Independent variables: innovativeness		Dependent variable: The Nature of Product						
		Unstandardised coefficients		Standardised coefficients	Sig.		Collinearity statistics	
		$\beta$	Std. error	Beta	t	p	Tolerance	VFI
Regression	(Constant)	3.695	.154		23.967	.000		
Model 1	IV	.183	.037	.0217	4.950	.000	1.000	1.000
R= 0.217; Adjusted R <sup>2</sup> = 0.047; F = 24.501 p<0.05*								

**Source:** Extracted from SPSS (Version 25.0)

Analysis of Regression Model 3 revealed that Innovativeness (Adjusted R<sup>2</sup> = 0.047) explained approximately 5 percent of the variance in Nature of Product in SMEs in the South African manufacturing industry innovativeness ( $\beta = 0.217$ ;  $t = 4.950$ ;  $p = 0.000$ ), further contributing positively towards Nature of Product. This indicates that Innovativeness is a significant predictor of Nature of Product. The result of the study shows that innovativeness is important in the development of a new product and services. In support of this result, studies conducted by several scholars (Kaplan, 2009:39; Abbas, Nawaz, Ahmad & Ashraf, 2017:23; Kleinschmidt & Cooper, 2020:241) note that a relationship exists between Innovativeness and Nature of Product and things such as product development, product differentiation and marketing depends on the innovativeness of employee. Therefore, innovation is vital for and predicts Nature of Product.

### 6.9.4 Regression Model 4

The results regarding Regression Model 4 are presented in Table 6.35.

**Table 6.35: Regression Model 4**

Independent variables: innovativeness		Dependent variable: Corporate Governance						
		Unstandardised coefficients		Standardised coefficients	Sig.		Collinearity statistics	
		$\beta$	Std. error	Beta	t	p	Tolerance	VFI
Regression	(Constant)	3.662	.348		10.509	.000		
Model 1	IV	-0.120	.084	-.064	-1.439	.151	1.000	1.000
R= 0.064; Adjusted R <sup>2</sup> = 0.004; F = 2.071 p<0.05*								

**Source:** Extracted from SPSS (Version 25.0)

The results presented in Table 6.35 demonstrate that innovativeness (Adjusted R<sup>2</sup> = 0.004) explained approximately 0.004 percent of the variance in Corporate governance in SMEs in the South African manufacturing industry. The results indicate that Innovativeness ( $\beta$  = -0.064; t = -1.439; p = 0.151) does not contribute towards Corporate governance in SMEs in the South African manufacturing industry. This indicates that IV does not predict Corporate governance in SMEs operating in the manufacturing industry in South Africa. In support of the result, Mohamad and Sori (2011:1) note that issues of corporate governance have are not linked to innovation but follow the stipulated rules and regulations and policies of an organisation. Hence, the shrunk relationship between Innovativeness and Corporate Governance. However, Hosoda (2019:39) and Oluwajoba (2019:12) in their studies, concluded that the way organisations are governed must be in line with the requirements of the industry they invest in with employees for the sake of enhancing their innovation capabilities. Thus, they advocate that there is a link between Innovativeness and Corporate Governance.

### 6.9.5 Regression Model 5

The results concerning Regression Model 5 are presented in Table 6.36.

**Table 6.36: Regression Model 5**

Independent variables: innovativeness		Dependent variable: Corporate Compliance to Policy						
		Unstandardised coefficients		Standardised coefficients	Sig.		Collinearity statistics	
		$\beta$	Std. error	Beta	t	p	Tolerance	VFI
Regression	(Constant)	1.822	.302		6.028	.000		
Model 1	IV	.021	.073	.013	.289	.773	1.000	1.000
R= 0.013; Adjusted R <sup>2</sup> = 0.000; F = 0.084 p<0.05*								

**Source:** Extracted from SPSS (Version 25.0)

The results in Table 6.36 indicate that Innovativeness (Adjusted R<sup>2</sup> = 0.000) does not explain any variance in CCP in SMEs in the South African manufacturing industry. The results show that IV ( $\beta$  = 0.013; t = 0.289; p = 0.773) does not contribute towards Compliance with Policies in SMEs in the South African manufacturing industry. This indicates that Innovativeness does not predict Compliance of Policies in SMEs operating in the manufacturing industry in South Africa. The results are aligned with the findings of Nieuwenhuizen (2019:1), which found that there is no relationship between Innovativeness and Compliance of Policies; rather, they cited factors such as excessive red tape with regards to compliance with labour laws, human and industrial relations, tax and tax-related issues, legal requirements, municipal regulations and support for business start-ups are key obstacles experienced by SMME innovativeness.

### 6.9.6 Regression Model 6

The results of Regression Model 6 are presented in Table 6.37.

**Table 6.37: Regression Model 6**

Independent variables: innovativeness		Dependent variable: Economic and Financial Sustainability						
		Unstandardised coefficients		Standardised coefficients	Sig.		Collinearity statistics	
		$\beta$	Std. error	Beta	t	p	Tolerance	VFI
Regression	(Constant)	3.478	.366		9.496	.000		

Independent variables: innovativeness		Dependent variable: Economic and Financial Sustainability						
		Unstandardised coefficients		Standardised coefficients	Sig.		Collinearity statistics	
		$\beta$	Std. error	Beta	t	p	Tolerance	VFI
Model 1	IV	-.076	.088	-.039	-.861	.390	1.000	1.000
R= 0.039; Adjusted R <sup>2</sup> = -0.001; F = 0.741 p<0.05*								

**Source:** Extracted from SPSS (Version 25.0)

The results in Table 6.37 indicate that Innovativeness (Adjusted R<sup>2</sup> = -0.001) explains 0.001 percent of the variance in EF in SMEs in the South African manufacturing industry. The results show that Innovativeness ( $\beta$  = -0.039; t = -0.861; p = 0.390) does not contribute towards Economic and Financial in SMEs in the South African manufacturing industry. These results resonate with the claim made by Burch (2018:34) that the financial stability of an organisation does not depend on innovation, but rather it hangs on the ability of the organisation to implement strategies and principles that enhance profitability and enable them to cut cost. This indicates that Innovativeness does not predict Economic and Financial in SMEs operating in the manufacturing industry in South Africa. However, this result is contrary to the observation made by Choi *et al.* (2019:13) that innovation plays an essential role in the financial sustainability of SMEs.

### 6.9.7 Regression Model 7

The results regarding Regression Model 7 are presented in Table 6.38.

**Table 6.38: Regression Model 7**

Independent variables: innovativeness		Dependent variable: Environmental Sustainability						
		Unstandardised coefficients		Standardised coefficients	Sig.		Collinearity statistics	
		$\beta$	Std. error	Beta	t	p	Tolerance	VFI
Regression	(Constant)	3.762	.418		8.995	.000		
Model 1	IV	-.081	.100	-.036	-.806	.420	1.000	1.000
R= 0.036; Adjusted R <sup>2</sup> = -0.001; F =0.650p<0.05*								

**Source:** Extracted from SPSS (Version 25.0)

The results in Table 6.38 indicate that Innovativeness (Adjusted  $R^2 = 0.001$ ) does not explain any variance in NP in SMEs in the South African manufacturing industry. The results show that IV ( $\beta = -0.036$ ;  $p = 0.420$ ) does not contribute towards Environmental in SMEs in the South African manufacturing industry. This indicates that Innovativeness does not predict Environmental in SMEs operating in the manufacturing industry in South Africa. However, Hahn (2019:24) and Vilke (2019:13) offer a different perspective as they observe that recently there is a paradigm shift in organisations as innovation is now part of the organisation's strategic tool to enhance environmental sustainability.

### 6.9.8 Regression Model 8

The results of Regression Model 8 are presented in Table 6.39.

**Table 6.39: Regression Model 8**

Independent variables: Innovativeness		Dependent variable: Social Sustainability						
		Unstandardised coefficients		Standardised coefficients	Sig.		Collinearity statistics	
		$\beta$	Std. error	Beta	t	p	Tolerance	VFI
Regression	(Constant)	3.682	.173		21.243	.000		
Model 1	IV	.156	.042	.166	3.748	.000	1.000	1.000
R= 0.166; Adjusted $R^2 = 0.025$ ; F = 14.050 $p < 0.05^*$								

**Source:** Extracted from SPSS (Version 25.0)

Analysis of Regression Model 8 (Table 6.39) revealed that Innovativeness (Adjusted  $R^2 = 0.025$ ) explained approximately 7 percent of the variance in SS in SMEs in the South African manufacturing industry. Innovativeness ( $\beta = 0.166$ ;  $t = 3.748$ ;  $p = 0.000$ ) was significant and further contributed positively towards the SS in SMEs operating in the manufacturing industry. This indicates that increased innovativeness in SMEs enhances and predicts SS in SMEs operating in the South African manufacturing industry. The results are aligned with the observation made by Hahn (2019:24) that since the past two decades, companies have increased their attention to issues of sustainable economic, social, and environmental development, and through the use of internet

computer innovations, the world has shifted its orientation towards environmental wellness. This indicates that innovation and sustainability are linked together.

### 6.9.9 Regression Model 9

The results of Regression Model 9 are presented in Table 6.40.

**Table 6.40: Regression Model 9**

Independent variables: innovativeness		Dependent variable: Climate Change						
		Unstandardised coefficients		Standardised coefficients	Sig.		Collinearity statistics	
		$\beta$	Std. error	Beta	t	p	Tolerance	VFI
Regression	(Constant)	2.874	.241		11.929	.000		
Model 1	IV	-.060	.058	-.046	-1.034	.302	1.000	1.000
R= 0.046; Adjusted R <sup>2</sup> = 0.000; F = 1.069 p<0.05*								

**Source:** Extracted from SPSS (Version 25.0)

Analysis of Regression Model 9 (Table 6.40) revealed that innovativeness (Adjusted R<sup>2</sup> = 0.000) does not explain any percent of the variance in GS in SMEs in the South African manufacturing industry. The analysis revealed that innovativeness ( $\beta$  = -0.046; t = -1.034; p = 0.302) is not statistically significant and does not contribute towards the General sustainability in SMEs in the manufacturing industry. Therefore, innovativeness does not predict climate change in SMEs operating in the manufacturing industry in South Africa. Contrary to the results obtained in this study, scholars (Aguado & Holl, 2019:26; Batista & Francisco, 2019:36) observe that climate change as an environment category needs organisations to develop strategies and innovative ways of business operations that are eco-friendly and ensure sustainable climate change. To ensure that their organisations have a clean environment, most organisations have one, and are still coming up with different innovative strategies, for example, one of them is using green fuel. Therefore, SMEs in the South African manufacturing industry should devise means to ensure that they have environmental policies in their organisation.

### 6.10 Hypotheses Decisions



Table 6.41 summarises the results from this study and states the decisions relating to its hypothesis.

**Table 6.41: Hypotheses decisions**

Hypothesis	Relationship	Beta coefficient	t Value	p-Value	Supported/not supported
H1	RM → IV	.024	0.403	0.476	Not supported
H2	ID → IV	.150	2.518	0.012	Supported
H3	ET → IV	-.021	-0.354	0.724	Not supported
H4	IV → GS	-.032	-0.711	0.477	Not supported
H5	IV → NP	.217	4.950	0.000	Supported
H6	IV → CG	-.064	-1.439	0.151	Not supported
H7	IV → EF	-.039	-0.816	0.390	Not supported
H8	IV → EN	-.036	-0.806	0.420	Not supported
H9	IV → SS	.166	3.748	0.000	Supported
H10	IV → CC	-.046	-1.034	0.302	Not supported
H11	ETO → IV	.390	8.842	0.000	Supported
H12	IV → CCP	.013	0.289	0.773	Not supported
<b>RM=</b> resource mobilisation; <b>ID=</b> infrastructure development; <b>ET=</b> employee training; <b>ETO=</b> employee training outcomes; <b>IV=</b> innovativeness; <b>GS=</b> general sustainability; <b>NP=</b> the nature of product; <b>CG=</b> corporate governance; <b>CCP=</b> corporate compliance to policies; <b>EF=</b> economic and financial financial; <b>EN=</b> environmental sustainability; <b>SS=</b> social sustainability; <b>CC=</b> climate change					

**Source:** Author's own compilation

As depicted in Table 6.41, of the twelve hypotheses proposed in this study, only four (H2, H5, H9 & H11) were supported because the positive Beta values were acceptable and their p-values were less than 0.05 were significant. For the other hypotheses, H1, H3, H4, H6, H7, H8, H10, and H12, the p-values were greater than the accepted level of 0.005 to be statistically significant and therefore not supported.

Having discussed the hypotheses proposed in this study and how these results fared concerning them, it is important to consider the underlying internal consistency and validity concerns relating to the measurement. The following section discusses the internal consistency and validity test of the results.

### 6.11 Internal Consistency

The internal consistency or scale reliability coefficients of the questionnaire items were assessed based on Cronbach's alpha criterion. To assess the reliability in this study, the test for scale reliability coefficients of items under each construct was conducted to evaluate the magnitude to which the questionnaire's survey items reveal internal consistency. Cronbach's alpha coefficients were computed to assess the degree to which similar responses could be obtained from the respondents should the same questions be directed to them under similar conditions. Scholars (Padilla, Divers & Newton, 2012:331; Bonett & Wright, 2014:1) submit that a construct is deemed reliable when the Cronbach's alpha coefficient result is equal to or greater than 0.7. The coefficients of internal consistency items for each of the 12 dimensions are presented in Table 6.42.

**Table 6.42: Scale Reliability**

<b>Construct</b>	<b>Questionnaire items</b>	<b>No of items</b>	<b>Cronbach's alpha</b>
Resource Mobilisation	Our company has enough resources to support service delivery. In our company, there is adequate quality technical support personnel. Our company has sufficient funds to pursue new developments in customer support delivery. Our company has adequate capital to acquire the necessary resources. Our company has access to the information required to make key decisions on product/service development	5	0.749
Infrastructure Development	In our company, the development of infrastructure is based on concern for the environment. In our company, there is well-developed environment sanitation (clean water and adequate sewage disposal). Our company has adequate physical infrastructure and facilities. In our company, there is an advanced infrastructural development strategy.	4	0.812
Employee Training	Our company has regular training programs for its employees. In our company, training programs are designed based on job requirements. The type of training that is offered within our company applies to the job In our company, the objectives of the training are well known.	4	0.758

<b>Construct</b>	<b>Questionnaire items</b>	<b>No of items</b>	<b>Cronbach's alpha</b>
Employee Training Outcomes	The training performed in our company has led to an increase in job satisfaction among employees. The training implemented in our company has improved the skills and knowledge of employees. The training implemented in our company has led to a change in the attitudes of employees.	3	0.731
Innovativeness	In our company, innovations are accepted easily in projects. In our company, employees are not punished even if their ideas do not work. Innovativeness is encouraged in the company.	3	0.755
General Sustainability	Acknowledgment of the importance of sustainability across the board. Concern for environmental compliance and auditing. Responsibility to help in making a difference on environmental issues such as waste and water use. Striving to make a difference on social issues such as health and education. Striving to make a difference on economic issues such as inflation and unemployment.	5	0.786
Nature of Product	Assessment of the health and safety impacts of products and services Type of product and service information required by procedures. Practices related to customer satisfaction, including results of surveys measuring customer satisfaction	3	0.754
Corporate Governance	The total number of business units analysed for risks related to corruption Number of employees trained in organisation's anti-corruption policies and procedures Public policy positions and participation in public policy development and lobbying The total number of business units analysed for risks related to corruption	4	0.911
Corporate Compliance to Policy	The total number of legal actions for anti-competitive behaviour, anti-trust, and monopoly practices and their outcomes Amounts of money paid by the company as fines for -non-compliance with laws and regulations The value of non-monetary penalties paid by the company for non-compliance with laws and regulations	3	0.916
Economic and Financial sustainability	The number of profits made by the company The overall financial health of the company The ability of the company to meet its financial obligations towards employees Value of money spent on taking care of the environment Amount of money spent in the procurement of products and services from local suppliers	5	0.944

Construct	Questionnaire items	No of items	Cronbach's alpha
Environmental	Using a life cycle analysis to evaluate the environmental friendliness of products Using clean production technologies and best practices. Promotion and implementation of environmental laws and regulations Environmental laws and regulations for staff education and publicity to raise environmental awareness Regular inspection and maintenance of environmental protection facilities and equipment	5	0.976
Social	Reduction in the impacts and risks to the general public Improvement in occupational health and safety of employees Improvement in product image Improvement in firm's social reputation Reduction in the impacts and risks to the general public	5	0.846
Climate change	Reduction in waste (water and/or solid) Reduction in toxic emissions Decrease of consumption for hazardous/harmful/toxic materials Decrease of frequency for environmental accidents Improvement in an enterprise's environmental situation.	5	0.834

**Source:** Author's own compilation

The results presented in Table 6.42 illustrates that all the thirteen measurement scales of this study (Resource Mobilisation, Infrastructure Development, Employee Training, Employee Training Outcomes, Innovativeness, General Sustainability, Nature of Product, Corporate Governance, Corporate Compliance to Policy, Economic and Financial sustainability, Environmental, Social, Climate change) were reliable. The Cronbach's alpha coefficients for each item under the four internal management systems (Resource Mobilisation=0.749; Infrastructure Development=0.812; Employee Training=0.758; Employee Training Outcome=0.731), innovativeness is the mediating variable (IV= 0.755) and constructs under the SME sustainability (General Suitability= 0.786; Nature of Product= 0.7; Corporate Governance= 0.911; Compliance of Policies=0.916; Economic and Financial=0.944; Environmental=0.970; Social Sustainability= 0.846 and Climate Change=0.834) yield values that were within the acceptable threshold of equal to or greater than 0.7. These results, therefore, confirm the satisfaction of the criteria of reliability as emphasised by Ursachi, Horonic and Zait (2015:681).

### **6.11.1 Scale Validity**

This section discusses how the three validities, namely, face, content, and construct, were ascertained in this study.

#### **6.11.1.1 Face validity**

Face validity pertains to whether a test appears to respondents to be measuring what it is supposed to measure (Ghazali, 2016:148). Face validity ensures that there are no errors in the measurement and that the questions posed are clear to avoid interviewer bias (Labbe, 2011:76). In this study, face validity was ascertained through a consultation with a panel of academics from Vaal University of Technology and experts in the field of business management. Besides, the questionnaire was reviewed by the study promoters to ensure that the measurement items measure what they intend to measure. Some changes were made to the questionnaire items of the wording of questions, length of the questions, and other technical aspects through their input.

#### **6.11.1.2 Content validity**

Content validity refers to the degree to which items in an instrument reflect the content universe to which the instrument will be generalised (Taherdoost, 2016:29). In this study content validity of the construct was ascertained through a pilot study of the questionnaire. It involved the distribution of 40 questionnaires to conveniently selected respondents who are SME owners-managers in various SMEs operating in the manufacturing industry in Gauteng province in South Africa. The questionnaires collected from the pilot sample were analysed to check whether respondents had faced challenges in answering the questions. Data collected from the pilot sample were then subjected to a reliability test using the SPSS statistical package software and all measurement scales attained Cronbach alphas above 0.7. As such, no items were removed from the questionnaire, as the data showed that its content was valid and reliable. The results of the pilot study are reported in Section 6.2.

#### **6.11.1.3 Construct validity**

Construct validity refers to how well a research instrument measures what it is supposed to measure (Ruel, Wagner III & Gillespie, 2015:91). Ghazali (2016:149) observes construct validity as the extent to which an instrument accurately measures a theoretical construct that it is designed

to measure. In the present study, two variants of construct validity, namely, convergent and discriminant validity, were considered. Convergent validity was tested using EFA. As recommended by Maskey *et al.* (2018:91) and Bilal and Khan (2019:1), factor loadings of above 0.5 and communalities of above 0.3 (c.f., Section 6.4) confirmed that convergent validity was adequate in this study. Additionally, the correlations between constructs in this study varied from -0.416 to 0.981, thereby meeting the acceptable discriminant validity as recommended by Taherdoost (2016:31).

#### **6.11.1.4 Predictive Validity**

Predictive validity is one method of criterion validity that predicts individual performance on some measure scores administered at a later date (Saunders *et al.*, 2016:307). In this study, predictive validity was tested using regression analysis. The regression analysis results show positive beta values between Infrastructure development and Innovativeness, Innovativeness and Nature of Policies, Innovativeness and Social sustainability, and Innovativeness and Compliance of Policies. These results show that predictive validity was adequate in this study.

### **6.12 Application of the Resource-Based View and the Dynamic Capabilities Theory**

This section discusses the linkage of the results of this study to the research theories, namely, the Resource-Based View and the Dynamic Capabilities theory. The Resource-Based View theory and the Dynamic Capabilities theory were discussed in detail in Chapters One and Three.

#### **6.12.1 Resource-based view theory**

As discussed previously, in Chapters One and Three, the Resource Based View theory is based on the premise that an organisation must acquire core and critical resources which are difficult for a competitor to imitate. The theory also aims to ensure that organisations maximise their performance and develop a sustainable competitive advantage by exploiting the resources at their disposal. The Resource Based View theory assumes that organisations determine their success or failure by providing an allowance for them to check and review their disposable resources and decide how best to bundle them to outplay their industry competitors. Thus, it facilitates organisations to consider the resources at their disposal to unlock the capabilities that are within the organisation to gain a competitive advantage.

In this study, the four internal management systems (Resource Mobilisation, Infrastructure Development, Employee Training, Employee Training Outcomes) are considered and taken as resources that SMEs can harness in the South African manufacturing industry to be more innovative and gain a competitive advantage over their competitors. The results of the study indicate that only Infrastructure Development ( $\beta = 0.166$ ;  $p < 0.012$ ) and Employee Training Outcome ( $\beta = 0.409$ ;  $p < 0.000$ ) have significant relationships and contribute positively to innovativeness. These results are in line with the resource-based view theory because infrastructure development and employee training outcomes are tangible and vital resources to SMEs to be innovative. Surprisingly, the results of the study revealed that resource mobilisation ( $\beta = 0.030$ ;  $p < 0.403$ ), and employee training ( $\beta = -0.024$ ;  $p < 0.724$ ) constructs are not significant and do not contribute to innovativeness in SMEs. Therefore, in this study, they are not necessary for enabling SMEs to be innovative.

### **6.12.2 The Dynamic Capabilities theory**

As discussed in previous chapters, the dynamic capabilities theory advocates that firms achieve new forms of competitive advantage by being flexible and fast in dealing with changing market environments. According to Gizawi (2014:2), the dynamic capabilities theory expands on two fundamental issues: the firm's ability to renew competencies to adapt to changes in the business environment and the capacity of strategic management to use these competencies to match the requirements of the environment. The main argument behind the dynamic capabilities' theory is that how organisations develop specific competencies to respond to changes in the business environment is ultimately related to the firm's business processes, market positions, and opportunities. In this study, the dynamic capabilities theory was applied because it allows organisations to be innovative in their operations, leading to various kinds of sustainability and competitive advantage.

The results of the study revealed that innovative capabilities in SMEs in the South African manufacturing industry enhance the nature of products ( $\beta = 0.183$ ;  $p < 0.000$ ) and SS ( $\beta = 0.156$ ;  $p < 0.000$ ). However, although the results show that innovativeness is significant to nature of products and social sustainability, the contributions are weak. The results of the study also revealed that innovativeness is insignificant and does not contribute sustainable indicators such as General

sustainability ( $\beta = -0.041$ ;  $\rho < 0.477$ ), Corporate governance ( $\beta = -0.120$ ;  $\rho < 0.151$ ), Compliance of policies ( $\beta = 0.021$ ;  $\rho < 0.773$ ), Employee training ( $\beta = -0.076$ ;  $\rho < 0.390$ ), Environmental ( $\beta = -0.081$ ;  $\rho < 0.042$ ) and Climate change ( $\beta = -0.060$ ;  $\rho < 0.302$ ). Interestingly, these results are contrary to other studies and findings by other scholars, who found that innovativeness is a predictor of the construct mentioned above, as discussed in the previous sections.

Under these circumstances, it can be concluded that these findings are in line with both the resource-based view and the dynamic capabilities theory. The results suggest that Infrastructure development and employee training outcome are significant and positively contribute to innovativeness, while resource mobilisation and employee training are insignificant. The results also indicated that innovativeness, on the other hand, influences the nature of the product and Social sustainability, whilst it is also insignificant to General sustainability, Corporate governance, Economic and financial, Environmental, and Climate change in SMEs operating in the manufacturing industry.

### **6.13 Conclusion**

Chapter 6 provided insights into all the activities related to the collection of data and its analysis as presented in Chapter 5. Subjects addressed include the pilot study, response rate, descriptive analysis of the results of both the demographic and constructs. Descriptive analysis weighed up the demographic profile of the respondents and their organisations. The chapter explored the mean scores and standard deviation of the constructs to show the averages of the responses on the constructs. The descriptive analysis showed the skewness and kurtosis to highlight the distribution of data. The chapter also discussed the correlations and the regression models of the study. Lastly, it discussed the link between the theories and the results of the study. The next chapter outlines the conclusions and recommendations.



## **CHAPTER 7**

### **CONCLUSIONS AND RECOMMENDATIONS OF THE STUDY**

#### **7.1 Introduction**

This final chapter discusses the conclusions and recommendations of the study. It first provides a review before outlining the conclusions drawn from the results obtained from the data analysis. The conclusions are based on the theoretical and empirical objectives. Furthermore, the study provides practical recommendations that can be adopted by SMEs operating in the South African manufacturing industry to increase the influence of internal management systems, innovativeness, and SME sustainability. Moreover, the chapter explores both theoretical and practical contributions to the study. Subsequently, it outlines the limitations, suggestions for further studies, and its overall conclusions.

#### **7.2 Review of the study**

The main aim of this study was to examine the relationship between internal management systems, innovativeness, and SME sustainability in the South African manufacturing industry. The thesis developed from the study is divided into seven chapters. The first chapter was divided into twelve sections that discussed the introduction, background to the study, outlined the problem statement of the study, the objectives, the research model, a summary of the hypotheses, the theoretical framework, a mini literature review of the research constructs, a brief research methodology, and statistical analysis, ethical considerations, the definition of terms and chapter outline.

The second chapter reviewed the literature on manufacturing SMEs in South Africa was divided into seven sections. The first section discussed the introduction of the chapter, the second section reviewed the literature on the overview of the SMEs sector. This was preceded by the third section, which reviewed the literature on the role of SMEs in the economy. The fourth section reviewed the literature on the challenges faced by SMEs, whereas the fifth section reviewed the literature on the lack of government support. The sixth section reviewed the literature concerning ways to promote SME sector growth, while section seven of the chapter discussed the conclusion.

The third chapter, which reviewed the literature on the research theories and internal management system, was divided into four sections. The first section discussed the introduction of the chapter. The second section reviewed the literature on various theories in general and the theories that were utilised in this study. The third section reviewed the literature on the research constructs of the study, while the fourth section discussed the conclusion of the chapter.

The fourth chapter of the study reviewed the literature on innovativeness and SME sustainability and was divided into eight sections. The first section discussed the introduction of the chapter, while the second section reviewed the literature on the definition of innovation and sustainability. The third section reviewed the literature on SME innovation. The fourth section reviewed the literature on SME sustainability, whereas the fifth section reviewed the literature on the dimensions of sustainability. The sixth section of this chapter reviewed the literature on the outcomes of sustainability. The seventh section focused on the conceptual framework of the study and hypothesis development, whilst section eight of discussed the conclusion of the chapter.

In the fifth chapter, the methodology used in this study was discussed in great depth. It was divided into fourteen sections in which the first section discussed the introduction of the chapter, while the second section focused on research paradigms that influence the type of methodology used in collecting research data. The third section highlighted the research methodology and design, while section four of the study discussed the research design of the study, whereas section five researched the research approach. Section six focused on the sampling design that was used, and section seven outlined the procedure that was followed in collecting data. Section eight discussed the pilot study, while section nine of the chapter discussed the processes that were to be used in preparing the collected data. Section ten focused on the data analysis approach, whilst section eleven discussed the methods that were to be used to measure reliability. Section twelve discussed the methods that were to be used to measure the validity. Section thirteen divulged the ethical considerations that were followed in this study, whilst section fourteen presented the conclusion of the chapter.

Chapter 6, which focused on data analysis and interpretation, was divided into thirteen sections. The first section discussed the introduction of the chapter, whilst the second section focused on discussing the results of the pilot study. The third section focused on calculating the response rate of the study. The fourth section of the chapter discussed the descriptive statistics of the

demographics of the respondents and their organisations. The fifth section focused on testing whether the collected data was factorable and if it was well distributed. This was realised through the exploratory factor analysis and the skewness and kurtosis test. Section six focused on the revised conceptual model based on the results obtained in the EFA whereas section seven zoned on discussing the descriptive statistics of the research constructs. Section eight focused on testing the relationships of research constructs through the Pearson correlation, while section nine of the chapter discussed the results obtained from the regression analysis. Section ten focused on the hypothesis decisions, whereas section 11 focused on testing the internal consistency of the results through testing validity and reliability. Section 12 of the chapter discussed the application of the theories employed in this study, and section thirteen presents the conclusion of the chapter.

Chapter 7 is the final chapter of the study and discusses the conclusions and recommendations. It is divided into ten sections, in which the first section provides the introduction of the chapter. The second section presents the review of the study, whereas the third section focuses on presenting conclusions based on the theoretical objectives. The fourth section presents conclusions based on empirical objectives, whilst the fifth section presents the conceptual model developed after analysing the results. The sixth section presents recommendations of the study. Section seven of the chapter presents the contributions of the study, while section eight presents its limitations. Section nine presents the suggestions for future research, and section ten of the chapter presents the summary of the chapter.

### **7.3 Conclusions based on the theoretical objectives**

This section discusses the conclusion based on the theoretical objectives of the study. As indicated in Chapter 1 (refer to Section 1.4.2), the following theoretical objectives were set for the study:

1. to explore the literature on manufacturing SMEs in South Africa;
2. to review the literature on internal management systems, such as resource mobilisation, infrastructure development, and employee training;
3. to analyse the literature on innovation; and
4. to examine the literature on sustainability.

### **7.3.1 Conclusions Based on the literature review on manufacturing SMEs in South Africa**

The first theoretical objective focused on conducting a literature review on manufacturing SMEs in South Africa. The objective was achieved in the second chapter of the current thesis. The review acknowledges that SMEs have been the main drivers of the economies globally, which is enhanced by the accumulation of their small contributions through the various sectors of origins. The review also pointed out that SMEs are directly responsible for reducing the high unemployment rate, poverty alleviation, aid efficiency within the economy, contingency provision to customer and client equality provisions regarding the distribution of resources, and customer liberty.

From the literature review, it also emerged that the majority of SMEs fail and die in their infancy stage because of various causes. These include managerial incompetence and uncondusive operating environment, lack of administrative know-how, incompetence, personal merits, and factors such as unpleasant economic conditions, incoherent business strategies, and resource scarcity were the main causes of new firms fail. The literature review further revealed that factors such as poor networking and labour-related problems, government-related actions, stiff competition, lack of financial resources, and lack of government support are some of the challenges faced by SMEs. In addition, from the literature review, it emerged that promoting inter-organisational relationships, offering capacity building through education and skills development schemes, pursuing optional financial avenues, promoting good corporate governance, and technological accessibility are some of the ways to promote SMEs' sector growth.

### **7.3.2 Conclusions based on internal management systems under consideration**

The second theoretical objective of this study focused on reviewing the literature on the conceptualisation and understanding of internal management systems under consideration. This objective was addressed in the third chapter. The chapter also reviewed the literature on the components that constitute the constructs under consideration. These include internal management systems include resource mobilisation, infrastructure development, and employee training.

In the literature review, it was indicated that internal management systems imply mechanisms as well as techniques that are put into effect by the organisation to ensure that they remain competitive in the global market. These mechanisms, techniques, and systems originated internally from the contributions made by the strategic personnel within the organisation and include but are not

limited to resource mobilisation, employee training, infrastructure development, quality control systems, personnel morale, and risk management. However, this study focused on resource mobilisation, infrastructure development, and employee training.

Concerning resource mobilisation, the literature review revealed that the development of SMEs hinges on the capability of the entities to gather and use readily disposable resources to enhance development and growth. The literature review also emerged that resources comprised tangible and intangible elements bundled together to achieve business stipulated goals, ranging from profitability, progressive existence, sustainability, wealth maximisation, and market dominion. It also pointed out that SMEs need various types of resources for their establishment, which are survival and growth. These types of resources include financial, human, information, and physical resources.

Regarding infrastructure development, the literature review revealed a distinction between developed and developing countries concerning SMEs to infrastructural development. The study emerged that there are various types of infrastructural developments that are vital for the SME sector. These include technological infrastructure, roads, buildings, drainage systems, and warehouses, among others. The literature review indicated that technological, infrastructural developments provide SMEs with a conducive innovation environment. It also pointed out that most SMEs face the challenge of buildings in terms of infrastructure as many operate from the backyards of residential homes. The study also revealed that road networks are a tool that helps protect SMEs' assets, such as vehicles, and allow them access to inputs and customers.

In terms of employee training, the literature stressed that there is a need to extend the knowledge and skills in SMEs' possession to be aligned with the current production or service offering trends, which can only be achieved through training. The literature review also revealed that training and education are also a source of motivation to employees and gives the impression that the organisation values its employees. It also pointed out that training enhances managerial competencies, which is one of the challenges that lead to the death and failure of many SMEs. From the literature, it also emerged that there are various types of training, such as problem-based learning, web-based training, social learning, and mobile learning.

### **7.3.3 Conclusions Based on the literature review on innovation**

The third theoretical objective was intended to review the literature on the innovativeness of SMEs. This theoretical objective was achieved in the fourth chapter of the current thesis. The literature review revealed that innovation in SMEs is imperative and is a multi-dimensional construct that incorporates production, process, and technological innovation. Also, it was affirmed that innovation is critical in SMEs and plays a significant role in improving SMEs' performance, economic growth, increased confidence in business, and improvement in industrial activities.

### **7.3.4 Conclusions Based on the literature review on sustainability**

The fourth theoretical objective focused on exploring the literature on SMEs' sustainability. This objective was achieved in the fourth chapter of the study. The literature review established that sustainability refers to a type of development that is meant to meet present-day needs while not compromising the ability of future generation. The literature review also affirmed that SMEs' sustainability is driven by several factors, ranging from skilled labour, government regulations, and management practices. From the literature review, it also emerged that SMEs' sustainability is linked to the innovativeness of the owners or managers. The literature review in this chapter also revealed that there are various dimensions of sustainability, ranging from general, nature of the product, economic, financial, social to climate as well as environmental sustainability.

Regarding general sustainability, the literature review revealed that it encompasses all forms of organisational sustainability that tries to ensure that the operations of an entity meet its current needs and allow for the business to enjoy the same benefits as before. Also, in this chapter, it emerged that general sustainability encompasses aspects such as skilled workforce, technology, and industrial development capabilities, availability of specialised skills within the organisation, information exchange, capacity building, and the provision of adequate finances. The literature also established that the general sustainability of SME organisations operating in the current business environment is crippled by globalisation.

Concerning the nature of the product as a dimension of sustainability, it focuses on innovation that is aligned to both the product and the projects that positively impact sustainability. It was revealed that it bases its roots on product innovation, which orients its emphasis on aspects of quality and

uniqueness of the product. The literature also revealed that product sustainability can be seen as a source of competitive advantage and a core business concept.

Regarding corporate governance, the literature revealed that corporate governance is an important aspect of SMEs sustainability as it acts as a guideline towards the management and controlling of businesses. The literature affirmed corporate governance as an essential part of sustainability that gives stimulation to SMEs on how the rights and duties allocated amongst the stakeholders within the organisations are to be performed; it outlined the rules, regulations, procedures to be followed, and the values that inform decision making-processes on business matters. From the literature review, it also emerged that the benefits of corporate governance are not only limited to corporate prosperity but also extend to organisational responsibilities.

On economic and financial sustainability, the literature review revealed that the economic and financial sustainability dimension of sustainability implies the capability of an organisation to be able to ensure value creation and enhance the financial wellness of an organisation. It also emerged that two aspects are aligned to the financial sustainability dimension, which includes cost reduction and economic interest of the stakeholders, such as improvement in economic wellbeing and the cost of living. The literature review also established that under economic sustainability are two prevalent concerns, namely, the micro and macro, in which micro issues are concerned with an organisation's economic performance that includes the financial aspects such as sales, turnover, cash flow, profit, and profit and shareholder value. The macro issues are associated with the SMEs' economic performance with their local and global considerations and their contributions to employment and GDP.

The literature review revealed that environmental sustainability has recently become a more pronounced and discussed aspect of business sustainability. It established that environmental sustainability places environmental responsibility in the hands of the firms. Thus, it ensures that organisations play a role in protecting and preserving the general environment in which they operate. It also emerged that environmentally responsible firms usually engage in conducting business while being cognisant of the steps in reducing, recycling, and re-using waste material. It also emerged that aspects such as attitude and awareness are crucial elements that hinder organisations to be conscious of their environmental impact. The literature review also established

that family-owned SMEs are excessively reluctant to adopt new business management practices that are environmentally friendly compared to modern SMEs.

Concerning social sustainability, the literature review revealed that it is concerned with societal issues as opposed to the profitability aspect of an organisation. It is anchored on the well-being of the people surrounding the organisation and the communities within it. It emerged that organisations that are conscious of the social dimension of sustainability stand a chance of earning a competitive advantage over those that are reluctant to incorporate such in their operations. The literature review also revealed that social sustainability is based on social dimensions such as social capital, cohesion, and exclusion.

Concerning the climate change dimension, the literature review revealed that it entails the organisation's ability to undertake business that poses a positive impact on climatic conditions. It emerged that this dimension gives organisations the responsibility of taking care of the environment to benefit future generations. The literature review also affirmed that the climate change dimension seeks to enhance ecological sustainability by making it a core policy objective rather than a marginal one.

#### **7.4 Conclusions based on empirical objectives**

This section discusses the conclusions based on the empirical objectives of the study. As indicated in Chapter 1 (refer to Section 1.4), the following empirical objectives were set for the study:

- i. to explore the perceptions of SME owner-managers in the South African manufacturing sector regarding the implementation of internal management systems in their businesses;
- ii. to analyse the perceptions of SME owner-managers in the South African manufacturing sector regarding the levels of innovation in their businesses;
- iii. to examine the perceptions of SME owner-managers in the South African manufacturing sector regarding the sustainability of their businesses;
- iv. to determine the relationship between internal management factors and innovativeness among SMEs in the South African manufacturing sector;
- v. to establish the relationship between innovativeness and sustainability among SMEs in the South African manufacturing industry; and



- vi. to develop a model for internal management systems, innovativeness, and sustainability among SMEs in the manufacturing industry of South Africa.

#### **7.4.1 Conclusions regarding the perceptions of SME owner-managers in the south African manufacturing sector towards the implementation of internal management systems in their businesses.**

The first empirical objective was to determine the perceptions of SME owners-managers in the South African manufacturing sector regarding the implementation of internal management systems in their businesses. To achieve this objective, descriptive statistics in the form of minimum and maximum values, mean scores, and standard deviations were applied to each construct, and the results were analysed.

##### **7.4.1.1 Perceptions of SME owner-managers regarding resource mobilisation**

Regarding resource mobilisation, SME owners-managers in the South African manufacturing sector perceived that their organisations have enough resource mobilisation capabilities that can enable them to achieve their goals. SME owner-managers indicated that their organisations have enough resources to support service delivery. They further confirmed that there is adequate quality technical support personnel in their organisations, sufficient funds to peruse new developments in customer support delivery, and adequate capital to acquire necessary resources. They further affirmed that their companies have access to the information required to make critical product/service development decisions. Therefore, this study concludes that SMEs in the South African manufacturing sector can mobilise resources that enable them to deliver their products/services effectively and efficiently.

##### **7.4.1.2 Perception of SME owner-managers regarding infrastructure development**

Concerning infrastructure development, SME owner-managers in the South African manufacturing industries perceived that they have adequate infrastructure to conduct their businesses. They agreed that the development of infrastructure in their organisations is based on concern for the environment. They also affirmed that there is well-developed environment sanitation in their organisations. Furthermore, the owner-managers also confirmed that their companies have adequate physical infrastructure and facilities and an advanced infrastructural development strategy. In light of all this, this study can conclude that SMEs in the South African

manufacturing sector have all the necessary infrastructure and strategies to propel their organisations to growth and development.

#### **7.4.1.3 Perception of SME owner-managers regarding employee training**

Regarding employee training, SME owners-managers in the South African manufacturing sector perceive that they initiate enough employee training initiatives to capacitate their employees. They confirmed that their organisations have regular training programmes for their employees in their organisations. They also affirmed that training programmes are designed based on job requirements and that the type of training applies to their jobs. The owners-managers also indicated that in their companies the objectives of the training are well known. Therefore, given all the information above, this study concludes that the SMEs in the South African manufacturing sector take pride in training their employees with the necessary skills that enable them to perform effectively in their jobs.

#### **7.4.1.4 Perception of SME owner-managers regarding employee training outcomes**

Concerning employee training outcomes, SME owner-managers perceive that training outcomes in their organisations are well known and articulated. They confirmed that the training performed in their organisations has led to increased job satisfaction among employees. They also revealed that the training implemented in their organisations has improved employees' skills and knowledge and have led to a change in the attitudes of employees. Given all these views, this study concludes that SMEs in the South African manufacturing sector has done well in defining the intended outcomes of their training initiatives as they enable them to measure the effectiveness of the programmes they are implementing.

### **7.4.2 Conclusions based on the perceptions of SME owner-managers in the South African manufacturing sector regarding the levels of innovation in their businesses**

The second empirical objective focused on analysing the perception of SME owner-managers in the South African manufacturing sector towards the levels of innovativeness in their businesses. They perceive that there are decent levels of accepting innovativeness in their organisations. SME owner-managers confirmed that innovations are quickly accepted in their companies and that employees are not punished, even if their ideas do not work. They also confirmed that

innovativeness is encouraged in their companies. Analysing these results, this study concludes that SMEs in the South African manufacturing industry value innovativeness and consider it an essential element for their growth and survival.

#### **7.4.3. Conclusions based on the perception of SME owner-managers in the South African manufacturing sector regarding the sustainability of their businesses**

The third empirical objective of this study focused on examining the perceptions of SME owner-managers in the South African manufacturing industry regarding the sustainability of their businesses. These perceptions were examined using eight different sustainability dimensions, namely, general sustainability, nature of the product, corporate governance, employee training, environmental, social sustainability, corporate governance, and compliance of policies.

##### **7.4.3.1 Perception of SME owner-managers regarding general sustainability**

Regarding general sustainability, SME owner-managers in the South African manufacturing sector perceive that there are decent levels of sustainability in their companies. Thus, they acknowledge the importance of sustainability across the board. They also confirmed that in their organisations, concern for environmental compliance and auditing are clearly expressed. They also affirmed that their organisations strive to make a difference and take responsibility for environmental issues (waste and water), social issues (health and education), and economic issues (inflation and unemployment). In this view, the study can conclude that SMEs in the manufacturing industry in South Africa have made significant differences in the communities in which they operate.

##### **7.4.3.2 Perception of SME owner-managers regarding the nature of the product**

Concerning the nature of the product, SME owner-managers in the South African manufacturing sector feel that their products are of great quality and safe for consumption and use. They confirmed that their products are assessed for health and safety before being distributed and sold to customers. They also expressed that vital information required by producers concerning the type of product and service is shared effectively and that practices related to measuring customer satisfaction are regularly conducted. Accordingly, this study concludes that SMEs in the South African manufacturing industry take serious measures to ensure that their products are quality and safe for their customers.

#### **7.4.3.3 Perception of SME owner-managers regarding corporate governance**

With regards to corporate governance, SME owner-managers in the South African manufacturing industry perceive that issues to do with good corporate governance are moderately considered in their organisations. They expressed that several business units are analysed for risks and related corruption and that several employees are trained in anti-corruption policies and procedures. However, they also felt that their organisations do not contribute towards public policy positions and participate in public policy development and lobbying. Therefore under these circumstances, this study concludes that SMEs in the South African manufacturing sector need to up their game and improve in issues to do corporate governance.

#### **7.4.3.4 Perception of SME owner-managers regarding corporate compliance to policy**

Regarding compliance to policy, SME owner-managers in the South African manufacturing sector perceive that the level of compliance to policy in the industry is regrettably low. They confirmed that there are low numbers of legal actions taken for anti-competitive behaviour, anti-trust and monopoly practices, and outcomes. They also affirmed that small amounts of money are paid as fines for non-compliance with laws and regulations and that they disregard and ignore the value of non-monetary penalties paid by the company for non-compliance with laws and regulations. Therefore, this study concludes that SMEs in the South African manufacturing sector are failing to comply with laws, policies, and regulations in their industry.

#### **7.4.3.5 Perception of SME owner-managers regarding economic and financial sustainability**

Concerning EF sustainability, SME owner-managers in the South African manufacturing sector perceive that the EF sustainability of their organisations is okay. They confirmed that certain amounts of profits are being made in their organisations. They affirmed that they spend valuable amounts of money to take care of the environment and in the procurement of products and services from local suppliers. However, they also perceive that the overall financial health of their companies is compromised and that they are struggling to meet the financial obligation towards their employees. In that event, this study, therefore, concludes that SMEs in the South African manufacturing industry need to up their game and devise other avenues to cater to their financial needs.

#### **7.4.3.6 Perception of SME owner-managers regarding environmental sustainability**

Regarding environmental, SME owner-managers in the South African manufacturing sector perceive that their companies support and take part in conserving their environment. They perceive that their organisations use life cycle analysis to evaluate the environmental friendliness of their products. They also expressed that their organisations use clean production technologies and best practices and promote and implement environmental laws and regulations. They also affirmed that they educate their staff and raise awareness towards environmental laws. SME owner-managers also confirmed that regular inspection and maintenance of environmental protection facilities and equipment are carried out. As a result, this study concludes that SMEs in the South African manufacturing industry participate in environmental preservation activities in the communities in which they operate.

#### **7.4.3.7 Perception of SME owner-managers regarding social sustainability**

With regards to social sustainability, SME owner-managers in the South African manufacturing industry perceive that they take cognisance and value the social impacts of their organisations towards their communities. They perceive that their organisations try to reduce the impacts and risks to the general public, and they always try to improve the occupational health and safety of their employees. They also affirmed that they try to improve their social reputation and their product images. Therefore, this study concludes that SMEs in the South African manufacturing industry take responsibility and try to improve the social welfare of their employees and communities.

#### **7.4.3.8 Perception of SME owner-managers regarding climate change**

Concerning climate change, SME owner-managers in the South African manufacturing sector perceive that their organisations work and contribute to activities aimed at reducing the impact of climate change. They confirmed that their organisations aim at reducing the disposal of waste in water, emission of toxic gasses, and decrease consumption of hazardous materials. Also, they confirmed that their establishments contribute towards improvements in enterprise environmental situations and decrease the frequency of environmental accidents. Along these lines, this study concludes that SMEs in the South African manufacturing industry take responsibility and participates in activities aimed at reducing climate change.

#### **7.4.4 Conclusions based on the relationship between internal management factors and innovativeness among SMEs in the South African manufacturing sector**

The fourth empirical objective focused on determining the relationship between internal management systems and innovativeness in the SMEs in the South African manufacturing industry. This objective was addressed by analysing the regression analysis results to test the hypothesised relationships between the four internal management systems under consideration: resource mobilisation, infrastructure development, employee training, and employee training outcome.

##### **7.4.4.1 Conclusions regarding the relationship of resource mobilisation on innovation**

The first hypothesis (H1) sought to test the relationship between resource mobilisation and innovativeness in SMEs in the South African manufacturing industry. The result of the study indicates that there is a weak and insignificant relationship between resource mobilisation and innovativeness ( $\beta = 0.030$ ). This result demonstrates that resource mobilisation does not predict innovativeness in SMEs operating in the South African manufacturing industry. However, this result is not aligned with the insights gained from the literature review, where it was revealed that there is a clear and significant relationship between resource mobilisation and innovativeness of organisations. Therefore, this present study concludes that resource mobilisation is not a predictor and enabler of innovativeness in SMEs in the South African manufacturing sector.

##### **7.4.4.2 Conclusions regarding the relationship between infrastructure development and innovation**

Regarding the second hypothesis (H2), the results of the study indicated that a relationship exists between Infrastructure development and innovativeness. This result demonstrated that infrastructure positively and significantly influences innovativeness in manufacturing SMEs in South Africa. However, the relationship is weak, as indicated by a beta of ( $\beta = 0.166$ ). This result demonstrates that infrastructure development has a positive impact on the innovativeness of organisations. In light of these results, this study, therefore, concludes that infrastructure development is an important antecedent of innovativeness to SMEs operating in the South African manufacturing industry.

#### **7.4.4.3 Conclusions regarding the relationship between employee training and innovation**

Concerning the third hypothesis (H3), the results of the study revealed that there is a negative and insignificant relationship between employee training and innovation ( $\beta = -0.024$ ). This result indicates that there is no relationship between employee training and innovation in SMEs operating in the South African manufacturing sector. These results are contrary to the observations drawn from the review of the literature concerning the influence of employee training and innovation, which indicated that there is a need for organisations to extend the knowledge of their employee to match the developments and technological changes happening in the economy as this will enhance their skills and be innovative. Given all this, this study, therefore, concludes that employee training is not an essential element to innovation in SMEs in the South African manufacturing industry.

#### **7.4.4.4 Conclusions regarding the relationship between employee training outcomes and innovation**

Regarding the eleventh hypothesis (H11), the study results revealed a positive and significant relationship between employee training outcomes and innovation in SMEs in the South African manufacturing industry. This relationship was demonstrated with a positive beta ( $\beta = 0.409$ ). This result indicates the importance of clarifying the objectives of employee capacity-building initiatives in SMEs. Therefore, this present study concludes that having clearly outlined employee training outcomes in organisations enables SMEs in the South African manufacturing industry to be innovative.

#### **7.4.5 Conclusions based on the relationship between innovativeness and sustainability among SMEs in the South African manufacturing industry**

The fifth empirical objective of the study focused on determining the relationship between innovativeness and sustainability in SMEs in the South African manufacturing industry. This objective was addressed by analysing the relationship between innovativeness and sustainability dimensions under this study: general sustainability, nature of the product, corporate governance, economic and financial sustainability, environmental, social sustainability, climate change, and corporate compliance to policy.

#### **7.4.5.1 Conclusions regarding the relationship between innovativeness and general sustainability**

Regarding the fourth hypothesis (H4), the results of the study indicate that there is no relationship between innovativeness and general sustainability. The relationship was shown by a negative and insignificant relationship ( $\beta = -0.041$ ). The results indicated that innovativeness does not predict general sustainability in SMEs operating in the South African manufacturing industry. However, this result is contrary to the observations made from the evidence from the literature, which suggests that innovativeness has a positive and significant relationship with the general sustainability of firms. This study, therefore, concludes that innovation does not lead to the general sustainability of SMEs in the South African manufacturing industry.

#### **7.4.5.2 Conclusions regarding the relationship between innovativeness and the nature of the product**

Regarding the fifth hypothesis (H5), the study results demonstrate that a relationship exists between innovativeness and the nature of the product in SMEs in the South African manufacturing industry. The relationship was indicated by a positive and significant beta ( $\beta = 0.183$ ). This result demonstrated that innovation is a significant predictor of the nature of the product. In such a way, this study concludes that innovation is an important element and is a vital predictor for the nature of the product in SMEs in the South African manufacturing industry.

#### **7.4.5.3 Conclusions regarding the relationship between innovativeness and corporate governance**

Concerning the sixth hypothesis (H6), the study results revealed no relationship between innovativeness and corporate governance in SMEs in the South African manufacturing industry. The relationship was marked by a negative and insignificant beta of ( $\beta = -0.120$ ). This result indicates that innovativeness does not predict good corporate governance in SMEs. The results agreed with the views of other scholars obtained from the literature, which observes that issues about corporate governance are not linked to innovation but the following of stipulated policies, rules, and regulations. Accordingly, this study concludes that innovativeness is not a predator and does not inspire good corporate governance in SMEs in the South African manufacturing industry.



#### **7.4.5.4 Conclusions regarding the relationship between innovativeness and economic and financial sustainability**

Regarding the seventh hypothesis (H7), the results of the study indicated that there is no relationship between innovativeness and economic and financial sustainability in SMEs in the South African manufacturing industry. The non-existence of the relationship was indicated by a negative and insignificant beta ( $\beta = -0.076$ ). These results demonstrated that innovation is not a predictor of economic and financial sustainability. This result was supported by the evidence obtained in the literature, which suggests that the economic and financial sustainability of an organisation does not depend on innovation but by implementing and following sound financial principles. In light of this, this study concludes that innovativeness is not a predictor for SMEs' economic and financial sustainability operating in the South African manufacturing industry.

#### **7.4.5.5 Conclusions regarding the relationship between innovativeness and environmental sustainability**

Concerning the eighth hypothesis (H8), the results of the study demonstrate that there is no relationship between innovativeness and environmental sustainability in SMEs in the South African manufacturing industry. The result of the study indicated that there is a negative and insignificant relationship between innovativeness and environmental sustainability ( $\beta = -0.081$ ). This result demonstrates that innovation is not a predictor of environmental sustainability. However, this result is contrary to the evidence obtained from the literature review which suggests that recently there is a paradigm shift in many organisations where innovativeness is now part of a strategic tool to ensure that there is environmental sustainability. This led to the conclusion that SMEs in the South African manufacturing industry need to re-evaluate their strategies and incorporate innovativeness in their environmental sustainability tool.

#### **7.4.5.6 Conclusions regarding the relationship between innovativeness and social sustainability**

Regarding the ninth hypothesis (H9), the study results revealed a relationship between innovativeness and social sustainability in SMEs in the South African manufacturing industry. The results indicated that there is a positive and significant relationship between innovativeness and social sustainability ( $\beta = 0.156$ ). This result shows that innovativeness predicts social

sustainability. This study, therefore, concludes that innovativeness and social sustainability are linked to each other.

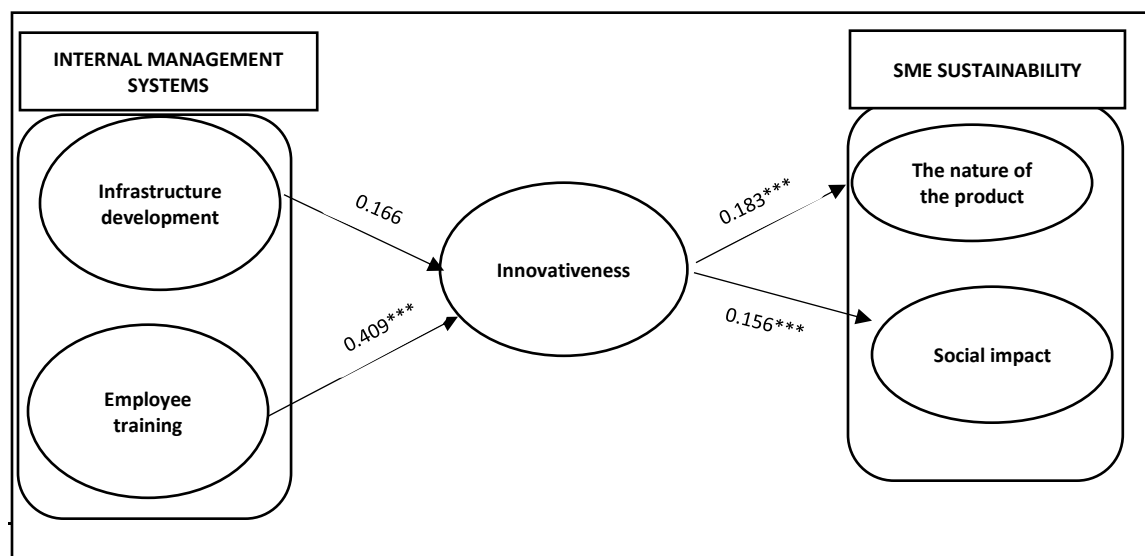
#### 7.4.5.7 Conclusions regarding the relationship between innovativeness and climate change

Concerning the tenth hypothesis (H10), the results of the study demonstrate that there is no relationship between innovativeness and climate change in SMEs in the South African manufacturing industry. The results were indicated that there is a negative and insignificant result between innovativeness and climate change ( $\beta = -0.060$ ). The result indicates that innovativeness does not influence climate change. In light of this, this study concludes that innovativeness is not vital to issues related to climate change in SMEs operating in the South African manufacturing sector.

#### 7.4.5.8 Conclusions regarding the relationship between innovativeness and corporate compliance to policy

Regarding the twelfth hypothesis (H12), the results of the study demonstrate that indeed a relationship does not exist between innovativeness and corporate compliance to policy. The result was indicated by a weak and insignificant beta ( $\beta = 0.021$ ), which signifies a lack of relationship. This result demonstrates that innovation does not influence SMEs to comply with policies and regulations. In light of this, this study concludes that innovativeness does not predict and is of no significance to compliance of policy in SMEs in the South African manufacturing industry.

### 7.5 The Model Developed



### **Figure 7.1: The Model for Internal Management Systems, Innovativeness and SME Sustainability**

**Source:** Author's compilation

The model developed in the study (Figure 7.1) illustrates that infrastructure development and employee training outcomes are central to SMEs' innovativeness in the South African manufacturing industry. This view is premised on the significant positive relationships between these two internal management system constructs and innovativeness. Also, the model further shows that innovativeness is essential to social sustainability and nature of the product. Thus, innovativeness is a stimulus to these two SME sustainability constructs (nature of the product and social sustainability).

## **7.6 Recommendations**

The primary objective of this study was to investigate the relationship between internal management systems, innovativeness, and SME sustainability in South Africa. In the process of determining these relationships, the study suggests several recommendations that can be taken into consideration to improve the influence of internal management systems, innovativeness, and sustainability in SMEs in South Africa. These recommendations are intended to benefit SME owners-managers and other stakeholders in various SME industries in South Africa and can be applied to SMEs in other developing countries.

### **7.6.1 Recommendations regarding the relationship between resource mobilisations and innovation**

As observed in the study, resource mobilisations pertain to the process of identifying the resources essential for the development, implementation, and continuation of works for achieving the firm's mission. The study also revealed that most SMEs fail because of a lack of resources. It is, therefore, necessary to suggest some recommendations that SMEs may adopt and implement to increase their resource mobilisations strategies. These strategies include the following, among others:

#### **7.6.1.1 Save before they enter into business**

From the study it has emerged that most SMEs die or fail while they are still in their infancy stage. Therefore it is critical that SMEs owners should save before they enter into business. This would allow them to have a solid financial base before they start their businesses. This would allow them a stable starting point as they are working on securing other forms of financing their businesses, such as loans and government gratuities.

#### **7.6.1.2 Pinpoint and sell surplus assets**

SME owners-managers must pinpoint surplus assets that need to be sold or reused in their organisations. This would enable them to determine what is of importance and reduce storage costs and other related costs. The reduction in storage cost would help SMEs save the little funding they have, and idle assets could be sold and converted into cash that would be injected into the business to increase productivity. The funds could attract talented and competent employees in the organisations, therefore pinpointing and increasing surplus assets and cash flows in the organisation.

#### **7.6.1.3 Having an effective inventory management system**

From the literature reviews, it has been noted that SMEs often ran out of stocks due to a lack of resources. Therefore, it is critical for SME owner-managers to have an effective inventory management system in place in their firms. This would enable SMEs to avoid stock-out and not disappoint their valuable customers. Having an effective inventory management system helps SMEs avoid and minimise idle and sitting stock that might be costing their organisations. An effective inventory management system also helps SME owner-managers to track customer behaviour around ordering, delivering, and other customer requirements, which would enable them to prioritise their expenditure and purchasing activities.

### **7.6.2 Recommendations regarding the relationship between infrastructure development and innovation**

The study emerged that infrastructure development is an essential enabler of innovation in SMEs in the South African manufacturing industry. To enhance the influence of infrastructure

development and innovation, several interventions can be used. These may include the following among others:

#### **7.6.2.1 Invest in advanced infrastructure development projects**

SMEs should invest in advanced infrastructure development projects to stay in touch with new technologies and developments in their environments. Investing in advanced infrastructure development projects help them to absorb and utilise innovations that are being developed, especially technological innovations that will help them grow. Also, investing in advanced infrastructure development projects provides SMEs with better means to engage with their supplier and provide them with opportunities to be innovative.

#### **7.6.2.2 Collaborate with other firms in infrastructure development activities**

It is critical for SMEs in the manufacturing industry to collaborate with other firms in building infrastructural development projects. This would give SMEs access to financial avenues such as loans from banks. Also, this would enable SMEs to own their places where they could freely do their own business and freely invest in the more advanced technologies and innovative activities. Collaborating with other firms of government bodies would encourage SMEs to come up with innovative means to invest in the communities they operate in, thereby leading to social sustainability.

### **7.6.3 Recommendations regarding the relationship between employee training and innovation**

The results of this study showed the employee training does not influence innovation in SMEs in the South African manufacturing sector. To create a positive and significant relationship between employee training and innovation, several strategies can be employed. Such strategies could include the following:

#### **7.6.3.1 Allow Employee engagement in training activities**

SMEs need to have mechanisms that allow employee engagement in key activities of the organisation. This would enable employees to develop a mutual bond and increase trust with their managers. Allowing employee engagement in training activities gives employees a sense of

autonomy and value their work. This would boost their confidence to loosen up, thereby enabling them to be innovative, which means to develop their skills with the help of their organisational training and development activities. Employee engagement activities also help the organisation identify areas where they need to help and develop their employees.

#### **7.6.3.2 Reward and recognise training achievements**

SMEs need to reward and recognise the training achievements of their employees to motivate them to keep engaging in training activities. This would encourage a learning culture. Rewarding and recognising training achievements also stimulate employee motivation and enable them to view skills development as necessary for their professional development as opposed to a temporal annoyance that interferes with their actual work. Rewards in the form of gamification points and badges, promotion opportunities, office perks, and bonuses can be used.

#### **7.6.3.3 Embrace process innovation**

SME owners-managers must embrace process innovation within SMEs, which is aimed at re-engineering the overall business processes. Process innovation calls for the drastic improvement of aspects of the internal organisational operations and enhances its capacities and capabilities. Thus, under process innovation, all the operations will be revamped to ensure that they align with the latest business operations for the organisation to remain competitive in the market. Revamping organisations' operation allows SMEs to strengthen areas where they are prone and weak, which can be done through training and developing their employees.

### **7.6.4 Recommendations regarding the relationship between employee training outcomes and innovation**

The study revealed that employee training outcomes influence innovation in SMEs in the South African manufacturing industry. Thus, the results of the study indicate that there is a relationship between employee training outcomes and innovation. To increase the influence of training outcomes on innovation, SMEs may use various strategies. These strategies among others can include the following:

#### **7.6.4.1 Personalise employee development**

To increase employee training outcomes in SMEs operating in the South African manufacturing industry, employee development should be personalised rather than apply a one-size-fits-all mentality. This would enable the organisation to analyse its employees and acknowledge them in terms of their specific skills, technological fluency, and approach to learning. This would help the SMEs save money as they would develop specific skills they need in the organisation. This could be achieved through methods such as self-direct career development. Personalised employee development outcomes encourage organisations to measure the success of their training and development programmes.

#### **7.6.4.2 Select the appropriate people for training**

For SMEs to increase their innovativeness, they need to carefully select the appropriate people for training. In doing so, they need to provide a clear direction about why they are attending training as well as the expected performance outcomes. It is also important that the training sessions' objective is reviewed and reiterated so that the employees leave the training not only with high mastery and confidence but with an enthusiasm to apply the technology.

#### **7.6.5 Recommendations regarding the relationship between innovation and general sustainability**

As observed in the study, there is no relationship between innovation and general sustainability. To increase and enhance the influence of innovation on general sustainability, several interventions could be utilised, which might include the following:

##### **7.6.5.1 SME owners must possess valid qualifications**

From the literature, it has emerged that most SMEs die a stillbirth because managers and owners lack the rightful skills and qualifications that enable them to lead their businesses to success. Therefore, SME owner-managers must have the right qualifications and experience concerning business management and operations. Having these valid skills would help them to make informed and rational decisions. Besides, aspects such as the functionality of a business, growth and sustainability are directly influenced by the owner. This implies that the sustainability of a business lies in the hands of the owner and as such, the owner must be highly equipped to influence the success of the venture.

#### **7.6.5.2 Employ skilled workforce**

Recruiting a skilled workforce is one way an organisation can gain sustainability in this robust competitive environment. A highly skilled human resource is one of the vital assets that an organisation can own. Therefore, SMEs must employ skilled employees to give the organisation a competitive edge over competitors, thereby providing them with a hedge towards profitability and sustainability.

#### **7.6.6 Recommendations regarding the relationship between innovation and the nature of the product**

The study results revealed a relationship between innovation and the nature of the product in SMEs in the South African manufacturing sector. To increase the influence of innovation, SMEs might employ various strategies, which include the following:

##### **7.6.6.1 Adopt technological innovations**

SMEs should adopt and implement new information and technological innovations to stay afloat with worldwide developments. This allows them to institutionalise various initiatives that facilitate the effective sharing of information about their products with their suppliers and customers. Adopting innovations also cultivates relationships with suppliers as organisations may be compelled to offer capacity-building schemes to train each other in new technology and how they could best make use of it. Moreover, adopting new technologies presents SMEs with better means to engage easily with their suppliers and customers.

##### **7.6.6.2 Knowing the aspects of the product**

SME owner-managers must be in a position to know about the aspects surrounding successful product placement, which include packaging, price, and promotion. This knowledge can only be passed to the owner-manager through adequate training on marketing-related aspects. A well-marketed product promotes great visibility, which can be turned into a high sales volume, affecting profitability positively.



### **7.6.7 Recommendations regarding the relationship between innovation and corporate governance**

From the study, it has emerged that there is no relationship between innovation and corporate governance. To enhance the influence of innovation on corporate governance, SMEs might use various interventions that include the following:

#### **7.6.7.1 Set clear company goals**

There is a need for the SME owner to manage and outline company goals together with the avenues to achieve them and monitor their performance. This implies that there is a need for SME owner-managers to devise and outline the rules, regulations, and procedures in detail towards the decision-making process of business matters. This makes the business to be legitimate, which could most likely attract investors.

#### **7.6.7.2 Promote good behavioural practices**

SMEs must evaluate their behaviour towards their employees. This needs SME managers to ensure that their mission, goals and objectives, and company policies are communicated to employees. SMEs could paste the policies and regulations of the organisations in an area that is accessible to every employee. Also, rewarding employees who have exhibited good behaviour encourages them to conduct themselves in ways that they are obliged to.

### **7.6.8 Recommendations regarding the relationship between innovation and corporate compliance to policy**

The results of the study revealed that there is a positive and significant relationship between innovation and corporate compliance to policy. Several strategies could be utilised to increase and enhance the influence of innovation on corporate compliance to policy. These might include the following:

#### **7.6.8.1 Institute compliant mechanisms**

There is a need for the owner-managers for SMEs to engage business advisors that could help draft all the necessary documents needed to ensure that there are rules, regulations, and procedures in

place that would be used as guidelines to undertaking effective and compliant business activities. A compliant business operation has access to a wide variety of big organisations for tenders.

#### **7.6.8.2 Institute integrated software systems**

Today's businesses base their functionality on sophisticated software solutions that allow for more streamlined networks. For SMEs to reach their full potential, they should use advanced software systems that can collect, integrate and analyse data to be distributed to all stakeholders. The use of advanced software enables organisations to easily track employees' activities, which otherwise would have been difficult to manipulate. Additionally, the automation process of public supply chains through advanced high-quality software helps SMEs reduce the workforce strain, cuts down the margin of error in processes, and allows more effective use of resources.

#### **7.6.9 Recommendations regarding the relationship between innovation and economic and financial sustainability**

The results of the study revealed that there is no relationship between innovation and economic and financial sustainability. To increase the influence of innovation SMEs might employ various strategies and include the following:

##### **7.6.9.1 Information sharing**

One of the most ways to increase SMEs' EF sustainability is to share information within the organisation and with suppliers and customers. Information of transactions and feedback can be easily communicated, given the advancement of technologies in this era. However, SME managers and owners need to guard against the spillage of critical information into the public domain, either by a leakage in the system or through hackers. Therefore, to avoid such instances, information security must be guaranteed. Organisations should prioritise awareness programmes to increase vigilance in the face of such threats. Information security features such as passwords, antivirus software, and firewalls could be applied as solutions. More so, training should be provided, focusing on how to code and decode encrypted messages to ensure that critical information about the organisation is safe if it is leaked. Other organisations have even established some anti-spyware departments to deal with information security issues. These departments are manned with information and technology specialists.

### **7.6.9.2 Adoption of advanced technologies**

With the advent of the information and technology era, ensuring EF sustainability using the internet has become necessary. This being the case, SMEs should adopt and make use of technological advancements. This enables them to solve complex problems and makes auditing of financial records easy. Adopting and making use of information technology ensures the flow of finances easy.

### **7.6.10 Recommendations regarding the relationship between innovation and environmental sustainability**

The results of the study demonstrated that there is no relationship between innovation and environmental sustainability. To increase environmental sustainability, SMEs need to employ various strategies, which might include the following:

#### **7.6.10.1 Have well developed environmental sanitation in place**

It is recommended that the SME owner-managers must ensure that the company has well-developed environmental sanitation with adequate physical infrastructure and facilities. This can be done through a follow-up on the compliance book where all aspects that are supposed to be followed regarding the environmental operations are laid out. This is meant to avoid unnecessary fines that might be aligned to environmental laws non-compliance.

#### **7.6.10.2 Have in place strategies to minimise environmental impacts**

The SME owner-manager must ensure that it is cognisant of activities in ensuring that the business operations result in a minimal impact to the existing natural environment or develop strategies on how to prevent such for the greater benefit of ecology. The strategies include re-use, recycle, minimising gaseous emissions, and avoiding refuse dumping in non-refuse dumping sites.

#### **7.6.10.3 Establish the business close to suppliers**

It is also recommended that there is a need for SMEs owners to ensure that they operate near the source of their raw material to limit transportation that might destroy roads as well as increase emissions during raw material transportation. There is also a need for the owner-managers to use water resources effectively and energy resources through the use of clean power.

### **7.6.11 Recommendations regarding the relationship between innovation and social sustainability**

The results of the study demonstrated that there is a relationship between innovation and social sustainability. To increase SS, SMEs can use various interventions. These interventions might include the following:

#### **7.6.11.1 Engage in corporate social responsibility activities**

It is recommended that the SME owner-manager must embark on community wellness-oriented programmes which come in different dimensions such as addressing socially related problems, ensuring a collaboration during the execution of social and cultural activities, and being committed to ensuring that the community welfare is improved would have the ability to curb a greater market share.

#### **7.6.11.2 Comply with rules and regulations**

SME owner-managers must ensure that they do not sell products or embark on business activities that favour them in profit terms while being a detriment to the wellness of the surrounding communities. There is a need to ensure that the operations are in line with the generally accepted business activities, which would lead to sustainable support by the surrounding communities. In literature, there is evidence of various researchers that have established a relationship of social sustainability to the legislative or human health and safety-related aspects, as opposed to cultural and ethical aspects.

### **7.6.12 Recommendations regarding the relationship between innovation and climate change**

The results of the study revealed that there is no relationship between innovation and climate change. To increase the influence of innovation on climate change, SMEs might employ various strategies that include the following:

#### **7.6.12.1 Draft company policies to protect the environment**

It is also recommended that SME owner-managers must do their business operations while considering the protection of the planet from degradation through sustainable consumption and production, sustainably managing its natural resources, and taking urgent action on climate change

to support the needs of the present and the future generations. Besides, there is a need to create a policy that resolves the problem from the root cause for the sake of supporting sustainable development initiatives. To achieve this, there is a need for reformed institutional frameworks, strengthened capabilities, high-level political commitment, and an inclusive and integrated vision of a sustainable future.

#### **7.6.12.2 Invest and make use of renewable energy.**

It is also recommended that SME owner-managers invest in renewable energy that generates at least half its power from wind or solar, and has been certified by Green-e-Energy, an organisation that vets renewable energy options. This may reduce their organisations' electric bill that encourages innovativeness within the organisation on ways to preserve a clean environment.

### **7.7 Contributions of the study**

The contributions of this study are both theoretical and practical. Theoretical contributions concern the applicability and benefits of cited literature, while practical contributions are aligned with the benefits of the results of the study to SMEs owners-managers and other stakeholders.

#### **7.7.1 Theoretical contributions**

Theoretically, the present study contributes to the existing body of knowledge since it is an addition to the available literature on internal management systems and the influence of IV on sustainability in SMEs in the South African manufacturing industry. It contributes to the existing literature on resource mobilisations, infrastructure development, employee training, employee training outcome, innovativeness, general sustainability, nature of the product, corporate governance, corporate compliance to policies, employee training, environmental, social sustainability, and climate change.

Furthermore, the study provides a specific conceptualisation of the relationship between internal management systems and innovativeness, which is the mediating construct. This provides a platform for applying the theory to SMEs in the South African manufacturing industry, where previously there was limited information since no study had been conducted.

Additionally, the study contributes to the literature concerning the determination of the relationship between innovativeness and SME sustainability. The study revealed that indeed a relationship exists between innovativeness and some of the sustainability dimensions, namely, the nature of the product and social sustainability. This was also supported by various example cases of previous results that were drawn from other countries. Thus, this study is essential in understanding the relationships between innovativeness and SME sustainability dimensions.

The study is also of critical use to future studies as it can be a source of reference on research methodology for studies on SME sustainability.

### **7.7.2 Practical contributions**

Practically, the results provided in this study are beneficial to SME owners-managers in the manufacturing industry regarding the ways to improve the sustainability and growth of their businesses. The study revealed the strategies of improving the influence of internal management systems on innovation. SME owner-managers in the South African manufacturing industry can take note and employ these strategies to benefit their organisations.

This includes giving hints on how best SMEs can be established, operated, and supported towards ensuring their growth. This helps various stakeholders with the main reference placed on owner-managers and the government through its national growth initiative to be able to realise the exact procedure to follow for the sake of ensuring the successful operations of the SMEs sector.

The study also revealed that innovation has very little or no influence on corporate governance in SMEs in the South African manufacturing industry. It revealed that this sustainability dimension draws its influence from complying with policies and regulations as well as upholding values that enable their business growth and development. Therefore, SME owner-managers must ensure that policies, values, and tenants of corporate governance are observed in their organisation for them to grow.

Also, the results of this study revealed that the economic and financial sustainability of SMEs in the South African manufacturing industry does not depend on the innovativeness of the organisation. Instead, sustainability depends on following financial and economic principles. SME

owner-managers in the SME industry need to ensure that principles such as the risk and return principle, cash flow principle, and profitability and liquidity principle, to mention a few, are observed in their organisations so that economic and financial sustainability can be realised in their organisations.

Moreover, the study revealed that SME owners-managers of SMEs in the South African manufacturing industry are not consulted and do not participate in policy-making decisions to do with environmental sustainability and climate change. Therefore, government agencies and departments must consider, consult and include SMEs in their policy-making processes, or in any decisions, as this would allow SMEs to own up and comply to these policies and regulations since they would feel valued.

Additionally, the recommendations made in this study are not limited to SMEs in the manufacturing industry but are universal, meaning that they apply to all SMEs across the nation and the continent.

The study has established an easy-to-follow procedure with each stakeholder's responsibility spelt out for the sake of ensuring the continued existence of the SME sector while preserving the readily available resources for use by future generations. Various studies across the globe were consulted, thereby making it feasible to follow up how to ensure SMEs' survival, growth, and existence from various perspectives, despite location. The thesis has set up a standard that can be used as a benchmark towards ensuring the sustainability of SME operations.

The study has also assisted the stakeholders on how best they can incorporate and use the technology to benefit the SME sector's sustainability.

## **7.8 Limitations of the study**

The current study provided some useful in-depth insights regarding the hypothesised relationships between internal management systems, innovativeness, and SME sustainability in the South African manufacturing industry. Despite the valued contributions made, various limitations should be highlighted for future reference. The first limitation is that the study did not test for the moderating effect of factors such as the salary of respondents, or gender of the respondents.

Measurement of the impact of demographic factors such as gender and salary on the proposed relationships could have further cemented the results of the study by showing how such factors moderate the proposed relationships.

The second limitation is that of the setting of the study. The study limited the scope of the study to one province in South Africa, which is the Gauteng province. This could be viewed as a weakness, given that the SME domain is broad and calls for a more extensive and broader geographic scope. An expansion of the scope to two or three more provinces could have yielded more informative results.

The third limitation is that the accuracy of the responses could not be ascertained because respondents had to complete the questionnaires in their own time in the absence of the researcher, which made the study susceptible to response bias. The researcher did not sit with each respondent to monitor the completion of the questionnaires. Another limitation is that the study did not test the relationship between internal management systems and SME sustainability dimensions, which is the outcome variable of the study.

## **7.9 Implications for Further Research**

Having highlighted the limitations of the current study, several implications for further research are suggested. Firstly, on variables such as resource mobilisations, employee training, employee training outcome, general sustainability, corporate governance, corporate compliance to policies, employee training, environmental and climate change where relationships were not found, future studies could be conducted to check if the pattern is still consistent with the results of this study. Furthermore, scholars may include other internal management systems and sustainability dimensions that were excluded in this study. It would be interesting to measure how such factors influence both IV and sustainability in SMEs in the South African manufacturing industry.

Another area where future studies could be conducted could be the testing of moderation influences where studies test demographic factors of SME owner-managers such as gender, salary, or race, among others. Mean differences based on these demographic factors could also be analysed using t-tests and analysis of variance techniques.



Also, the study's primary informants ended up being managers and owners of SMEs, and on further research, stakeholders such as the government, suppliers, financial institutions, customers as well as low-level employees must take part and express their views for the sake of widening the views from the primary investigation.

The study was only limited to a quantitative approach, therefore is advisable to undertake one using either a qualitative approach or a mixed methodology to establish an in-depth analysis of the study.

## **7.10 Conclusion**

This chapter serves as the final chapter of the study. It provides the study's overall overview and its conclusions based on the theoretical and empirical objectives. The results provided statistical evidence that there is a relationship between internal management systems, innovation, and sustainability in SMEs in the South African manufacturing industry. The study revealed that resource mobilisation and employee training have no influence and relationship with innovation whilst infrastructure development and employee training outcome have. Additionally, the results show that innovation plays an essential role in steering SME sustainability. They indicated that innovation influences the nature of the product and social sustainability whilst it does not have a relationship with other sustainability factors such as general sustainability, corporate governance, employee training, environmental, corporate compliance to policies, and climate change. The chapter also presents various recommendations for improving innovation through internal management systems and enhancing SME sustainability through innovation. It further reveals that the study makes several important contributions to both theory and practice. Finally, it indicates that although the study is limited in various ways, several suggestions for further research can be drawn, paving the way for more focused research attempts in the future.

## BIBLIOGRAPHY

- Abbas, M., Nawaz, S.M., Ahmad, J. & Ashraf, M. 2017 The effect of innovation and consumer related factors on consumer resistance to innovation. *Cogent Business & Management*, 4:1:23-47.
- Abbott, P., Goosen, X. & Coetzee, J. 2013. The Human Resource function contribution to human development in South Africa. *South African Journal of Human Resource Management*, 11(1):1-13.
- Abbrey, J., Bagah, D. A. & Wulifan, J. K., 2018. The relevance of business planning document for small and medium scale enterprises in Tamale metropolis, North Ghana. *Journal of Business Administration and Education*, 7(1): 34-80.
- Abdul-Rashid, S.H., Sakundarini, N., Ghazilla, R.A.R. & Ramayah, T. 2017. The impact of sustainable manufacturing practices on sustainability performance Empirical evidence from Malaysia. *International Journal of Operations Production and Management*, 37:182-204.
- Abdulsaleh, A. M. & Worthington, A. C., 2019. Small and medium-sized enterprises financing: a review of literature. *International Journal of Business and Management*, 8(2): 36-54.
- Aboelmaged, M., 2018. The drivers of sustainable manufacturing practices in Egyptian SMEs and their impact on competitive capabilities: A PLS-SEM model. *Journal of Cleaner Production*, 1-207.
- Abor, J. & Quartey, P., 2010. Issues in SME development in Ghana and South Africa. *International Research Journal of Finance & Economics*, Volume 39: 218-228.
- Abor, J. Y., Agbloyor, E. K. & Kuipo, R., 2017. Bank finance and export activities of Small and Medium Enterprises. *Review of Development Finance*, 4(3): 97-103.
- Abrahám, J., Strielkowski, W., Vošta, M. & Šlajs, J., 2017. Factors that influence the competitiveness of Czech. *Agric.Econ – Czech*, 45(8): 50-60.

Ackah, J. & Vuvor, S. 2011. The Challenges faced by Small & Medium Enterprises (SMEs) in Obtaining Credit in Ghana. Master's Thesis in Business Administration. [Online]. Available:<<https://www.coursehero.com/file/pjk9i7g/Ackah-J-and-Vuvor-S-2011-The-Challenges-faced-by-Small-Medium-Enterprises-SMEs/>> Accessed: 25/03/2021.

Agbenyegah, A. T., 2013. Challenges facing rural entrepreneurship in selected areas in South Africa. Doctoral Dissertation. Potchefstroom Campus of the North-West University.

Aguado, E. & Holl, A., 2019. Differences of corporate environmental responsibility in small and medium enterprises: Spain and Norway. *Sustainability*, 6(2): 20-32.

Agwu, M. O. & Emeti, C. I., 2019. Issues, challenges and prospects of small and medium scale enterprises (SMEs) in Port-Harcourt City, Nigeria. *European Journal of Sustainable Development*, 3(1): 101-114

Agyapong, D. & Obro-Adibo, G., 2018. The impact of socio-cultural systems on the growth of small family businesses in Ghana. *Developing Country Studies*, 3(14): 1-15.

Agyemang, I. K., Deh, I. Y. & Asuamah, Y., 2017. Socio-demographics effect in factors that shape decision to start own business. *Journal of Small Business and Entrepreneurship Development*, 1(1): 34-50.

Ahad, T., Dyson, L. E. & Gay, V., 2019. An empirical study of factor influencing the SMEs intention to adopt m-Banking in rural Bangladesh. *Journal of Mobile Technologies, Knowledge & Society*, 3(2): 1-16.

Ahmed, A., 2017. Rural marketing strategies for selling products & services: issues & challenges. *Journal of Business Management & Social Sciences Research*, 2(1): 55-66.

Ahmeti, F. & Marmullaku, B., 2019. Human resource management and practices in SMEs in developing countries: practices in Kosovo. *European Scientific Journal*, 11(7): 30-40.

- Akgün, E. A., Keskin, H. & Byrne, J., 2017. The moderating role of environmental dynamism between firm emotional capability and performance. *Journal of Organizational Change Management*, 21(2): 30-52.
- Akhter, R. & Sumi, F. R., 2019. Socio – Cultural factors influencing entrepreneurial activities: A study on Bangladesh. *IOSR Journal of Business Management (IOSR-JBM)*, 16(9): 1-15.
- Akinson, A.O. 2018. Effect of infrastructural facilities on SMEs growth in Nigeria. *International Journal of Innovative Research and Development*, 10(7):196-203.
- Akugri, M. S., Bagah, D. A. & Wulifan, J. K., 2016. The contributions of small and medium scale enterprises to economic growth: a cross-sectional study of Zebilla in the Bawku west district of northern Ghana. *European Journal of Business and Management*, 7(19): 1-14.
- Alafeef, M., 2019. The impact of innovation marketing orientation in achieving the competitive advantage in hotel establishments in Saudi Arabia case study Al-Baha City-KSA. *International Journal of Scientific and Technology Research*, 1-190.
- Alfonso Expósito & Juan A. Sanchis-Llopis, 2019. The relationship between types of innovation and SMEs' performance: a multi-dimensional empirical assessment. *Eurasian Business Review*, Springer; *Eurasia Business and Economics Society*, 9(2):115-135
- Al-Mahrouq, M. 2010. Success factors of small and medium enterprises: the case of Jordan. Zagreb. *International Review of Economics & Business*, 13(2):89-106.
- Almutairi, F. & Sathiyarayanan, M., 2016. Causes of failure of implementation management information systems (MIS) in Small and Medium Enterprises (SMEs) in the Middle East. *International Journal of Innovative Research and Creative Technology*, 1(1): 20-35.
- Amoah-Mensah, A., 2019. Strategic resources and performance of rural SMEs. *International Journal of Business and Social Research (IJBSR)*, 3(4): 1-13.
- Amyx, C., 2015. Small Business Challenges – The perception problem: size doesn't matter. *Washington Business Journal*, 3(4): 1-45.

- Anders, I., Vladimir, V. & Peter, H., 2019. The impact of managers' attitudes on SMEs' growth in northern Sweden. *International Journal of Entrepreneurship and Small Business*, 18(3): 98-112.
- Anderson, J. C. & Gerbing, D.W. 1988. Structural equation modelling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103(3): 411-423.
- Andreisova, L. 2018. How can a corporate (compliance) culture be described and effectively measured? *Business and Management Studies*, 4(3):52-58.
- Andrew, K., 2017. The challenges of entrepreneurship as an economic force in rural development: a case study of Kyaddondo East constituency, Wakiso district in Uganda, East. *African Journal of Science and Technology*, 5(1): 1-16.
- Andriotis, N. 2020. Five tips on realistic training objectives. [Online]. Available:< [Training Objectives: 5 Tips to Set Realistic Goals for your Training Programs \(talentlms.com\)](https://www.talentlms.com/blog/training-objectives-5-tips-to-set-realistic-goals-for-your-training-programs/)> Accessed: 18/03/2021.
- Ansari, B., Mirdamadi, S. M., Zand, A. & Arfaee, M., 2018. Sustainable entrepreneurship in rural areas. *Research Journal of Environmental and Earth Sciences*, 5(1): 26-31.
- Anser, M., Zhang, Z. & Kanwal, L., 2019. Moderating effect of innovation on corporate social responsibility and firm performance in realm of sustainable development. *Environmental Management*, 3(6): 4-27.
- Anser, M., Zhang, Z. & Kanwal, L., 2019. Moderating effect of innovation on corporate social responsibility and firm performance in realm of sustainable development. *Environmental Management*, 3(6): 4-27.
- Arogundade, B. B., 2017. Entrepreneurship education: an imperative for sustainable development in Nigeria. *Journal of Emerging Trends in Educational Research and Policy Studies (JETERAPS)*, 2(1): 10-29.
- Arruda, L., De Jesus Lameira, V., Quelhas, O. & Pereira, F., 2019. Sustainability in the Brazilian heavy construction industry: An analysis of organizational practices. *Sustainability*, 1(3): 55-70.

Asfaw, A. M., Argaw, M. D. & Bayissa, L. 2015. The impact of training and development on employee performance and effectiveness: a case study of district five administration office, Bole Sub-City, Addis Ababa, Ethiopia. *Journal of Human Resource and Sustainability Studies*, pp. 188-202.

Ashley, P., 2018. *Ethics and Social Responsibility in Business*. 2 ed. Brazil: Saraiva: São Paulo.

Aslam, S., Ahmad, M., Amin, S., Usman, M. & Arif, S. 2018. The impact of corporate governance and intellectual capital on firm's performance and corporate social responsibility disclosure: evidence from Australian listed companies. *Pakistan Journal of Commerce and Social Sciences*, 12(1):283-308.

Ayanda, A. M. & Laraba, A. S., 2019. Small and medium scale enterprises as a survival strategy for employment generation in Nigeria. *Journal of Sustainable Development*, 4(1): 10-30.

Ayyagari, M., Beck, T. & Demirguc-Kunt, A. 2007. Small and medium enterprises across the globe. *Small Business Economics*, 29(3):415-434.

Ayyagari, M., Demirgüç-Kunt, A. & Maksimovic, V., 2018. Formal versus informal finance: Evidence from China. *Review of Financial Studies*, 48-97.

Babbie, E. 2007. *The practice of social research*. 11th ed. Belmont, CA: Thompson Wadsworth.

Bagozzi, R. P. & Yi, Y. 1988. On the evaluation of structural equation model. *Journal of Academy of Marketing Science*, 16(1):74-94.

Bakdash, J.Z. & Marusich, L.R. 2017. Repeated measures correlation. *Frontiers in. Psychology*, 8:1-13.

Baleseng, M. C. 2015. *Factors affecting the sustainability of SMEs in the manufacturing sector of Gaborone, Botswana*. Masters dissertation. Faculty of Commerce and Administration. North-West University. South Africa.

Baloch, M. A., Ozturk, I., Bekun, F. V., & Khan, D. 2021. Modeling the dynamic linkage between financial development, energy innovation, and environmental quality: Does globalization matter?. *Business Strategy and the Environment*, 30(1): 176-184.

Balshaw, T. & Goldberg, J., 2014. *Broad-Based BEE: Amended codes & scorecard*. South Africa: Tafelberg Publishers.

Bansal, P., 2019. Envolving sustainably: A longitudinal study of corporate sustainable development. *Strategic Management Journal*, 5(26): 12-46.

Batista, A. & Francisco, A., 2019. Organizational sustainability practices: A study of the firms listed by the corporate sustainability index. *Sustainable Operations*, 5(2); 30-45.

Battle, K., Muyengwa, G., Mukhuba, K. & Mbohwa, C. 2013. Barriers to Enterprise Development: The Case of SMMEs Operating in the South African Motor Body Repair Sector. *International Conference on Law, Entrepreneurship and Industrial Engineering*, 244- 48.

Beck, T. & Demirgüç-Kunt, A., 2018. Access to finance: An unfinished agenda. *World Bank Economic Review*, 300-360.

Bell, J., 2014. *Doing Your research project. a guide for first time researchers*. London: McGraw-Hill Education.

Ben-Eliyahu, A. 2014. *What is a path model?* [Online] Available at: <https://chronicle.umbmentoring.org/what-is-a-path-model/> Accessed 31/07/2018

Berndt, A. & Petzer, D. 2013. *Marketing research*. Cape Town: Pearson Education South Africa.

Berstrom, D, Kalima, R., Olinger, J. & Holley, K. 2014. The sustainable communities initiative: the community engagement guide for sustainable communities. *Journal of Affordable Housing & Community Development Law*, 22(2)191-211.

Bessant, J. & Tidd, J. 2007. *Innovation and entrepreneurship*. Hoboken, USA: Wiley.

Bhagat, S. and B. Bolton. "Director ownership, governance and performance. *Journal of Financial and Quantitative Analysis*, 48(1):105-135.

Bhattacharjee, A., 2012. *Social science research: principles, methods, and practices*. Florida, USA: Creative Commons Attribution-NonCommercial-ShareAlike.

Bibi, S., Khan, A., Qian, H., Garavelli, A.C., Natalicchio, A. & Capolupo, P. 2020. Innovative climate, a determinant of competitiveness and business performance in chinese law firms: the role of firm size and age. *Sustainability*, 1-24.

Bilal, C & Khan, A. 2019. What is the communality cut-off value in EFA? [Online]. Available:<[https://www.researchgate.net/post/What-is-the-communality-cut-off-value-in-EFA#:~:text=communalities%20is%20calculated%20sum%20of,be%200.30\\*0.30%20%3D%200.09.>](https://www.researchgate.net/post/What-is-the-communality-cut-off-value-in-EFA#:~:text=communalities%20is%20calculated%20sum%20of,be%200.30*0.30%20%3D%200.09.>) Accessed: 18/02/2021.

Bolton, B. & Zhao, J. What matters in corporate governance and innovation? [Online]. Available:<[http://www.efmaefm.org/0efmameetings/efma%20annual%20meetings/2018-Milan/papers/EFMA2018\\_0632\\_fullpaper.pdf](http://www.efmaefm.org/0efmameetings/efma%20annual%20meetings/2018-Milan/papers/EFMA2018_0632_fullpaper.pdf)>[Accessed: 12/03/2021.

Bonett, D.G. & Wright, T.A. 2014. Cronbach's alpha reliability: interval estimation, hypothesis testing, and sample size planning. *Journal of Organizational Behavior*, 1-13.

Booyens, I., 2013. Are small, medium-and-micro-sized enterprises engines of innovation? The reality in South Africa. *Science and Public Policy*, 1-78.

Brown, T. A., 2019. *Confirmatory factor analysis for applied research*. New York: The Guilford Press.

Brusco, S. & Righi, E., 2016. Local government, industrial policy and social consensus: the case of modern Italy. *Economy and Society*, 18(4): 100-112.

Bryman, A. 2012. *Social research methods*. 4th ed. New York: Oxford University Press.



- Bukki, A.O., Oguntimehin, Y.A. & Adeyemi, M. 2019. A study of small and medium - scale enterprises (SMEs) owners' resources mobilisation and innovative culture in South-West Nigeria. *Annual Journal of Technical University of Varna Bulgaria*, 3(1):1-10.
- Burch, S., 2018. Small businesses and sustainability innovation: confronting the gap between motivation and capacity. *Centre for International Governance Innovation*, 127(1): 1-12.
- Burlea-Schiopoiu, A. & Mihai, L.S. 2019. An integrated framework on the sustainability of SMEs. *Sustainability*, 11:1-22.
- Burns, K.E.A. & Kho, M.E. 2015. How to assess a survey report: A guide for readers and peer reviewers. *Canadian Medical Association Journal (CMAJ)*, 187: 198-205.
- Burns, R. P. & Burns, R. A. 2008. *Business research methods and statistics using SPSS*. Los Angeles: Sage.
- Bushe, B. 2019. The causes and impact of business failure among small to micro and medium enterprises in South Africa, *Africa's Public Service Delivery and Performance Review*, 7(1):1-15.
- Carley-Baxter, L.R., Hill, C.A., Roe, D.J., Twiddy, S.E., Baxter, R.K. & Ruppenkamp, J. 2009. Does response rate matter? journal editors use of survey quality measure in manuscript publication decisions. *Survey Practice*, 2 (7).
- Casson, R.J. & Farmer, L.D. 2014. Understanding and checking the assumptions of linear regression: a primer for medical researchers. *Clinical and Experiment Ophthalmology*, 42(6):590-596.
- Ceptureanu, E. G., Ceptureanu, S. I., Bologa, R. & Bologa, R. 2018. Impact of competitive capabilities on sustainable manufacturing applications in Romanian SMEs from the textile industry. *Sustainability*, 1-16.
- Chan, L.L. & Idris, N. 2017. Validity and reliability of the instrument using exploratory factor analysis and Cronbach's alpha. *International Journal of Academic Research in Business and Social Sciences*, 7(10):400-410.

Chardine-Baumann, E. & Botta-Genoulaz, V. 2014. A framework for sustainable performance assessment of supply chain management practices. *Computers and Industrial Engineering*, 76: 138-147.

Check, J., & Schutt, R. K. 2012. Survey research. In Check, J. & Schutt, R. K. (Eds.). *Research methods in education*. (pp. 159–185). Thousand Oaks, CA: Sage Publications

Chimucheka, T. & Mandipaka, F., 2015. Challenges faced by SMMEs in the Nkonkobe Municipality. *The International Business and Economics Research Journal*, 1-45.

Chimucheka, T. 2015. The contribution of entrepreneurship education in improving entrepreneurial skills and knowledge of SMME owners and managers. *Journal of Economics*, 1-90.

Chinomona, R. & Hove, P. 2015. The influence of supplier involvement on communication, relationship longevity and business performance in SMMEs in South Africa. *Journal of Economics and Behavioural Science*, 1-90.

Chinomona, R. & Pretorius, M., 2011. SME manufacturers' cooperation and dependence on major dealers' expert power in distribution channels. *South African Journal of Economics and Management Sciences*, 12(2):170-187.

Choi, J., Kim, S. & Yang, D., 2019. Small and medium enterprises and the relation between social performance and financial performance: Empirical evidence from Korea. *Sustainability*, 3(2): 10-26.

Chumney, F. 2016. Exploratory Factor Analysis: A Brief Introduction. [Online]. Available:< <https://www.youtube.com/watch?v=rQZiy7GE-LM>> Accessed: 15/02/2021.

Chun, H. & Shin, S., 2018. The impact of labor union influence on corporate social responsibility. *Sustainability*, 2(7): 35-67.

Cloete, H.C.A. 2016. Human Resource Development in Local Government: A Management Perspective. [Online]. Available:< <https://www.semanticscholar.org/paper/Human-resource->

[development-in-local-government%3A-aCloete/21211c51bc95d185e89acf6244ec1cdc3f2f30bd>](#)  
Accessed 23/03/2021.

Colardyn, D., 2016. *La gestion des compétences*. Moscow: PUF.

Collis, J. & Hussey, R. 2014. *Business research: a practical guide for undergraduate and postgraduate students*. 4<sup>th</sup> ed. Basingstoke: Palgrave Macmillin.

Coloma, G. 2017. The existence of negative correlation between linguistic measures across languages. *Corpus Linguistics and Linguistic Theory*, 13(1):1-26.

Creswell, J. W. & Garrett, A. L., 2011. The “movement” of mixed methods research and the role of educators. *South African Journal of Education*, 28: 321 – 333.

Cuihong, Z. 2018. *Research on sustainable development strategy of SME*, Beijing: Beijing University of International Business and Economics.

Cycle, E. F., 2018. Policies for seed and early stage financing STI Policy Paper: Policies for Seed and Early Stage Finance. *Financing Challenges for Young Innovative Firms*, 2(6): 112-139.

Deloitte. 2013. Enhancing manufacturing competitiveness in South Africa. Deloitte Management Competitiveness report, South Africa.

Department of Small Business Development. 2010. *Black business supplier development programme (BBSDP)*. [Online]. Available:<[http://www. dsbd.gov.za/assets/black-business-supplier-development-programme-\(bbsd\)- guidelines.pdf](http://www.dsbd.gov.za/assets/black-business-supplier-development-programme-(bbsd)-guidelines.pdf) > Accessed: 05/04/2019.

Devins, D., Johnson, S. & Sutherland, J. 2004. Employer characteristics and employee training outcomes in UK SMEs: A multivariate analysis. *Journal of Small Business and Enterprise Development*, 11(4):449-457.

Dey, P. & Petridis, N. E., 2019. Environmental management and corporate social responsibility practices of small and medium-sized enterprises. *Clean Production*, 9(16): 67-80.

Divya, 2017. *Importance and benefits of SPSS in research*. [Online] Available at: <https://www.writeneed.com/single-post/2017/07/05/Importance-and-benefits-of-SPSS-in-research> Accessed: 31/07/2018.

Dong, Y. 2012. *Contingent Valuation of Yangtze Finless Porpoises in Poyang Lake, China*. London: Springer.

Dostie, B. 2017. The Impact of Training on Innovation. *Industrial and Labor Relations Review*, 71(2):64-87.

EC, 2017. SMEs' Access to Finance survey Analytical Report. *European Commission Analytical Report*, 1(3): 50-77.

ECB, 2018. *Survey on the access to finance of small and medium-sized enterprises in the Euro Area, October 2017 to March 2018*. London: Unknown.

Ehtesham, F. 2011. *Private sector engagement for poverty reduction: the experience of UNDP and lessons for G-20*. M.A. Dissertation. New York: The City College of New York.

Eisenhardt, K.M., & Martin, J.A. 2000. Dynamic capabilities: What are they? *Strategic Management Journal*, 21(10):1105–1121.

El Baz, J., Laguir, I., Marais, M. & Staglianò, R., 2019. Influence of national institutions on the corporate social responsibility practices of small- and medium-sized enterprises in the food-processing industry: Differences between France and Morocco. *Journal of Business Ethics*, 3(6): 30-60.

Eustace, A. & Martins, N. 2014. The role of leadership in shaping organisational climate: An example from the FMCG industry. *South African Journal of Industrial Psychology*, 40(1):1-13.

Exposito, A. & Sanchis-Llopis, J.A. 2019. The relationship between types of innovation and SMEs' performance: a multi-dimensional empirical assessment. *Eurasian Business Review*, 9:115-135.

Faizal, M., Zaidi, A. & Othman, S.N. 2012. Understanding the concept of dynamic capabilities by dismantling Teece, Pisano, and Shuen's (1997) definition. *International Journal of Academic Research in Business and Social Sciences*, 2(8):367-378.

Faller, C. M. & Zu-Knyphausen, A. D., 2019. Does equity ownership matter for corporate social responsibility? A literature review of theories and recent empirical findings. *Journal of Business Ethics*, Issue 150: 1-60.

Farsi, J. Y. & Toghraee, M.T. 2014. Identification the main challenges of small and medium sized enterprises in exploiting of innovative opportunities (Case study: Iran SMEs). *Journal of Global Entrepreneurship Research*, 4(4):1-15.

Fatoki, O. & Garwe, D., 2010. Obstacles to the growth of new SMEs in South Africa: A principal component analysis approach. *African Journal of Business Management*, 4(5): 729-738.

Fatoki, O., 2011. The impact of human, social and financial capital on the performance of Small and Medium-Sized Enterprises (SMEs) in South Africa. *Journal of Social Science*, 29(3): 193-204.

Ferreira A.P. & Velinças F. 2016. Training and development from the SME point of view: Portuguese employers' input. In: Machado C., Davim J.P. (eds) *Organizational Management*. London: Palgrave MacMillan.

Fiesa, G.G. & Oyelana, A.A. 2015. An assessment of the roles of small and medium enterprises (SMEs) in the Local Economic Development (LED) in South Africa. *Journal of Economics*, 6(3):280-290.

Garg, R. & Kumer-De, K. 2014. An Exposition of Resource Capabilities for SMEs in The Emerging Markets. *South African Journal of Economic and Management Sciences*, 17(3):310-319.

George, D. & Mallery, P. 2010. *SPSS for Windows step by step: a simple guide and reference*. 10<sup>th</sup> ed. Boston: Pearson.

Ghazali, N.H. 2016. A Reliability and validity of an instrument to evaluate the school-based assessment system: a pilot study. *International Journal of Evaluation and Research in Education*, 5(2):148-157.

Gizawi, N.E. 2014. The dynamic capabilities theory: assessment and evaluation as a contributing theory for supply chain management. [Online]. Available: [https://essay.utwente.nl/65301/1/EI%20Gizawi\\_BA\\_MB.pdf](https://essay.utwente.nl/65301/1/EI%20Gizawi_BA_MB.pdf). >Accessed: 15/02/2021.

Gladwin, T., Kennelly, J. & Krause, T., 2018. Shifting paradigms for sustainable development. *Business Management Review*, 2(4): 1-30.

Glen. S. 2016. What is the Kaiser-Meyer-Olkin (KMO) Test? [Online]. Available: <https://www.statisticshowto.datasciencecentral.com/kaiser-meyer-olkin/> >Accessed: 15/02/2021.

Greener, S. & Martelli, J., 2019. *An Introduction to Business Research Methods*. S.l.:BookBoon.

Grover, V., 2019. *Research approach*. [Online] Available: <https://www.slideshare.net/grovervijayk/research-approach?> Accessed: 22/03/2021.

Guokun, Z., 2019. Science and technology constitute the primary productive force. *Science and Technology Innovation Herald*, 2(6): 20-35.

Gupta, M. & Gupta, D., 2011. *Research methodology*. New Delhi: PHI Learning.

Guttman, L. 1954. A new approach to factor analysis: The Radex. In P. F. Lazarsfeld ed. *Mathematical thinking in the social sciences*. pp. 258-348. New York: Free Press.

Hahn, R., 2019. ISO 26000 and the standardization of strategic management processes for sustainability and corporate social responsibility. *Business Strategy*, 3(1): 20-30.

Hair, J.F., Black, W.C., Babin, B.J. & Anderson, R.E. 2010. *Multivariate data analysis*. 7th ed. New York: Pearson.

- Hansen, E.G. & Klewitz, J. 2012. The role of an SME's green strategy in public private eco-innovation initiatives: The case of Economic profit. *Journal of Small Businesses and Entrepreneurship*, 25:451–477.
- Hao, J., Ilan, A. & Yu, C. 2013. Environmental dynamism, innovation, and dynamic capabilities: the case of China. *Journal of Enterprising Communities: People and Places in the Global Economy*, 1-144.
- Harrington, D., 2009. *Confirmatory factor analysis*. New York: Oxford University Press.
- Hauben, M., Hung, E. & Hsieh, W. 2017. An exploratory factor analysis of the spontaneous reporting of severe cutaneous adverse reactions. *Therapeutic Advances in Drug Safety*, 8(1):4–16.
- Herr, H. & Nettekoven, Z., 2018. The role of small and medium-sized enterprises in development: What can be learned from the German experience? (53). Issue Global Labour University Working Paper.
- Honglie, Z., 2019. Institution character is key to SME's development. *Journal of Yunnan University of Finance and Economics*, 4(3): 1-25.
- Hosoda, M., 2019. Management control systems and corporate social responsibility: Perspectives from a Japanese small company. *International Journal for Business Operations*, 7(4): 30-67.
- Hove, P., Sibanda, K. & Poore, D., 2014. The impact of Islamic banking on entrepreneurial motivation, firm competitiveness and performance in South African SMEs. *Mediterranean Journal of Social Sciences*, 1-165.
- Jagongo, A.O. 2017. Strategic Resource Mobilization for Entrepreneurial Financing (A Review of Impediments for Growth of Women Owned MSMEs in Kenya). 5th Business & Management Conference, Rome.
- Jain, D. 2018. Skew and kurtosis: important statistics terms you need to know in data science. [Online]. Available: <https://codeburst.io/2-important-statistics-terms-you-need-to-know-in-data-science-skewness-and-kurtosis-388fef94eeaa> Accessed: 27/02/2021.

- Kaiser, H. 1974. An index of factor simplicity. *Psychometrika*, 39: 31–36.
- Kaplan, M.D. 2009. The relationship between perceived innovativeness and emotional product responses: A brand oriented approach. *Innovative Marketing*, 5(1):42-50.
- Kariv, D., 2019. Off stage-on stage: men and women entrepreneurs leading change and business growth. *Journal of Enterprising Communities: People and Place in the Global Economy*, 1-180.
- Katua, N., 2014. The role of SMEs in employment creation and economic growth in selected countries. *International Journal of Education and Research*, Issue 2: 461-472.
- Kelly, M. 2019. What is Corporate Compliance and How Does it Impact Business? [Online]. Available:< <https://www.ganintegrity.com/blog/what-is-corporate-compliance/>> Accessed: 14/03/2021.
- Kleinschmidt, E.J. & Cooper, R.G. 2020. The impact of product innovativeness on performance. *Journal of Product Innovation Management*, 8(4):240-251.
- Kline, R.B. 2011. *Principles and practice of structural equation modeling*. New York: Guilford Press.
- Kolade, O., Obembe, D. & Salia, S., 2018. Technological constraints to firm performance: The moderating effects of firm linkages and cooperation. *Journal of Small Business and Enterprise Development*, 1-21.
- Kothari, C. R., 2014. *Research methodology: methods and techniques*. New Delhi: New Age International.
- Kozlenkova, I. V., Samaha, S. A. & Palmatier, R. W. 2014. Resource based theory in marketing. *Journal of the Academy of Marketing Science*, 1-21.
- Krugman, P., 2018. *Geography and Trade*. Boston,MA: MIT Press.
- Kumah, O. & Omilola, B., 2014. *Small business is big business: a UNDP perspective on SMME development in South Africa*, South Africa: UNDP.



- Kumar, K., 2015. Market orientation, organisational competencies and performance: A empirical investigation of a path analytic model. *Journal of American Academy of Business*, 1-100.
- Kumar, R. C., 2008. *Research Methodology*. New Delhi: APH Publishing Corporation.
- Kyobe, M. 2009. Factors Influencing SME Compliance with Government Regulation on Use of IT: The Case of South Africa. *Journal of Global Information Management*, 17(2):30-59
- Labbe, E.E. 2011. *Psychology Moment by Moment: A Guide to Enhancing Your Clinical Practice with Mindfulness and Meditation*. Canada: New Harbinger Publications.
- Ladzani, M. W. & Seeletse, S. M., 2012. Business social responsibility: how are SMEs doing in Gauteng, South Africa? *Social Responsibility Journal*, 8(1): 87-99.
- Ladzani, W. & Netswera, G., 2009. Support for rural small businesses in Limpopo Province, South Africa. *Development Southern Africa*, 26(2): 226-239.
- Laforet, S., 2012. Size, strategic, and market orientation effects on innovation. *Journal of Business Research*, pp. 1-70.
- Lalangui, P., Garcia, J. & Rio-Rama, M., 2019. Sustainable practices in small and medium-sized enterprises in Ecuador. *Sustainability*, 3(1): 40-60.
- Lamprecht, J.L.D., 2011. A comparison of the characteristics of internationalising SMEs in South Africa and the BRIC countries. M.Com. Dissertation, Potchefstroom. North West University.
- Langwell, C. & Heaton, D., 2016. Using human resource activities to implement sustainability. *Journal of Small Business Entrepreneurship Development*, 23(3): 1-230.
- Lapan, S. D., Quartaroli, M. T. & Riemer, F. J., 2019. *Qualitative research: An Introduction to Methods and Designs*. San Francisco: Jossey-Bass.
- Lavrakas, P. J., 2008. *Encyclopaedia of Survey Research Methods*. California: Sage.

- Leavy, P., 2017. *Research design: quantitative, qualitative, mixed methods, arts-based, and community-based participatory research approaches*. London: The Guilford Press.
- Lekhanya, L. M., 2010. The use of marketing strategies by SMMEs in rural KwaZulu-Natal. D.Tech Disseration. Durban: Durban University of Technology.
- Li, Y., Zheng, J. & Li, F., 2017. Assessment of municipal infrastructure development and its critical influencing factors in urban China: A FA and STIRPAT approach. *Municipal Infrastructure Development in Urban China*, 1-14.
- Mabunda, T. E., 2018. Enterpriseneurship as a facilitator for sustainable enterprise development: a case of the centre for enterpriseneurship in South Africa. *Current Business Issues Journal (CBIJ)*, 1(1): 7-17.
- Madhani, P. M., 2010. Resource Based View (RBV) of Competitive Advantage. *Sustainability*, 3(1): 20-90.
- Madzik, P., Budaj, P. & Chocholáková, A., 2018. Practical experiences with the application of corporate social responsibility principles in a higher education environment. *Sustainability*, 3(2): 45-60.
- Mafini, C. & Muposhi, A., 2017. The impact of green supply chain management in small to medium enterprises: cross-sectional evidence. *Journal of Transport Supply Chain*, 11: 1-90.
- Mafini, C. & Omoruyi, O., 2013. Logistics benefits and challenges: the case of SMEs in a South African local municipality. *Southern African Journal of Entrepreneurship and Small Business Management*, 6(166): 145-167.
- Mago, S. & Toro, B., 2013. South African government support to SMMEs. The case of King William's Town Area. *Journal of Economics*, 1-28.
- Mahembe, E., Chiumya, C. & Mbewe, P., 2011. *Literature review on small and medium enterprises' access to credit and support in South Africa*. National Credit Regulator (NCR). Pretoria. South Africa.

- Maier, D., Maier, A., Aschilean, I., Anastasiu, L. & Gavris, O. 2020. The Relationship between Innovation and Sustainability: A Bibliometric Review of the Literature. *Sustainability*, 12:1-20.
- Makadok, R., 2011. Toward synthesis of the resource based and dynamic capability views of rent creation. *Strategic Management Journal*, 1-200.
- Makhado, A., 2015. The effectiveness of mentorship programme of Mogale City Local Municipality for small, medium and micro enterprises. *MTech. Mini-dissertation*, Issue Pretoria: UNISA.
- Maloka, C. M., 2013. The contribution of SMMEs towards local economic development in Mankweng Township, Limpopo Province. M.A. Dissertation. Turfloop: University of Limpopo, .
- Martinez-Conesa, I., Soto-Acosta, P. & Palacios-Manzano, M., 2018. Corporate social responsibility and its effect on innovation and firm performance: An empirical research in SMEs. *Journal of Clean Production*, 2(6): 90-120.
- Maskey, R., Fei, J. & Nguyen, H. 2018. Use of exploratory factor analysis in maritime research. *The Asian Journal of Shipping and Logistics*, 34(2):91-111.
- Masocha, R. & Fatoki, O. 2018. The role of mimicry isomorphism in sustainable development operationalisation by SMEs in South Africa. *Sustainability*, 1-16.
- Masocha, R. 2018. Does environmental sustainability impact innovation, ecological and social measures of firm performance of SMEs? Evidence from South Africa. *Sustainability*, 10:1-11.
- Matsoso, M. L., 2014. Performance measures in supply chain management of small manufacturing enterprises. M.Tech. Dissertation. Cape Town. University of Technology.
- Matsunaga, M. 2010. How to factor-analyse your data right: do's, and don'ts, and how-to's. *International Journal of Psychological Research*, 3(1):97-110.

- Millicent, C. & Reginald, M., 2014. Challenges and key success factors of African descent foreign-owned SMEs in the Eastern Cape Province of South Africa: a case of selected towns. *Mediterranean Journal of Social Sciences*, 1-68.
- Moaisi, D. 2014. Factors affecting the growth of micro and small manufacturing enterprises in Botswana. M.Tech. Dissertation., Stellenbosch. University of Stellenbosch.
- Mofokeng, T. M., 2015. The influence of knowledge sharing, business strategy alignment and long term relationships on supply chain performance in the small and medium enterprise sector. M. Tech. Dissertation. Vanderbijl Park. Vaal University of Technology.
- Mohamad, S. & Sori, Z.M. 2011. An overview of corporate governance: some essentials. *Social Science Research Network Journal*, 1-6.
- Mohorko, A. & Hlebec, V. 2016. Degree of cognitive interviewer involvement in questionnaire pretesting on trending survey modes. *Computers in Human Behaviour*, 62: 79-89.
- Moore, S. & Manring, S., 2019. Strategy development in small and medium sized enterprises for sustainability and increased value creation. *Journal of Clean Production*, 3(6): 20-38.
- Mousavifard, F. & Ayoubi, A. 2018. Innovation and training in engineering management: an essentiality, a necessity or a choice? *International Journal of Information, Business and Management*, 10(1):230-244.
- Mugo, A. N., Kahuthia, J. & Kinyua, G. 2019. Effects of infrastructure on growth of small and medium enterprises in Kenya: A case of clothing and textile businesses in Nairobi Central Business District. *International Academic Journal of Human Resource and Business Administration*, 3(6):133-149.
- Mulweye, D.C. & Paul, S.N. 2018. Role of e-procurement procedures on supply chain performance in government ministry: a case study of Ministry of Lands Kisumu. *International Journal of Social Science and Humanities Research*, 6(3):206-233.

- Muriithi, S.M. 2017. African Small and Medium Enterprises (SMES) Contributions, Challenges and Solutions. *European Journal of Research and Reflection in Management Sciences*, 5(1):36-48.
- Mweru, M. C. & Muya, M. T., 2016. Features of resource based view theory: an effective strategy in outsourcing. *International Journal of Management and Commerce Innovations ISSN 2348-7585*, 2(3): 200-214.
- Nagarajan, V., Savitskie, K., Ranganathan, S., Sen, S. & Alexandrov, A. 2013. The effect of environmental uncertainty, information quality, and collaborative logistics on supply chain flexibility of small manufacturing firms in India. *Asia Pacific Journal of Marketing and Logistics*, 25(5):784-802.
- Ndabeni, L. L., 2008. The contribution of business incubators and technology stations to small enterprise development in South Africa. *Development Southern Africa*, 25(3):259-268.
- Nedelko, Z. & Potocan, V. 2013. The role of management innovativeness in modern organisations. *Journal of Enterprising Communities: People and Places in the Global Economy*, 1-49.
- Neuman, L. W., 2014. *Basics of social research: qualitative and quantitative approaches*. Boston: Pearson Education.
- Ng, H., 2012. Development of intangible factors for SME success in a developing country. *International Journal of Academic Research in Business and Social Sciences*, 2(12):190-213.
- Nhemachena, C. & Murimbika, M., 2018. Motivations of sustainable entrepreneurship and their impact of enterprise performance in Gauteng Province, South Africa. *Business Strategy and Development*, 1-115.
- Nieman, G. & Nieuwenhuizen, C., 2014. *Entrepreneurship: A South African perspective*. 3rd ed. Pretoria: Van Schaik.
- Niemczyk, A., 2014. The application of path modelling in the analysis of consumer behaviour in the cultural tourism market. *Economics & Sociology*, 7(1): 204-216.

Nieuwenhuizen, C. 2019. The effect of regulations and legislation on small, micro and medium enterprises in South Africa. *Development Southern Africa*, 36(1):1-12.

O'Brien, R.M. 2017. A Caution Regarding Rules of Thumb for Variance Inflation Factors. *Quality & Quantity*, 41:673-690.

O'Connor, M. & Rafferty, M. 2012. Corporate governance and innovation. *The Journal of Financial and Quantitative Analysis*, 47(2):397-413.

Obokoh, L.O. & Goldman, G., 2016. Infrastructure deficiency and the performance of small- and medium-sized enterprises in Nigeria's Liberalised Economy. *Acta Commercii - Independent Research Journal in the Management Sciences*, 16(1):1-10.

Ocloo, C. E. & Tsetse, E. K., 2013. Customer retention in the Ghanaian mobile telecommunication industry. *European Journal of Business and Social Sciences*, 1-78.

OECD, 2017. Reducing the regulatory burden on business in the Netherlands: how can this be achieved? *Best Practice Policies for Small and Medium-sized Enterprises*, 1(3): 35-52.

OECD, 2017. *SMEs: Employment, innovation and growth – The Washington Workshop*. Paris: Unknown.

OECD, 2018. *Diffusing technology to industry: government policies and programmes*. Paris: Unknown.

OECD. 2018. Improving the business environment for SMEs through effective regulation. Ministerial Conference on Small and Medium-sized Enterprises on 22-23 February 2018 in Mexico.

Oluwajoba, I., 2019. Assessment of the capabilities for innovation by small and medium industry in Nigeria. *African Journals of Business Management*, 1(8): 60-90.

Oncioiu, I., 2019. Small and medium enterprises' access to financing – A European Concern: Evidence from Romanian SME. *International Business Research*, 40-67.

Osborne, J.W. 2014. *Best practices in exploratory factor analysis*. Scotts Valley, CA: Create Space Independent Publishing.

Padilla, M.A., Divers, J. & Newton, M. 2012. Coefficient alpha bootstrap confidence interval under nonmorality. *Applied Psychological Measurement*, 36:331-348.

Pallant, J. 2016. *SPSS Survival Manual: A step by step guide to data analysis using SPSS program*. 6th ed. London: McGraw-Hill Education.

Pandey, B. & Pandey, M. M., 2019. *Research methodology: tools and techniques*. Romania: Bridge Centre.

Panizzolo, P., 2018. Managing innovation in SMEs. *Journal of Small Business Economics*, 1(3): 30-45.

Parker, C. & Gilad, S. 2011. Internal Corporate Compliance Management Systems: Structure, Culture and Agency. [Online]. Available:< <http://ssrn.com/abstract=1790283>> Accessed: 14/03/2021.

Pellissier, R. & Nenzhelele, T. E., 2013. The impact of work experience of small and medium-sized enterprises owners or managers on their competitive intelligence awareness and practices. *South African Journal of Information Management*, 15(1): 1-6.

Penrose, E. T., 1959. *The Theory of the Growth of the Firm*. New York: Wiley.

Pituch, K.A. & Stevens, J.P. 2015. *Applied multivariate statistics for the social sciences: an analysis with SAS and IBM'S SPSS*. 6th ed. London: Routledge.

Pretorius, M. & Van-Vuuren, J., 2003. Contribution of support and incentive programs to entrepreneurial orientation and start-up culture in South Africa. *South African Journal of Educational Management*, 19(5): 413-427.

- Rahman, S., 2019. The advantages and disadvantages of using qualitative and quantitative approaches and methods in language “Testing and Assessment” Research: A Literature Review. *Journal of Education and Learning*; 6(1),102-122.
- Ramli, A.A., Anuar, F.L.M.K., Rosli, I., & Jamalidan, S. A. 2018. The relationship of design, implementation, monitoring and evaluation in training and development towards employee performance in food and beverage industry. *Global Business and Management Research*, 10(3):1-12.
- Rampa, R., & Agogu  , M. 2021. Developing radical innovation capabilities: Exploring the effects of training employees for creativity and innovation. *Creativity and Innovation Management*, 30(1): 211-227.
- Reypens, L., Bacq, S., & Milanov, H. 2021. Beyond bricolage: Early-stage technology venture resource mobilization in resource-scarce contexts. *Journal of Business Venturing*, 36(4): 1-3306110.
- Rogerson, C. M. 2013. Tracking SMME development in South Africa: Issues of finance, training and the regulatory. *Urban Forum*, pp. 1-90.
- Rothwell, R., 2018. Technology-based small firms and regional innovation potential: the role of public procurement. *Journal of Public Policy*, 4(4): 37-62.
- Rubin, A. & Babbie, E.R. 2010. *Empowerment series: essential research methods for social work*. 4<sup>th</sup> ed. Mexico: Cengage Learning Empowerment Series.
- Ruel, E., Wagner III, W.E. & Gillespie, J.G. 2015. *The practice of survey research: theory and applications*. New Dehli: Sage.
- Rwigema, H. & Venter, R., 2004. *Advanced entrepreneurship*. Oxford: Oxford University Press.
- Sachs, I., 2019. Transition strategies for the 21st century: Development and environment. *Foundation for Administrative Development*, 1(3): 16-45.



- Saksonova, S., 2018. Foreign direct investment attraction in the Baltic States. *Journal: Business: Theory and Practice*, 2(15): 114-120.
- Samuels, P. 2016. Advice on Exploratory factor analysis. [Online]. Available:<  
<https://www.researchgate.net/publication/304490328>> Accessed: 12/03/2021.
- Santarelli, E. & Vivarelli, M., 2007. Entrepreneurship and the process of firms' entry, survival and growth. *Industrial & Corporate Change*, 16(3): 455-488.
- Sarstedt, M. & Mooi, E. 2014. *A concise guide to market research: the process, data, and methods using IBM SPSS statistics*. London: Springer.
- Saunders, M., Lewis, P. & Thornhill, A., 2016. *Research methods for business students*. England: Prentice Hall.
- Schaltegger, S. 2011. Sustainability as a driver for corporate economic success. *Journal of Social Economics*, 33:15–28.
- Schober, P., Boer, C. & Schwarte, L.A., 2018. Correlation coefficients: appropriate use and interpretation. *Anesthesia & Analgesia*, 126(5):1763-1768.
- Sekaran, U. & Bougie, R., 2016. *Research methods for business: a skill building approach*. West Sussex: Wiley.
- Shankar, K., Kumar, K. & Kannan, D. 2016. Analysing the drivers of advanced sustainable manufacturing system using AHP approach. *Sustainability*, 8(8):1-202.
- Shapira, P., Roessner, D. & Barke, R., 2019. New public infrastructures for small firms: industrial modernization in the USA. *Entrepreneurship and Regional Development*, 2(3): 63-85.
- Sheeba, M.J. & Christopher, P.B. 2020. Exploring the role of training and development in creating innovative work behaviors and accomplishing non-routine cognitive jobs for organizational effectiveness. *Journal of Critical Reviews*, 7(4):263-267.

Sheehan, M., Garavan, T.N. & Carbery, R. 2014. Innovation and human resource development (HRD). *European Journal of Training and Development*, 38:2-14.

Shree, S.V., Pugazhenth, R. & Chandrasekaran, M. 2017. Statistical investigation of the performance evaluation in manufacturing environment. *International Journal of Pure and Applied Mathematics*, 114(12):225-235.

Sidik, I. G., 2012. Conceptual framework of factors affecting SME development: mediating factors on the relationship of entrepreneur traits and SME performance. *Procedia Economics & Finance*, 4: 373-383.

Singh, Y. K., 2012. *Fundamental of research methodology and statistics*. New Delhi: New Age International.

Siti-Nabiha, A.K., Azhar, Z., Isa, S.M. & Siti-Nazariah, A.Z. 2018. Measuring social performance: Reconciling the tension between commercial and social logics. *International Journal of Soccial Economics*, 45:205-222.

Skinner, D., Tagg, C. & Holloway, J., 2000. Managers and research: The pros and cons of qualitative approaches. *Management Learning*, 31(2): 163 – 179.

Suh, C. J. & Lee, I. T., 2018. An empirical study on the manufacturing firm's strategic choice for sustainability in SMEs. *Sustainability*, 1-23.

Sula, T. & Banyar, M., 2015. Innovative marketing as a tool for building a positive image of an institution of higher education and increasing the competitiveness of its graduates - Analysis of the functional use of projects of the Department of Marketing Communications. *Procedia-Social and Behavioural Sciences*, 1-90.

Sun, X., Chang-Richards, A. Y., Kleinsman, T., & Innes, A. 2021. Improving human resource mobilisation for post-disaster recovery: A New Zealand case study. *International Journal of Disaster Risk Reduction*, 52: 1-10.

Sung, S.Y. & Choi, J.N. 2018. Effects of training and development on employee outcomes and firm innovative performance: Moderating roles of voluntary participation and evaluation. *Human Resource Management*, 10:1339-1353

Supino, P. G. & Borer, J. S., 2019. *Principles of research methodology: a guide for clinical investigators*. New York: Springer.

Susanty, A., Sirait, N.M. & Bakhtiar, A. 2018. The relationship between information sharing, informal contracts and trust on performance of supply chain management in the SMEs of batik. *Measuring Business Excellence*, 22(3):292-314.

Taherdoost, H. 2016. Validity and reliability of the research instrument: how to test the validation of a questionnaire/survey in research. *International Journal of Academic Research in Management*, 5(3):28-36.

Taques, F. H., López, M. G., Basso, L. F., & Areal, N. 2021. Indicators used to measure service innovation and manufacturing innovation. *Journal of Innovation & Knowledge*, 6(1): 11-26.

Tavakoli, H., 2012. *A Dictionary of research methodology and statistics in applied linguistics*. Tehran: Rahnama Press.

Terziovski, M., 2017. Innovation practice and its performance implications in small and medium enterprises (SMEs) in the manufacturing sector. *Strategic Management Journal*, 31(8): 70-82.

Tinoco, J., 2018. *Social balance: an approach to transparency and public accountability of organisations*. Brazil: Atlas.

Tornatzky, L. & Klein, K., 2017. Innovation characteristics and innovation adoption-implementation: a meta-analysis of findings. *IEEE Trans.Eng. Management*, 29(1): 28-45.

Trochim, W.M. & Donnelly, J.P. 2006. *The research methods knowledge base*. 3<sup>rd</sup> ed. Cincinnati, OH: Atomic Dog.

Tsvetkova, D., Bengtsson, E. & Durst, S. 2020. Maintaining sustainable practices in SMEs: Insights from Sweden. *Sustainability*, 1-16.

Turner, R. & Ledwith, A. 2018. Project management in small to medium-sized enterprises: fitting the practices to the needs of the firm to deliver benefit. *Journal of Small Business Management*, 56(3): 475-493.

Umidjon, A., Shuhua, H., Jayathilake, B. & Renyan, M. 2014. Characteristics of small and medium enterprise innovativeness: cases of Uzbekistan and China. *International Journal of Management Science and Business Administration*, 1-90.

Unknown. 2011. Sustainable community development initiative. *Sustainability Survey*, 1-5.

Urban, B. & Naidoo, R. 2018. Business sustainability: empirical evidence on operational skills in SMEs in South Africa. *Journal of Small Business and Enterprise Development*, 1-21.

Ursachi, G., Horonic, I.A. & Zait, A. 2015. How reliable are measurement scales? External factors with indirect influence on reliability estimators. *Procedia Economics and Finance*, 20:679- 686.

Van-Tonder, E., 2016. Trust and commitment as mediators of the relationships between quality advice and customer loyalty. *Journal of Applied Business Research*, 1-67.

Venkatasubramanian, V. & Ramanakumar, K. P. V., 2018. A comparative study on development of small and medium enterprises (SMEs) in Kanchipuram District. *The 3rd International Conference on Materials and Manufacturing Engineering*, 1-8.

Veugelers, R. 2008. The roles of SMEs in Innovation in the EU. A case of policy intervention? *Review of Business and Economics*, 53(3):218-299.

Vieira, V. A. 2013. Antecedents and consequences of market orientation: a Brazilian meta-analysis and an international mega-analysis. *Brazilian Administration Review*, 1-75.

Vilke, R., 2019. Corporate social responsibility as innovation: Recent developments in Lithuania. *Business Economics*, 2(6): 9-30.

Walliman, N., 2011. *Research methods: the basics*. New York: Routledge.

Walter, M., 2019. *The nature of social science research*. [Online]. Available: [http://lib.oup.com.au/he/study\\_skills/samples/walter\\_socialresearch3e\\_sample.pdf](http://lib.oup.com.au/he/study_skills/samples/walter_socialresearch3e_sample.pdf). Accessed: 27/02/2021.

Wanga, Z. & Wang, N. 2012. Knowledge sharing, innovation and firm performance. *Expert Systems with Applications*, 8899-8908.

Wennekers, S. & Thurik, R., 2017. Linking entrepreneurship and economic growth. *Small Business Economics*, 13(1): 27-55.

Wheeler, D. J. 2011. Problems with skewness and kurtosis, Part One. [Online]. Available: <https://www.qualitydigest.com/inside/quality-insider-article/problems-skewness-and-kurtosis-part-one.html>. Accessed: 27/02/2021.

Wickramasinghe, M., 2009. *Feminist research methodology: making meanings of meaning-making*. New York: Routledge.

Widana, G. O., Wiryono, S. K., Purwanegara, M. S. & Toha, M., 2015. Exploring the impact of Islamic business ethics and relationship marketing orientation on business performance: the Islamic Banking experience. *Asian Academic of Management Journal*, 1-67.

Wiese, J., 2014. Factors determining the sustainability of selected small and medium-sized enterprises. M. Tech Dissertation. Potchefstroom. North West University.

Williams, B., Onsman, A. & Brown, T. 2010. Exploratory factor analysis: A five-step guide for novices. *Journal of Emergency Primary Health Care (JEPHC)*, 8(3): 1-13.

Woschke, T., Haase, H. & Kratzer, J. 2017. Resource scarcity in SMEs: effects on incremental and radical innovations. *Management Research Review*, 40(2):195-217.

Wuyts, S., Rindfleisch, A. & Citrin, A., 2015. Outsourcing customer support: The role of provider customer focus. *Journal of Operations Management*, 40-55.

Xiaoying, Z., 2018. *Research on sustainable development of SME of China*, Changsha: Hunan Agricultural University.

Yang, Z. *et al.*, 2017. Employees' collaborative use of green information systems for corporate sustainability: motivation, effort and performance. *Information Technology for Development*, 1-22.

Yasuda, H. 2015. Formation of strategic alliances in high technology industries: Comparative study of the resource-based theory and the transaction-cost theory. *Technovation*, 1-56.

Yong, A.G. & Pearce, S. 2013. A beginner's guide to factor analysis: focusing on exploratory factor analysis. *Tutorials in Quantitative Methods for Psychology*, 9:79-94.

Zeng, S., Xie, X. & Tam, C., 2017. Relationship between cooperation networks and innovation performance of SMEs. *Technovation*, 30(2): 80-102.

Zilberman, D., Lipper, L., McMarthy, N. & Gordon, B. 2017. Innovation in response to climate change. *Climate Smart Agriculture*, 49-74.

Zindiye, S., 2010. An empirical investigation into the factors affecting the performance of small and medium enterprises in the manufacturing sector of Harare, Zimbabwe. M. Com. Dissertation. Alice. University of Fort Hare.

## APPENDICES

### Appendix A: Cover Letter for Questionnaire

**Faculty of Management Sciences**  
**Research conducted by**  
**Mr Simon Mofokeng**  
**Cell: 078 078 4110**  
**Email: [simon.mofokeng22@gmail.com](mailto:simon.mofokeng22@gmail.com)**

Dear Respondent,

My name is Mr Simon Mofokeng, a PhD student from the Department of Logistics at Vaal University of Technology. You are requested to participate in an academic research study that I am conducting, which is aimed at gathering information on internal management systems, innovativeness and sustainability amongst SMEs in South Africa. You have been chosen to participate in the study based on your experience of working in the SME sector. I therefore believe that you will provide relevant information.

Please take note of the following:

1. This study will provide an anonymous survey. Your name will not appear on the questionnaire and the answers you provide will be treated as strictly confidential. You cannot be identified in person based on the answers you give.
2. Your participation in this study is very important. You may, however, choose not to participate and you may also stop participating at any time without any negative consequences.
3. Please answer the questions in the attached questionnaire as completely and honestly as possible.
4. The results of the study will be used for academic purposes only and may be published in an academic journal. A summary of the findings can be provided to you on request.
5. Please contact my supervisors, Dr E. Chinomona ([elizabethc@vut.ac.za](mailto:elizabethc@vut.ac.za)) and Prof C Mafini ([chengedzaim@vut.ac.za](mailto:chengedzaim@vut.ac.za)) if you have any questions or comments regarding the study.

## Appendix B: Research Questionnaire

### SECTION A: DEMOGRAPHIC INFORMATION

In this section we would like to find out a little more about yourself. Please put a cross (x) in the appropriate block.

<b>A1</b>	<b>Gender</b>	(1) Male	(2) Female
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<b>A2</b>	<b>Age</b>	(1) Under 30 years	(2) 30-39 years	(3) 40-49 years	(4) 50-59 years	(5) 60 years and above
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<b>A3</b>	<b>Highest qualification</b>	Matric or below	(1) Post-matric certificate	(2) Diploma	(3) Degree	(4) Postgraduate	(5) Professional
		Other (Please specify) .....					

<b>A4</b>	<b>Race</b>	(1) Black	(2) White	(3) Indian	(4) Mixed	(5) Other (specify)
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<b>A5</b>	<b>Position in SME</b>	(1) Owner	(2) Co-owner	(3) Manager	(4) Professional employee	(5) Other (specify) .....
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### SECTION B: ORGANISATION PROFILE

In this section, we would like to find out information about your organisation. Please put a cross (x) in the appropriate block.

<b>B1</b>	<b>Number of employees</b>	(1) Less than 50	(2) 51 to 100	(3) 101 to 150	(4) 151 to 200 or more
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<b>B3</b>	<b>Number of years in operation</b>	(1) Less than 2 years	(2) Between 2 and 5 years	(3) Between 5 and 10 years	(4) Between 10 and 15 years	(5) More than 15 years
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<b>B4</b>	<b>Industry</b>	(1) Agri-processing	(2) Automotive	(3) Chemical	(4) Metals	(5) Textile, clothing and footwear
		(6) Construction	(7) Mining	(8) Electrical and electronics	(9) Furniture	(10) Other Specify.....



B5	<b>Turnover per annum (millions in rand)</b>	(1) Less than 10m	(2) Between 11m to 20 m	(3) Between 21 to 30 m	(4) Between 31 to 40 m	(5) Between 41 to 50 m and above specify.....
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## SECTION C: INTERNAL MANAGEMENT SYSTEMS

We would like to find out your views and experiences regarding internal management systems in your business. The internal management systems under consideration are (1) resource mobilisation (RM) (2) infrastructure development (IN) and (3) employee training (TR). Please indicate the extent to which you agree or disagree by encircling the corresponding number between 1 (Strongly Disagree) and 5 (Strongly Agree).

INTERNAL MANAGEMENT SYSTEMS		Strongly Disagree	Disagree	moderately agree	Agree	Strongly agree
<b>Resource Mobilisation</b>						
RM1	Our company has enough resources to support service delivery.	1	2	3	4	5
RM2	In our company there is enough employee expertise concerning customer needs (intellectual capital).	1	2	3	4	5
RM3	In our company there is adequate quality technical support personnel.	1	2	3	4	5
RM4	Our company has sufficient funds to pursue new developments in customer support delivery.	1	2	3	4	5
RM5	Our company has adequate capital to acquire necessary resources.	1	2	3	4	5
RM6	Our company has access to the information required to make key decisions on product/service development	1	2	3	4	5
<b>Infrastructure Development</b>						
ID1	In our company, development of infrastructure is based on concern for the environment.	1	2	3	4	5
ID2	In our company there is well-developed environment sanitation (clean water and adequate sewage disposal).	1	2	3	4	5
ID3	Our company has adequate physical infrastructure and facilities.	1	2	3	4	5
ID4	In our company there is an advanced infrastructural development strategy.	1	2	3	4	5
ID5	In our company there is adequate office space.	1	2	3	4	5
<b>Employee Training</b>						

ET1	Our company has regular training programs for its employees	1	2	3	4	5
ET2	In our company, training programs are designed based on job requirements.	1	2	3	4	5
ET3	The type of training that is offered within our company is applicable to the job	1	2	3	4	5
ET4	In our company the objectives of the training are well known.	1	2	3	4	5
ET5	The training performed in our company has led to an increase in job satisfaction among employees.	1	2	3	4	5
ET6	The training implemented in our company has improved the skills and knowledge of employees.	1	2	3	4	5
ET7	The training implemented in our company has led to a change in the attitudes of employees.	1	2	3	4	5

#### SECTION D: SME INNOVATIVENESS

We would like to find out your views and experiences regarding the innovativeness (IV) of your business. Please indicate the extent to which you agree or disagree by encircling the corresponding number between 1 (Strongly Disagree) and 5 (Strongly Agree).

SME INNOVATIVENESS		Strongly Disagree	Disagree	moderately agree	Agree	Strongly agree
IV1	In our company, technical innovations based on research results are accepted quickly.	1	2	3	4	5
IV2	In our company, importance is given to innovative ideas regarding products and services	1	2	3	4	5
IV3	In our company, innovations are accepted easily in projects.	1	2	3	4	5
IV4	In our company, employees are not punished even if their ideas do not work.	1	2	3	4	5
IV5	Innovativeness is encouraged in the company.	1	2	3	4	5

#### SECTION E: SME SUSTAINABILITY

We would like to find out your views and experiences regarding sustainability in your business. The dimensions of sustainability under consideration are (1) general sustainability (GS) (2) nature of the product (NP) and (3) corporate governance (CG) (4) economic and financial (EF) (5) environmental (EN) (6) social (SC) and (7) climate change (CC). Please indicate your views by encircling the corresponding number between 1 (Decreased significantly) and 5 (Increased significantly).

SME SUSTAINABILITY		Decreased significantly	Decreased	Neutral	Increased	Increased significantly
<b>General Sustainability</b>						
GS1	Acknowledgement of the importance of sustainability across the board.	1	2	3	4	5
GS2	Management support for sustainable development.	1	2	3	4	5
GS3	Concern for environmental compliance and auditing.	1	2	3	4	5
GS4	Responsibility to help in making a difference on environmental issues such as waste and water use.	1	2	3	4	5
GS5	Striving to make a difference on social issues such as health and education.	1	2	3	4	5
GS6	Striving to make a difference on economic issues such as inflation and unemployment.	1	2	3	4	5
<b>Nature of Product</b>						
NP1	Assessment of the health and safety impacts of products and services	1	2	3	4	5
NP2	Total number of incidents of non-compliance with health and safety regulations in the development and sale of products and services	1	2	3	4	5
NP3	Type of product and service information required by procedures.	1	2	3	4	5
NP4	Total number of incidents of non-compliance with regulations concerning product and service information and labelling.	1	2	3	4	5
NP5	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction	1	2	3	4	5
<b>Corporate Governance</b>						
CG1	The total number of business units analysed for risks related to corruption	1	2	3	4	5
CG2	Number of employees trained in organisation's anti-corruption policies and procedures	1	2	3	4	5
CG3	The total number of legal actions for anti-competitive behaviour, anti-trust, and monopoly practices and their outcomes	1	2	3	4	5
CG4	Public policy positions and participation in public policy development and lobbying	1	2	3	4	5
CG5	Amounts of money paid by the company as fines for non-compliance with laws and regulations	1	2	3	4	5
CG6	The value of non-monetary penalties paid by the company for non-compliance with laws and regulations	1	2	3	4	5

CG7	The total number of business units analysed for risks related to corruption	1	2	3	4	5
<b>Economic and Financial Sustainability</b>						
EF1	The amount of profits made by the company	1	2	3	4	5
EF2	Amount of costs incurred by the company at all levels of operations	1	2	3	4	5
EF3	Overall financial health of the company	1	2	3	4	5
EF4	Ability of the company to meet its financial obligations towards employees	1	2	3	4	5
EF5	Value of financial assistance received from the government	1	2	3	4	5
EF6	Value of money spent on taking care of the environment	1	2	3	4	5
EF7	Amount of money spent in the procurement of products and services from local suppliers	1	2	3	4	5
<b>Environmental</b>						
EN1	Using a life cycle analysis to evaluate the environmental friendliness of products	1	2	3	4	5
EN2	Using clean production technologies and best practices	1	2	3	4	5
EN3	Promotion and implementation of environmental laws and regulations	1	2	3	4	5
EN4	Environmental laws and regulations for staff education and publicity to raise environmental awareness	1	2	3	4	5
EN5	Regular inspection and maintenance of environmental protection facilities and equipment	1	2	3	4	5
<b>Social Sustainability</b>						
SS1	Reduction in the impacts and risks to the general public	1	2	3	4	5
SS2	Improvement in occupational health and safety of employees	1	2	3	4	5
SS3	Providing more positions to the community	1	2	3	4	5
SS4	Improvement in product image	1	2	3	4	5
SS5	Improvement in firm's social reputation	1	2	3	4	5
SS6	Reduction in the impacts and risks to general public	1	2	3	4	5
<b>Climate Change</b>						
CC1	Reduction in waste (water and/or solid)	1	2	3	4	5
CC2	Reduction in toxic emissions	1	2	3	4	5
CC3	Decrease of consumption for hazardous/harmful/toxic materials	1	2	3	4	5
CC4	Decrease of frequency for environmental accidents	1	2	3	4	5

CC5	Improvement in an enterprise's environmental situation.	1	2	3	4	5
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**Thank you for taking time to complete this questionnaire. Your views are much appreciated.**

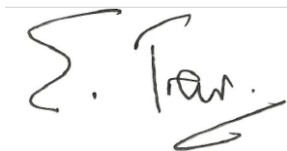
## **Appendix C: Declaration for Language Editing**

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7 May 2021

### **LANGUAGE EDITING**

This is to certify that I language-edited the dissertation, “Internal management systems, innovativeness, and the sustainability of Small and Medium Enterprises in the South African manufacturing sector,” by Simon Mofokeng for a PhD in Business Administration degree, in the Faculty of Management Sciences, Vaal University of Technology.

A handwritten signature in black ink, appearing to read 'E. Trew', with a horizontal line above it.

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## Appendix D: Turnitin Report

