

**ISOMORPHISM AND SUSTAINABLE DEVELOPMENT PRACTICES OF SMALL
BUSINESSES IN LIMPOPO PROVINCE, SOUTH AFRICA**

by

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ABSTRACT

The study aimed to provide an empirical analysis on the relationship between isomorphic pressures and sustainable development practices as well as the impact of sustainable development practices on the performance of SMEs. Thus, three parental concepts, namely, isomorphism, sustainable development and firm performance, are investigated amongst SMEs in Limpopo province, South Africa. Three primary hypotheses are postulated, namely, (1) there is a significant positive relationship between perceived institutional isomorphism and sustainability practices of SMEs, (2) there is a significant positive relationship between perceived competitive isomorphism and sustainability practices of SMEs, and (3) there is a significant positive relationship between perceived sustainability practices and firm performance of SMEs. These three primary hypotheses were specifically investigated at the hand of thirty (30) secondary hypotheses.

Due to the multidimensionality of the parental concepts in this study, the two-staged structural equation modelling (SEM) approach, constituting a measurement model and structural model, was used for testing the hypothesised relationships. AMOS version 24 software was used to conduct SEM analyses of the second-order and first order constructs in the primary and secondary hypotheses, respectively. Prior to conducting SEM, SPSS version 24 was used in conducting Exploratory Factor Analysis (EFA) through Principal Component Analysis (PCA) using the varimax rotation method. To obtain the empirical results, a quantitative research methodology was utilised formulated at the backdrop of a positivism epistemological approach and objectivism ontology. Data was collected from a total of 222 SMEs owner/manager respondents in the Limpopo province, using a convenience sampling technique.

The study found a significant positive relationship between perceived institutional isomorphism and sustainability practices of SMEs. Contrarily, the relationship between perceived competitive isomorphism and sustainability practices of SMEs was found to be insignificant though positive. Lastly, the relationship between sustainability practices and firm performance was found to be positive and significant. On the other hand, out of the 30 secondary hypotheses, only eight were

not supported. Of the 30 secondary hypotheses, 9 pertained to the first primary hypothesis which measured the three institutional isomorphism (coercive, mimetic and normative) and three sustainability types (economic, environmental and social). Herein, only the relationship between coercive isomorphism and social sustainability was not supported.

The second primary hypothesis constituted three out of the 30 secondary hypotheses which measured the relationship between competitive isomorphism and the three types of sustainability practices. Herein, the relationships between competitive isomorphism and environmental as well as economic sustainability were not supported. Lastly, the SEM results found that, of the 18 secondary hypotheses that pertain to the last primary hypothesis, five were not supported. The 18 secondary hypotheses pertain to the three types of sustainability and six forms of firm performance (financial, customer satisfaction, employee satisfaction, innovation, environment and social). There was no significant and positive relationship between environmental sustainability and financial as well as innovation performance amongst SMEs in Limpopo province. Additionally, a significant positive relationship was not found between social sustainability and employee satisfaction, innovation as well as environmental performance.

The study significantly contributed towards theoretical understanding, operationalisation, and model suggestion in line with isomorphism, sustainable development, and firm performance. The study further methodologically contributed towards utilisation of parsimonious complex SEM models. Finally, the thesis recommends the use of phenomenological and grounded theory in isomorphism, sustainability and firm performance to build theory, as theory in these areas was found to be scarce. In terms of policy, the study recommends that government and its agencies have a critical role to play in ensuring sustainability is adopted by firms, as the findings in this study proved that institutional isomorphic forces impact the wide adoption of sustainability on the part of SMEs.

DECLARATION

I, the undersigned, REGINALD MASOCHA, hereby declare that this doctoral thesis entitled “Isomorphism and Sustainable Development Practices of Small Businesses in Limpopo Province, South Africa” is my own original work. All the sources that I have used or quoted have been indicated and acknowledged by means of complete references. This work has not been and will not be submitted or presented for the award of any other Degree, Diploma, Fellowship or similar title at any other institution.

Signature.....

Date/..../....

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DEDICATIONS

I dedicate

This doctoral treatise

To Jesus Christ of Nazareth,

The Holy Ghost, and

To the Heavenly Father

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LIST OF ABBREVIATIONS

AMOS	Analysis of Moment Structures
AVE	Average Variance Extracted
CR	Composite Reliability
GEM	Global Entrepreneurship Monitor
NBSSI	National Board for Small Scale Industries
SEDA	Small Enterprise Development Agency
SEM	Structural Equation Modelling
SMEDAN	Small and Medium Sized Development Agency of Nigeria
SMEs	Small Business Enterprises
SPSS	Statistical Package for Social Sciences
TIA	Technology and Innovation Agency
TREC	Turfloop Research Ethics Committee

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CHAPTER 1: INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 INTRODUCTION

Sustainable development is a contemporarily vital phenomenon across economies, all over the world. The Agenda 2030 for Sustainable Development which was recently rolled out reiterates the commitment of all nations towards the notion of Sustainable Development (United Nations Development Group, 2015:5). In the South African economy, to this end, the National Framework for Sustainable Development (NFSD, 2008) is a policy document promulgated to guide the efforts and aspirations of the nation pertaining to sustainable development. Section 24 of the constitution of South African (Act 108 of 1996) stipulates the obligation of civil society and government towards securing the ecology in a sustainable development manner (NFSD, 2008:12). Furthermore, the National Environmental Management Act (NEMA), (Act No.107 of 1998) constitutes the definition of sustainable development which is in line with the globally consented Brundtland Commission definition (NFSD, 2008:14).

The South African Constitution under Section 24(b) ensures all the citizens of the nation, the right towards “the environment, secured for the sake of present and future generations’ benefit, through rational legislative and other mechanisms that preserve the ecology utilisation of natural resources while enhancing acceptable economic and social development”. Within the National Framework for Sustainable Development, chapter four of the policy document identifies business and industry as partners with government in the operationalisation of the sustainable development concept (NFSD, 2008:45). Furthermore, one of the challenges identified is on defining institutional mechanisms that facilitate the adoption of sustainable development by participants (NFSD, 2008:45).

Against this backdrop, the study at hand focuses on investigating mechanisms underpinning the spread of sustainable development within the context of the SME sector. The treatise proposes the process of isomorphism as providing explanations of how SMEs are adopting sustainable development practices. In this regard, this first chapter provides the synopsis of the current study. In the chapter, the

delineation of the background of the study, problem statement and aim of the study is identified. Furthermore, the chapter outlines the research objectives, hypotheses, definition of terms, as well as the literature overview. Lastly, the research methodological overview, the significance of the study and the thesis structure are provided. Section 1.2 below focuses on the background of the study.

1.2 BACKGROUND OF THE STUDY

Sustainable development has sprouted as a global agenda (Sen, 2014:94). Since 1972 at the United Nations Conference on the Human Environment (UNCHE), deliberate mitigating activities (such as recycling, waste management, eco-innovations, energy efficiency) are increasing as it is reckoned that failure to do so, the earth will become uninhabitable (Borim-De-Souza, Balbinot, Travis, Munck & Takahashi, 2015:218). Traced back to the 1987 Brundtland Commission report titled “Our Common Future”, sustainable development means that current development should not compromise future generations’ ability of meeting their needs (Borim-De-Souza *et al.*, 2015:223). To replicate the unprecedented global seriousness and inescapability of sustainable development is the new Agenda 2030. On 1 January 2016, upon the expiry of the Millennium Development Goals, the *2030 Agenda for Sustainable Development* officially became operational following its promulgation during a United Nations summit (25-27 September 2015) (United Nations Development Group, 2015:5).

Sustainable development constitutes three dimensions namely, economic, societal and environmental and the three are sometimes called the “Triple Bottom Line” (Rishi, Jauhari & Joshi, 2015:376). Sustainable development cuts across academic, social and political backgrounds (Borim-De-Souza *et al.*, 2015:223), as such, it has been met with diverse views and perspectives (Swanson & Zhang, 2012:630; Ratiu & Anderson, 2014:4). For the business world, Swanson and Zhang, (2012:630) argue that businesses depend on sustainable development and sustainable development depends on businesses. However, implementing sustainable development, a relatively new concept is still a battle for businesses (Høgevoid, Svensson, Klopper Wagner, Valera, Padin, Ferro & Petzer, 2015:427).

Therefore, how businesses are implementing sustainable development needs to be examined, given the infancy of the concept. Several academicians have indicated that SMEs are faced with a challenge to comprehend sustainability issues. However, this does not relieve SMEs of their sustainability duties and responsibilities (Quader, Kamal & Hassan, 2016:140). Although small medium enterprises (SMEs) activities have been reckoned to be of little effect (Jamil, Mohamed, Muhammad & Ali, 2015:620), SMEs and large firms alike are increasingly regarded as essential to sustainable development (Louw & Venter, 2014:50).

Against this background, as pressures for businesses to implement sustainable practices increase, this study endeavours to attest the role of isomorphic pressures towards sustainable development practices amongst SMEs. Isomorphism has been used to explain the diffusion of various new business environmental trends such as technological adoption and total quality management within industries (Lai, Wong & Cheng, 2006:94). Isomorphism is a constraining process that pressures organisations to resemble other organisations under the same environmental conditions (Lin & Sheu, 2012:540).

The isomorphic process answers why eventually firms will adapt towards homogeneity in behaviour and practices due to communal interconnectedness (Lin & Sheu, 2012:540). Denman and James (2016:41) argue that the nature and behaviour of organisations when faced with similar environmental constraints will move towards homogeneity over time as result of isomorphic pressures. Two types of isomorphism exist, namely institutional (coercive, mimetic, and normative) and competitive (Buchko, 2011:31). Competition in terms of market competition, niche change, and fitness measures results in competitive isomorphism.

Under institutional isomorphism also called, institutional similarity (Chiang, 2010:916), coercive pressures are exerted on a firm by other organisations which they depend on. Mimetic pressures emanate when a firm imitates the behaviour and practices of successful counterparts within the same industry. Normative pressures come as firms reinforce and spread norms of behaviour as they interact. Through isomorphic pressures, one unit in a population conforms to other units in the

population that deals with similar situations (Joseph & Taplin, 2012:365; Lin & Sheu, 2012:535).

Empirical studies on isomorphism, sustainable development and firm performance (See Table 3.1 on exemplars of studies on isomorphism, sustainability and firm performance) have focused on one aspect of isomorphism which is mimetic isomorphism and environmental sustainability. Therefore, to the best knowledge of the researcher, no research has attempted to holistically investigate the principle of isomorphism, looking at all the dimensions of sustainable development practices. Also, the link between isomorphism and sustainability practices on SMEs has not been explored in South Africa (Urban & Naidoo, 2012:146). This study sought to investigate isomorphism and sustainable development practices of small businesses in Limpopo Province.

1.3 PROBLEM STATEMENT

With sustainable development being a new environmental force and a global challenge, contemporary research is needed to examine forces contributing towards sustainable development growth across industries. When faced with a new environmental setting, the phenomenon of isomorphism has been pinpointed in contributing towards adaptation in firm behaviour that is influenced by the environment. The problem question underlying this study is: **“how sustainable development practices by SMEs are influenced by isomorphic pressures as well as how firm performance is influenced by the adoption and practice of sustainable development?”**

Foremost, from the researchers' knowledge, there is no study that has simultaneously measured the variables, isomorphism, sustainable development and firm performance. The relationship of sustainable development practices in SMEs and isomorphism has not been investigated in South Africa. Consideration in extant empirical research has been on large corporations, and predominantly in the first world since large organisations are regarded to be instrumental as pertaining to sustainability issues (Windolph, Schaltegger & Herzig, 2014). Chow and Chen

(2012:528) argue that there is need to examine how organisations are influenced by their trading partners as well as local policies.

Empirical studies focusing on the three concepts underpinning the study at hand have approached the concepts primarily with a disaggregated approach. On the other hand, other studies have pursued a unidimensionality approach, especially, firm performance and sustainable development. Both approaches are questionable considering that the construct of sustainable development by virtue requires the consideration of all the variables in an aggregated and balanced form. Furthermore, the concept of firm performance under sustainability is increasingly broadening as more and more firms are required to report on all the aspects of their performance (Gomes, Eugénio & Branco, 2015:281).

As such, the disaggregation and unidimensional approach that has been used in sustainable development to date have eluded the critical aspect of sustainable development; which is considering various measures of sustainable development and the ultimate sustainable firm performance (Nazari, Herremans & Warsame, 2015:375). On that note, this study seeks to provide a holistic approach to the concepts of isomorphism, sustainable development, and firm performance. Thus, it adopts a multidimensional approach and simultaneously investigates isomorphism, sustainable development and firm performance.

1.4 AIM OF THE STUDY

This study aims to provide an empirical analysis on the relationship between isomorphic pressures and sustainable development practices and the subsequent relationship of sustainable development practices and firm performance of SMEs.

1.5 RESEARCH OBJECTIVES

The following objectives were formulated:

- i. To ascertain the sustainable development practices of SMEs in Limpopo Province.

- ii. To investigate the role that isomorphism plays towards sustainable development practices of SMEs in Limpopo Province.
- iii. To examine whether sustainable development practices have a positive impact on SMEs' performance in Limpopo Province.
- iv. To provide recommendations on the influence of isomorphism on the sustainable development practices of SMEs in Limpopo Province.

1.6 HYPOTHESES

The following primary hypotheses and their associated were utilised to establish the conclusions in this study.

H1 There is a significant positive relationship between perceived institutional isomorphism and sustainability practices of SMEs in Limpopo Province.

H1a There is a significant positive relationship between perceived coercive pressures and economic sustainability practices of SMEs in South Africa.

H1b There is a significant positive relationship between perceived coercive pressures and environmental sustainability practices of SMEs in South Africa.

H1c There is a significant positive relationship between perceived coercive pressures and social sustainability practices of SMEs in South Africa.

H1d There is a significant positive relationship between perceived mimetic pressures and economic sustainability practices of SMEs in South Africa.

H1e There is a significant positive relationship between perceived mimetic pressures and environmental sustainability practices of SMEs in South Africa.

H1f There is a significant positive relationship between perceived mimetic pressures and social sustainability practices of SMEs in South Africa.

H1g There is a significant positive relationship between perceived normative pressures and economic sustainability practices of SMEs in South Africa.

H1h There is a significant positive relationship between perceived normative pressures and environmental sustainability practices of SMEs in South Africa.

H1i There is a significant positive relationship between perceived normative pressures and social sustainability practices of SMEs in South Africa.

H2There is a significant positive relationship between perceived competitive isomorphism and sustainability practices of SMEs in Limpopo Province.

*H2a*There is a significant positive relationship between perceived competitive pressures and economic sustainability practices of SMEs in South Africa.

*H2b*There is a significant positive relationship between perceived competitive pressures and environmental sustainability practices of SMEs in South Africa.

*H2c*There is a significant positive relationship between perceived competitive pressures and social sustainability practices of SMEs in South Africa.

H3There is a significant positive relationship between perceived sustainability practices and firm performance of SMEs in Limpopo Province.

*H3a*There is a significant positive relationship between economic sustainability practices and financial performance of SMEs in Limpopo Province.

*H3b*There is a significant positive relationship between economic sustainability practices and customer satisfaction performance of SMEs in Limpopo Province.

*H3c*There is a significant positive relationship between economic sustainability practices and employee satisfaction performance of SMEs in Limpopo Province.

*H3d*There is a significant positive relationship between economical sustainability practices and innovation firm performance of SMEs in Limpopo Province.

*H3e*There is a significant positive relationship between economical sustainability practices and environmental performance of SMEs in Limpopo Province.

*H3f*There is a significant positive relationship between economical sustainability practices and social firm performance of SMEs in Limpopo Province.

*H3g*There is a significant positive relationship between environmental sustainability practices and financial performance of SMEs in Limpopo Province.

*H3h*There is a significant positive relationship between environmental sustainability practices and customer satisfaction performance of SMEs in Limpopo Province.

*H3i*There is a significant positive relationship between environmental sustainability practices and employee satisfaction performance of SMEs in Limpopo Province.

*H3j*There is a significant positive relationship between environmental sustainability practices and innovation firm performance of SMEs in Limpopo Province.

*H3k*There is a significant positive relationship between environmental sustainability practices and environmental performance of SMEs in Limpopo Province.

H_{3l} There is a significant positive relationship between environmental sustainability practices and social firm performance of SMEs in Limpopo Province.

H_{3m} There is a significant positive relationship between social sustainability practices and financial performance of SMEs in Limpopo Province.

H_{3n} There is a significant positive relationship between social sustainability practices and customer satisfaction performance of SMEs in Limpopo Province.

H_{3o} There is a significant positive relationship between social sustainability practices and employee satisfaction performance of SMEs in Limpopo Province.

H_{3p} There is a significant positive relationship between social sustainability practices and innovation firm performance of SMEs in Limpopo Province.

H_{3q} There is a significant positive relationship between social sustainability practices and environmental performance of SMEs in Limpopo Province.

H_{3r} There is a significant positive relationship between social sustainability practices and social firm performance of SMEs in Limpopo Province.

1.7 DEFINITION OF CONCEPTS

Sustainable Development: The Brundtland Commission's proposed definition of sustainable development is in the forefront in literature and is adopted in this study. The Brundtland commission defines sustainable development as development that meets the needs of the present without compromising the ability of future generations to meet their own needs (Green, Toms & Clark, 2015:220).

Social Sustainability: Socially sustainability refers to activities that ensure that communities are equitable, diverse, connected and democratic and provide a good quality of life (Chow & Chen, 2012:519). For the purpose of this study social sustainability is defined as the endeavours of the firm to uphold social-wellbeing of all stakeholders.

Economic Sustainability: Is defined as the business of the business of creating wealth for its shareholders and is regarded as soft sustainability. Open, competitive and international markets that encourage innovation, efficiency and wealth creations are fundamental aspects of economic sustainability (Chow & Chen, 2012:519). This study adopts a hard sustainability definition which refers to the creation and

distribution of goods and services that help to raise the standard of living around the world in the long-term rather than the short-term.

Environmental Sustainability: In this study, it refers to the maintenance of natural capital by regulating the impact of human activities (human footprints) on the natural environment. It involves responsible use of renewable and non-renewable resources, regulated pollution and waste assimilation (Chow & Chen, 2012:521).

Isomorphism: Is a process that forces one unit in a population to conform to other units in the population that deal with similar situations (Findik & Bedük, 2014:27). Herein, isomorphism is defined as the process of homogenisation of firms because of isomorphic pressures.

Competitive Isomorphism: Refers to homogenisation of organisations due to compliance with a competitive degree in terms of "market competition, niche change, and fitness measures" (Findik & Bedük, 2014:28). In this study, competitive isomorphism refers to the pressure of searching for efficiency by organisations and it is more relevant for those situations in which free and open competition exists.

Coercive Isomorphism: Refers to both formal and informal pressures applied on organisations by other organisations upon which they rely and by cultural expectations in the society within which organisations function (Joseph & Taplin, 2012:365). In this study, coercive isomorphism relates to the pressure to conform from all the stakeholders within the industry which the business operates in.

Mimic Isomorphism: Refers to homogenisation that occurs when organisations model themselves and emulate the practices and policies of those organisations perceived to be legitimate and successful (Joseph & Taplin, 2012:365). In this study, mimic isomorphism refers to pressure to conform that come as a result of copying and me-too strategies by SMEs in terms of sustainability.

Normative Isomorphism: Relates to the pressures that emanate when members interact, thereby reinforcing and spreading norms of behaviour among themselves (Joseph & Taplin, 2012:365). This study adopts the definition of normative

isomorphism as the pressures which come by belonging to certain networks and form shared expectations within relative industrial contexts of what constitutes appropriate and legitimate behaviour.

Firm performance: Can be defined as the extent to which a firm attain success or accomplish its outcome relating to competitors in conditions of sales, profitability and sales returns from new products based on performance metrics (Shankar & Chin, 2011:15). This study utilises the subjective definition of firm performance relating to the subjective judgements of the respondents of how the firm is doing based on the firm performance indices.

Small and Medium Enterprise: In South Africa, a 'small business' is defined as amended by the National Small Business Amendment Acts (26 of 2003 and 29 of 2004). The act categories small businesses into; survivalist, micro, very small, small and medium, thus the use of the term "SMME" for small, medium and micro-enterprises. Nonetheless, the terms 'SMME' and 'SME' are interchangeably used in South Africa. The SME definition makes use of the number of employees (the most common mode of definition) per enterprise size category combined with the annual turnover categories, the gross assets excluding fixed property (Mahembe, 2011:22).

From the Act, an SMME is a business with (1) total full-time equivalent of paid employees less than 200 (2) total annual turnover of less than R50 million and (3) total gross fixed assets value (fixed property excluded) of less than R5 million. In this study, an SMME is defined as a firm which is independently owned by owner/managers, employing not more than 200 full-time employees, with total annual turnover of less than R40 million and with a total gross fixed assets value (fixed property excluded) of less than R15 million.

1.8 PRELIMINARY LITERATURE REVIEW

The literature framework for this study is underpinned by three parental concepts, namely, isomorphism, sustainable development and SME performance. The first concept of isomorphism provides for the theoretical framework and is explained in

this research by two theories, namely, institutional isomorphism theory and organisational ecology theory. The institutional theory is propounded by Di Maggio and Powell, (1983) and it relates that isomorphism (or processes of homogenisation of organisational form in a certain field) is in two forms, namely, competitive isomorphism and institutional isomorphism (Di Maggio & Powell, 1983:149). The institutional theory emphasises the concept of isomorphism amongst organisations as caused by three institutional pressures, namely, coercive, normative and mimetic (Joseph & Taplin, 2012:365). On the other hand, the organisational ecology theory by Hannan and Freeman (1977) expounds solely on the competitive pressure under the competitive isomorphism.

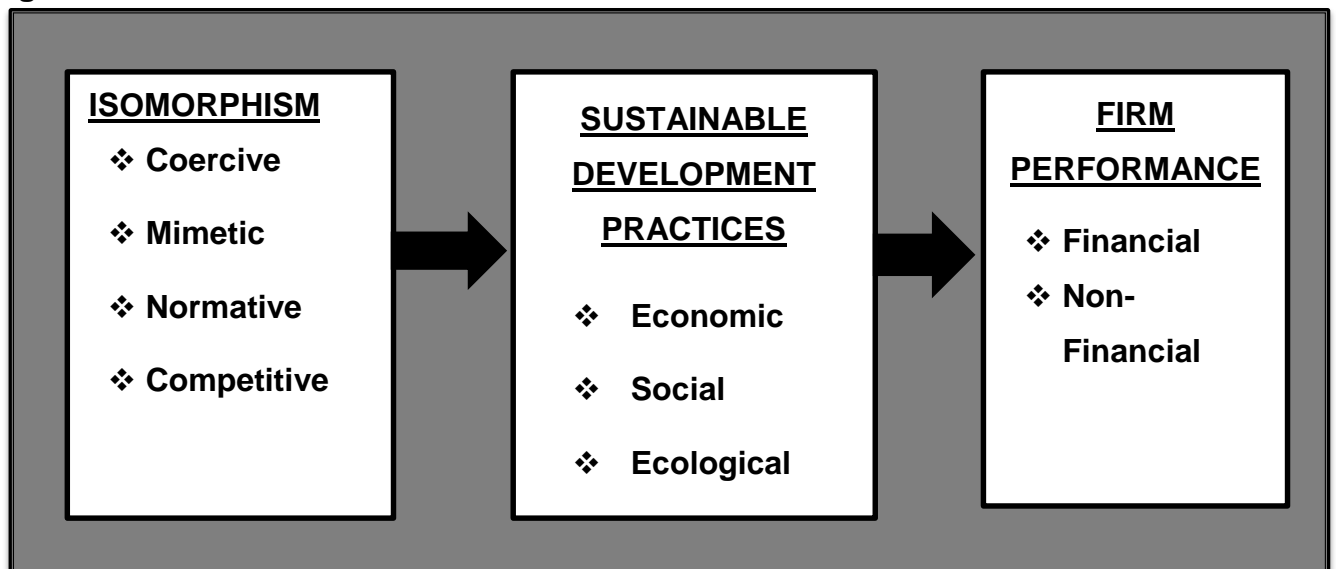
Isomorphism stipulates that there are certain forces, namely, isomorphic pressures that influence the shape of the institutions in the society as well as the internal practices of each of the firms in the given environment. Basically, each firm is dependent on both the internal institutional environment which is comprised of values, structures, systems and processes that are conventional or traditional (Gstraunthaler, 2010:404). Also, firms are embedded by the external institutional environment, a milieu collective to the other organisations. The institutional theory for isomorphism relates that from a broader spectrum, institutions constitute cognitive, normative, and regulative structures and events that offer constancy and meaning to social behaviour (Biloslavo & Lynn, 2007:994).

The second concept abounding the literature framework of sustainable development is embedded by three pillars of sustainable development, namely, economic, social and environmental which form the basis for the parental theory to this study. The social dimension or social equity principle under sustainable development relates to all societal members having equal access to the available resources and opportunities. Critical to the definition of sustainable development is the realisation that “needs” present and future should be met in an equitable setting (Swanson and Zhang, 2012:630). *Ibid* state that sustainability in meeting social needs implies a social equity between generations, and further rationally considering the equity within each generation. Lastly, the third concept for this, firm performance (also termed business performance) (Santos & Brito, 2012:97), is a vital variable in numerous

studies. Consistently, Al-Matari, Al-Swidi, and Fadzil, (2014:26) and Gharakhani and Mousekhani (2012:39) relate that the concept of firm performance is a critical concept in the field of strategic management and numerous strategy researches utilising the construct of firm performance. Santos and Brito (2012:97) also state that the construct of firm performance is commonly used as a final dependant variable in latent research.

Interestingly, notwithstanding being widely researched, in academic literature, the concept of firm performance is broad and involves great complexity (Pérez-Cabañero, González-Cruz & Cruz-Ros, 2012:121; Santos & Brito, 2012:97; Ha-Brookshire, 2009:134). According to Rodríguez-Gutiérrez, Moreno & Tejada, (2015:195) the unit being analysed, the choosing of a concise and operational definition and the theoretical framework to be utilised in a study, result in differences on how the concept of firm performance is approached. These three concepts constitute the three variables being investigated in this research. Chapter three of the thesis intensively reviews the literature on the three concepts. Figure 1.1 below diagrammatically provides the depiction of the concepts under study within the SME context in South Africa.

Figure 1.1 Research Variables



Source: Developed for this study by the author

1.9 METHODOLOGICAL OVERVIEW

1.9.1 Study Area

The study area for this study is the Capricorn District Municipality (CDM) which is located in the Limpopo Province. The CDM comprises five local municipalities, namely, Aganang, Blouberg, Lepelle-Nkumpi, Molemole and Polokwane. Polokwane is the largest city in the province and is the centre of economic activities and embraces a considerable number of small businesses (Capricorn District Municipality, 2016).

1.9.2 Research Design

This critique utilised the quantitative research methodology. Quantitative research seeks to provide numerical and statistical compilations of specific behaviours, opinions and attitudes as it pertains to the research objectives (Bradley, 2007:276). The survey technique was utilised in this study and self-administered questionnaires personally and electronically (e-mail) were distributed. The two techniques were chosen because of their convenience and effectiveness in communication.

1.9.3 Population of the Study

The population of the SMEs in the Limpopo Province, Capricorn District Municipality comprises the sample frame for this study. According to Limpopo Economic Development Agency, a total of 823 registered SMEs are found in various sectors in the Limpopo Province.

1.9.4 Sample and Sampling Methods

The convenience non-probability sampling technique was used in gathering the data for the study. The Raosoft Sample size calculator was used to calculate the sample size as follows; $N=823$ SMEs and the calculation resultant sample size was 263. SEM requires at least 200 participants sample size to be effective. Sideridis, Simos,

Papanicolaou, & Fletcher (2014) established that a sample size of 50-70 would be enough for a model involving 4 latent variables. Wolf, Harrington, Clark, & Miller (2013) opine that a sample size requirements ranging from 30 (Simple CFA with four indicators and loadings around .80) up to 450 cases (mediation models) is required for SEM. As such, taking into consideration the non-response rate in the calculator (50%) the sample size for the study was 400 SMEs.

1.9.5 Data Collection Instruments and Procedures

A self-administered questionnaire was used in this study and to be finalised following an extensive literature review process (See Appendix 1). The questionnaire primarily constituting 5-point Likert scale type of questions was operationalised based on former works. The questionnaire was set in four sections: A, B, C, and D. Section A measured demographic details and the organisations' information. The questions in this section were customised to meet the nature of SMEs in South Africa. Section B centred on questions on sustainable development. To measure sustainable development, a scale developed by Høgevold *et al.* (2015) was adopted in this study. The Cronbach alpha test for reliability for each factor in this scale ranged between 0.66 and 0.68, which is greater than the recommended threshold of 0.6. The items used to measure sustainable development practices have been commonly measured under corporate social responsibility.

Section C measured the isomorphic pressures and to measure institutional isomorphism, scales developed by Lin & Sheu (2012) and Liu, Ke, Wei, Gu & Chen (2010) were adopted for this study. Both scales had Cronbach alpha test of reliability which exceeded 0.7 and were deemed satisfactory. Finally, section D focused on business performance. The research utilised subjective measures of business performance instead of objective measures. To measure firm performance, a five-point scale employed by Ghouri, Rehman-Khan, Malik & Razaq (2011) was adapted for this study. Perceptions of the respondents on financial performance, customer satisfaction performance, employee performance, innovation performance, environmental performance as well as social performance were utilised as a non-financial measure.

1.9.6 Data Analysis Methods

The data analysis stage followed a two-thronged approach, namely, descriptive and inferential analyses. Descriptive analysis for the whole sample was conducted using Statistical Package for Social Sciences (SPSS) Version 24. For hypothesis testing under inferential analysis, Structural Equation Modelling (SEM) was conducted. SEM is a multivariate technique which is an alternative to multiple regression analysis (Hoyle, 2011:1). SEM is considered more superior since it is able to simultaneously test a series of dependence relationships between variables. (Cooper & Schindler, 2008:626). Since the scale to be used in the study is mostly adapted, a confirmatory factor analysis was conducted utilising Analysis of Moment Structures (AMOS V24.0) software.

1.9.7 Reliability and Validity

The researcher made use of Item-total correlation values, Cronbach's coefficient alpha (α) greater than 0.7, Composite Reliability (CR) and Average Variance Extracted (AVE) to check the measurement reliability. On the other hand, validity refers to the extent to which differences in observed scale scores reflect true differences between objects on the characteristics being measured, rather than systematic or random errors. It is divided into two: convergent and discriminant validity. In this study, convergent validity was measured using Item-to-total correlation, factor loadings and Average Variance Extracted values. On the other hand; discriminant validity was measured using Average Variance Extracted Value versus Shared Variance and Inter-Construct Correlation Matrix.

1.9.8 Ethical Considerations

The respondents were informed about the rationale for the research. The researcher ensured that, all the information provided as far as the research is concerned; was kept under a highest level of confidentiality. Participants were also made aware that, the data was only to be used for academic and research purpose and was not to be

given or sold to any third party. The sources of literature that were utilised in the study were duly acknowledged. Finally, in line with the University of Limpopo's Research Ethics Committee requirements, ethical approval was sought before data collection was instituted.

1.10 SIGNIFICANCE OF THE STUDY

Theoretically, there is a lack of studies that consider sustainable development from the SME perspective especially in the South African context. This study takes the initiative to research the concept considering the role that isomorphic pressures play in the spread of sustainable development in the business world. The concept of sustainable development is still considered embryonic and existing studies have primarily focused on sustainable development dimensions separately when it comes to isomorphism. As such this study contributes by providing a holistic model of sustainability and isomorphism by adopting a multi-dimensional approach to sustainable development. Whereas, as per the literature reviewed no study has attempted to do that particularly in the South African context.

Furthermore, the aspect of the multidimensionality approach to firm performance is a major contribution in research. Literature has reviewed that most of the studies conducted on firm performance have followed a unidimensionality approach to firm performance. However, as observed in literature, as far as sustainable development and sustainable reporting is concerned, there is an increasing emphasis and shift towards firms providing a broader reporting of their performance. In the past, firms were required to provide their economic performance alone. To the contrary, firms are required to provide information on their social and environmental performance (Gomes *et al.*, 2015:281). As such, this study contributes significantly through the provision of performance measures that capture the aspect of sustainable reporting as how SMEs can utilise them.

To the best knowledge of the researcher, no empirical study has simultaneously tested both competitive isomorphism and institutional isomorphism's influence on

sustainable development within the SMEs context. Studies that exist have focused on institutional isomorphism alone. Furthermore, there is lack of empirical evidence with regards to sustainable development practices by SMEs within the developing world context. The role of SMEs in sustainability needs to be considered since they play a greater part collectively towards the economic activities of almost all countries, especially in the developing world (Windolph *et al.*, 2014:379). According to the United Nations (1987) sustainable development aspires towards narrowing the gap between the rich and poor countries (Ratiu & Anderson, 2014:6).

Whereas, policy makers worldwide have argued that SMEs are an ideal way to enhance sustainability (Urban & Naidoo, 2012:146) in South Africa there is little research on the sustainability of SMEs. For policymakers, the major value lies in that the pursuit of this study converges with a contemporarily prime global concern. The newly promulgated Agenda 2030 for Sustainable Development shows the level of significance attached to this concept (United Nations Development Group, 2015:5). In this regard, it stands to make significant contributions towards unearthing how SMEs are adopting sustainable development practices in the developing nation of South Africa.

Coherently, SMEs have been regarded as strategic in driving economic growth and wealth creation primarily in historically disadvantaged populations and have been a prime research subject in South Africa and globally commanding great research interest (Du Toit, Erasmus & Strydom, 2010:44). Thus, the study will be of significant value by contributing towards understanding how sustainability adoption by SMEs is influenced and can be accelerated in the developed world. Thereby consequently contributing towards poverty alleviation and sustained economic growth which is at the centre of sustainable development.

1.11 LAYOUT OF THE STUDY

The following layout of chapters was followed in the compilation of the report for the study at hand:

- **CHAPTER ONE: AN INTRODUCTION TO THE RESEARCH PROBLEM**

The first chapter of the treatise provide the introduction and background of the study. Furthermore, the problem statement, aim of the study, objectives and hypotheses of the research study are also presented. The chapter additionally encompasses discussions on the overview of the literature and methodology, significance of the study as well as the layout of the study. Finally, a summary of the chapter is provided.

- **CHAPTER TWO: SMEs IN SUSTAINABILITY**

The subject of SMEs and the related dynamics are comprehensively reviewed in this chapter. Emphasis was primarily on delineating the concept of SMEs within various contexts and with reference to the South African context. Furthermore, the chapter relates the nature of SMEs in the context of sustainable development.

- **CHAPTER THREE: THEORETICAL LITERATURE REVIEW**

Chapter three focuses on reviewing literature on the theoretical principles underpinning the study. The parental principles underpinning the study at hand are isomorphism, sustainable development and firm performance. As such, the chapter is structured along these concepts. The different elements that pertain to these three concepts are discussed in the chapter.

- **CHAPTER FOUR: CONCEPTUAL FRAMEWORK AND HYPOTHESES DEVELOPMENT**

The conceptual framework utilised to address the research hypotheses as outlined in chapter 1 is discussed in chapter four. The conceptualisation of the study is provided. Furthermore, the chapter focuses on discussing the development of the hypotheses for the study pertaining to the relationships being tested.

- **CHAPTER FIVE: RESEARCH METHODOLOGY**

This chapter discusses the research methodological procedures and steps that were applied in this study. Herein, the research paradigm, research design, sampling procedures, data gathering and data analysis techniques that were utilised in the study are discussed in detail. Furthermore, the chapter contains the ethical considerations that underpinned the collecting of data.

○ **CHAPTER SIX: DATA ANALYSIS**

The chapter discusses the procedures used to statistically treat and analyse the gathered data. The structure of the discussion follows the two basic steps of statistical analysis, namely, descriptive and inferential analysis. Herein, the discussion integrates the theory provided in chapter three with the conceptual model provided in chapter four.

○ **CHAPTER SEVEN: CONCLUSIONS AND RECOMMENDATIONS**

Finally, chapter 7 provides the conclusions and recommendations pertaining to the study. Furthermore, the chapter discusses the limitations to the study as well as areas for future studies. The results obtained were also examined in light of empirical studies and latent literature underpinning the study at hand.

1.12 SUMMARY OF THE CHAPTER

This chapter presented a synopsis of whole current research study. Herein, the introduction and background of the study are discussed. Also, the problem statement, aim of the study, definition of concepts, research objectives, research hypotheses, aim of the study, overview of literature review and methodological overview are included. Lastly, the chapter present the significance of the study as well as the layout of the research. Through the abovementioned topics, the chapter discussion provided the delineation and disintegration of the topic and the problem being researched. The chapter guides the following stages by focusing on the critical aspects that set the background and set up of the entire study.

On the background provided in chapter one, chapter two focuses on the concept of SMEs within the sustainability context. The chapter provides the contextual discussion that highlights the issues that pertains to SMEs in literature.

CHAPTER 2: SMEs IN SUSTAINABILITY

2.1 INTRODUCTION

The inherent and constant evolvments of markets as well as continuous heightened competition, especially due to technological innovation, continue to outpace research efforts in the business environment. Of note, the new area on sustainable development has received little attention as far as the role played by SMEs. Much focus has been in the financial aspect of SMEs. However, it is unarguable that financial success highly depends on the firm's ability to pursue its strategies in response to the business environment. Against this backdrop, this chapter provides literature on SMEs on the various aspects including the definition and overview of SMEs within the global and South African context. Furthermore, attention is provided on the contribution as well as challenges of SMEs with particular focus given towards sustainable development. Also, included in the chapter are the roles and drivers for SMEs in sustainable development. Lastly, a summary of the discussions in the chapter is included.

2.2 DEFINITION OF SMALL AND MEDIUM ENTERPRISES

A single definition of SMEs seldom exists in literature (Issahaku, Ganiyu & Sophia, 2015:5; Chew & Chew, 2008:334; Maduku, Mpinganjira & Duh, 2016:712). Maduku *et al.* (2016:712) highlight that the definition of an SME is a continuously contentious element in the literature. It is deemed that the definition of SMEs varies as one moves from one industry to the other, and more so, across countries. Eze, Goh, Goh & Tan (2013:212) state that SMEs are basically defined depending on the stages of economic development and the general policy purposes for which the definition is utilised. Maduku *et al.* (2016:712) posit that several definitions are propounded by various researchers and institutions. In this regard, it is a prominent practice for studies that deal with SMEs to first provide a background and definition of SMEs. Thus, providing clarity and contextualisation on the subject of SMEs, as per the study being undertaken.

Abor and Quartey (2010:219) argue that researchers use legal status, method of production, size of the firm, capital assets, skill of labour and capital turnover as means of addressing the definitional challenge with regards to SMES. *Ibid* state that there is a common practice of using size alone as a means of defining SMEs. However, this cannot be universally applied in the sense that if size was to be used alone, all firms in certain countries will be regarded as small, whilst in other contexts no firm can be regarded as small (Abor & Quartey, 2010:219). Regardless of the various definitions of SMEs that may exist, the primary focus is on either the number of employees or the amount of invested capital (Eze *et al.*, 2013:212). Moreira (2016:280) opines that the absence of a commonly accepted definition for SMEs results from the fact that the classification of businesses into large, medium or small scale is a subjective and qualitative judgement matter.

According to Abor and Quartey (2010:220), the definition of SMEs can be categorised as per the number of employees based on whether a country is industrialised or developing. For industrialised nations the definition is as follows:

- ✓ Large-enterprises constituting 500 or more employees;
- ✓ Medium-enterprises constituting 100-499 employees;
- ✓ Small-enterprises constituting 99 or fewer employees.

The categorisation provided for developing countries is as below:

- ✓ Large-enterprises constituting 100 or more employees;
- ✓ Medium-enterprises constituting 20-99 employees;
- ✓ Small-enterprises constituting 5-19 employees;
- ✓ Micro-enterprises constituting less than 5 employees.

In an attempt to provide a definition of SMEs in this study, two perspectives are considered, namely, the international perspective and the South African perspective. The section that follows discusses the definition of SMEs from an international perspective whereby a few of non-African countries are considered.

2.2.1 The International Perspective

Eze *et al.* (2013:212) declare that the World Bank has acknowledged that there are beyond 60 ways in which SMEs are defined in 75 countries. According to Asamoah (2014:118), the most prevalent and broadly quoted definition of SMEs is the one provided by the European Union (EU). The definition provides for a headcount classification of SMEs utilising the number of employees and turnover. The mid-sized category has less than 50 employees and annual turnover of £10 million whilst a micro firm has less than ten employees and an annual turnover of less than £2 million.

Furthermore, in the European Union an SME is defined as a business with a total number of employees which is less than 250, with a maximum annual turnover of £50 million and a balance sheet amounting to £43 million. Asamoah (2014:118) states that the financial maximum amount of turnover and the balance sheet total for SMEs were increased to these recent levels after considering the increased productivity within the Union (European Union, 2016). However, the EU's definition's major shortcoming is that it lacks universal applicability because it is too all-embracing for it to be applied to several countries. As such, it is urged that researchers need to utilise definitions of SMEs that are relevant to their target group (operational definition) (Abor & Quartey, 2010:219).

In the United Kingdom (UK), the definition of SMEs is encapsulated in the Companies Act of 1989. This definition pertains to particular quantitative and qualitative characteristics. According to Zheng (2011:225), SMEs in the UK vary in terms of the size, economic activity, geographic position, and resource availability. Quantitatively, the criteria for defining SMEs require that the annual turnover of the firm should not exceed twenty-two million eight hundred thousand (22.8) British Pounds Sterling. The balance sheet total should not exceed more that eleven million four hundred thousand (11.4) British Pounds Sterling and the headcount of the employees should not exceed two hundred and fifty (250).

Qualitatively, in the United Kingdom, the definition requires that SMEs should have a relatively small market share. Furthermore, the definition stipulates that for a firm to be regarded as an SME, it should be independent and not a subsidiary of a larger business organisation. Lastly, an SME in the UK scenario should consist of management who are closely and personally involved in the majority of decision-making. The UK definition also includes micro firms with only less than ten employees (Zheng, 2011:225). Similarly, in the United States of America (USA), the definition of SMEs does not differ significantly from the above given definitions as contained in the USA Small Business Act of 2002. According to this act, an SME is defined as an independently owned and operated business that does not dominate the field of its operations. This definition also varies as per the industry based on the differences found in each industry.

In Asia, SMEs are commonly defined by two categories, namely, the number of employees and the size of annual sales turnover in the nation of Malaysia. The National SME Development Council (NSDC) is responsible for making policy on SMEs towards the enhancement and development of SMEs throughout all the sectors in Malaysia. SMEs are comprehensively categorised into three types of business, namely, services, manufacturing and agriculture sectors. Furthermore, these typologies are subdivided into micro, small or medium according to the number of employees and annual sales turnover. Generally, firms with fewer than 50 employees and an annual sales turnover of RM25 million are categorised as SMEs (Rachagan & Satkunasingam, 2009:469). More specifically, Eze *et al.* (2013:212) provide the following diagrammatical representation of the categorisation of Malaysian SMEs:

Table 2.1 Definition of SMEs in Malaysia

Based on number of full-time employees		
Size	Manufacturing, manufacturing-related services and agro-based industries	Services, primary and information and communication technology (ICT)
Micro-enterprise	Fewer than five full time employees	Fewer than five full time employees
Small enterprise	Between five and 50 full time employees	Between five and 19 full time employees
Medium enterprise	Between 51 and 150 full time employees	Between 20 and 50 full time employees
Based on annual sales turnover		
Micro-enterprise	Less than RM250 000	Less than RM200 000
Small enterprise	From RM250 000 to less than RM 10 million	From RM200 000 to less than RM 1 million
Medium enterprise	Between RM 10 million and RM 25 million	Between RM 1 million and RM 5 million

Source: Eze *et al.* (2013:212)

In Japan, SMEs are defined based on the capital invested as well as the number of employees. According to the Japanese SME Basic Law, the term “Small and Medium Enterprise” generally refers to an enterprise having capital that does not exceed ¥300 million and has 300 or less employees. The legislature further prescribes that “Small enterprises” are defined as businesses with 20 or fewer employees (Subrahmanya, 2008:24). Whereas, in China a firm qualifies to be regarded as an SME when its total sales revenue is less than 300 million RMB yuan or the number of employees is less than 2 000, or the total assets value is not more than 400 million RMB yuan (Guo & Wang, 2014:262).

The definition of SMEs from the Indian perspective is also faced with mixed views. Malik & Nilakant (2011:112) reveal that various economic groups, banks, trade bodies and employer institutions posit definitions that are consistent to their needs. He further presents that most of the definitions are based on the number of employees, assets value as well as sales turnover. The table below (Table 2.2) presents the official categorisation of SMEs as per the Micro, Small & Medium Enterprises Development (MSMED) Act, 2006 of India.

Table 2.2 Definition of MSMEs in India

Manufacturing Enterprises – Investment in Plant & Machinery		
Description	INR	USD(\$)
Micro Enterprises	Up to Rs. 25 Lakh	Up to \$ 62,500
Small Enterprises	above Rs. 25 Lakh & up to Rs. 5 Crore	above \$ 62,500 & up to \$ 1.25 million
Medium Enterprises	above Rs. 5 Crore & up to Rs. 10 Crore	above \$ 1.25 million & up to \$ 2.5 million

Service Enterprises – Investment in Equipments		
Description	INR	USD(\$)
Micro Enterprises	Up to Rs. 10 Lakh	Up to \$ 25,000
Small Enterprises	above Rs. 10 Lakh & up to Rs. 2 Crore	above \$ 25,000 & up to \$ 0.5 million
Medium Enterprises	above Rs. 2 Crore & up to Rs. 5 Crore	above \$ 0.5 million & up to \$ 1.5 million

Source: Kumar (2014:73)

2.2.2 African Perspective

The definition of SMEs also varies across Africa and a few African countries are randomly selected and discussed herein. Firstly, in Tanzania SMEs are found in three different categories. The definition utilises the two quantitative criteria, namely, number of employees and capital invested in differentiating SMEs. The first category of SMEs in the Tanzanian context constitute of micro-enterprises which employ up to five employees. As for the capital invested, micro enterprises need to have 5 million Tanzanian shillings (TZS) invested in machinery. Secondly, small enterprises should

have 5 to 50 employees and TZS 5 to 2000 million. Finally, medium-sized enterprises ought to have 50 to 100 employees and TZS of 200 to 800 million (Isaga, Masurel & Van Montfort, 2015:197).

In Ghana, various definitions have been propounded with regards to small-scale enterprises but the most prominently utilised method is the number of workers in a firm. One of the official sources, the Ghana Statistical Service (GSS) regards enterprises with less than 10 workers as small-scale firms and those with more than 10 workers as medium and large-sized firms (Abor & Quartey, 2010:220). On the other hand, the National Board for Small Scale Industries (NBSSI) of Ghana utilises a two-thronged approach to define SMEs. The NBSSI utilises fixed assets and the number of workers in its definition. Accordingly, the NBSSI defines a small-scale firm as a business with less than 9 employees, and has plant and machinery (disregarding land, buildings and vehicles) that are below 10 million Ghanaian cedes (Abhor & Quartey, 2010:220).

However, the continuous depreciation of the local currency has been regarded as posing definitional challenges when the value of assets is utilised. As such, Asamoah (2014:118) argues that the most used definition is the one given by the EU which utilises the headcount of employees and turnover. In this regards, the US dollar (US\$) is used instead of the Ghanaian cedes. Based on this criterion, a small-scale firm is defined as employing more than five workers and not exceeding 50 workers. The value of assets, disregarding land, building and working capital- should be less than \$US30 000 and the annual income turnover should be between \$US6, 000 and \$US30 000. On the other hand, a medium-sized firm is deemed to be a business employing between 50 and 100 employees.

In Nigeria, still the definition of SMEs differs. According to Apulu, Latha and Moreton (2011:125), the Small and Medium Sized Development Agency of Nigeria (SMEDAN) categorises SMEs into micro, small and medium sized enterprises. SMEDAN states that a micro firm is an enterprise constituting fewer than ten employees with an annual turnover that is less than five million Naira. Furthermore, SMEDAN details that a small firm is a business employing between 10-49 workers

with an annual turnover ranging between five to 49 million Naira. Finally, the SMEDAN regards an enterprise as a medium firm if it employees between 50-199 workers whilst the annual turnover ranges between 50-499 million Naira.

2.2.3 South African Perspective

The highly utilised framework in South Africa for defining SMEs is provided in the National Small Business (NSB) Act 102 of 1996, as amended in 2003. The National Small Business Act of South Africa 1996 as amended in 2003 defines a small business as *“a separate and distinct entity including cooperative enterprises and non-governmental organisations managed by one owner or more, including its branches or subsidiaries if any is predominantly carried out in any sector or sub-sector of the economy mentioned in the schedule of size standards, and can be classified as an SME by satisfying the criteria mentioned in the schedule of size standards”* (Government Gazette of the Republic of South Africa, 2003).

The NSB Act 102 provides a qualitative as well as a quantitative definition of SMEs. Qualitatively the act stipulates that an SME operates in a formal market, is tax registered and adheres to additional formal registration requirements. The act further outlines that there is a secondary coordinating managerial structure available and also some degree of managerial level coordination. Quantitatively, the National Small Business Act of South Africa 1996 as amended in 2003 provides quantitative size standards in all the sectors of the South African economy as shown in Table 2.3 below.

Table 2.3 Classification of SMEs by Sector in South Africa

Sector or sub-sectors in accordance with the Standardised Classification	Size or class	Total full-time equivalent of paid employees Less than:	Total annual turnover Less than:	Total gross asset value (fixed property excluded) Less than:
Agriculture	Medium	100	R 5.00 m	R 5.00 m
	Small	50	R 3.00 m	R 3.00 m
	Very small	10	R 0.50 m	R 0.50 m
	Micro	5	R 0.20 m	R 0.10 m
Mining and Quarrying	Medium	200	R 39.00 m	R 23.00 m
	Small	50	R 10.00 m	R 6.00 m
	Very small	20	R 4.00 m	R 2.00 m
	Micro	5	R 0.20 m	R 0.10 m
Manufacturing	Medium	200	R 51.00 m	R 19.00 m
	Small	50	R 13.00 m	R 5.00 m
	Very small	20	R 5.00 m	R 2.00 m
	Micro	5	R 0.20 m	R 0.10 m
Electricity, Gas and Water	Medium	200	R 51.00 m	R 19.00 m
	Small	50	R 13.00 m	R 5.00 m
	Very small	20	R 5.10 m	R 2.00 m
	Micro	5	R 0.20 m	R 0.10 m
Construction	Medium	200	R 26.00 m	R 5.00 m
	Small	50	R 6.00 m	R 1.00 m
	Very small	20	R 3.00 m	R 0.50 m
	Micro	5	R 0.20 m	R 0.10 m
Retail, Motor Trade and Repair Services	Medium	200	R 39.00 m	R 6.00 m
	Small	50	R 19.00 m	R 3.00 m
	Very small	20	R 4.00 m	R 0.60 m
	Micro	5	R 0.20 m	R 0.10 m
Wholesale Trade, Commercial	Medium	200	R 64.00 m	R 10.00 m
	Small	50	R 32.00 m	R 5.00 m

Agents and Allied Services	Very small	20	R 4.00 m	R 0.60 m
	Micro	5	R 0.20 m	R 0.10 m
Catering, Accommodation and other Trade	Medium	200	R 13.00 m	R 3.00 m
	Small	50	R 6.00 m	R 1.00 m
	Very small	20	R 5.10 m	R 1.90 m
	Micro	5	R 0.20 m	R 0.10 m
Transport, Storage and Communications	Medium	200	R 26.00 m	R 6.00 m
	Small	50	R 13.00 m	R 3.00 m
	Very small	20	R 3.00 m	R 0.60 m
	Micro	5	R 0.20 m	R 0.10 m
Finance and Business Services	Medium	200	R 26.00 m	R 5.00 m
	Small	50	R 13.00 m	R 3.00 m
	Very small	20	R 5.00 m	R 0.50 m
	Micro	5	R 0.20 m	R 0.10 m
Community, Social and Personal Services	Medium	200	R 13.00 m	R 6.00 m
	Small	50	R 6.00 m	R 3.00 m
	Very small	20	R 1.00 m	R 0.60 m
	Micro	5	R 0.20 m	R 0.10 m

Source: The Government Gazette of the Republic of South Africa (2003)

Furthermore, SMEs in South Africa are categorised as follows:

- Survivalist enterprise: This classification is deemed pre-entrepreneurial, and constitutes practices such as hawkers, vendors and subsistence farmers. (In essence, survivalist enterprises are considered under the micro-enterprise sector). The revenue produced made is below the lowest income standard or the poverty line.
- Micro enterprise: These sizes of enterprises typically are without many formal requirements pertaining to registration. They constitute, for instance, *spaza* shops, minibus taxis and household industries. They have less than 5 workers and their annual turnover is below the VAT registration threshold of R150 000 per year.

- Very small enterprise: These are enterprises with below 10 employees on their payroll, with the exception of mining, electricity, manufacturing and construction sectors, whereby the number is 20 employees. These enterprises operate in the formal market and have access to technology.
- Small enterprise: The maximum limit is 50 employees. Small enterprises tend to be highly established when contrasted to very small enterprises and exhibit more multifaceted business practices.
- Medium enterprise: The ceiling is 100, or 200 employees for the mining, electricity, manufacturing and construction sectors. These enterprises are often deemed by the decentralisation of power to an additional level of management.

2.2.3 Definition of SMEs in this Study

Clearly, the definition of SMEs is a daunting task. As Mamman, Kanu, Alharbi & Baydoun (2015:12) elucidate, firms that are considered to be small in one country may fall under the definition of medium or large firms in another country. For instance, firms that have more than 100 employees are regarded as large in many developing nations. However, firms employing from 99 to 499 in Europe are regarded as large. From the outlook of the different definitions provided above, many definitions of SMEs are rather descriptions. Increasingly, business academicians refute the use of quantitative criteria in favour of using qualitative dimensions to describe SMEs because of high universal plausibility in the global context.

Qualitatively, SMEs can be defined based on the firm's organisational and behavioural features, like the extent of legal independence, flatter organisational structures, extent of informality and the level of technological advancement. The qualitative definition can further include the economic characteristics such as small market share ownership, inability to influence prices, low customer base and absence of performance monitoring systems. In addition, the control and management of SMEs is often a responsibility of an individual or two people. The products and services provided by SMEs are slightly different from those offered by large businesses. Lastly, SMEs are highly unlikely to conduct research and

development as well as going through substantial structural changes as compared to large firms (Haselip, Desgain & Mackenzie, 2014:369).

As such, in this study, both the quantitative and qualitative criteria will be utilised. For the purposes of this study, an SME is defined as a firm which is independently owned by owner/managers, employing not more than 200 full-time employees, with total annual turnover of less than R40 million and with a total gross fixed assets value (fixed property excluded) of less than R15 million. This definition disregards the differences that apply in terms of the differences in industry as outlined in the above definition with regards to the National Small Business Act no 102 of South Africa 1996 as amended in 2003. Since, the research is concerned with the behaviour of SMEs in general disregarding the specificities in terms of industry differences.

2.3 GLOBAL OVERVIEW OF SMEs

With global output and employment concerns, it is ultimately and globally consented that researching towards SMEs' economic contribution provides sustainable competitive advantage for all countries, especially the developing world. Hence, research in the area of SMEs has been broadly conducted, globally, with the endeavour of enhancing the survival and success of SMEs (Vegholm, 2011:325). Rodríguez-Gutiérrez *et al.* (2015:194) point out that research into SMEs has increased in the previous decade emanating from the significant contribution of this business sector towards the ultimate performance of the economy. Wang (2016:1) argues that the original assertion that large firms are the major contributors to the economy is being challenged as the role of SMEs cannot be underestimated in the contemporary business environments.

SMEs have become a global phenomenon and are associated with the growth of many economies. More and more governments are directing their efforts towards the SMEs sector. Accordingly, Rodríguez-Gutiérrez, *et al.*, (2015:195) argue that emerging business trends that have been transpiring worldwide such as downsizing, flexible operations systems, franchising and outsourcing favour high entrepreneurial

activities globally. In this regard, Rodríguez-Gutiérrez, *et al.*, (2015:195) indicate that 90-99 percent of firms all over the world are SMEs, and with the majority of them being small or even micro firms. Consistently, making reference to one of the fastest growing economies in the world, Singh, Garg & Deshmukh (2009:55) suggests that in China 98.9 percent of all the firms are SMEs. In Europe, SMEs constitute 99.8% of European firms and 66% of overall employment as well as approximately 50% of the total value added in the European Union (Baden, Harwood & Woodward, 2009:429).

Quader *et al.* (2016:140) point out that there are approximately 18 million SMEs in Europe. More specifically, SMEs are responsible for 99% of business in the United Kingdom (UK), 99.7% of enterprises in Australia and 99.9% of business in Italy (Massa, Farneti & Scappini, 2015:63). Furthermore, Massa *et al.* (2015:63) state that 50% of the Gross Domestic Product of all the countries in Europe is produced by SMEs. In this regard, the European Union has acknowledged that the role of SMEs is shifting towards innovative, more sustainable models of production and consumption through investments in human resources, social and environmental capital (Ciasullo & Troisi, 2013:46).

SMEs on the global arena have been noted in some countries to outperform large corporations in some aspects. For example, SMEs are deemed to constantly perform better than large corporations on important measures such growth in production as well as growth in employment (Ongori & Migiro, 2010:94). As such, the contribution of SMEs in each country is an unarguable notion that needs substantiation through considering the context of sustainable development. On the other hand, researchers need to research assertions being made concerning the impact of business to the environment as it has been observed that SMEs play a considerable role towards the economies in the world. The next section considers the contribution of SMEs in South Africa.

2.4 THE ROLE OF SMEs IN SUSTAINABLE DEVELOPMENT

This section attempts to review literature on the positive and negative contributions of SMEs in sustainable development.

2.4.1 Positive Contribution of SMEs towards Sustainable Development

Globally SMEs are regarded by policymakers as pivotal towards driving the success of economies enhancing of sustainable development as they are regarded as engines of growth in many economies (Urban & Naidoo, 2012:146). *Ibid* further state that the role of SMEs is substantive in South Africa as they contribute towards economic empowerment and job creation and employment within disadvantaged societies. By focusing on disadvantaged societies SMEs play a critical role in wealth distribution which is a critical element to sustainable development.

2.4.1.1 Innovation

At the centre of sustainable development is that there must be long-term economic development (Chow & Chen, 2012:521). There is an undeniable link between the level of innovativeness in an economy and the development, thereof. Hardie, Allen & Newell (2013:181) argue that innovation produces economic value in market economies, by enabling firms to utilise their resources efficiently, whilst, meeting the needs of people in ways they were seldom met before. Innovation is bringing up something new in the form of a product or service, production process or a structure or administrative system (Saunila, Pekkola & Ukko, 2014:235). According to Al-Ansari, Pervan & Xu (2013:162) SMEs are an engine for innovation and technological developments as they are often flexible to manoeuvre their inputs, products, procedures and prices in response to changes in the environment. Consistently, Wonglimpiyarat (2015:298) and many economists argue that despite the heavy concentration of research and development (R&D) expenditure in large firms, it is the small firms that account for most of the important inventions and innovations. Thus, in this case SMEs contribute towards sustainable development innovatively by creating economic growth as well as enhancing the livelihoods of people by coming up with new products.

Increasingly, technological innovation is inevitably central for any business to achieve success in the contemporary business environments (Al-Ansari *et al.*, 2013:162). For SMEs, their major contribution towards sustainable development is

by attaining survival and growth. The more SMEs an economy has, the more its growth prospects are, as has been observed with economies such as China and the United Arab Emirates (UAE). In this case, the major determinant for a firm's survival and growth is being in possession of some competitive advantage. Apulu *et al.* (2011:125) argue that innovation is a strategic tool for SMEs to attain a sustainable competitive advantage. Accordingly, Salavou and Avlonitis (2008:976) argue that SMEs are faster than larger organisations when it comes to innovation because of numerous reasons. For instance, amongst others, SMEs respond to market shifts and needs as well as acknowledge transformations quicker and swifter than large corporations.

Regardless of the nature of the competitive advantage, the ability of a firm to maintain a competitive advantage lies in the firm's capacity to innovate (Al-Ansari *et al.*, 2013:162). SMEs that prioritise innovative capabilities and produce value-added products for the new markets have increased prospects of long run survival (Clarke, Chandra and Machado, 2016:6; Saunila *et al.*, 2014:235). Al-Ansari *et al.* (2013:162) assert that in the UAE, a leading emerging market, SMEs constitute the larger proportion in both the service and manufacturing sectors. Al-Ansari *et al.* (2013:162) further state that these SMEs tend to prioritise innovativeness as their strategy for growth. While, in Europe SMEs are the primary source of wealth creation and innovation (Quaders *et al.*, 2016:140).

Primarily, the economic theme of sustainable development requires a firm to be efficient and effective (Chow & Chen, 2012:521). Herein, SMEs have a direct contribution towards sustainable development through eco-innovation also termed, sustainable innovation or socially responsible innovation. In latent literature, the term eco-innovation is continuously gaining acceptance in describing innovations in resource use, energy efficiency, waste minimisation, reuse and recycling, new material use, and eco-design (Mele & Spena, 2015:5). Klewitz, Zeyen & Hansen (2012:443) cite that eco-innovations entail improved processes, products, business practices that minimise or eliminate adverse environmental impacts. From the OECD perspective, eco-innovation includes institutional innovations that reduce negative effects to the environment, society and economy (Mele & Russo-Spena, 2015:5).

Furthermore, more and more terms that describe sustainable development such as eco-design, eco-efficiency, eco-effectiveness, recirculation and business redefinition have an element of innovativeness strongly underlying them (Chow & Chen, 2012:521).

More and more firms, SMEs included, are recognising the benefits that emanate from pursuing sustainable innovation. According to Klewitz *et al.* (2012:444) eco-innovativeness reduces costs (e.g. an energy management system), minimises risks (e.g. through enhanced safety features), enhances sales and profitability (e.g. through the use of premium organic brands), improves reputation and brand value, enhances attractiveness as an employer and builds up innovation capabilities. Whilst, Bossle, De Barcellos & Vieira (2016:1317) propound that eco-innovativeness enhances performance and competitiveness. As such, SMEs are bound to venture into eco-innovation with the aim of reaping the benefits that are embedded in the process. This will contribute towards the ultimate issue of sustainable development. As indicated by Sisaye (2012:22), sustainability has technological connotations underpinning it.

2.4.1.2 Poverty alleviation

The alleviation of poverty is at the core of the concept of sustainable development as stipulated in the Brundtland Report of 1987. Of the 17 sustainable development goals of the United Nations until 2030, ending poverty in all its forms is on top of the list (Li, Su & Liu, 2016:443). In the African context, sustainable development is chiefly concerned with the reduction of poverty since African poverty levels are considerably higher and continue to increase, in contrast to other continents (Okpara, 2011:157). Sustainable development stresses that the needs of the poor should receive overriding attention.

Poverty is regarded as a multidimensional concept and SMEs stand to positively contribute towards most of them. As Mamman *et al.* (2015:13) explain poverty relates to the lack or inadequacy of social, political, cultural, and economic privileges. SMEs are regarded as one of the major drivers towards poverty alleviation (Singh *et*

al., 2010:54), especially in developing nations such as South Africa (Apulu *et al.*, 2011:125). The role of small businesses emanates from realising that with adequate support and conducive setup, the poorest of the poor can transform from being dependants to active sources (Nkamnebe & Idemobi, 2011:236; Okpara, 2011:157). Toindepi (2016:348) defines poverty alleviation as a process of lifting up the poor from their condition which is accomplished through economic development, with entrepreneurship playing a pivotal role. Okpara (2011:157) opines that any serious strategy towards poverty alleviation should encapsulate the development, support and promotion of small businesses, particularly in Africa. Similarly, Akinboade & Kinfaek (2014:934) argue that in order to eradicate the high levels of poverty and hunger as prescribed in the Millennium Development Goals now termed Agenda 21, SMEs contribute to growth and industry development in poverty stricken countries.

Mensah and Benedict (2010:139) allude to the fact that lack of business skills amongst the black population in South Africa is the major cause for poverty amongst them. They further argue that the Apartheid system denied exposure to entrepreneurial skills and competences amongst blacks. As such, with adequate skills and training channelled towards small businesses, especially the survivalist types, poverty is likely to be minimised and the standards of living increased. The economic status of South Africa's SMEs is that they account for 62.2 percent of all businesses, contribute 36.1 percent to the gross domestic product (GDP) and 55.9 percent to the total private sector employment (Ladzani & Seeletse, 2012:89).

2.4.1.3 Social activities

Interestingly, SMEs contribute towards sustainable development by creating employment particularly for the neglected categories of the society. Among others, people with inadequate educational and skills levels, women in the lower spectrums of the society. According to Apulu *et al.* (2011:125) SMEs help to improve the living standards of people through bringing about extensive local capital formation and attaining great levels of productivity and capacity. Some authors have termed sustainable development, planet, people and profits. Accordingly, the activities of

SMEs towards the development of people are positively related to the quests of sustainable development.

According to Turyakira, Venter and Smith (2014:160), social activities pertain to focus on the community, sports, health and well-being, education, helping the low-income earners as well as participating in the community. These activities are regarded as interventions towards the enhancement of social and cultural causes in the societies as well as community development (Tyukira *et al.*, 2014:160). SMEs have been considered crucial to the support of community activities in the European as well as Latin American economies. Accordingly, an empirical study by Polášek (2010:140) established that societal activities such as donations in the form finance and kind, volunteering, education to the society, assistance towards the societal standards of living (i.e. sports, culture, etc.) as well as partnering with local schools, authorities and different community organisations are vital for SMEs.

Accordingly, Emery (2012:44) pinpoints that social marketing aims to access individual's valid self-interest and motivates changes. Several social marketing initiatives have sought to change values and attitudes as a means of influencing behaviours. According to Grant (2007:37), marketing can make more people willing and able to "go green" by education and getting green living out of the green lifestyle niche, as well as extending green culture and lifestyles beyond all classes and by acculturation.

Currently, there is a substantial wave in public interest and concern about the environment and a growth in ethical consumer purchasing can be observed. The green consumer is someone who voluntarily engages in consumer practices that are regarded as environment friendly. Certainly, the green consumer is often classified under such terms as ethical consumerism. As such, by getting involved in green marketing SMEs can contribute towards the society through encouraging a green culture influencing the values and attitudes of the societies.

2.4.1.4 Growth of the economy

SMEs are collectively referred to as the most forceful factor in economies that are emerging, South Africa included (Wang, 2016:1; Iederan, Curşeu, Vermeulen & Geurts, 2013:387). Small firms contribute towards the growth of economies through enhancing production, encouraging competition and innovation, employment creation, prosperity as well as distribution of wealth. Coherently, Clarke *et al.* (2016:3) argue that economic development is a product of formal and informal institutions. Subject to country contextual frameworks, as time progresses, weak institutions ought to become stronger. Thus, Singh *et al.* (2010:55) pinpoint that SME development is related to the economic development of a nation. While, Todd & Javalgi (2007:167) pinpoint that SMEs are critical as they contribute to both national and international economic growth.

Apulu *et al.* (2011:126) relate that it is universally consented that SMEs are extremely significant in both developed and developing nations as they substantially contribute towards local capital formation, living standards and achieving high productivity. Under sustainable development, one of the major concerns for firms is long-term profitability and survival. In other words, sustainability can be interpreted as a firm's ability to sustain its operations in the long run (Høgevold, *et al.*, 2015:430). Chow & Chen, (2012:521) posit that economic development refers to managing a firm as durable participant in the economy, with a positive influence on the economic status of its stakeholders and local, national and global systems. As such, as SMEs achieve sustainability this is expected to contribute towards sustainable development over the economies.

The South African economy has been motionless and recorded another below expectation growth rate of 0.5 in 2016. The major attributes to this dismal growth rate are the decreasing global demand and a myriad of local political and economic challenges. Locally, the economy is experiencing a weak labour market and rising inflation rate that are affecting consumption. On the other hand, the volatile and instable political environment is highly discouraging for investment. Furthermore, the productivity of the economy has been adversely affected by the decrease in

commodity markets, which has subsequently led to the loss of jobs in the mining sector. With the South African economy largely dependent on the mining sector, the effect of loss of jobs in the mining sector will affect other sectors (Overview of Provincial Revenue and Expenditure, 2017:11).

Individually successful small firms eventually transform to become large corporations thereby increasing their significance to the economy. In this regard, Apulu *et al.* (2011:125) argue that in line with aspirations of sustainable development, to enhance prosperity in communities, SMEs are considered as significant drivers of attaining equitable and sustainable industrial diversification. Thus, by achieving equitable and sustainable industrial divergence, SMEs serve as pivotal engines of economic growth and innovation. In the goal to achieve vibrancy, equitability and sustainability within the rural communities of the Limpopo province, the Provincial Government has earmarked the SME sector as one of the driving factors (Overview of Provincial Revenue and Expenditure, 2017:39).

2.4.1.5 Employment Creation

High unemployment levels are a concern for many economies of the world, especially those in the developing world, South Africa included. According to Statistics South Africa (2016), the official South African unemployment rate was estimated at 26.7% in the second quarter of the year 2016. This rate is projected to go beyond 40% if the citizens who have given up on finding employment are included. As unemployment is a concern from the sustainable development perspective, SMEs' development has been esteemed as a solution (Maduku *et al.*, 2016:712). Coherently, Abor and Quartey (2010:218) assert that SMEs are esteemed as efficient and magnificent job creators. Accordingly, the SME sector in developed industrial economies has been seen to be the largest source of employment rather than the multinational corporations.

Wang (2016:2) argues that SMEs comprised over 60% of aggregate employment in most of the developing nations. Furthermore, SMEs constitute approximately 90% of private businesses and make a contribution above 50% of employment and of GDP

in the majority of African countries (Abor and Quartey, 2010:219; Apulu *et al.*, 2011:127). Whereas, Quader *et al.* (2016:14) state that approximately 18 million SMEs exist in Europe and they employ 66 % of the EU workforce. Musa and Chinniah (2016:259) cite that the benefits that emanate from SMEs being employment portals are numerous in line with sustainable development. For instance, when SMEs employ and train workers in a given community, multinational corporations are likely to invest in such a community. This will eventually improve the living standards of the local communities as well as infrastructural development.

Interestingly, SMEs are largely labour intensive compared to larger businesses, as such; they have lesser capital costs associated with job creation (Zindiye, 2008:59). Most SMEs are one-man enterprises, meaning that the largest employment segment for SMEs is that of self-employed proprietors. This category constitutes more than 50% of the SME workforce in many developing nation, whilst their families, who often are not paid but are active in the firms, comprise approximately another quarter. Furthermore, the remaining section of the workforce constitutes hired workers and trainees or apprentices (Abor & Quartey, 2010:218). However, even though SMEs are regarded as engines to employment creation, this transpires under strenuous conditions. For instance, the pool of employee skills that SMEs attract is very narrow (Smith & Zagelmeyer, 2010:396).

Apulu *et al.* (2011:127) propound that small businesses develop a pool of skilled or semi-skilled employees for the purposes of future industrial development. While Jain and Chen (2013), posit that SMEs do possess a multiplier effect when it comes to employment creation. Jain and Chen (2013) relate that, each SME inherently can expand its branches, and henceforth, its workforce. According to Apulu *et al.*, (2011:127) SMEs contribute significantly towards the sustainable development through job creation at relatively low capital cost. Thus, the value of SMEs when it comes to employment creation should never be underestimated. There is an undoubted correlation between the SMEs sector and unemployment in an economy, such as that of South Africa. On average, South African SMEs relatively produce directly and indirectly, more job opportunities per unit of invested capital with the amount of capital invested per employment opportunity being even less in the

service industries (Zindiye, 2008:58). Subsequently, this relationship significantly justifies the case for SMEs in the sustainable development discourse when it comes to employment creation.

2.4.2 Negative Contribution of SMEs towards Sustainable Development

In as much as SMEs contribute towards poverty alleviation, economic growth, innovation, and employment creation as noted in the above, there are still negative implications imposed by SMEs with regards to sustainable development practices. Major concerns of sustainable development with regards to SMEs pertain to their harmful activities towards the environment and the society.

2.4.2.1 Pollution

From as late as the 1960s through to the inception of the 1970s, interests over firms' responsibility in pollution and protection of environments were ignited (Stubblefield Loucks, Martens & Cho, 2010:181). It is argued that SMEs are the leading contributors towards carbon dioxide emissions, pollution and commercial wastes (Baden *et al.*, 2009:430). Raar (2015:532) relate that small businesses might not individually contribute to the same degree with their larger counterparts in terms of outflow of pollution and waste. However, the aggregate impact on the environmental outcomes is likely to be significant when considering the magnitude of the SME sector, holistically. According to Massa *et al.*, (2015:63) and Raar (2015:529), at an international level, SMEs adversely contribute approximately 60% of all carbon dioxide emissions and 70% of all pollution.

In China, research has established that 80% of SMEs are characterised by pollution problems attributing to 60% of the country's pollution (Tang & Tang, 2012:437). Raar (2015:529) argues that most SMEs are only concerned with survival, as such; they only comply with legislation requirements on pollution and seldom consider voluntarily pursuing initiatives that pertains to pollution. It is argued that SMEs contribute a larger and often polluting portion of finished materials, such as metal castings (Agan, Acar & Borodin, 2013:23). As such, in the European countries

regulations that pertain to pollution controls have been extended to include SMEs (Stubblefield Loucks *et al.*, 2010:192). Similarly, fast developing nations such as China, India and Malaysia which have as much as 99% of their industries comprised of SMEs, more attention is being directed towards SMEs' pollution levels (Agan *et al.*, 2013:23).

2.4.2.2 Environmental degradation

It has been propounded that SMEs present a more significant environmental bearing per unit than large firms. Musa and Chinniah (2016:255) even though previous research has focused on the impact of huge firms on the environment, deemed that the integrated impact of SMEs on the environment is extensive. Stubblefield Loucks *et al.* (2010:179) argue that due to inadequate financial abilities and lack of skilled labour, most SMEs were highly dispossessed to assess their harm towards the environment. Furthermore, Musa and Chinniah (2016:255) pinpoint that many SMEs worldwide do not have adequate knowledge on environmental management and seldom understand the concept of environmental management. Consequently, the possibilities of SMEs being involved in activities that are environmentally friendly are very low.

Sentiments in literature suggest clearly that the approaches of SMEs towards environmentalism substantially differ from those of large firms. For instance, evidence in latent literature suggests that the subsequent negative and collective impact of SMEs towards environmental degradation may outweigh that of large corporations (Musa & Chinniah, 2016:255). On the other hand, Ghazilla, Sakundarini, Abdul-Rashid, Ayub, Olugu and Musa (2015:658) indicate that many SMEs do not regard their activities as of significant environmental impact when compared with those of large corporations. Thus, Revel (2007:117) opines that for that reason many SMEs do not consider lack of environmental management as a costly practice. Consequently, as posited in the above, the aggregation of SMEs' impact coupled with their no-effect mentality towards environmentalism points towards a devastating environmental impact by SMEs, individually and collectively.

Zindiye (2008:58) argues that SMEs result in social stability because they result in less damage towards the physical environment when compared to large enterprises. There are still higher prospects of SMEs being either environmentally irresponsible or increasing their environmental damage under the pretext of 'it is of no materiality'. Furthermore, due to lack of capacity in terms of skills, awareness, knowledge and financial capacity, SMEs are bound to be constrained in dealing with the environment when compared to large corporations.

2.4.2.3 Wastage and wastefulness

Waste management is a strategy that often stands alone in most organisations after management's deliberate decisions. The problem of waste includes wastage and wastefulness and is deemed a universal problem. While wastage refers to the absence of proper management of the by-products of the business's operations process, wastefulness occurs as a result of inefficiency (Fakoya, 2013:249). Furthermore, Fakoya, (2013:249) claims that waste is produced during the entire production and distribution process as well as during the consumption stage. Whereas, wastefulness transpires when both private and public industries as well as households, utilise more than enough in terms of energy and other resources.

Oftentimes, large firms have the capacity to carry on the additional requirements such as fixed costs incurred in the acquisition of needed facilities and equipment. For instance, for a firm to establish effective systems on recycling and redesigning of products, waste management, projects or processes to minimise pollution extra resources are needed especially financial and human skills (Raar 2015:532). While large firms are better positioned SMEs are often heavily constrained to attempt such programmes. According to Shi, Peng, Liu & Zhong (2008:842) the majority of SMEs face challenges such as outdated equipment and technology, employees with insufficient skills and training as well as inadequate financial resources. These challenges negatively affect the ability of SMEs to participate in sustainable development.

In such instances, their operations are bound to cause substantial negative environment damage. Zeng, Meng, Zeng, Tam, Tam and Jin (2011:1423) argue that at times extremely adverse damage has been done to the natural environment by SMEs. Zeng *et al.* (2011:1423) further argue that due to operations which are constrained by various exogenous and endogenous factors, excessive emissions of waste water, gas and solid wastes have been discharged by SMEs. However, Theyel and Hoffman (2012:1111) posit that waste reduction is a possible informal practice by SMEs which needs further investigations.

In South Africa, given the pending energy problems, local SMEs need to prioritise conservation of electricity. Consequently, a reduction in electricity production (thermal power through coal combustion) should enhance South Africa's per capita carbon dioxide (CO₂) emissions ratio. The CO₂ emission ratio for South Africa is regarded to be approximately 7.4 metric tonnes per year, which is relatively very high when contrasted with the global average of nearly 4 metric tonnes in a year (Viviers, 2014:35).

2.4.3 Contribution of SMEs towards Sustainability of South Africa

Attention towards SMEs' general contribution towards the economies of the world has been growing in literature. Considering the position that SMEs occupy in the global as well as the South African sphere, their role towards sustainable development cannot be underrated. Small Medium Enterprises (SMEs) have been a prime research subject for some time in South Africa commanding interest from both the private and public sectors due to their strategic role in driving economic growth and wealth creation primarily in historically disadvantaged populations (Du Toit, Erasmus and Strydom, 2010:44). SMEs are regarded as the backbone of most African countries (Asamoah, 2014:117). However, the dilemma of absence of a single universally accepted definition of what constitutes an SME is still prevalent in Africa.

The Bantu education system during the Apartheid policy has created the black population who are more dependant rather than independent economically. The system equipped the black population with skills that made more of employees than business owners. As of late, the South African economy is battling with a high unemployment rate which is as a result of a deficiency of skilled labour (SEDA, 2015:5). Apparently, there is a positive relationship that has been observed between education levels and the entrepreneurial acumen (Mensah & Bennedict, 2010:139). As the education levels are increasing, it is expected that entrepreneurial levels will increase in South Africa, subsequently benefiting the economy of South Africa.

In the year 2014, the government of South Africa escalated their role in small business endeavours through the formulation of a dedicated department solely for the purpose. The Department of Small Business Development, currently being headed by Minister Lindiwe Zulu, has been entrusted with the responsibility of SMEs (Groepe, 2015:5). The sole mandate of this ministry is to enhance the promotion and advancement of small businesses in South Africa (SEDA, 2015). Groepe (2015:5), further indicates that SMEs are expected to employ not less than (90%) of the South African workforce by 2030. This reiterates the importance of the SME sector within the South African economy.

South African SMEs have been observed as contributors of innovations to the economy. This emanates from the fact that they are nimble, lean and hungry for excellence (Groepe, 2015:6). Also, SMEs are seen as contributors towards poverty alleviation, social activities, growth of the economy as well as employment creation. All these aspects are major facets of sustainable development. In developing countries like South Africa, with a scarcity of capital and increasing labour excesses, the following contributions of SMEs are identified (Zindiye, 2008:59):

- SMEs are instrumental in the utilisation of talents, energy and entrepreneurship of people who can seldom attain their complete potential in large corporations;
- Smaller enterprises often succeed through providing services to a small or constrained markets which are unattractive and unprofitable to larger firms;

- SMEs act as breeding platforms for entrepreneurial capacity and a fail proof terrains for industries that are new;
- SMEs result in social stability because they result in less damage towards the physical environment when compared to large enterprises;
- SMEs contribute towards the economic competitiveness of their respective nations; and
- SMEs inspire prosperity in rural dwellings and improve the population's wide-ranging levels of economic involvement.

2.5 SUSTAINABILITY CHALLENGES FACED BY SMEs

Extant literature has primarily focused on large corporations as far as sustainable development is concerned. However, SMEs possess certain specificities and typical characteristics in terms of capabilities and resources. This makes the application and utilisation of large corporations' strategies challenging if not impossible. According to Seda (2015:7), the challenges for SMEs in South Africa, tend to vary with location, thus, it is crucial to note that all domestic SMEs seldom face similar challenges. Herein, this discussion endeavours to review some of the challenges that SMEs face in their quest to become competent in the context of sustainable development.

2.5.1 Globalisation and Competition

Globalisation is the creation of somewhat a mega-economy through a process that involves the transformation of the economies over the earth into one economic environment. The world is poised to be a seamless community and culture due to globalisation and technology (Subrahmanya, 2007:762). According to Zain and Kassim (2012:148), globalisation is a global economic amalgamation underpinned by three pressures, namely, the freeing of international trade and capital movements, advancement in technology and dawn of the information society, and the deregulation and departure from specific sectors of the economy.

In the past, small businesses enjoyed geographical protection from the government as well as market segmentation which separated small firms in their own markets

(Sharma, 2011:186). However, due to factors like technological advancement in communication and transportation modes, the phenomenon of globalisation has been witnessed to be on an increasing scale. Foreign direct investment (FDI), international trade, global migration in both people and jobs are also noted as contributors to an exacerbated and resounding globalisation level occurring contemporarily (Deo, 2013:5). Nowadays, many factors impose pressure upon SMEs due to globalisation and competition.

For instance, globalisation and competition increase the number of competitors that the SMEs must deal with. According to Subrahmanya (2007:762) and Sharma (2011:186), globalisation has heightened the extent of competition more than ever before as governments are increasingly doing away with the traditional barriers on their borders that protected local industries. Notably, the number of products, services, ideas, technology and capital is increasing the options that customers have. Consequently, globalisation is also resulting in increased customer sophistication, whilst technological complications are increasing the sophistication of customers that SMEs have to eventually deal with (Wang & Shi, 2011:201).

Sing *et al.* (2009:55) remark that global competition primarily affects those SMEs that tend to be solely domestic and with most of their markets and sales being predominantly local. According to the Deputy Governor of the South African Reserve Bank, Francois Groepe, SMEs in South face extreme levels of competition owing to the fact that they seldom occupy a monopoly position in their markets (Groepe, 2015:5). Small businesses often function in circumstances where they are faced with inadequate resources, a flat organisation, insufficient technical skills, poor innovation and lack of intellectual capital (Sing, *et al.*, 2009:55; Sing, Garg & Deshmukh, 2008:528). Furthermore, (Groepe, 2015:5) states that for SMEs to survive they need to be versatile as they lack the needed economies of scale, huge investments, ability to withstand the gestation period to success.

2.5.2 Financial Constraints

The financial dynamics of SMEs such as access to finance, knowledge of finances, use of finances, capital structures etc. are well-researched topics in latent literature. Research has shown that access to finance has long been discovered as a major issue as far as SMEs are concerned (Bilal & Mqbal, 2015:123; Wonglimpiyarat, 2015:299; Wang, 2016:3). Apart from their personal savings, small firms depend on informal sources of raising finances, such as relatives and friends. Often this kind of financing is inadequate for SMEs to finance their business ventures (Wang, 2016:3). As a result, they end-up resorting to borrowing from banks and other financial institutions. Thus, the majority of SMEs predominantly depend on banks for their normal day-to-day banking activities, start-up financing as well as finance to grow their scale of operations (Vegholm, 2011:325).

Banks are unarguably essential to the economic well-being of any nation and are even more strategic with regards to the SME sector development, as such, the bank-SME relationship is undeniably strategic in nature. Wang, (2016:3) pinpoints that access to finance is a challenge for small firms in most designed capital markets, especially where credit is granted based on historical credit record. According to Wonglimpiyarat (2015:298), borrowing from financial institutions is also challenging for SMEs. However, credit has been identified as a major bottleneck for SMEs. A study by the World Bank, established that approximately 90% of SMEs worldwide pinpointed that credit was the major constraint to new investments (Abor & Quartey, 2010:226). Empirical evidence from a study by Chavis, Klapper & Love (2010) indicate that bank finance gradually increased as the age of the business increased. Which means it is imperatively hard for newly established SMEs to obtain funding from banks.

The phenomenon of lack of funding on the part of SMEs is undeniably of a global prevalence nature with South African SMEs not being an exception. According to SEDA (2015:6), South African banks as well as financial lenders have a tendency of being averse and conservative when dealing with SMEs. As a result, they are reluctant to commit financial resources towards SMEs during their inception stages.

Rather, they opt to lend towards SMEs in their advanced phases of development when they have managed to go through the beginning and risky stages. According to GEM (2014), access to finance is a major hindrance for SMEs in South Africa. However, Finmark Trust (2010) through the Finscope's Small Business Survey highlighted that this phenomenon is not the same across regions. Gauteng and North-West provinces were observed to have minimum financial barriers for SMEs when compared to other provinces.

The financial challenges of SMEs are directly related to the economic dimension in the triple-bottom line. As required, for a firm to be sustainable economically it must be profitable, produce new products, and competitive (Wilson, 2015:436). Faced with inadequate financing, no business is able to obtain and maintain equipment and facilities, recruit and retain competent employees, produce and market products, or perform any activities necessary to run a successful operation (Bilal & Mqbal, 2015:123). According to Abe, Troilo and Batsaikhan (2015:2), the potential for SMEs to attain development, growth, sustainability and enhance themselves is significantly subject to their aptitude to access and manage finance. Abe *et al.* (2015:8) state that empirically it is purported that lack of access to finances can reduce the profit margins by as much as 13.6 %. As such, finance is a major issue in the ability of SMEs to make significant contribution towards sustainable development.

Furthermore, the lack of finances and proper financial management skills has huge implications over the potential for SMEs to pursue sustainable development. Many of sustainable development programmes require adequate financial budgets because they are costly and were designed with large firms who possess plentiful resources (Stubblefield Loucks *et al.*, 2010:179). However, even with little finances the practice of sustainable development is still plausible within the context of SMEs. As established in literature, cost savings is one of the benefits that a firm is likely to benefit when it pursues sustainable development. Also, numerous sustainability practices require less capital but innovativeness and an attitude towards serving the society, environment and long-term profitability. For instance, minimising pollution, waste disposals and environmental degradation require more of a responsibility than financial commitments. On the other hand, Okpara (2011:158) argues that research

has established that additional capitalisation of SMEs is often not an obstacle for SMEs to conduct successful business activities. The inadequate capital can be mitigated by creativity and innovation.

2.5.3 Technological and Infrastructural Constraints

Infrastructure and technology are essential factors for any business, small and large alike. According to SEDA (2016:7), the unavailability of access to physical infrastructure is a substantial obstacle towards business success and results in further business costs. As such, infrastructure is undoubtedly a paramount antecedent towards SME development (GEM, 2014). In this case, communication infrastructure, facilities and transportation, land and location that are easily accessible at economical prices are needful for small business success. Maduku *et al.* (2016:711) argue that some degree of technology investment is a requirement for SMEs to maintain profitability and competitiveness.

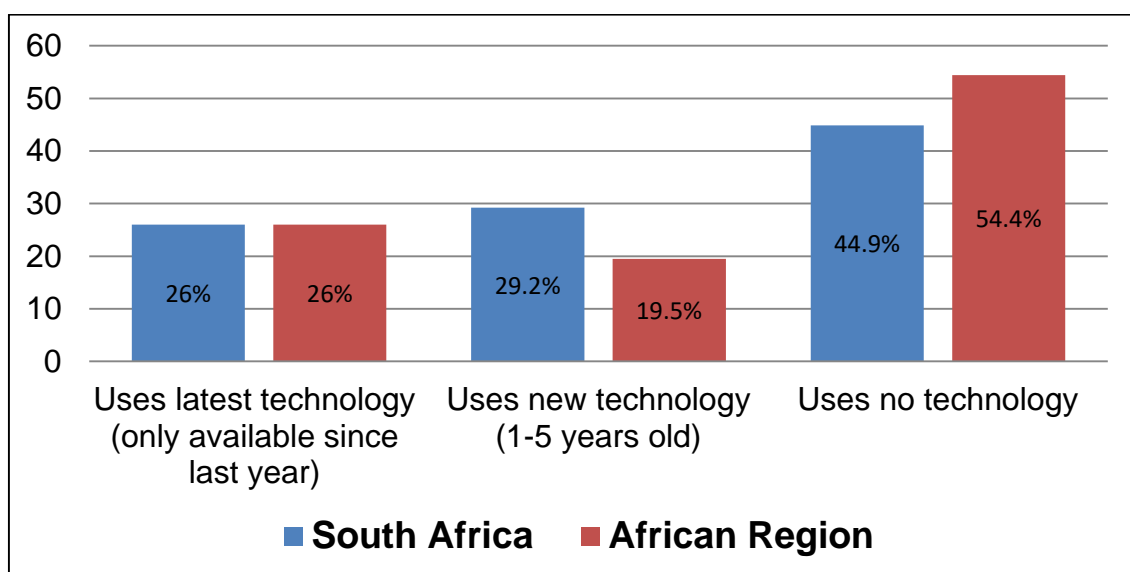
Many SMEs are hindered to be effective in sustainable development matters due to insufficient or totally unavailability of innovations. With regards to innovating, SMEs are often reluctant to shake off traditional methods of operations (Musa & Chinniah, 2016:259). Shi *et al.* (2008:842) posit that most of the technologies and equipment utilised by SMEs are obsolete, making them ineffective and inefficient in dealing with sustainable development issues. Technological capability is closely related to sustainability. For instance, Zeng *et al.* (2011:1427) mention clean production technologies, product redesign, re-engineering of production processes and enhancement of resource utilisation as environmental management strategies. In pursuit of sustainable development competence, firms have to pursue strategic innovations. In this regard, there are substantive debates on the prowess of SMEs when it comes to surpassing large corporations in matters of technological innovations (Salavou & Avlonitis, 2008:976).

In the South African context, the government has endeavoured to create a technologically enabling environment. Following the realisation of how potentially technology inhibits the business prospects for SMEs, the department of Science and

Technology put in place the Technology and Innovation Agency (TIA). According to SEDA (2016:6), TIA was promulgated to facilitate and reinforce technological innovation while simultaneously enhancing the global competitiveness of South African small businesses. Furthermore, SEDA (2016:8) indicates that establishing research and development capacities is crucial for SMEs as it helps in developing ideas into tangible businesses.

Research and development is essential for small businesses because it enables SMEs to obtain innovative products through a process of discovering. SEDA (2016:8) indicates that small businesses that are innovating have a huge potential to experience fast growth in contrast to traditional start-up firms. GEM (2016/2017:36) indicates that at just over half (55%) utilising new innovations, South African SMEs are relatively underscoring in innovation when compared to those in developed nations. According to Booyens (2011), innovativeness in South Africa is dampened by the inability of SMEs to establish robust upward connections with larger businesses. As such, this shortfall deprives small businesses the prospects to experience technology dissemination into their organisations. The diagram below (Fig 2.1) illustrates the innovation levels of SMEs in South Africa according to the GEM 2016/2017 report. Herein, the figure indicates that more than 40% of South African SMEs do not utilise technology.

Figure 2.1 Use of modern technology by TEA businesses in 2016



Source: GEM (2016/2017:37)

In this regards, the GEM report (2014) purports that there is a serious need for the government of South Africa to proliferate research and development incentives. According to SEDA (2016:8) such incentives have a huge potential to enhance innovations as well as attracting and strengthening networks between local and international knowledge based businesses. Whereas, in terms of infrastructure, research has established that South African SMEs are faced with challenges to obtain suitable physical space to locate their operations, especially in Gauteng province. Furthermore, other SMEs in South Africa were challenged by electricity delivery interruptions (Finmark Trust, 2010). Thus, infrastructure and technology is a major problem that hinders SMEs in sustainable development.

2.5.4 Inadequate Skills and Education

SMEs require certain capabilities for them to be able to take upon sustainability practices. Regardless of the presence of willingness amongst SMEs to play an active role in sustainable development, inadequate skills act as a limitation and impediment (Oxborrow & Brendley, 2013:361). Accordingly, Stubblefield Loucks *et al.* (2010:179) argue that the deficiency of employee resources constrains the adoption of sustainable development practices by SMEs. Apulu *et al.* (2011:129) cite that the skill shortages prevalent in SMEs are not only limited to technical abilities, but they also include managerial skills. Mostly, SME owner/managers are good technicians but not good managers. As such, they possess insufficient expertise and confidence of being involved in issues that are not core to their businesses, such as sustainable development practices (Musa & Chinnia, 2016:260).

With regards to sustainable development, Wilson (2015:436) posits that a firm that prioritises the learning of all its members and unceasingly changes itself is sustainable. However, most SMEs do not have adequate skilled labour to be able to perform effectively in line with the changes needed for sustainable development. Moreover, most of SMEs place inadequate value towards the development and upgrade of the skills and knowledge of their employees, or are hesitant to seize opportunities for training programmes offered by government (Musa & Chinniah, 2016:259; Panagiotakopoulos, 2011:11). SMEs' lack of skilled workforce is primarily

due to labour market imperfections which result in outflow of labour from SMEs towards large corporations. As such, Panagiotakopoulos (2011:12) argues that SME owner/managers are reluctant of investing in employee training because of fear of high possibilities of employees being poached by large corporations.

According to a study by Musa and Chinniah (2016:259), approximately 29% of SMEs in Malaysia stated that a skilled labour force was a deterrent to their sustainable development endeavours. Panagiotakopoulos, (2011:12) propounds that the lack of a skilled labour force has broader implications for small business development because of the detrimental effects of skill shortages on competitiveness. A skilled workforce is a critical source of competitive advantage for firms in the contemporary environment. However, Klewitz *et al.*, (2012:443) posit that managerial and organisational structural factors such as inadequate or no employees committed to sustainable development as well as an ad hoc approach characterise SMEs human resources' base. Empirically, Kamunge, Njeru & Tirimba (2014:16) established that there was a positive relationship between SMEs performance and their human resources factor. Subsequently, it is indubitable that the more positive the human resource factor SMEs have, the more their contribution towards sustainable development.

In South Africa, the Department of Trade and Industry (DTI) (2008) posits that there is a significant relationship between the lack of skills and low levels of entrepreneurship capacity. Subsequently, the DTI indicates that in South Africa, the lack of growth in employment is as a result of a skills shortage which manifests in low potential of entrepreneurship in the country. Similarly, the National Development Plan (NDP) indicates that the SME sector is adversely stalled by skills shortage in South Africa. According to SEDA (2015:9) this shortage of skills is mostly transpiring in the business skills such as accounting and sales services. Of essence, most SMEs in South Africa are comparatively found in the trade and accommodation areas, and these sectors are highly sales-oriented which requires the sales skills.

2.6 SUSTAINABLE DEVELOPMENT BUSINESS DRIVERS FOR SMEs

In the increasingly complex contemporary environments, business at larger, are finding it challenging to realise success. Numerous business forces that challenged businesses in the past are being modified and some of them are getting more prominence. Sustainable development is one of the factors that recently businesses from all spectrums have to deal with. As observed, transitions in many macro-environmental factors posit either opportunities or threats towards businesses. The outgoing discussion focused on the role of SMEs in sustainable development. This section focuses on the importance of sustainable development in SMEs. Plenty of literature shows that there are advantages for SMEs to adopt and utilise sustainable business practices (Stubblefield Loucks *et al.*, 2010:179).

2.6.1 Stakeholders Patronage

Stakeholders have a significant impact on the performance of businesses since firms depend on their stakeholders for resources to sustain their operations, as well as, their ultimate growth and survival. The reputation of SMEs is critical to the various stakeholders. Decisions and actions made by SMEs are critically evaluated by stakeholder groups such as, customers/clients, employees, lenders, suppliers, contractors and regulatory bodies (Raar, 2015:529). According to Stubblefield Loucks *et al.* (2010:179), in contrast to large businesses that pre-emptively engage in sustainable development strategies, small businesses rather tend to react to external stakeholders' strong pressures. However, proactive sustainability potentially influences corporate reputation and image in a positive way, as well as, enhancing the relations with stakeholders such as, customers, investors, community members and other stakeholders (Ciasullo & Troisi, 2013:46).

As far as employees are concerned, they are the vital stakeholders. In today's world, some employees esteem the disposition and principles that their employing organisations have towards sustainable development issues, such as pollution (Raar, 2015:531). Research clearly expounds and supports assertions on the significance of ethics and values as far as attracting quality employees. Notably,

firms, whether small or large, that have excellent CSR or sustainable development practices, are highly placed to attract and retain high quality workers (Stubblefield Loucks *et al.*, 2010:182; Ciasullo & Troisi, 2013:46).

Lending authorities can also place regulatory requirements that measure the compliance of a firm in sustainability matters as a condition for mortgage holders. In some cases, certain financial institutions have stringent measures in financing projects that have adverse consequences towards sustainable development issues (Raar, 2015:531). Stubblefield Loucks *et al.* (2010:182) concur that by prioritising sustainable development a firm increases its potential to attract investors who regard social and environmental issues as essential.

Government is also a strategic stakeholder that SMEs should critically consider in terms of sustainable development. For instance, engaging in sustainable development as well as socially oriented behaviours helps to forge and strengthen relationships with governments, particularly with regards to public policy and regulations (Stubblefield Loucks *et al.*, 2010:182). However, research in the UK; have revealed that government regulations, benchmarking and pressure group interests seldom strongly impact SMEs behaviour in sustainability (Santos, 2011:492). Whereas, in the Netherlands research has also found almost a similar position amongst SMEs as they argued they would be less responsive to government demands than the publics' with regards to sustainable development (Santos, 2011:492). Seemingly, the role that government plays in influencing sustainable development is contextual or varies according to the country. According to Santos (2011:492), research has also shown that ethics are not a driver for sustainability but rather government is more compelling for SMEs.

On the other hand, customers' sustainable development influence towards the firm is through the market. Customers may shun or avoid purchasing products that are offered by firms whom they consider to be unfriendly with regards to sustainable development (Raar, 2015:531). As the major and direct victims of environmental contaminations, consumers anticipate firms to be socially responsible, operate in an

environmentally friendly mode, rather than just comply with legal requirements (Tang & Tang, 2012:440). Firms linked to unethical business practices or operations, which damage the environment, are being increasingly boycotted by consumers (Raar, 2015:531).

This has led to an expansion of consumers' wants and needs, with which firms and marketers have to deal with. At the same time, marketers are confronted with unsustainable consumer behaviour and have to lead consumers towards more sustainable consumption (Raar, 2015:531). Firms are coming under increased scrutiny regarding the environmental performance of their products. Not only must the products meet user needs for quality and cost, they must also address the environmental concerns of society at large. Besides environmental impacts, consumers also express their concerns about the social impacts of products they purchase and more than ever demand 'green' products (Agan *et al.*, 2013:25).

2.6.2 Business Practices

SMEs that do engage in sustainable development have the tenacity to be preemptive in adopting innovative practices (Stubblefield Loucks *et al.*, 2010:179). Increasingly, firms are appreciating that to have business strategies that are successful they should encapsulate social and environmental issues. Environmentally sustainable products potentially enhance the ability of firms to distinguish their product offerings from that of counterparts (Cox, 2007:16). Environmental responsibility can support a positive corporate image and provide points of differentiation for SMEs. Production, distribution and marketing activities centred on environmental principles create superior adeptness and increase profits and lessen product life cycle costs. Efficiency, profit growth and cost savings can emanate from improved waste management through strategies such as recycling, re-use of waste material or sale of waste material in its original form or in a modified form (Menon and Menon, 2007:12).

In North America research has found that 45 percent of SME owners/managers opined that their customers did not have a problem with paying more for eco-friendly products and services (Viviers, 2009:33). The benefits of sustainable business practices extend to enhancing the health and safety of workers during manufacturing of products. Also, consumers tend to enjoy products that do not pose health threats during the use of a sustainable product (Bocken, Short, Rana & Evans, 2014:43). Customers tend to enjoy their lives in their communities without any form of air and sound pollution and other externalities. As such, the preservation of the environment, especially for younger generations as well as the wellbeing of consumers who are spending a lot on sustainable products have been enshrined in the practices of businesses more and more (Viviers, 2009:33; Galpin, Whittington & Bell, 2015:7).

Furthermore, the growth of networks and supplier alliances is influencing SMEs to be active in the realm of sustainable development. The pressure that SMEs receive from their trade partners and large corporations, which require certain levels of sustainability competency for one to do business with them is a driver for SMEs (Santos, 2011:492). However, when compared to other organisations, SMEs find their position being insignificant to influence the sustainability behaviours of their large corporations. As such, the role of large corporations towards small firms may also act as a deterrent towards sustainable development practices.

2.6.3 Risk Reduction

The management of risk is essential for the success of any business organisation (Stubblefield Loucks *et al.*, 2010:192). In the context of sustainable development, risk emanates from the possibility of endangering the firm's reputation. As such, one of the critical motivations in the contemporary business world for firms to enter into the sustainability discourse is the desire to minimise this reputation risk. On top of reputation risk, sustainable development posits other forms of non-financial risks which firms need to continuously monitor. According to Wong (2014:578) sustainable development presents firms with the need to manage environmental and social risk which emanate from neglecting environmental and social aspects of sustainability. On the other hand, Wong (2014:578) equates the financial risk with the aspect of

economical sustainability whilst social and environmental sustainability are encapsulated in the non-financial risk, in the form of social and environmental risks.

Following the increasing precedence of environmental and social concerns across the globe, Stubblefield Loucks *et al.* (2010:192) argue that failure to appreciate such matters as primary business concerns could subject SMEs to business-threatening risks. Conspicuously, SMEs that adopt a pre-emptive approach to sustainable development initiatives will minimise the risk that comes with non-compliance with legal requirements (Raar, 2015:532). As such, one of the drivers of firms towards adopting sustainable development practices is the desire to manage risk. According to Wong (2014:581) sustainable development potentially assists SMEs to increase staff productivity and their reputation, as well as reduces overall operational risks and related costs. Furthermore, SMEs stand to attract investors as well as improve their market share through sustainable ways of competitive advantage as well as brand and product differentiation.

2.6.4 Owners and Employees

The drivers and barriers of sustainable practices are somewhat different between SMEs and large corporations (Ghazilla *et al.*, 2015:658). Owner managers have been found to be the major determinant towards the extent to which each particular SME will pursue sustainable development (Theyel & Hofmann, 2012:1112). Herein, the intentions of SME owners play a significant role as well as their orientation towards ethics (Ghazilla *et al.*, 2015:658). Stubblefield Loucks *et al.* (2010:183) cite that SMEs are usually owner managed and rather than being accountable to many stakeholders, they have one or very few shareholders. Leadership that is robust and committed from top management is critical for the success of any sustainability management system (Viviers, 2009:33). More specifically, Curkovic and Sroufe (2016:324) posit that proactive leadership results in the reduction of pollution and carbon dioxide emissions, thus enhancing efficient resource utilisation and reducing waste, i.e., bottom line effects.

On the other hand, employees play a critical role towards the sustainability of small businesses. Sustainable development adoption has the potential for SMEs to experience a positive consequence on staff morale. Employees are mostly the ones who initiate better environmental practices and firms that take into consideration employees' appeals for sustainable business practices will improve staff morale and productivity. In other words, employees are likely to experience a renewed feeling of value in their work and perceive their positive contribution towards valuable roles when the businesses adopt an environmental approach (Viviers, 2009:33). Enhanced health and safety working conditions have deemed to result in a more fruitful workforce as well as new employee prospects to involve the workforce (Curkovic & Sroufe, 2016:324).

2.7 SUMMARY OF THE CHAPTER

The chapter provided a discussion on the background information pertaining to the concept of SMEs. Understanding of what constitutes SMEs and to what extent they are significant as a subject for research was provided in the discussion. Furthermore, the discussion provided a comprehensive explanation of how the subject of sustainability is related to the features of SMEs. In this regard, the discussion focused on the contribution of SMEs towards sustainability as well as the challenges that underpin the SME context when it comes to sustainable development practices. Lastly, the chapter provided a discussion of the drivers for sustainable development practices for SMEs. The following chapter (Chapter Three) provides theoretical literature whereby the three parental concepts, namely, isomorphism, sustainable development and firm performance are discussed in detail.

CHAPTER 3: LITERATURE REVIEW ON ISOMORPHISM, SUSTAINABLE DEVELOPMENT AND FIRM PERFORMANCE

3.1 INTRODUCTION

This chapter is a literature review chapter which focuses on providing a theoretical literature review. The study at hand focuses on three thematic literature concepts, namely, isomorphism, sustainable development and firm performance. Accordingly, chapter three is structured as per these three concepts. The first section of the chapter provides a critical review of the concept of isomorphism. This is followed by literature review on sustainable development practices providing a thorough analysis of literature pertaining to this concept. The third part of the chapter presents the review of literature on firm performance. Section 3.2 below provides literature on the theory of isomorphism.

3.2 THEORETICAL LITERATURE REVIEW

The theoretical framework for this study is built upon the theory of institutional organisational isomorphism and the organisational ecology theory. These two theories have attempted to explain the concept of isomorphism. According to Tuttle and Dillard (2007:390), that isomorphism is an evolutionary process that organisational fields inherently follow from diversity to homogeneity. It is also regarded as the behaviour of organisations as impacted by external factors (Turunen & Finne, 2014:603; Di Maggio & Powell, 1983:149). As such, these theories are used in this study to explain the adoption of sustainable development practices by SMEs in the Limpopo province.

As mentioned earlier in chapter one, literature identifies two major forms of isomorphism, namely, competitive and institutional. The two theories underpinning the literature framework in this study, namely organisational ecology theory and theory of institutional isomorphism prevalently explain competitive and institutional isomorphism, respectively. These theories are discussed in the following sections. This is followed by a discussion on isomorphism as a construct in this study, which is provided in an endeavour to elucidate the concept of isomorphism.

3.2.1 Organisational Ecology Theory

Hannan and Freeman (1977) state that the organisational ecology theory provides the theoretical lens of the concept of competitive isomorphism in this treatise. The theory states that isomorphism is the sum of competitive pressures that compel organisations to display virtually identical features due to environmental pressures. According to Turunen and Finne, (2014:605), the organisational ecology theory is one of the broad theories that regards organisations as mutual elements transformed by exogenous environmental factors over time.

The theory is inspired by such sciences as biology, sociology and economics as it endeavours to explain circumstances determining the evolution of organisations and their relative organisational populations (Turunen & Finne, 2014:605). The ecological notion is also utilised in botany and zoology to explain how organisms adapt to their environments (Bartram, 2011:670; Sisaye, 2011:380; Sisaye, 2012:380). The theory is a fusion of ecological and evolutionary models of transformations in populations of organisations that reveal forces embedding the transformation of organisational structures over a long-time period (Hannan & Freeman, 1977; Bartram, 2011:670; Sisaye, 2011:381).

The organisational ecology theory holds that organisations tend not to have constant and preferred ways or simple structures, with regards to changing conditions (Hannan and Freeman, 1977). Davis and Barnes (2010:19) utilised the term “business ecosystems” to justify the inevitability of transformations in the industry. In this case, business ecosystems refer to the communalism of firms as they interact interdependently with each other. Within these systems firms learn strategies to fight external threats and often eventually adopt strategies that are tried and tested. Davis and Barnes (2010:19) cite that transitions in structures of a community are caused by external shocks.

According Todd *et al.* (2014:296), organisational ecologists’ interest lies in the interrelationships amongst firms in an organisational ecosystem. Todd *et al.* (2014:296) stipulate that the interest of organisational ecologists is particularly on

how organisational ecosystems respond to exogenous factors such as competition. In an industry, over time, organisations' resemblance to each other and their environment transpires when firms select non-ideal structures outside the population. Also, decision-makers learn suitable responses and organise their behaviour in line with these responses. Subsequently, competitive isomorphism becomes a result when efficiency is attained through homogeneous competitive forces.

Organisational ecology considers the impact of social, economic, and political factors on the different organisational forms that organisations can follow (Sisaye, 2102:19). Thus, ecology of organisations regards firms as significantly dependent upon their environment. The environment stipulates the nature of organisations that fit particular circumstances thereby shaping business contexts (Turunen & Finne, 2014:605; Todd *et al.*, 2014:296). In this case, the phenomenon of sustainable development is a recent shock to the whole business arena and its prevalence spreads across all business sectors regardless of the context (Salimath & Jones, 2011:874; Sisaye, 2011:380; Sisaye, 2012:19).

In this study, the theory of organisational ecology by Hannan & Freeman (1977) is used as a basis for understanding the concept of competitive isomorphism. There is a convergence between the theory of organisational ecology and the concept of sustainable development. As stated above, the theory of organisational ecology has its theoretical and methodological premises in the field of biology (Bartram, 2011:670; Sisaye, 2011:380; Sisaye, 2012:380; Turunen & Finne, 2014:605). Interestingly, according to Sisaye (2012:19), sustainable development also has its genesis in one of the subfields of biology, namely, evolutionary biology. The ecological philosophy is moulded on the popular Darwinian theory of evolution and natural selection. The ecological approach as informed by the Darwinian Theory expounds on societal growth and development through environmental determinism and competition, as well as, sustainability.

As such, this study seeks to examine whether there is a relationship between sustainable development dimensions (economic, social and environmental) and competitive isomorphism. As observed, organisational ecology focuses on the wider

environment which includes community, nation, ecosystem and the planet. It also discourses about the imbalances emanating from pollution, environmental degradation, and damages to the ecosystems (Siseya, 2012:20). As further stated, by Siseya (2012:20) sustainability is a crucial concept of study in ecological approaches. From a normative perspective, Siseya (2012:20) further states that organisational ecology assumes collaboration, competition, conflict and interdependence in dealing with sustainable development. However, the theory of organisational ecology is not without its criticism.

Opponents of the organisational ecology theory criticise the relevance and essence of utilising a biological analogy towards the explanation of a social phenomenon (Shehada, 2010:22). Criticism of the theory is that there are no sufficient biological dimensions, definitions, propositions and measurements included in the theory. Also, the theory lacks focus on individual firm's rationalisation as according to Hannan & Freeman (1989), organisations seldom consider the success or failure of a tactic or strategy. Hannan & Freeman (1989) argues that when it comes to strategies focused on dealing with environmental challenges organisations depend on strategies utilised by similar organisations in the environment. However, in this research in order to understand and investigate how isomorphism as determined by competition transpires within the SMEs and sustainable development context in South Africa, the backdrop of the organisational ecology theory is essential.

3.2.2 Institutional Organisational Theory

In this study, the Institutional Organisational theory guides theoretical review as well as empirical enquiry into institutional isomorphism. The prominence of institutional theory or neoinstitutional theory as a lens of analysing organisational life occurred in the late 1970s and the early 1980s (Shehada, 2010:29). The institutional organisational theory is popularised as postulated by DiMaggio and Powell in 1983. The theory of institutional isomorphism has been widely utilised in research to understand similarities ranging from the outlook of educational textbooks to understanding the similarities in non-profit and profit making organisations (Kourtikakis, 2007:12). Simplistically, Wu, Daniel, Hinton and Quintas (2013:162)

posit that institutional theory upholds that organisations of all sorts adapt structures in line with the existence and operation of other institutions in their industry or country.

Although the theory of institutional isomorphism acknowledges the other strand of isomorphism, it does not place much focus on explaining transition in firm behaviour as determined by competitive pressures (Huang, Hu, Liu, Yu & Yu, 2016:3424). The institutional theory acknowledges that there are two types of isomorphism (or processes of homogenisation of organisational form in a certain field): competitive isomorphism and institutional isomorphism (Di Maggio & Powell, 1983:149). The theory focuses on explaining the concept of isomorphism amongst organisations from the institutional perspective due to three types of pressures, namely, coercive, normative and mimetic (Joseph & Taplin, 2012:365). From the institutional organisational theory perspective, these three kinds of isomorphic pressures constitute the mechanisms by which the demands of the environment are dictated towards organisations resulting in change happening (Kourtikakis, 2007:10). Regardless of the organisational institutional theory being postulated more than three decades ago, the forces have been adopted in many contemporary management studies on isomorphism (Wu *et al.*, 2013:162).

After observing inefficiency amongst similar public institutions, Di Maggio & Powell, (1983) postulate that homogenisation of organisations is not by efficiency but by some other factors. This contradicts the viewpoint of the organisational ecology theory which renders that similarity in organisations is by efficiency and only firms that are efficient will survive in the industry. Kourtikakis, (2007:10) argues that the theory of institutional isomorphism propels that there are processes that result in contemporary organisations being highly uniform without necessarily being efficient. The *modus operandi* of the forces observed in the institutional theory of isomorphism is that they compel organisations within a particular environment, to be similar. Wu *et al.* (2013:162) assert the term “bandwagon pressure” referring to institutional isomorphism emanating from the pressure to conform caused by a sheer number of organisations adopting a practice or attribute within a certain context.

Collective behaviours of the whole organisational sector inspire the institutional theory (Chen, 2013:18). The theory of institutional isomorphism is postulated on the premises that the enduring and established rules, norms and values of a society infiltrate and bear on the internal organisational structures (Shehada, 2010:29). Coherently, according to Watson (2009:24), the principal premise for the institutional organisational theory of isomorphism is that the prevalent societal rules, norms and mentality provide shape and meaning towards organisational activity. In other words, with time, certain values and attributes tend to be institutionalised, formalised or established as providing goodness-of-fit for firms operating within a given environment. To the extent, those organisations that do not comply with the established and common systems of meaning will have their activities deemed socially inappropriate. In the aftermath, such firms will most likely lose legitimacy thereby threatening the firms' access to resources or even their survival.

Literature indicates that institutionalists differentiate on the aspect of conformity, Thus, when isomorphism occurs, it is either because an organisation conforms to systems of belief or meaning or it is a mere conformation towards the structure and appearance. In other words, when faced with external pressures, firms can embark on substantive (belief-changing) isomorphism or symbolic (appearance-altering) management of legitimacy (Watson, 2009:24). Substantive management of legitimacy is regarded as the genuine and substantial transformation in organisational goals, structures and processes or socially institutionalised practices. However, symbolic management transpires when a firm barely seems to be compliant with social values and expectations. Nonetheless, the two are difficult to separate empirically and in practice.

3.3 ISOMORPHISM

Isomorphism is a concept that addresses how business organisations attain legitimacy by complying with social values and norms (Joseph & Taplin, 2012:365; Lin & Sheu, 2012:535). The concept of isomorphism focuses on the aspect of firm-environment interface and acknowledges that firms seldom exist in a vacuum. Congruently, Bartram (2011:670) posits that isomorphism is a depiction of a

complicated interaction between environmental selection and the readiness of a firm to adapt. According to Bartram (2011:670), isomorphism describes the reasons for configurations that exist amongst organisations that are operating in a similar environmental setup. As such, if firms are to survive and attain their objectives they need to adapt to their normative environments.

Bartram (2011:670) further states that isomorphism asserts that in equilibrium, elements exposed to similar environmental settings will adopt an identical nature of organisation. When considering the population level, Bartram (2011:671) relates that organisational appearances are transfigured in the path of more compatibility with environmental characteristics. Thus, each actor will be compelled to resemble other elements faced with the same category of constraints, thus attaining legitimacy. In this instance, legitimacy becomes a solid rationale for isomorphism and organisational legitimacy refers to the position conferred by social actors within a given environment. As such, a legitimate organisation would be one that has values and behaviours that are consistent with those valued by social actors and built their expectations on. The discussion below discusses the different types of isomorphism.

3.2.3.1 Competitive Isomorphism

According to Beckert (2010:160), competition as a means of homogenisation holds that competitive pressure manifests in institutional convergence of business models. According to Gstraunthaler (2010:404), competitive isomorphism deals with the embracing of procedures to improve the level of competitiveness. Gstraunthaler (2010:404) argues that competitive isomorphism is a mechanism of rationalisation that puts emphasis on market competition, niche transformation and fitness assessments. Homogenisation, which involves firms belonging to the same field possessing similar attributes, has been identified also as being caused by competitive pressures.

The theory of organisational ecology has three external pressures that influence the life of organisations in a community, namely, pressures for legitimacy, forces of competition and institutionalisation (Bartram, 2011:670). Bartram (2011:671) states

that heavy emphasis is placed upon competition as the main cause of isomorphism in the theory of organisational ecology. According to González (2010:388), when faced with competitive conditions, organisations get to be more and more identical to the extent that rules of behaviour ensure exchange activities to be conducted in an efficient way. Thus, competitive isomorphism is associated with the pursuit for efficiency by firms and it is highly pertinent to conditions where free and transparent competition transpires.

By highlighting market competition and rational system, competitive isomorphism is defined as economic pressures on organisations and organisations' adaptation to these economic pressures (Findik & Bedük, 2014:27). From the organisational ecology theory Shehada, (2010:26) states that when firms opt to adapt because of competition, isomorphism will occur. Cooney (2006:145) highlight that technical firms (such as manufacturing firms) are held to be shaped by forces of competitive isomorphism. Institutionalised organisations (such as schools, museums, even job training programmes), alternatively, exist in fields where societal norms and values control much of the organisational activities rather than a strict, task-oriented pursuit of efficiency. These institutionalised organisations, it is contended, are successful to the extent they relate to norms or "myths" in their broader field. Legitimacy (rather than efficiency) surfaces as the principal organising force (Meyer & Rowan, 1977).

Market competition, market changes, and system rationalisation underpin the adaptation criteria to these changes. By marketing competition, only firms that are able to adapt to the competitive nature of the environment shall survive (Gstraunthaler, 2010:404). As such, competitive isomorphism occurs as the system automatically rationalises which organisations remain in the community or industry and which ones exit. The high mortality amongst small firms, according to Shehada (2010:21), is explained by failure to adapt strategies, structures and processes in many instances. For instance, sustainability has been adopted by many organisations as a competitive advantage strategy. As such, the study proposes that imperatively successful small firms will be using sustainable development strategies as a competitive tool.

3.2.3.2 Coercive Isomorphism

Coercive isomorphism emanates from compelling pressures that are either formal or informal (Wu *et al.*, 2013:162). Informal pressures can originate from the cultural forces and expectations of a community or environment where the organisation exists. Coercive pressures may also emanate from the formal government laws and regulations pertaining to issues like pollution controls, taxation and accounting rules. According to Kshetri (2009:24), coercive pressures entail expressed regulative processes such as, rule setting, monitoring and sanctioning activities. These emanate from regulatory bodies and the prevalent rules and laws which determine the firms' behaviours in relation to a practice in the business environment, in this case sustainable development. Moxham and Kauppi (2014:414) and Kauppi (2013:1320) state that key stakeholders such as customers, non-governmental organisations (NGOs) and other interest groups contribute towards coercive isomorphism.

In latent literature, the dimension of coercive mechanism of isomorphism has received much research attention (Yang, 2009:46). Coercive isomorphic pressures happen because organisations are deemed to rely on their external environments for resources that enhance survival. Thus, successful organisations are those which can negotiate with the external pressures for resources. Consequently, coercive isomorphism is as a result of pressures emanating from external sources of resources that the organisations depend on. Amongst others, these external sources of resources which exert pressure on firms to conform to the expected sociocultural aspect of the broader society include the state and the credit providers as important factors (González, 2010:389). Thus, coercive isomorphism legitimacy is enforced legally (Wahid & Sein, 2013:78).

With coercive isomorphism, Othman, Darus and Arshad (2011:123) argue that coercive pressures may be perceived by organisations as a force, persuasion or invitation to enter collusion. On the other hand, Giblin and Burruss (2009:354) highlight that there are institutional seduction and inducements that transpire in coercive isomorphism. In this instance, firms may not be pushed towards adopting

certain structures; instead there is a significant incentive to do so. The incentives are often related to monetary resources, whereby governments provide grant funding and various monetary opportunities, subject to the adoption of certain structures and practices. However, institutional theorists opine that coercive mechanisms seldom lead to efficiency (Kauppi, 2013:1320).

When faced with outside demands, based on the pressure applied and the context, the conformity of firms varies from passive conformity to active resistance. Chiang (2010:917) points out that firms respond to external pressures in various ways, amongst others, acquiesce, compromise, avoidance, defiance and manipulation. Acquiesce transpires when a firm adheres to the external pressures and eventually comply with the rules and regulations (Chiang, 2010:917). The compromise approach pertains to resolving the conflicting expectations by bargaining with the stakeholders and pressuring organisation. Avoidance refers to firms that opt to avoid the effect of external pressures through ignoring the rules in their internal operations and behaviour whilst portraying compliance from the outside view. Defiance pertains to firms challenging the rules and norms from the external environment by disregarding, challenging or even counterattacking them (Chiang, 2010:917).

Finally, manipulation occurs when firms respond by endeavouring to co-opt, influence or control the external organisations when they receive rules and pressures, thereof (Chiang, 2010:917; Gstraunthaler, 2010:404). There is a possibility of decoupling when pressure is exerted upon firms. Decoupling occurs when an organisation gives an outside impression that they are complying with external forces, but whereas in the inside, the firm will be doing things differently and to the contrary (Chiang, 2010:917). Consistently, Gstraunthaler (2010:404) argues that firms do not passively assent to the requests and pressures posited on them.

3.2.3.3 Normative Isomorphism

Normative isomorphism emanates from professionalisation. Professionalisation has been described as “the collective struggle of members of an occupation to define the conditions and methods of their work as well as to establish a cognitive base and

legitimisation for their occupational autonomy” (Wu *et al.*, 2013:162). Basically, two mechanisms, namely, professional networks and formal education are observed as major contributing mechanisms with regards to normative isomorphism. González, (2010:389) notes that the growth of professional networks spanning organisations and the formal education from university specialists and institutions providing professional training are critical in producing organisational norms.

Kshetri (2009:24) acknowledges that normative mechanisms of isomorphism are as a result of normative institutions which introduce prescriptive, evaluative and obligatory aspects within a society which determine choice making. For instance, professional associations are critical normative forces which prescribe authentication mechanisms in the form of a set of rules and norms. The legitimisation power held by professional associations is enshrined in their provision of self-regulation prescribed in codes of conduct, licensing and certification requirements. Consequently, this influences the behaviour of firms belonging to a particular industry or society. According to Wahid and Sein (2013:78), under normative isomorphism moral values determine legitimacy and these should be found in the codes of conduct, licensing and certification requirements.

The professionalisation of employees within an industry is one critical factor observed to invoke commonalities which lead to normative isomorphism. As firms seek to achieve superior performance, standards of professionalism and professional practice are increased for employees. Consequently, members belonging to a particular profession share ideas and inherit techniques that are regarded by the professional group to be updated and effective. Thus, these interactions among members of the same profession institute and reinforce practices which are held to be acceptable and legitimate within the given profession. This results in homogeneous perceptions, behaviours, practices in the form of normative isomorphism (Chiang, 2010:917).

3.2.3.4 Mimicry Isomorphism

Under the institutional organisation theory, mimicry, mimetic or mimesis constitutes the third mechanism that explains isomorphism from the institutional perspective. Mimetic isomorphism as a mechanism to respond to environmental uncertainties has received substantial exploration by scholars within the discourse of institutional theory (Beckert, 2010:158; González, 2010:389). According to Codagnone, Misuraca, Savoldelli and Lupiañez-Villanueva (2015:307), mimicry isomorphism holds that organisations often undertake courses of convergent transformations in order to look legitimated within their institutional spheres. Based on mimetic processes, organisations will copy legitimated and/or prosperous counterparts in their business milieu so as to be legitimised as well, thereby resulting in institutional isomorphism.

Mimetic isomorphism entails that when a firm is faced with uncertainties it tends to imitate others in order to maintain competitiveness and avoid or minimise adverse and unexpected outcomes (Yang & Hyland, 2012:1076). According to Biloslavo and Lynn (2007:775), Kauppi (2013:1320) and Wu *et al.* (2013:162) mimetic isomorphism is in three forms, namely, frequency-based imitation, trait-based imitation, and outcome-based imitation. Firstly, frequency-based imitation relates to the purest form of mimetic isomorphism. This occurs when a firm imitates or copies the practices and structures that have been embraced by the majority of firms within an industry (Biloslavo & Lynn, 2007:775; Wu *et al.*, 2013:162).

Secondly, trait-based imitation involves high levels of selectivity when contrasted to frequency-based imitation. Trait-based imitation happens when a firm exclusively imitates firms that are highly successful (Kauppi, 2013:1320; Biloslavo & Lynn, 2007:775; Wu *et al.*, 2013:162). The underlying belief that drives trait-based imitation is that decisions and practices utilised by a particular organisation that resulted in success is most likely going to have the same positive outcomes to the imitator (Biloslavo & Lynn, 2007:775). Finally, outcome-based is almost similar to trait-based imitation in that it involves selectively imitating decisions and practices that lead to prosperous results. Thus, outcome-based imitation is simply described as transpiring

when actions that seem to be connected to success are copied (Wu *et al.*, 2013:162). Wu *et al.* (2013:162) cite that many studies within the institutional theory discourse concentrate on frequency-and trait-based imitations. However, they observe that outcome-based imitation can be critical particularly in the initial stages of adopting a practice.

Mimicry behaviour also termed modelling (meaning firms modelling themselves after their counterparts) occurs through various mechanisms. Amongst others, modelling occurs through a firm recruiting employees from other firms, through consultants and taking part in industry associations (Wu *et al.*, 2013:162). Beckert (2010:159) argues that imitation for legitimation will only transpire if the imitated organisations are perceived to be significantly successful in line with the espoused values within the field. According to Kshetri (2009:25), firms will mimic other organisations that fall within their industry. However, the firms being imitated should be identical in complexity or the ones on the cutting edge. When the mimicking of firms identical in complexity or those deemed to be on the cutting edge, a national culture is likely to emerge. In this regard, Wahid & Sein (2013:78) point out that under mimicry isomorphism legitimacy is culturally guided.

The phenomenon of mimicry isomorphism has not gone without criticism or reservations. Some of the authors in latent literature have opined that mimicry do not cause homogeneity but rather heterogeneity. According to Yang and Hayland (2012:1077), there are two contradicting theoretical approaches to the relationship of mimicry forces and isomorphism. The first approach argues that imitation leads to dissimilarity and not isomorphism, because the differences in the firm resources result in huge heterogeneous consequences as firms respond to a similar environment. Secondly, institutional isomorphism literature presents forces that are conflicting, as such differences are expected in terms of isomorphic pressures and homogeneity on the part of firms. Given the uncertainty of the relationship between isomorphic pressures and the consequences on the firms, it is imperative to research this phenomenon within the context of sustainable development.

3.3 SUSTAINABLE DEVELOPMENT

This section provides an extensive literature review of the concept of sustainable development. Focus is given on the overview of the sustainable development with the intention of evaluating the essence of the concept. As mentioned, earlier on, the concept of sustainable development is embedded by three common dimensions, namely, economic, ecological and social. As such, literature under this section will further focus on reviewing the aforementioned three primary dimensions of sustainable development which underpin the study at hand.

3.3.1 Overview of Sustainable Development

The concept of sustainable development has increasingly become inescapable for the business world and has continuously affected almost all aspects of business functions. Latent research indicates evidence of sustainable development being utilised by business organisations as a competitive strategy (Thiel, 2015:187). While the usage of the concept of sustainable development has grown to the extent of being a buzzword, the meaning has flattened and has become synonymous with anything that is either good or bad (Ratiu & Anderson, 2015:194). There is a general consensus amongst environmentalists and world leaders that if care is not taken, human life will cease to exist sooner than apprehended due to the increasingly destructive nature of human activities on “mother earth”. As such, with global output and employment concerns, it is ultimately and globally consented that researching towards SMEs’ economic contribution provides sustainable competitive advantage for all countries, especially the developing world (Williams & O’Donovan, 2015:641).

The concept of sustainable development has been around since the early 1980s. Effects of the Capitalist systems of the Industrial Revolution have received much attention due to its destructive nature. However, sustainable development has so far lacked a commonly agreed definition. Several definitions of Sustainable Development exist and in the forefront, is the Brundtland Commission’s proposed definition; namely, development that meets the needs of the present without compromising the ability of future generations to meet their own needs (WCED,

1987:45). Swanson & Zhang (2012:30) opine that it is this simplicity and generality nature of the commonly accepted definition provided by the Brundtland commission that primarily contributes to the lack of consistency pertaining to the Sustainable Development concept. For instance, there is now sustainable reporting, green businesses, green supply chain management, sustainable marketing, green consumers and many more such new terminologies which show that sustainable development is the future for businesses.

The prestigious United Nations Conference on the Human Environment (UNCHE) convened in Stockholm in 1972, is esteemed in history as a crossroad towards an erratic global spread with regards to sustainable development (Borim-De-Souza, 2012:159). The World Commission on Environment and Development (WCED) of 1987, the 1992 Rio Earth Summit in Rio de Janeiro Brazil, the 1999 United Nations Global Compact (UNGCC), 2002 World Summit on Sustainable Development (WSSD) in Johannesburg South Africa are examples of conventions where the world emerged to be seriously concerned with sustainable development (Swanson & Zhang, 2012:231). Furthermore, Sustainable development has been a subject of debate on various platforms i.e. intercontinental, intergovernmental, inter-industrial, academics, political and so forth. On 1 January 2016, the world leaders instituted "*The Agenda 2030 for Sustainable Development*" upon expiry of the Millennium Development Goals, emphasising globally pervasiveness pertaining to the issue of Sustainable Development (UNDG, 2015:5).

Sustainable development is a universal new millennium phenomenon considered to be critical, inevitable and an enduring challenge with effects spanning through the whole world and human life. In this regard, it is vital to examine the behaviour of businesses with regards to sustainable development practices in today's business research. The presupposed inseparability of sustainable development and the business world led to the formation of the World Business Council for Sustainable development (WBCSD) prompted by the Rio de Janeiro Earth Summit held in 1992 and the Brundtland report (Swanson & Zhang, 2012:231).

Studies have suggested that society and stakeholders have been increasingly patronising firms that utilise an active approach regarding the principles of sustainable development (Gomes, Kneipp, Kruglianskas, Da Rosa & Bichueti, 2015:116). According to McPhee (2014:4), this is accomplished through new actions such as decreasing the firm's carbon footprint or water usage, improving on education commitments and community engagement. Thus, firms should focus on transforming their activities across the whole organisation and find new means to produce value for both the firm and their proximal communities (McPhee, 2014:4).

The sustainability hype is related and often interchangeably used with concepts such as corporate social responsibility (CSR) and sustainability management and these concepts continue to attract attention in latent management literature and corporate practices (Windolph, *et al.*, 2014:379; Thiel 2015:183). The World Commission on Environment and Development (WCED) report relates that sustainable development requires firms to simultaneously develop long-term economic, social and environmental principles (Galpin *et al.*, 2015:1). Thus, for firms to express sustainable development, they should utilise these principles (economic prosperity, societal wellbeing and environmental promotion) in their products, policies and practices. Scepticism is found in various circles that held that environmental integrity and social equity contradict economic prosperity (Galpin *et al.*, 2015:2). The following discussion provides an in-depth analysis of the three dimensions of sustainable development.

3.3.2 Economic Sustainability

The concept of economic sustainability pertains to minimisation of operating costs utilising systematic management, improved productivity of the labour-force, enhanced expenditures on research and development as well as investments in training and other human capital kinds (Jamali & Mirshak, 2007:239). Jämsä, Tähtinen, Ryan & Pallari (2011:142) argue that the economic dimension is focused on the distribution of resources that are scarce. According to Marques, Mendonça and Jabbour (2010:239) economic sustainability pertains to the turnover growth or

stability, payment of taxes to government, payroll, growth in profitability, investing, and growth in exports.

Assefa and Frostell (2007:64) purport that this dimension results in economically sustainable systems that continually produce goods and services. As well, economic sustainability entails sustaining manageable levels of government and external debt, while desisting from sectoral imbalances that destroy agricultural and industrial production. Nowadays, long-term sustainable competitive advantage through any new products or ideas, quality, costs or time is difficult to maintain. This is due to endless competitive cycles caused by reactive strategies i.e. me-too products and differentiation strategies amongst rivalry firms which eventually are destructive (Wilson, 2015:436). The effects of the destructive nature of these reactive strategies are prone to be more pronounced when it comes to the SMEs considering their capacity and resources. In this regard, Bansal and Desjardine (2014:71) argue that sustainable development implies an undertaking by firms to invest less for smaller profits sooner and investing more for future profits that are more.

The idea of value creation is at the centre of the economic sustainability dimension and is simplified as prices exceeding costs. Jamali and Mirshak (2007:239) indicate that economic sustainability is increasingly understood to refer to generating added value in a wider sense, rather than conventional financial accounting. Economic sustainability considers the long-term and longevity of a firm and Wilson (2015:436) states that there has been a decline in corporate life span due to heightened competition and notion of creative destruction. Consistently, Martinez-Conesa, Soto-Acosta and Palacios-Manzano (2017:2374) argue that the dimension of economic sustainability refers to the elements of the firm that need to be upheld in order to continue in the market in the long run.

Galpin *et al.* (2015:3) cite that economic sustainability is created by producing various goods and services in a responsible manner. It entails producing products that are required by customers, lowering costs of inputs or realising production efficiencies. Coherently, Martinez-Conesa *et al.* (2017:2374) advance that the dimension of economic sustainability comprises elements that include technology and innovation. However, the pillar of economic sustainability seems to be the least

documented of the three dimensions of sustainable development. There is need for more literature to be structured and formulated around the concept of economic sustainability within the contemporary sustainable development context. For instance, Bansal and Desjardine (2014:71) state that high value creation is not always related to financial performance as market conditions or regulations through intense competition may minimise the firm's ability to capture value. As such, there is need for the different components of economic sustainable development to be researched and theorised.

3.3.3 Environmental Sustainability

The dimension of environmental sustainability is prominently described by the principle of environmental integrity which requires that people's actions need not destroy the earth's land, air and water resources. The ability of the ecosystems is regarded to be constrained in terms of regeneration capacity and potential to expand (Høgevoid *et al.*, 2015:430). Closely, Turyakira *et al.* (2014:161) describe environmental sustainability as the measures a firm adopts towards the minimisation of its adverse consequences towards the natural environment. Such activities pertain to the ecological and economic utilisation of the natural resources, implementing packaging strategies that are environmentally friendly, recycling, waste reduction, energy and water conservation, as well as pollution control.

Galpin *et al.* (2015:3) argue that ecological sustainability by firms aims at reducing the size of their ecological footprint. Each firm has an environmental impact even simply by managing lighting of office buildings or more pronounced by reducing production wastes and emissions through three taxonomies, namely, pollution control, pollution prevention and product stewardship. Firstly, *pollution control* requires firms to adopt responsible waste disposal mechanisms, such as additions of physical equipment to filter toxins or outsourcing of waste removal services. Secondly, pollution prevention entails the reduction of waste through innovative processes or technologies utilised through the production system. Lastly, product stewardship focuses on designing products that use fewer resources and toxin, recycle or reuse materials.

Human operations may have enormous influence on the natural environment, such as diminished biodiversity, ozone depletion, greenhouse gases accumulation, disposal management, deforestation and toxic emission (Jämsä *et al.*, 2011:142). According to Coffman and Umemoto (2010:601), ecological sustainability focuses on the well-being of the natural systems over time. More and more firms are adopting internationally recognised, industry-certified environmental managements systems (EMSs) (Høgevold *et al.*, 2015:430). Extensive research has been conducted on the principle of environmental sustainability, but the research effort looking at all the three pillars of sustainable development is unsatisfactory (Dos Santos, Svensson & Padin, 2013:104). Cost reductions by means of environmental actions have received criticism as the sole motivator for action (Høgevold *et al.*, 2015:430). Research in sustainability for SMEs has focused on the environmental dimension and it is still fragmented, underdeveloped and limited (Williams & O'Donovan, 2015:641-642).

According to Gomes *et al.* (2015:117), in the past decade global industrial production has enlarged by over a 100-times and it is expected that this output will consume 50% of the resources and producing 20% of the current carbon dioxide. Growth in world population is expected to double from 5.5 billion to 11 billion by 2030, and sustainability concerns such as loss of biodiversity, waste, and deforestation are at an increase (Sen, 2014:97). In this regard, Martinez-Conesa *et al.* (2017:2374) emphasise that as far as the environmental dimension is concerned, preserving the environment and enhancing the issue of environmental performance are central with regards to sustainability issues.

The European Commission identified that the most significant environmentally sustainable practices by firms, pertain to the utilisation of materials and energy, pollution and waste management, in an environmentally conscious manner (Turyakira *et al.*, 2014:161). Research on the SMEs in Europe highlighted that environmentally conscious practices are broadly concerned with establishing environmentally friendly products as well as operational systems or being dynamically involved in recycling actions (Mandl & Dorr, 2007:47). Danish SMEs revealed that environmentally oriented CSR activities had a positive impact on their

business reputation, which in turn influenced their competitiveness (Turyakira *et al.*, 2014:161).

3.3.4 Social Sustainability

Social sustainability primarily focusses on society and social development (Van Zeijl-Rozema, Cövers, Kemp & Martens, 2008:412). 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. Firms as critical institutions in the society are regarded as instruments of social justice (Jämsä *et al.*, 2011:142). Thus, firms are expected to embrace, legal, ethical, social-economics of stakeholders and not only financial stakeholders. According to Martinez-Conesa *et al.* (2017:2374), social sustainability entails that the firms should be responsible in their dealings with consumers, investors, government and employees. Furthermore, Martinez-Conesa *et al.* (2017:2374) cite that the branch of social sustainability requires firms to manage their internal affairs by ensuring employee motivation through mechanisms that result in value for the firm.

Social sustainability involves three processes, namely, environmental assessment, stakeholder management and social issues management (Vallance, Perkins & Dixon, 2011:342). Firstly, environmental assessment involves firms scanning social-economies and environmental issues and responding appropriately. Secondly, in stakeholder management, firms respond to individuals outside organisations and the natural environments. It entails distribution of value created by firms equitably amongst the stakeholders. Lastly, social management addresses social issues, such as, desisting from the use of child labour, not producing socially undesirable products, not participating in unethical matters (Jämsä *et al.*, 2011:142; Marques *et al.*, 2010:239). Generally, social sustainable development manifests in important items such as demographics and inequalities in cultural differences (Sen, 2014:97).

On the other hand, Thiel (2015:183) indicates that there are four themes that define the social domain in sustainability context, namely, social-economics, stakeholders,

societal-wellbeing and social sustainability. Consistently, Høgevold *et al.* (2015:430) cite that social sustainability includes definitions of society, community and culture and is measured in the firm's performance in donations, safety, strategic philanthropy and corporate citizenship. Thus, social sustainability places a demand upon firms to play an active role and acknowledge more responsibilities toward stakeholders and the social environment they operate in (Ciasullo & Troisi, 2013:44). Human needs include the basic needs such as food, shelter, clothing as well as good quality of life, with quality of life including things like healthcare, education and political freedom (Thiel, 2015:183).

Social sustainability is a vital dimension for businesses, large and small, because they rely to a greater extent on the well-being, stability and success of the societies where they are located. The status of a firm in the location of its operations, the manner in which it is perceived as an employer as well as a producer, as a participant in the local area, definitely impact on its competitive position (Polášek, 2010:56). Furthermore, firms that are regarded as being socially active stand to experience an increase in their reputation from the public and business fraternity. In this case, this enhances the potential for firms to attract capital as well as increasing their competitive position (Turyakira *et al.*, 2014:160). SMEs are prominent in providing social support towards sporting activities in almost all the countries in Europe. Consistently, in Latin America, SMEs seem to be highly active in the areas of sports, health as well as cultural events (Turyakira *et al.*, 2014:160).

However, the social sustainability in the form of contribution towards culture and sports in the African context is yet to be researched. Broadly, there is need for research to determine the social sustainability of African SMEs. On the other hand, poverty has been identified as a major theme under social sustainability (Li, *et al.*, 2016:443). The contribution of SMEs on the African continent could be towards social sustainability could be found more prevalent towards poverty alleviation. Section 2.5.1.1 discussed the role that SMEs play towards sustainable development in the form of poverty alleviation.

3.4 FIRM PERFORMANCE

Firm performance constitutes the third construct in this study. Rodríguez-Gutiérrez *et al.* (2015:195) pinpoint that firm performance is not a new concept in the field of business research. However, Santos and Brito (2012:97) posit that despite its prominence in latent literature, the construct of firm performance is challenged by incongruences pertaining to indicators being selected based on the researcher's convenience. Another incongruence noted by Santos and Brito (2012:97) is that of inadequate consideration of the dimensionality of firm performance. As such, this section provides a literature review towards the concept of firm performance. The discussion in this section focuses on the definition, the domain, as well as the dimensionality of firm performance. The next section focuses on the definition of firm performance.

3.4.1 Firm Performance Definition

Firm performance means different things to different people. According to Ha-Brookshire (2009:132) firm performance is a complex concept to define and the complexity of the definition is even more entrenched within the context of SMEs' operations. Consistently, Rodríguez-Gutiérrez *et al.* (2015:195) argue that a vast difference found in firms is the main reason why the definition of business performance is challenging. Consistently, Santos and Brito (2012:98) argue that the phenomenon of definitional confusion with regards to firm performance emanates from authors utilising antecedents of performance as indicators of performance. Table 3.1 below presents some of the definitions of firm performance that have been identified in literature.

Table 3.1 Exemplars of definitions on firm performance

Author and year	Definition
Al-Matari <i>et al.</i> (2014)	The efficiency and effectiveness of an action indicated through organised symbols that can be associated and conveyed under similar settings.
Santos and Brito (2012:98)	Firm performance is defined as a set of organisational effectiveness that involves operational and financial outcomes.
Shankar and Chin (2011:15)	Firm performance is defined as the magnitude or the extent to which a firm attains success or reaches their outcome in contrast to competitors in regard to sales, profitability and sales returns from new products.
Gharakhani & Mousekhani (2012:35)	Firm performance is regarded as the ability of a firm to produce satisfactory results and activities.
Ho (2008)	Firm performance is defined in relation to the extent to which a firm achieves its goals.
Saunila (2016:165)	Firm performance is the potential of the measurement object to produce results that can be evaluated by prearranged attributes in relation to the predetermined aspirations. Furthermore, performance is regarded as the exact outcomes/outputs of specific actions, how the action was conducted, or the ability to attain the outcomes.
Kafetzopoulos, Psomas and Gotzamani (2015:383)	Firm performance is a multidimensional construct defined relative to the value of the firm's outcomes.

In the contemporary environment, definitions of firm performance need to be evaluated from a sustainability perspective. In the past, firm performance primarily focused on the economic and operational performance of the business (Santos and Brito, 2012:98). However, contemporarily firm performance metrics are moving from economic-orientation performance measurement towards those of sustainability (Abdul-Rashid, Sakundarini, Ghazilla & Ramayah, 2017:185; Pérez-Cabañero *et al.*, 2012:129). In support of this, Goyal *et al.* (2013:370) state that there is an increasing trend by researchers to measure the holistic performance of firm considering the triple-bottom line indices. Thus, accordingly, as per the study at hand which focuses on sustainable development, it is therefore apparent that the measurement of firm performance should be inclusive of sustainable performance indices. In this regard, Santos and Brito (2012:98) suggest that empirical research needs to operationalise firm performance in line with the research objectives and characteristics.

3.4.2 Dimensionality of Firm Performance

Firm performance is a multidimensional factor and complicated phenomenon (Gharakhani & Mousekhani, 2012:35; Kafetzopoulos *et al.*, 2015:389). According to Santos and Brito (2012:100), the construct can either be unidimensional or multidimensional. In the case of unidimensionality, all the indices utilised impliedly represent firm performance in a virtually identical manner (Kafetzopoulos *et al.*, 2015:383). Al-Matari *et al.* (2014:26) state that, no single or specific dimension has been provided that measures all the performance elements. According to Pérez-Cabañero *et al.* (2012:121), two primary schools of thought appear in business management pertaining to the aspect of the firm performance dimensionality, namely:

- i. Researches that provide a one-dimensional definition towards firm performance and with measurement being economic and financial performance-commonly Return On Investment or Return on Equity; and
- ii. Studies that regard performance as a multidimensional construct encapsulating financial and non-financial indicators.

Santos and Brito (2012:101) argue that unidimensionality is a very simplistic and feeble undertaking for such a complex concept like firm performance. Firm performance can be possibly illustrated by one second-order variable as reflected by first-order dimensions (See Figure 3.2 below, model on the left). Furthermore, first-order dimensions, even though they are not the same, they will be signs of similarity characteristically to a higher order concept, performance. In this case, unidimensionality therefore entails that all the indicators should have a strong correlation. Sambharya (2011:1162), however, noted that since performance measures became prominent in research, they seldom correlate towards one another and transform significantly over time. Consistently, Ha-Brookshire (2009:134), argues that more than 50% of measures used in SMEs do not correlate, and in any case, they correlated; approximately 25% of the significant correlations were negative.

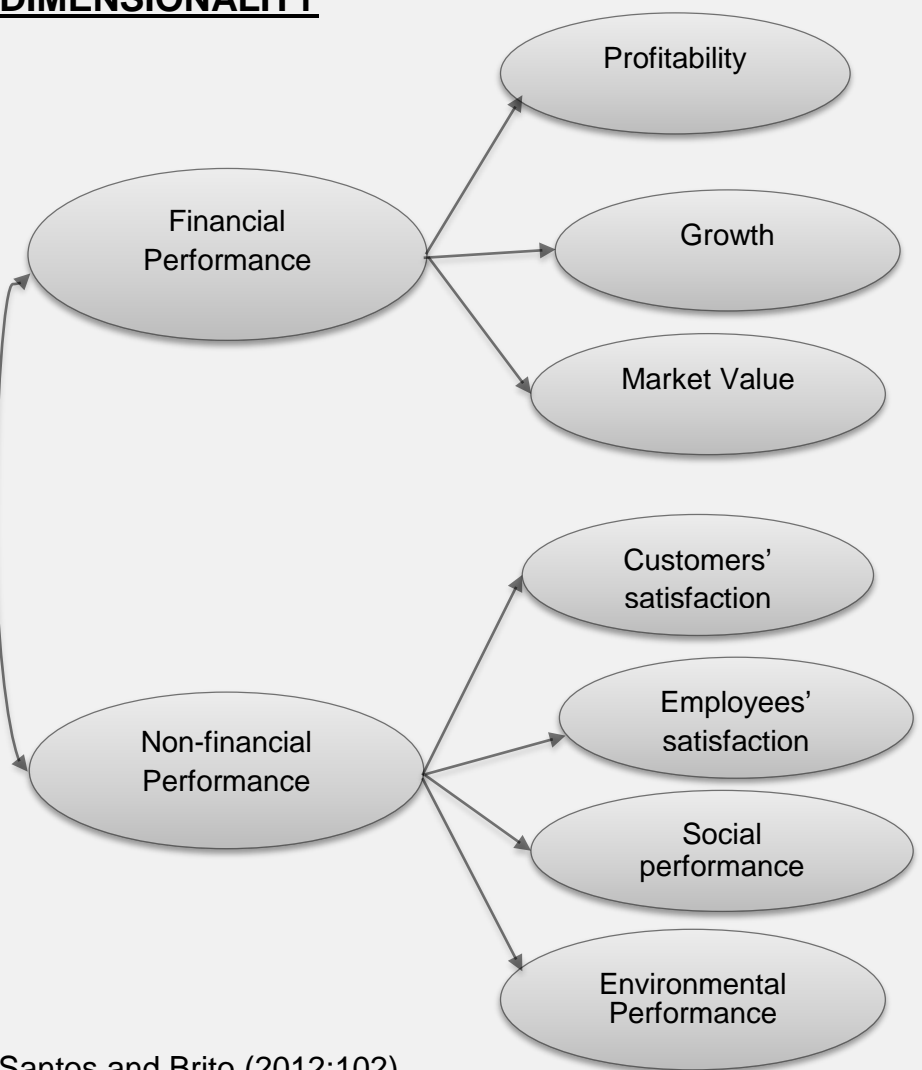
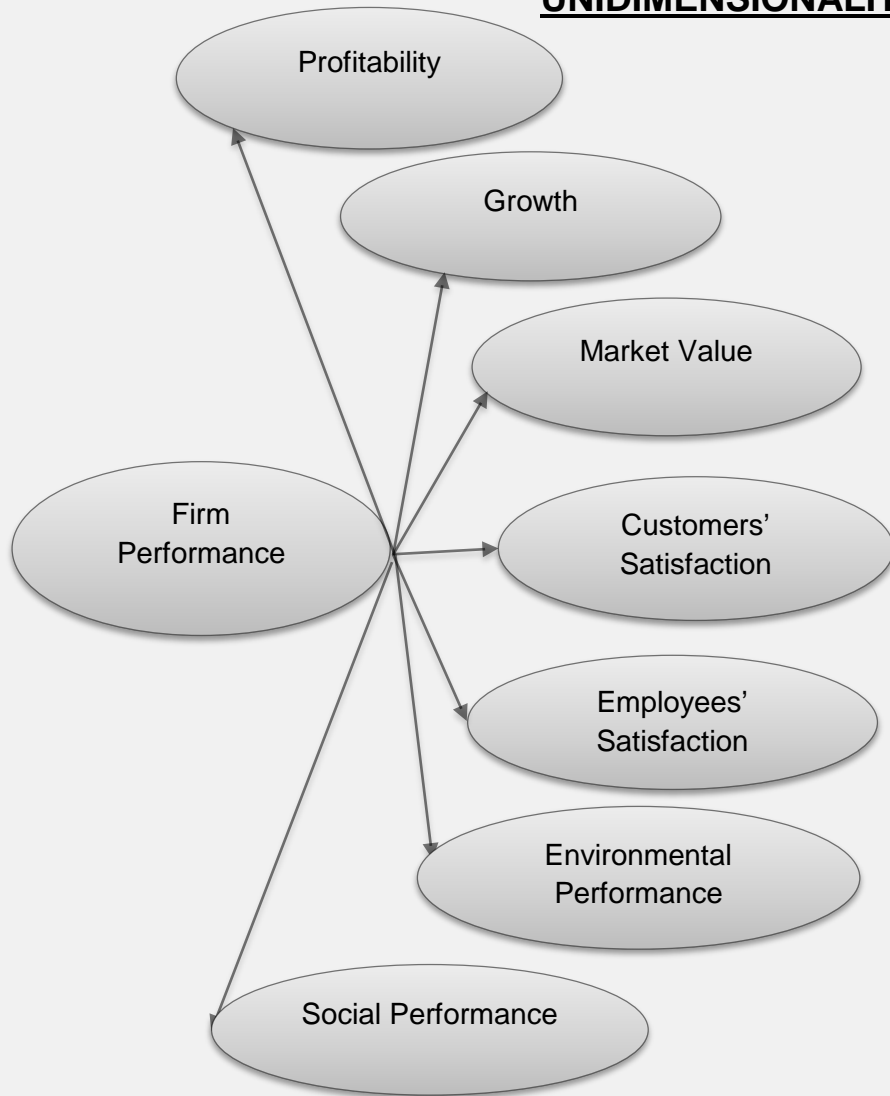
On the other hand, multidimensionality implies that each dimension represents a single element of the ultimate results of the firm and is embedded by a certain set of indicators. Commonly, a multidimensionality model implies that firm performance would be represented by two second-order dimensions namely, financial and non-financial performance (Santos & Brito, 2012:103). An exhaustive exploration of multidimensional constructs should examine second-order dimensions that can categorise first-order dimensions (See Figure 3.1 below, model on the right). There is need for these observed indicators to cluster collectively under one dimension, with higher correlations within the group than with other indicators from separate dimensions (Sambharya, 2011:1162). Theoretically as well as empirically, literature strongly signals towards multidimensionality, with several dimensions that underlie the intricate and entire concept of firm performance being utilised (Santos & Brito, 2012:103).

This study uses the multidimensionality approach to measure firm performance. Considering, the concept of sustainability which demands a comprehensive measurement of the performance of firms. In this regard, the following section discusses in detail how the multidimensionality model of firm performance applies in the context of SMEs.

Figure 3.1 Firm Performance Second Order Models

UNIDIMENSIONALITY

MULTIDIMENSIONALITY



Source: Santos and Brito (2012:102)

3.4.3 Firm Performance Measures

Rodríguez-Gutiérrez *et al.* (2015:195) cite that latent research indicators have utilised either economic (profitability and productivity measures) financial or growth indicators. On the other hand, Santos and Brito (2012:101) consider multidimensionality to consist of financial performance and non-financial performance, with the financial performance dimension comprising profitability, growth and market value. Selvarajan, Ramamoorthy, Flood, Guthrie, MacCurtain and Liu (2007:18) state that return on investment (ROI), earnings per share and net income after tax have often been employed as measures of financial performance.

According to Salavou and Avlonitis (2008:974), profitability and growth indices are of high significance in characterising firms between more and less successful ones. However, Al-Matari *et al.* (2014:27) opine that the financial measurement of firm performance faces criticism because it is primarily backward-looking and it also partially predict the future pertaining to depreciation and amortisation. Sharing the same sentiments, Sambharya (2011:1162) argues that financial measures are ex-post and focus on recognised strategies whilst they disregard the future. Furthermore, Sambharya (2011:1162) critiques that financial measures also tend to be internally oriented and assess management, whilst they disregard the stakeholders and external environments.

Furthermore, Al-Matari *et al.* (2014:27) propound that financial performance is regarded to be insufficient as a firm performance measure because it is subject to the accounting profession standards. Thus, it is constrained by the accounting practice since it is determined by the accountant. Alternatively, non-financial performance dimensions that have been utilised by authors include innovativeness, employee satisfaction, customer satisfaction, entrepreneur satisfaction and competitiveness (Selvarajan *et al.*, 2007:18; Pérez-Cabañero *et al.*, 2012:129; Bulak & Turkyilmaz, 2014:803). Whereas, Santos and Brito (2012:101) note that the non-financial dimensions are measured at the hand of competitive issues such as customer satisfactions, quality, innovation, employee satisfaction and reputation.

Saunila (2016:165) identifies various, but almost similar, performance dimensions from literature that can be utilised to express firm performance. These dimensions include financial effectiveness, efficiency, profitability, productivity, working life quality, employees, customer satisfaction, as well as innovation. A study by Santos and Brito (2012:103) presented 37 performance indicators representing various firm performance measures. Table 3.2 below presented by Santos and Brito diagrammatically illustrates the various dimensions and their indicators found in literature on the construct of firm performance.

Table 3.2 Performance Dimensions and Indicators Selected

Dimensions	Selected Indicators
Profitability	Return on Assets, EBTIDA margin, Return on investment, Net income/Revenues, Return on equity, Economic value added
Market Value	Earnings per share, Stock price improvement, Dividend yield, Stock price volatility, Market value added (market value / equity), Tobin's q (market value / replacement value of assets)
Growth	Market-share growth, Asset growth, Net revenue growth, Net income growth, Number of employees growth
Employee Satisfaction	Turn-over, Investments in employees development and training, Wages and rewards policies, Career plans, Organisational climate, General employees' satisfaction
Customer Satisfaction	Mix of products and services, Number of complaints, Repurchase rate, New customer retention, General customers' satisfaction, Number of new products/services launched
Environmental Performance	Number of projects to improve / recover the environment, Level of pollutants emission, Use of recyclable materials, Recycling level and reuse of residuals, Number of environmental lawsuits
Social Performance	Employment of minorities, Number of social and cultural projects, Number of lawsuits filed by employees, customers and regulatory agencies

Source: Santos and Brito (2012:103)

3.4.4 Firm Performance Factors in the Context of SMEs

Numerous differences occur with regards to the concept of firm performance and the major categorisation in literature is that of financial and non-financial measures which further have been assessed utilising subjective and objective measures (Rodríguez-Gutiérrez *et al.*, 2015:195; Pérez-Cabañero *et al.*, 2012:129). The distinguishing of objective and subjective measures in firm performance measurement can also be regarded as qualitative and quantitative, respectively. Thus, objective measures use the quantitative information provided by the firms usually from their financial statements. On the other hand, subjective measures use the perceptual or qualitative judgements of the respondents of the performance measurement indices (Matinez-Conesa *et al.*, 2017:2377). Thus, in the midst of these numerous dimensions that exist, a researcher should choose the dimensions most relevant to his or her research and judge the outcomes of this choice (Richard, Devinney, Yip, & Johnson, 2009:726).

SMEs differ to a larger extent from large businesses because they possess peculiar characteristics and the process of making decisions, equally differs. In this context of SMEs, Pérez-Cabañero *et al.* (2012:121) opine that the conceptualisation and measurement of firm performance is apparently an item for massive debates in literature. Ha-Brookshire (2009:132) cites that researchers have utilised various tools that have been primarily utilised in large firms' research to measure small firms' performance. This has transpired without justification and has resulted in bias and misrepresentation of reality (Ha-Brookshire, 2009:132). Therefore, Ha-Brookshire (2009:132) questions the appropriateness of performance measures such as profits, sales, and growth rates that are used for large firm performance to be used also for SMEs' performance.

Traditionally, SMEs performance measurement has been approached primarily from two perspectives, namely, operations and financial (Saunila, 2017). Bulak and Turkyilmaz (2014:803) are of the opinion that the majority of SMEs struggle to maintain the necessary performance indicators emanating from limited resources for data collating and evaluation. Furthermore, within SME milieus researchers have strongly cautioned against the utilisation of financial performance data especially in

the form of objective measures. According to Liozu and Hinterhuber (2013:599) and Rodríguez-Gutiérrez *et al.* (2015:196), hard financial data from SMEs is prone to be biased due to managerial manipulation because of corporate and personal tax causes. As such, past SME researchers have primarily focused on non-financial measures which also tend to be easy when it comes to the gathering of the data (Jalali, Jaafar & Ramayah, 2014:52).

The complicatedness of measuring firm performance is exacerbated by the way SMEs regard business success. According to Rodríguez-Gutiérrez *et al.* (2015:196), SMEs consider success differently based on their aspirations and objectives which are likely to shift or develop over time, so will the criteria of measuring the success. Bulak and Turkyilmaz (2014:803) state that in latent literature, SMEs performance is commonly ascertained through financial and non-financial performance measures. It is crucial to include non-financial measures in ascertaining SME performance because they help provide a complete depiction of the firm's performance. Furthermore, subjective ascertainment of SMEs firm performance are more ideal and consistent, because small businesses may witness momentary declines in their outcomes without this being symbolic of less positive performance (Rodríguez-Gutiérrez *et al.*, 2015:196).

Terlink's (2017:55) study on SMEs advances that as far as multidimensionality of firm performance is concerned, the components are business performance, firm effectiveness and financial performance. In this case, financial performance is regarded as the primary attribute of firm performance and is ascertained by factors, such as profitability (Terlink, 2017:55). Business performance refers to aspects that pertain to the market features, such as market share, growth, diversification and development in products. It is an assortment of growth in current business and future positions regarding new product development and diversification. Firm effectiveness measures the organisation's effectiveness from the stakeholder perspective considering quality and social responsibility.

Ultimately, researchers seem to agree that there is need for an entire set of new measures to be developed, specifically for SMEs. According to Kumar, Boesso,

Favotto and Menini (2012:135), the way SMEs and large businesses respond to opportunities in their relative industries is seldom similar. Saunila (2017) consistently posit that academicians have proposed that SMEs need unique tools to be developed in line with the firm's traits and requirements. Ha-Brookshire (2009:132) is of the opinion that there is need to ascertain if firm size is a huge determinant for firm performance measures when new performance measures are developed for SMEs.

3.4 SUMMARY OF THE CHAPTER

This chapter focused on the literature review of the theoretical framework and the concepts of isomorphism, sustainable development practices as well as firm performance. The goal of the chapter was to provide an understanding of the theory underpinnings of this study as well as the parental concepts, thereof. In providing the theoretical lens to the study, two theories were presented as providing the background of the study. The Theory of Organisational Ecology and Institutional Theory were presented as the guiding theories pertaining to the two types of isomorphism, namely, competitive isomorphism and institutional isomorphism, respectively. These two types of isomorphism were also reviewed in the chapter and how they relate to sustainable development practices within the SME context. Lastly, the chapter discussed the firm performance concept together with the six dimensions that were used in the research. The following chapter focuses on the conceptual framework and the hypotheses development phases.

CHAPTER 4: CONCEPTUAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

4.1 INTRODUCTION

Chapter Three discussed the theoretical underpinnings of the research study at hand. The current chapter is two-thronged. Firstly, chapter four focuses on discussing the proposed conceptual model that is being investigated in the current study. Secondly, the chapter ends by looking into hypotheses development. The conceptual framework of this study, as well as the hypotheses development procedure are provided and justified as per the empirical literature review. Firstly, the chapter begins by discussing the conceptual framework and the rationale underpinning the model presented.

4.2 CONCEPTUAL FRAMEWORK

This section presents the conceptual framework that is applied in addressing the formulated research hypotheses for this study. In this case, the existing theory theoretical patterns, themes and issues in relation to isomorphism, sustainability and firm performance are identified and utilised in the structuring of the conceptual framework. As far as the concept and phenomenon of sustainable development is concerned, much visions and deliberations from various spheres of life abounds the context (Windolph *et al.*, 2014:379). However, operationalisation of sustainable development is vitally needed and calls are being made for businesses to go beyond visions and goals by considering actions and behaviours that transform how firms interact with the outside world (Gomes *et al.*, 2015:116). The major challenge is on implementing sustainable development, particularly, with attention being provided on the three dimensions of sustainable development, namely, economic, social and ecological (Perez-Batres *et al.*, 2011:843; Windolph *et al.*, 2014:379; Swanson & Zhang, 2012:630).

Several problematic issues that pertain to the implementation of sustainable development have been discovered in current sustainable development literature and latent research. According to Windolph *et al.* (2014:380), past research has

primarily adopted a disaggregated approach towards the three variables of sustainable development namely, economic, environmental and social. Coherently, this alone, represents a tremendous gap considering that sustainable development, by nature, imperatively purports an integrative approach towards economic, environmental and social development issues. As such, decisive research of any nature, when it comes to operationalisation and assessment, ought to adopt an integrative approach within the context of sustainable development. To this end, few studies have attempted to research sustainable development practices in its entirety. As indicated in Table 4.1 below, the literature review process identified Gomes *et al.*, (2015); Windolph *et al.*, (2014); Goyal *et al.*, (2013); Høgevold *et al.*, 2013; Aggarwal, (2013) and Dos Santos *et al.*, (2013) as examples of studies that attempted considering the holistic approach to the concept of sustainable development.

Table 4.1 Exemplars of studies on isomorphism, sustainability and firm performance

Authors and year	Variables investigated previously
1. Gomes <i>et al.</i> (2015).	Sustainability Management practices, business performance, firm size in Brazil
2. Jamil, Mohamed, Muhammad, & Ali. (2015).	Environmental Management Accounting Practices and Institutional Isomorphism in SMEs in Malaysia.
3. Perez-Batres <i>et al.</i> (2011).	Institutional Isomorphism and UN Global impact registration in Western Europe Large Firms
4. Windolph <i>et al.</i> (2014).	Institutional Isomorphism and Sustainability Management tools in large firms in Germany
5. Ortas <i>et al.</i> (2015).	Institutional Isomorphism and ecological, social and governance performance in large firms in Spain, France and Japan.
6. Aggarwal (2013)	Sustainability and firm performance in large firms in India
7. Lopez <i>et al.</i> (2007).	Sustainable development and corporate performance
8. Urban & Naidoo (2013)	Sustainability and Operational Skills in SMEs in South Africa
7. Lopez <i>et al.</i> (2007).	Sustainable development and corporate performance
8. Urban & Naidoo (2013)	Sustainability and Operational Skills in SMEs in South Africa

9. Massa <i>et al.</i> (2015)	Sustainability reporting in SMEs in Italy
10. Dos Santos <i>et al.</i> (2013).	Sustainable business practice of Woolworths in South Africa
11. Rondinelli (2007)	Sustainable development on Transnational firms
12. Goyal <i>et al.</i> (2013).	Sustainable development and firm performance on large firms in India
13. Høgevold <i>et al.</i> (2015).	Sustainable business practices and firm networks on large firms in Norway
14. Venkatraman & Nayak (2015).	Sustainable performance of Small, Medium and Large organisations in Australia

In contrast to this study, how firms are practising sustainable development is not clearly articulated in these studies especially with reference to SMEs. Most of these studies (i.e. Venkatraman & Nayak, 2015; Massa *et al.*, 2015; Martínez-Ferrero & García-Sánchez, 2015) considered the accounting perspective, the so called sustainable reporting. Sustainable reporting focuses on the end product of a firm's sustainability efforts rather than considering the sustainable processes and practices, which is a focus in the study at hand. In other words, the major difference lies in the fact that studies on sustainability reporting are concerned with whether the firms being investigated are reporting on sustainability issues (i.e. Cheng & Yu, 2012; Venkatraman & Nayak, 2015; Massa *et al.*, 2015; Martínez-Ferrero & García-Sánchez, 2015). Whereas, the study at hand is inspired to unearth whether or not the firms are practising sustainability and the embedding factors influencing sustainability practices, with particular reference to SMEs.

As literature posits, much of the sustainability academic work is largely biased towards large corporations and in the developed nations (Venkantraman & Nayak, 2015:483). Thus, despite the critical economic role played by SMEs in the economy, especially the emerging economies, there is lack of empirical studies that address the sustainability concept, holistically in the SMEs context (Cambra-Fierro, Hart, Polo-Redondo, 2008:645). Subsequently, considering the aspect that there are numerous and significant differences between SMEs and large corporations research, there is an augmentation and heightening of the research and literature gaps that this study endeavours to answer. Many of the sustainable development mechanisms and tools were developed with large corporations in mind and are

difficult if not impossible to be paralleled to SMEs (Cheng & Yu, 2012:82; Windolph *et al.*, 2014:382).

As indicated in Table 4.1 above, very few authors have investigated isomorphism and sustainability development practices holistically from the literature reviewed. Subsequently, there is an unexplored study area concerning how holistically sustainable development practices by SMEs are influenced by isomorphic pressures. In general, researchers call for more enquiries into the underpinning factors concerning the isomorphism phenomenon (Gstraunthaler, 2010:404). In this study, isomorphism is regarded in the sense that interaction with the environment as well as interactions of small firms and other firms within an organisational field brings sustainable development transformations.

This study holds that from the isomorphism context, as firms interact, they tend to influence each other's behaviours and practices within their social spheres. In line with this premise, Gomes *et al.* (2015:117) posit that firms have joined the sustainable development movement initially as a response to external pressures and criticisms from government entities and organisational civil societies that blamed businesses for environmental degradation. Coherently, Tilt (2008:15) opines that in response to social change in the society, social networks play a significant part in assessing, predicting, responding to and adapting to global social and environmental change. Of which, sustainable development is an example of such a global change.

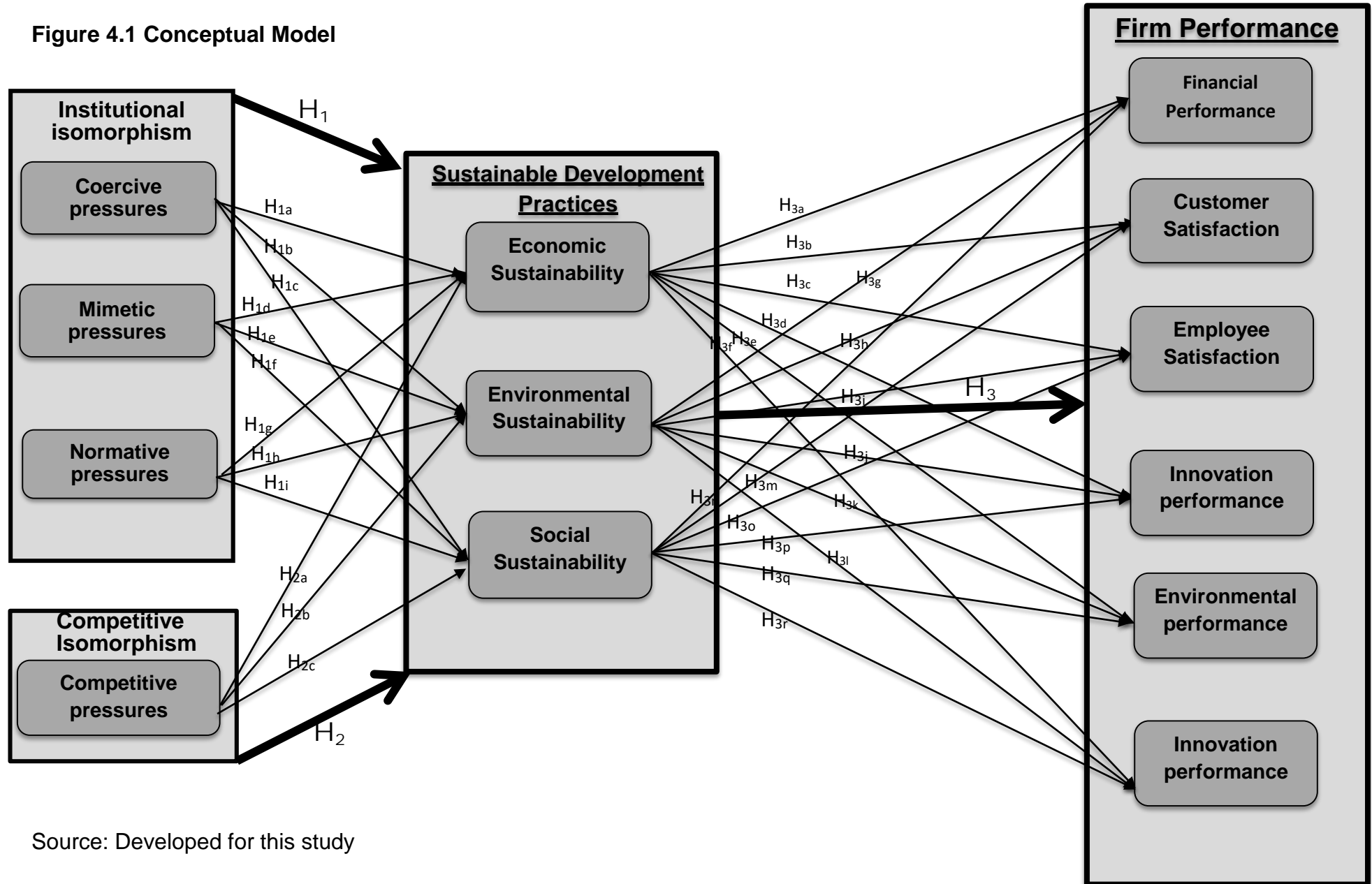
Furthermore, the hypothesised relationships between isomorphism and sustainable development as well as sustainable development and firm performance are well supported when considering the aspect of uncertainty. There is intense uncertainty with regards to the conceptualisation and operationalisation of the sustainable development concept. Firms are still battling with what constitutes sustainable development as well as how to put it into practice. For instance, Balbinot & Borim De Souza (2012:163) state that the most crucial part in researching on sustainability is the interaction between the different parts and the whole concept, as well as, the whole concept and the environment. In this regard, they (Balbinot & Borim De Souza, 2012:163) vehemently argue that research has failed to address these concerns.

Consistently, the study at hand proposes the concept of isomorphism as an explanatory to the interaction of how the environmental factors influence sustainable development practices in the context of SMEs. The study further seeks to find out how sustainability influences the variables of firm performance in response to the sustainable development levels of the firm's involvement. The study pursues a multi-dimensional approach to firm performance, whereby, six dimensions of firm performance, namely, financial, customer satisfaction, employee satisfaction, innovation, environmental and social are utilised. As such, the presence of pessimism and overhanging questions with regards to the relationship between sustainable development and the said forms of firm performance thereof, is largely scarce in the business fraternity at large.

To this end, under the conceptual framework in this section, assumptions, views, concepts and variables embedding this study are provided that expound on the study. In conclusion, the major premise for this study is that the sustainable development call for businesses is to go beyond visions and goals, by implementing sustainability is unsparing towards all firms, including SMEs. As the operationalisation of sustainable development has been made imminent and calls are being made for businesses to consider sustainable actions and behaviours, transformations are inevitable (Gomes *et al.*, 2015:116). Thus, the study propounds that these transformations are as a result of isomorphic pressures, and four isomorphic pressures (coercive, normative, mimicry and competitive) are put forward as embedding transformations in SMEs' sustainable practices.

A conceptual framework is also regarded as a system of concepts, conventions, expectations, views and theories that underpin the research. These can be visually written in a diagrammatical format to depict the key factors, concepts and variables as well as the presupposed relationships amongst them. As such, the conceptual model for this study, diagrammatically depicted in Fig 4.1 below, is put forward illustrating the hypothesised interrelationships of the research variables.

Figure 4.1 Conceptual Model



Source: Developed for this study

The following section will discuss the development of the hypotheses.

4.3 HYPOTHESES DEVELOPMENT

The conceptual model depicted above is developed based on the three primary hypotheses for the study which are:

- ✓ **H1:** There is a significant positive relationship between perceived institutional isomorphism and sustainability practices of SMEs in Limpopo Province.
- ✓ **H2:** There is a significant positive relationship between perceived competitive isomorphism and sustainability practices of SMEs in Limpopo Province.
- ✓ **H3:** There is a significant positive relationship between perceived sustainability practices and firm performance of SMEs in Limpopo Province.

These hypotheses as presented in chapter 1 (See Section 1.6) are further divided into secondary hypotheses.

4.3.1 Isomorphism and Economic Sustainability

The economic dimension includes the reduction of operating costs through systematic management, labour productivity, expenditures on research and development and investments in training and other forms of human capital (Jamali & Mirshak, 2007:239). Nowadays, long-term sustainable competitive advantage through any new products or ideas, quality, costs or time is difficult to maintain. This is due to endless competitive cycles caused by reactive strategies i.e. me-too products and differentiation strategies amongst rivalry firms which eventually are destructive (Wilson, 2015:436). In this regard, a study by Iederan *et al.*, (2013:402) found out that SMEs tend to adopt a non-isomorphic behaviour as a way of responding to changes in competitive environments. In line with normative isomorphism, a study by Gretzinger, Hinz and Matiaske (2010:214) found that SMEs in Denmark and Germany utilised professional consultancy and cooperated with their counterparts in developing new products.

Today one of the strategies used is rather to co-operate than to compete with contestants in the industry, as a way of gaining economic performance. By so doing, firms form regional clusters along social proximity where they share resources and knowledge thereby increasing their survival (Galbreath, 2015:221). Isomorphism suggests that organisational fields or industries follow an evolutionary path from diversity to homogeneity (Tuttle & Dillard, 2007:390). Research by Gonzalez, (2010) and Cheng and Yu (2012:98), Roy and Goll (2014:858) found that isomorphic pressures play a critical role in economic sustainability for SMEs. The study established that firms have utilised competitive strategies to advance their economic performance and the competitive strategies are uniform. As such, this study proposes that as a way to achieve economic sustainability, firms are increasingly becoming isomorphic towards each other. On the background of the above discussion, this thesis put forward the following hypotheses:

H_{1a} There is a significant positive relationship between perceived coercive pressures and economic sustainability practices of SMEs in Limpopo Province.

H_{1d} There is a significant positive relationship between perceived mimetic pressures and economic sustainability practices of SMEs in Limpopo Province.

H_{1g} There is a significant positive relationship between perceived normative pressures and economic sustainability practices of SMEs in Limpopo Province.

H_{2a} There is a significant positive relationship between perceived competitive pressures and economic sustainability practices of SMEs in Limpopo Province.

4.3.2 Isomorphism and Environmental Sustainability

The dimension of environmental sustainability is prominently described by the principle of environmental integrity which requires that human activities need not to erode the earth's land, air and water resources. Ecosystems are regarded to be constrained in terms of regeneration capacity and potential (Høgevold *et al.*, 2015:430). A study by Adebajo, Teh & Ahmed (2016) found that institutional isomorphism is prevalent in the context of environmental sustainability. Høgevold *et al.* (2015:427) state that variables

of sustainability implementation, performance, monitoring and evaluation have not yet been satisfactorily examined in literature.

Zhu and Sarkis (2007) established that firms are influenced by all the three institutional isomorphic pressures. They assert that manufacturers being the top polluters and responsible for much of the depletion of resources more than their counterpart firms, as such, they are subjected to more external pressure. A study in Malaysia by Hsu, Tan, Zailani and Jayaraman (2013) established that manufacturers were driven by both institutional and competitive pressures to practise environmental sustainability in their operational processes. In their study, they established that competitor pressure and regulatory pressures were the most influential ones. Diabat and Govindan (2011) ascertained that the significance of isomorphic pressures pertaining to the implementation of sustainable practices is getting increasingly paramount.

Research by Jamil *et al.*, (2015) and Jalaludin, Sulaiman and Ahmad (2011) established that environmental sustainability was significantly positively influenced by all the variables of institutional isomorphism with coercive being the most influential. However, although Jalaludin *et al.*'s (2011) study established a similar finding, it found that normative isomorphism was not related to environmental practices. Furthermore, Husted and Allen (2006) also empirically established that the variable of environmental sustainability practices was positively related isomorphism. To the contrary, Windolph *et al.* (2014) did not find any positive relationship between environmental sustainability and isomorphism. They argue that how much isomorphic pressures are responsible for firm's sustainability is still subject to research.

However, in this research it is hypothesised that both institutional and competitive isomorphism offer explanations on how diffusion of environmental sustainability behaviours occurs within an industry. Since concerns for environmental issues have become integrated into the firm's culture and this is also recognised by customers and other influencers (Chopra, 2007:23). Particularly, manufacturing firms can contribute

further to environmental improvements by encouraging their suppliers to behave in a more environmentally responsible way (Belz & Peattie, 2009:121). As such, as firms increasingly encourage each other to adopt good environmental practices, this suggests institutional isomorphism. By so doing, it is imperative to research isomorphism in environmental sustainability as a most likely phenomenon (Lin & Sheu, 2012:533). In this regard, the following hypotheses were formulated to address this gap in this thesis:

H_{1b} There is a significant positive relationship between perceived coercive pressures and environmental sustainability practices of SMEs in Limpopo Province.

H_{1e} There is a significant positive relationship between perceived mimetic pressures and environmental sustainability practices of SMEs in Limpopo Province.

H_{1h} There is a significant positive relationship between perceived normative pressures and environmental sustainability practices of SMEs in Limpopo Province.

H_{2b} There is a significant positive relationship between perceived competitive pressures and environmental sustainability practices of SMEs in Limpopo Province.

4.3.3 Isomorphism and Social Sustainability

The social dimension or social equity principle under sustainable development relates to all societal members having equal access to the available resources and opportunities. Critical to the definition of sustainable development is the realisation that “needs” present and future should be met in an equitable setting (Swanson and Zhang, 2012:630). *Ibid* state that sustainability in meeting social needs implies a social equity between generations, and further rationally considering the equity within each generation. Isomorphism has earlier been utilised to understand various organisational and individual practices where the issue is about gaining legitimacy through conforming to social values and norms (Joseph & Taplin, 2012:365). Bogt (2008) argues that a firm may regard it socially sensible to imitate other firms, that is, to adopt socially rational behaviours.

According to Eilers, Chong, Kim, Naganathan & Glavinich[†] (2016:326), social needs are crucial aspects of general business practices. Eilers *et al.* (2016:326) further posit that contemporary business organisations should attend to the needs of the community and society, especially development. According to Eilers *et al.* (2016:326), research in the UK and Japan indicates the vitality of the human aspect of sustainability and the role that external forces such as national government policies, market pressures, community groups and NGOs play.

Isomorphism and social sustainability practices have not been directly researched amongst SMEs. Studies in other areas, such as Joseph and Taplin (2012) have established a significant positive relationship between social sustainability and mimicry isomorphism amongst municipalities in Malaysia. While, Ortas, Alvarez, Jaussaud and Garayar (2015) found that social sustainability was particularly significantly related to coercive isomorphism, due to trade unions in countries. Research by González (2010) failed to establish a positive relationship between competitive isomorphism and social sustainable practices of firms within the Spanish electrical industries. This study therefore sought to advance the emerging field of sustainable development by addressing how the various isomorphic pressures influence social sustainability amongst SMEs in a developing country. In this regard, the following hypotheses were postulated to investigate the relationship between social sustainability and isomorphism in this thesis:

H_{1c} There is a significant positive relationship between perceived coercive pressures and social sustainability practices of SMEs in Limpopo Province.

H_{1f} There is a significant positive relationship between perceived mimetic pressures and social sustainability practices of SMEs in Limpopo Province.

H_{1i} There is a significant positive relationship between perceived normative pressures and social sustainability practices of SMEs in Limpopo Province.

H_{2c} There is a significant positive relationship between perceived competitive pressures and social sustainability practices of SMEs in Limpopo Province.

4.3.4 Sustainability and SMEs Performance

Ratiu and Anderson (2015:194) argue that sustainable development practices depend on how each professional group defines the concept. While SMEs, may be regarded to have a minor impact individually towards sustainable development, their collective impact is undoubtedly significant. The need for SME businesses to proactively adopt sustainable management practices is supported as an ideal point of emanation in creating the change desired towards sustainable development (Urban & Naidoo, 2012:146). The degree of proactivity in sustainable practices adoption is related to size of the organisation and with large firms more likely than small firms to adopt (Gomes *et al.*, 2015a:117). There are advantages for small businesses in adopting sustainable development practice which include, benefiting on society and stakeholders patronage, gaining a competitive edge on the market, increase market share and boost shareholder value (Høgevold *et al.*, 2015:431; Gomes *et al.*, 2015a:117).

Researchers have utilised individual dimensions of sustainable development such as environmental (Gonzalez-Benito *et al.*, 2005) and social (Lankoski, 2009; Hull & Rothenberg, 2008), as well as, assessed the integrated impact of all sustainable development dimensions on firm performance (Wagner, 2010; Lopez, Garcia & Rodriguez, 2007; Chang & Kuo, 2008; Goyal, Rahman & Kazmi, 2013:362). Despite numerous studies existing on the dimensions of sustainable development, their influence on firm performance is still not clear (Moneva & Alvarez, 2014:332). In consistency, Adebajo *et al.* (2016:997) and Curkovic and Sroufe (2016:336) assert that there is no consensus with regards to the latent impact of sustainable development practices on the performance of firms.

Studies by Clemens (2006), Murillo and Lozano (2006) and Russo and Tencati (2009) found a significant positive relationship between adoption of sustainable development practices and firm performance amongst SMEs. While, using small and medium Brazilian supermarkets, Marques *et al.*, (2010:249) found a positive relationship between the social sustainability and firm performance. Wang & Sarkis, (2013:871)

allude to a negative relationship between sustainability and firm performance. Some studies, such as Azevedo (2011) and Wu and Pagell (2011) have found a partial positive relationship between sustainable development and firm performance. In this scenario, the studies established that the relationship varied with the type of firm performance measures that were utilised.

As such, this study utilises a multidimensional approach to measuring firm performance. Foremost, most of the studies have not tested all the dimensions of sustainability against firm performance. Instead, they have investigated the relationship between the social and/environmental dimension against the economic dimension as a measure of firm performance. This study will consider economic sustainability as different from firm performance and will measure all the three sustainable development dimensions against the several dimensions of firm performance. Since firm performance is not the same thing as economic sustainability, in the long-term a broader definition of firm performance included sustainable firm performance measures, namely, social performance and environmental performance. Against the backdrop of the above discussion, the following hypotheses are formulated for this thesis:

H_{3a} There is a significant positive relationship between economical sustainability practices and financial performance of SMEs in Limpopo Province.

H_{3b} There is a significant positive relationship between economical sustainability practices and customer satisfaction performance of SMEs in Limpopo Province.

H_{3c} There is a significant positive relationship between economical sustainability practices and employee satisfaction performance of SMEs in Limpopo Province.

H_{3d} There is a significant positive relationship between economical sustainability practices and innovation firm performance of SMEs in Limpopo Province.

H_{3e} There is a significant positive relationship between economical sustainability practices and environmental performance of SMEs in Limpopo Province.

H_{3f} There is a significant positive between relationship economical sustainability practices and social firm performance of SMEs in Limpopo Province.

H_{3g} There is a significant positive relationship between environmental sustainability practices and financial performance of SMEs in Limpopo Province.

- H_{3h} There is a significant positive relationship between environmental sustainability practices and customer satisfaction performance of SMEs in Limpopo Province.
- H_{3i} There is a significant positive relationship between environmental sustainability practices and employee satisfaction performance of SMEs in Limpopo Province.
- H_{3j} There is a significant positive relationship between environmental sustainability practices and innovation firm performance of SMEs in Limpopo Province.
- H_{3k} There is a significant positive relationship between environmental sustainability practices and environmental performance of SMEs in Limpopo Province.
- H_{3l} There is a significant positive relationship between environmental sustainability practices and social firm performance of SMEs in Limpopo Province.
- H_{3m} There is a significant positive relationship between social sustainability practices and financial performance of SMEs in Limpopo Province.
- H_{3n} There is a significant positive relationship between social sustainability practices and customer satisfaction performance of SMEs in Limpopo Province.
- H_{3o} There is a significant positive relationship between social sustainability practices and employee satisfaction performance of SMEs in Limpopo Province.
- H_{3p} There is a significant positive relationship between social sustainability practices and innovation firm performance of SMEs in Limpopo Province.
- H_{3q} There is a significant positive relationship between social sustainability practices and environmental performance of SMEs in Limpopo Province.
- H_{3r} There is a significant positive relationship between social sustainability practices and social firm performance of SMEs in Limpopo Province.

4.4 SUMMARY THE CHAPTER

This chapter provided the conceptual framework which is essential for the current research study. This involved exploring literature pertaining to the proposed research problem and the research gaps which the study intended to solve. Thus, the concepts, conventions, expectations, views and theories that underpin the research were discussed. With the aid of a conceptual model, the diagrammatical representation of the key factors, concepts and variables as well as the presupposed relationships amongst

them was outlined in the chapter. Lastly, the chapter provided a discussion on the hypotheses development at the hand of extensive literature review. Chapter five that follows provides an outline of the research methodology that was utilised in this study.

CHAPTER 5: RESEARCH METHODOLOGY

5.1 INTRODUCTION

The preceding three chapters reviewed the literature behind this research scholarship. The overview of SMEs was provided in chapter two, wherein the primary concerns pertaining to SMEs, their benefits and challenges were outlined. Chapter three presented the theoretical literature framework of the study by providing a discussion of the three constructs underpinning the study. Finally, chapter four provided the conceptual framework and the hypotheses development aspects of the study.

This chapter presents a methodical description and analysis of the research methodology while examining and substantiating the quantitative model within which the study lies to provide a platform for research results and presentation. A research methodology is a component of a research paradigm. Subsequently, research design and plan, the population and sampling techniques are discussed. Furthermore, focus is put on the validity and reliability issues and ethical considerations in order to meet the research integrity stipulations. The chapter concludes with an outline of the limitations of the research study. Section 5.2 below provides a discussion of the research method followed by this study.

5.2 RESEARCH PARADIGM

Paradigms have paramount worth in practical and empirical research because they significantly influence the research design together with the outcomes of the research (Tronvoll, Brown, Gremler and Edvardsson, 2011:563). Consistently, Brennan, Voros & Brady (2011:104) pinpoint that paradigmatic assumptions have direct implications on the ultimate methodology adopted, the assortment of methods, procedures and tools that are regarded as ideal. Furthermore, Brennan *et al.* (2011:104) indicate that paradigmatic assumptions also influence the meanings and conclusions that are attached to the findings or data produced through these procedures.

Basically, a research paradigm is defined as a supreme viewpoint (Burke, 2007:477) under which ideas and actions are configured. Patel (2016:602) defined paradigm as an all-inclusive world-view, a systematic cosmology, with its associate (often unconscious meta-physical) suppositions concerning truth, knowledge, and reality. Tronvoll *et al.* (2011:563) posit that a paradigm relates to the entire arrangement of views, ideals and practices common amongst members of a particular society. Underpinning each research process is how the three fundamental questions regarding ontology, epistemology and methodology are approached in research (Saunders, Lewis & Thornhill, 2012:19). Biedenbach & Müller (2011:84) state that paradigms guide a research study ontologically and epistemologically in deciding upon a research methodology.

A research paradigm, when established, stands as a “set of lenses” before the researcher. The “set of lenses” enables the researcher to regard the fieldwork within prescribed set of assumptions, thereby integrating the abstract value of the paradigm with the pragmatics of carrying a demanding research (Burke, 2007:477). Accordingly, Patel (2016:602) pinpoints that there is a significant difference amongst paradigms and researchers should avoid combining them. Tronvoll *et al.* (2011:563) argue that, selecting a research paradigm should precede making a choice on the research methodology, because the former ought to influence the methodological decisions in research. Basically, ontology and epistemology are regarded as the beginning point of the research process (Johnston, 2014:209).

Five main classes of paradigms in business management have been identified by Brennan *et al.* (2011:103) namely, positivism, post-positivism, criticalism, constructivism and participatory. Patel (2016:602) pinpoints three traditional categories of paradigms which are objectivism, subjectivism and criticalism. Against the backdrop of such an extensive spectrum of research paradigms, the study at hand is fostered within the premises of the positivism paradigm. Herein, the positivism paradigm is defined as a

paradigm whereby facts get to be clearly definite and results can be measured (Burke, 2007:480).

5.2.1 Research Ontology

The ontological question asks about the nature of “reality” as well as the existence of what is to be known (Brennan *et al.*, 2011:103). Ontology pertains to what is reality and how existence can be understood. Bryman and Bell (2011:20) argue that questions of social ontology focus on the manner of social objects. The concept of ontology is closely intertwined with the concept of epistemology. While epistemology is concerned with knowing - ontology focuses on the aspect of being (Cameron, 2009). Furthermore, Cameron (2009) posits that, ontology is a composite term emanating from the Greek language, with words ‘*onto*’ meaning being and ‘*logo*’ referring to study. Dudovskiy (2016) argues that ontology is a mechanism of belief that reveals the researcher’s construal pertaining to what makes up a fact.

Simply put, ontology is concerned with the principal problem of whether social entities should be regarded as objective or subjective (Blaikie, 2010:54). Objectivism (or positivism) and subjectivism are basically the two significant aspects of ontology. Ontologically, the positivism paradigm regards knowledge as facts that are based on rigorous theoretical review. Positivism argues that facts are facts. According to Johnston (2014:210) positivism considers the world as outside and as such should be ascertained or measured utilising objective mechanisms. Objectivism presupposes the condition that social entities are in existence externally to the social actors concerned with the reality being searched. In other words, the objectivism ontological position holds that social phenomena and their meanings are of the existence that is separate from that of social actors (Saunders *et al.*, 2012).

On the contrary, the interpretivist paradigm regards the world as subjective to the interpretation of the people as the social actors. Subjectivism (also regarded as

constructionism or interpretivism), considers that social phenomena emanates from perceptions and subsequent activities of the social actors involved in their existence. According to Bryman and Bell (2011:21), constructionism can be formally viewed as “ontological viewpoint which stresses that social phenomena and their meanings are continually being accomplished by social actors”. The constructionism ontological position contradicts the position that categories such as organisation and culture are presupposed and therefore considers social actors as outside realities that play no influential role.

Furthermore, Bryman and Bell (2012:27) state that there is a strong relationship between epistemological underpinnings and the subsequent ontological position. The study at hand utilised the objectivism ontological position. The main rationale for selecting this viewpoint is that the knowledge required is about sustainable development and isomorphism is regarded as an external social reality which needs to be considered with as an objective reality. Furthermore, the use of scientific and statistical models and procedures is regarded vital in searching for this truth, thus, the objectivism ontological position is considered to be mostly pertinent in this study. In this regard, the study utilises quantitative research strategies to obtain statistically justifiable knowledge. Establishing one’s ontological position is regarded as the beginning of the research process and vital to the selection of the research design.

5.2.2 Research Epistemology

Epistemologically, a paradigm addresses the manner of the relationship between the researcher and knowledge (Brennan *et al.*, 2011:103). Bryman and Bell (2011:12) describe epistemology as the part of the research that addresses the question of what is (or should be) deemed to be tolerable knowledge within a discipline. Simply put, Tennis (2008:102) defines epistemology as how researchers get to know. Bryman and Bell (2011:12) further elucidate that, as far as epistemology is concerned, the major concern is on the principles that should be utilised in studying the social world. Dudovskiy

(2016:1) indicates that epistemology is apprehensive of the prospects, nature, origins and constraints of knowledge in a particular discipline of study.

Tennis (2008:102) cites various epistemic stances that researchers can occupy in the quest to obtain knowledge. These epistemic stances have a significant influence on the kind of knowledge researchers obtain. The famous epistemic stances that researchers can occupy include pragmatism, positivism, operationalist, referential, instrumentalist, empiric, rationalistic, realism, etc. Epistemic stances influence how knowledge is obtained because they posit a systematic consideration of reality, the knowledge about reality, and the meaning attached to the reality (Tennis, 2008:103). Herein, the research on hand is conducted under the positivism epistemic stance.

To the contrary, researchers can utilise the interpretivism epistemological approach. Herein, the interpretivists argue that it is impossible to understand the social world through the utilisation of research principles obtained from natural sciences. Instead, the interpretivism approach holds that research in social sciences should be conducted using an unrelated research philosophy (Blumberg *et al.*, 2011:17). For interpretivists, this argument emanates from the premise that the subjects being researched in social sciences (human beings and organisations) are significantly different from those of natural sciences (Bryman & Bell, 2011:14). According to Blumberg, Cooper and Schindler (2011:17) interpretivism has three elementary principles, namely: the social domain is created and the meaning is subjectively created by the human beings, the researcher is included in the observation being made, and research is propelled by interests.

However, interpretivism was disregarded in this study because of its primary demerits. The interpretivism has the major problem of generalisability of findings. This becomes a major concern considering the incessant changes of the business world (Blumberg *et al.*, 2011:17). Furthermore, the collection of data in interpretivism can be challenging and time consuming and the researcher is required to be part of what is being

researched (Ormston, Spencer, Barnard & Snape, 2014:12). Apart from that, in the business research, much research has been conducted at the background of the positivism approach. The following table depicts the differences between these two epistemological approaches.

Table 5.1 Epistemological Approaches: Positivism versus Interpretivism

Criteria	Positivism	Interpretivism
Basic Principles View of the world	The world is external and objective	The world is socially constructed and subjective
Involvement of researcher	Researcher is free	Researcher is part of what is observed and sometimes even actively collaborates
Researcher's influence	Research is value-free	Research is driven by human interest
Assumptions Item to be observed	Objective, often quantitative, facts	Subjective interpretations of meanings
How is knowledge developed?	Reducing phenomena to simple elements representing general laws	Taking a broad and total view of phenomena to detect explanations beyond the current knowledge
Advantages	Economical in data collection	Facilitates understanding of how and why
	Opportunity for the researcher to maintain control of the research process	Good at understanding social processes
	Easily comparable data	Allows for complexity and contextual factors
	Clear theoretical focus for the research from the outset	Enables the researcher to be alive to changes which occur
Disadvantages	Inadequate at understanding social processes	Data analysis is challenging can be time consuming
	Inflexible-direction often cannot be changed once data collection has started	Data collection can be time consuming
	Often does not discover the rationale or meanings of people	Researcher has to live with the uncertainty

Source: Blumberg *et al.* (2011:18)

The positivism research paradigm was chosen because it utilises formal propositions, quantifiable measurement of variables, hypotheses testing, and inferences concerning a phenomenon taken from a sample that is representative of a particular population. Positivism stresses the value of utilising or copying methods that are used in natural sciences (Bryman & Bell, 2011a:12). Furthermore, positivistic research studies (as in this study) often are steered by theory and hold that reality is objectively provided and is capable of providing guidelines for how firms, workers and customers should behave (Tronvoll *et al.*, 2011:568). Positivists seek to attest theory, with the quest to enhance the extrapolative understanding of occurrences and subjects of research (Burke, 2007:480).

In addition, the positivism epistemological position supports the study at hand emanating from the fact that the social world is regarded to exist externally and is considered objectively (Blumberg *et al.*, 2011:17). The researcher further settled for the positivist's position because it provides independence to the researcher when conducting the research. In this case, the researcher will occupy the part of an objective analyst. According to Bryman and Bell (2011:12) positivism utilises both deductive and inductive approaches to research and it focuses on the phenomena that are observable by senses which can actually be verified as objects and sources of knowledge. As indicated in table 5.1 above, positivism was also opted for because it offers advantages such as easily comparable data, clear theoretical focus from the onset, economic data collection, researcher control over the research process and so forth.

Nonetheless, the positivism epistemological approach is primarily criticised for its failure to discover meanings behind the responses as well as lack of capacity to understand social processes. Furthermore, the opponents of positivism argue that there is inflexibility in terms of the research direction which often cannot be changed once data collection has started (Blumberg *et al.*, 2011:19). However, the shortcomings of interpretivism outweighed those of positivism in the context of the research at hand considering the research problem is of wider and broader nature, a large sample was

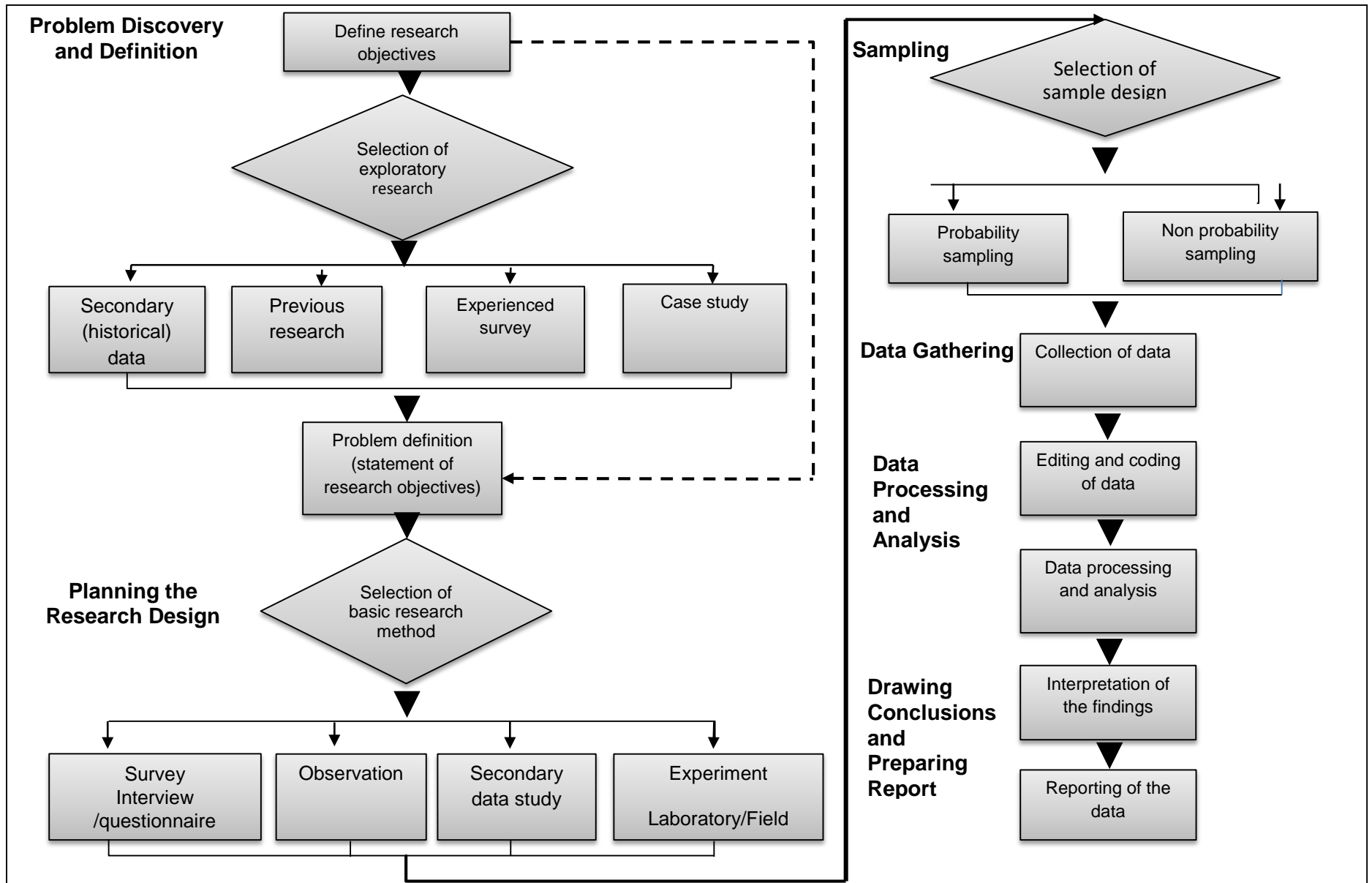
needed to attain reliable conclusions. Also, the research was concerned with the attesting of theory more than unearthing new theory (which is often a concern for interpretivism). The following sections discuss the methodology that was used.

5.3 THE RESEARCH METHODOLOGY

Finally, the methodological question addresses the manner in which the researcher goes about seeking for what is to be known (Brennan *et al.*, 2011:103). It refers to the tools and procedures the researcher utilises to go about seeking the information. As stated above this research falls in the premises of objective ontology and positivism epistemology, both which utilise scientific, statistical and systematic tools of gathering knowledge. The chapter at hand is buttressed by the literature from the preceding chapters and provides an analytical structure to be implemented for the operationalisation of the measurements of the study. By utilising systematically and scientifically proven research procedures, decision-making may become more accurate as the results generated from such research designs can be validated, tested and generalised. Fig 5.1 below provides the research process steps followed by this study.

The business research process encompasses a sequence of phases that methodically explore a challenge or a prospect facing a business. The sequence of steps involved in the business research process are as follows; problem/opportunity identification and formulation, planning a research design, selecting a research method, selecting the sampling procedure, data collection, evaluating the data and preparing the research report for presentation. The steps in the research process are discussed below in relation to the study at hand.

Figure 5.1 Steps in the research process



Source: Zikmund, Babin, Carr & Griffin (2013:61)

5.3.1 Problem Identification and Definition

A business problem refers to a situation that represents high possibilities of particular significant adverse consequences towards the firm. The decisions pertaining to the research methodology pursued in research project highly depend on the nature of the research problem and the set objectives (Churchill, Brown & Suter, 2010:37). It is essential for the researcher to possess a perfect perspective of the research problem as this enables for an effective and streamlined research (Sreejesh, Mohapatra & Anusree, 2014:14). Apparently, there is exceeding unpredictability of the environment due to ever-increasing macro environmental elements in the contemporary business environments. As such, there is a dire need for businesses to incessantly analyse their relative environments and ascertain the problems or opportunities that should be addressed for the firms to have sustainable competitiveness within the market (Sreejesh *et al.*, 2014:13).

The statement of the problem for this study was provided in Section 1.3 of chapter one. The main problem question underlying this study is on how sustainable development practices by SMEs are influenced by isomorphic pressures as well as how firm performance is influenced by the adoption and practice of sustainable development? In order to clearly investigate the problem underpinning this study specific research objectives and hypotheses associated with the problem statement were articulated. Sub-section 5.3.2 below outlines the objectives and hypotheses postulated for this research study.

5.3.2 Research Objectives and Hypotheses Formulation

When the problem has been clearly defined, the formulation of the research objectives and hypotheses may then be executed. Objectives serve the purposes of acting as guidelines for the various steps of the research process. The purpose of the research has to be thoroughly analysed in order to devise concise and precise objectives

(Cooper & Schindler, 2011:353; Sreejesh *et al.*, 2014:15). Section 1.5 in chapter one highlights the objectives guiding the research study as follows:

- To ascertain the sustainable development practices of SMEs in Limpopo Province.
- To investigate the role that isomorphism plays towards the sustainable development practices in Limpopo Province.
- To examine whether sustainable development practices have a positive impact on SMEs performance in Limpopo Province.
- To provide recommendations on the influence of isomorphism on the sustainable development practices of SMEs in Limpopo Province.

The research objectives are simultaneously formulated with the research hypotheses. These hypotheses are a reflection of the research objectives. Hypotheses are unproven propositions or statements regarding a given phenomenon of interest to the researcher (Cooper & Schindler, 2011:456). Section 1.6 presents the primary hypotheses of this study. From there on, the specific hypotheses to be tested were developed. In line with section 1.6 in chapter one, the following hypotheses were formulated.

H1 There is a significant positive relationship between perceived institutional isomorphism and sustainability practices of SMEs in South Africa.

H2 There is a significant positive relationship between perceived competitive isomorphism and sustainability practices of SMEs in South Africa.

H3 There is a significant positive relationship between perceived sustainability practices and firm performance of SMEs in South Africa.

After the formulation of the research objectives and hypotheses, the selection of the research design follows. Section 5.3.3 below provides the selection of the research design.

5.3.3 Research Design

A research design outlines the methods and procedures for collecting and analysing the needed information. A research design provides insights for solving the research problem (Cooper & Schindler, 2008:140). In addition, a research design offers the framework that guides the utilisation of a research method and the analysis of the resultant data (Bryman & Bell, 2011:100). The research design determines how the researcher will exhibit causal associations between the variables being researched (Cooper & Schindler, 2008:141). Through the research design, the way the researcher understands and describes behaviours and their meaning, can be attached to that behaviour in the given social context. Bryman & Bell (2011:100) further elucidates that the research design also determines how researchers describe social phenomena, their associations and transformations over time.

The selection of a research design stipulates choices pertaining to the value placed upon the various dimensions of the research process (Ghuri & Grønhaug, 2010:54). Also, research designs ascertain the extent to which results are generalisable to the whole population as individuals or organisations other than those participating in the research (Bryman & Bell, 2011:100). There are a myriad of research designs and their categorisation is non-harmonious. Cooper and Schindler (2008:141) indicate that there are various dimensions that can be utilised to classify research designs.

According to Bryman & Bell (2011:100), five research designs exist, namely, experimental, cross-sectional, longitudinal, case study and comparative. Cooper and Schindler (2008:140) cite that research designs can be classified as exploratory, causal and descriptive. Sachdeva (2013:95) and Blumberg *et al.* (2011:148) note that research designs can either be exploratory, formal, monitoring, communication, experimental, *ex-post facto*, descriptive, causal, cross-sectional, longitudinal case study, statistical study, field setting, laboratory research, simulation, actual routine, modified routine and many others. Whereas, qualitative, quantitative and a combination of the two which is termed

methodological triangulation are also used as the basic three types of research design (Salkind, 2012:213; Cooper & Schindler, 2008:146).

5.3.3.1 Descriptive research

In management research, the commonly identified types of research designs are exploratory, descriptive and causal (Cooper & Schindler, 2008:140; Ghauri & Grønhaug, 2010:56-57; Zikmund *et al.*, 2013:52; Blumberg *et al.*, 2011:150). An exploratory research is conducted in pursuit of a problem or circumstance so as to provide insights and understanding, chiefly in cases where the problem is ambiguous or the subject is original to researchers (Burns & Burns, 2008:82). Significantly, conducting explorative research potentially results in a more thorough comprehension of the phenomena of interest and aids in advancing knowledge through enhanced theory building (Sekaran & Bougie, 2009:103). Explorative research can essentially be utilised to articulate or precisely define a problem, to formulate hypotheses, to separate vital variables and their associations, to establish alternative courses of action, to advance insights on developing an approach to the problem or to ascertain main issues for further research (Cooper & Schindler, 2008:146).

On the other hand, the purpose of causal research is to determine whether one variable result in a particular response in another variable as well as ascertaining the manner of the association between the causal variable and the effect projected (Burns & Burns, 2008:83). The independent variable causes a variation on the dependent variable. According to Cooper and Schindler (2008:153), for perfect standards of causality, it is required that one variable get to cause another with no any other variable having effects on causality. In causal researches, the researcher deliberately manipulates specific variables so as to ascertain the impact of the manipulation on the dependent variable, thereof. The extent of manipulation varies depending on whether the manipulation is happening in the laboratory or in the natural setting (Sekaran & Bougie, 2009:113).

Descriptive research is concerned with describing a population with respect to important variables. Descriptive research is relevant to the research study where the researcher already knows the underlying relationships of variables surrounding the problem (Cooper & Schindler, 2008:151). Ghauri and Grønhaug (2010:56) cite that critical to descriptive research is that the structure, clear instructions and procedures are utilised. Descriptive research describes the characteristics of certain groups, entities, income groups or genders (Sekaran & Bougie, 2009:105). Descriptive research can be conducted in two ways, namely, longitudinal or cross-sectional (Cooper & Schindler, 2008:45). Sekaran and Bougie (2009:119) point out that, longitudinal studies involve the studying of people or phenomena on several occasions over time so as to solve a research question. Of essence is that in a longitudinal study, a fixed sample of element (a panel) that is measured repeatedly is utilised. Cross-sectional studies, on the other hand, are a type of research that involves the collection of information from any given sample population elements only once or at a snapshot. As such, cross sectional studies are also called one-shot studies.

Against this backdrop, this study is of a descriptive and cross-sectional nature. Longitudinal studies demand time, effort and cost more than cross-sectional studies (Sekaran & Bougie, 2009:120). As such, due to time and budgetary constraints this study utilised the cross-sectional approach whereby data was gathered from the respondents at one point through the survey technique. A cross-sectional design was utilised in this case because certain benefits of longitudinal studies can also be reaped in cross-sectional studies. For instance, past and future information about the respondents can be obtained through adept questioning on past outlooks, history and future anticipations (Sachdeva, 2013:96; Cooper & Schindler, 2008:144).

Adopting descriptive research aids in determining the proportion of people who behave in a certain way. Blumberg *et al.*, (2011:152), cite that descriptive research answers questions: who, what, when, where and how pertaining to a topic? Thus, it becomes relatively easy to make predictions about the adoption behaviour when employing

descriptive methods. Thus, through hypotheses, descriptive methods assist in determining relationships between variables. In this instance, it enabled conclusions to be drawn regarding the relationship between isomorphism, sustainability and firm performance (Bryman & Bell, 2011:107).

5.3.3.2 Research approach: Qualitative versus Quantitative

As far as qualitative, quantitative and/or a combination of the two which is termed methodological triangulation is concerned, the current research is of a quantitative nature (Salkind, 2012:213). Qualitative research is focused on disclosing ideas from the inner thoughts and emotions of respondents (Hair, Wolfinbarger, Ortinau & Bush, 2008:82). Quantitative research seeks to provide numerical and statistical compilations of specific behaviours, opinions and attitudes as pertaining to the research objectives (Bradley, 2007:276). Quantitative research is an investigation of phenomena whose findings are mainly the product of statistical summary and analysis (Zikmund *et al.*, 2013:134). Theory can be measured numerically and analysed statistically, thus, inferences about the target population based on the results from the sample surveyed can be made (Shafeek, 2009:79).

Quantitative research is beneficial in that, consumer behaviours and attitudes can be measured and results can be generalised to the larger population. Moreover, quantitative research is useful in tests of reliability and validity and in the verification of the stated hypotheses (Shammout, 2007:90). More unprejudiced principles through the use of logical and highly organised methods of determining relationships are catered for in quantitative research (Neill, 2007:4). Quantitative research employs mathematical analysis for the measurement of, for instance, market size, customer satisfaction, and business shares (Mishra, 2015:30). Quantitative research aids in more accurate predictions about relationships between market variables and behaviours in order to gain more insights into these relationships (Hair *et al.*, 2008:82). Quantitative research further has a goal of validating relationships and formulating and testing hypotheses.

Subsequent to the research design selection, the research method may then be selected to compliment the research design. Section 5.3.4 below highlights the research methods available in research projects.

5.3.4 Research Technique

Three primary data collection methods have been noted, namely, observations, experiments and surveys (Mishra, 2015:164). This research study follows the survey method. According to Zikmund *et al.* (2013:185) a survey is defined as a method of gathering primary data through communicating with a representative section of the population. Consistently, Bhattacharyya (2006:55) defines a survey as a data gathering technique conducted through questioning people who are presumed to have the required information. Surveys comprise interviews or communications conducted through either face to face, online, telephone surveys, mail, mobile phones, or self-administered (Zikmund *et al.*, 2013:185; Blumberg *et al.*, 2011:208).

This method is also commonly regarded as sample surveying, referring to the fact that a sample of respondents is selected from the population. Surveys can be categorised into two broad classes, namely, the questionnaire and the interview (Sachdeva, 2013:121). In this study, a self-administered questionnaire in the form of a standardised measuring instrument was used. Self-administered questionnaires do not need the interviewer to be present. Zikmund *et al.* (2013:217) posit that self-administered questionnaires can either be printed or electronic. Paper questionnaires can be distributed through mail, in-person drop-off, inserts or through fax. Electronically, self-administered questionnaires can be completed through e-mails, internet website, interactive kiosks, or through mobile phones. This study utilised in-person drop off and electronic mail (e-mail) in distributing the questionnaires.

The drop-off method involves the interviewer travelling to the site of the interviewee which is a home or business and drop-off the questionnaire which will be collected later either in person or through the mail (Sachdeva, 2013:123). It is an economical and effective method because it enhances the response rate (Zikmund *et al.*, 2013:223). For respondents who could be reached through the e-mail the questionnaires were sent to them through the e-mail. The e-mail method provides numerous advantages amongst others, it provides rapid distribution and fast response time. This method also provides the respondents more anonymity and the ability to be more candid in their responses (Zikmund *et al.*, 2013:223).

Overall, the survey method was chosen because it provides great versatility (Blumberg *et al.*, 2011:207). Considering the large sample size applied in this study, the survey method was regarded to be the most appropriate because it is fast, cheap, efficient and can be administered to big samples (Shammout, 2007:91; Zikmund *et al.*, 2013:186). Furthermore, the sample survey technique was utilised because the technique is designed to operate with the respondents' perceptions, views and feelings and gather data on belief, attitudes and motives (Shammout, 2007:91; Blumberg *et al.*, 2011:207).

Despite the above benefits the survey method faces disadvantages in that the researcher interacts directly with the respondent or indirectly through the questionnaire. As a result, the surveys tend to be obstructive in nature as there is disturbance of the respondents during the data gathering procedure (Zikmund *et al.*, 2013:67). Also, in the case of self-administered questionnaires there is a high potential of respondents misunderstanding the questions (Shammout, 2007:91). Surveys are also prone to respondents' biases and prejudices which may affect the findings and conclusions of the research (Sachdeva, 2013:123).

Nonetheless, the survey method was still deemed instrumental in this study as it is particularly regarded essential when the researcher is not interested, or has minimum control upon behavioural incidents. Also, the survey method was considered relevant as it ensures an accurate way of evaluating data about the sample, and enables the

researcher to reach conclusions about the findings from a sample of responses to a population (Shammout, 2007:91). Self-administered questionnaires were selected to gather primary data for the research. The subsequent section 5.3.5 focuses on the design of the data collection instrument.

5.3.5 Designing the Research Instrument

Structured questionnaires were employed in this research study. As a research instrument, structured questionnaires utilise predetermined questions to gather the data. In line with the large volume of data that was required for the study, questionnaires were regarded to be highly effective (Shammout, 2007:107). Self-administered questionnaires personally and electronically (e-mail) distributed were utilised. The two techniques have been chosen because of their convenience and effectiveness in communication. The questionnaire primarily constituting 5-point Likert scale type of questions was operationalised based on former works. Likert scales are deemed to be highly reliable and resulting large quantities of data as compared to other forms of scales. They are also relatively quick and easier to formulate (Cooper & Schindler, 2008:310). Bradley (2007:209) further posits that Likert scales have a significant advantage in that they are free from bias.

A self-administered questionnaire was used in this study having been finalised following an extensive literature review process (See Annexure 1, page 283). The questionnaire comprised of four sections: A, B, C and D. Section A measured demographic details and the organisations' information. The remaining sections B, C and D, respectively, measured the research constructs, namely, sustainable development, isomorphism and firm performance. In total, a sum of 65 items were utilised to measure the research model. The discussion below focuses on the operationalisation of the constructs. Table 5.2 below presents the scoring of each construct in the questionnaire.

Table 5.2 Summation of Items in the Model

Constructs	Number of Items	Sources
Sustainable development	21 items	Hogevold <i>et al.</i> (2015)
Environmental sustainability	8 items	
Economic sustainability	6 items	
Social sustainability	7 items	
Isomorphism	19 items	Lin & Sheu (2012); Liu <i>et al.</i> (2010)
Coercive pressures	4 items	
Normative pressures	5 items	
Mimetic pressures	5 items	
Competitive pressures	5 items	
Firm performance	25 items	Ghouri <i>et al.</i> (2011), Liozu & Hinterhuber (2013:599)
Financial performance	5 items	
Customer satisfaction	4 items	
Employee satisfaction	4 items	
Innovation performance	4 items	
Environmental performance	4 items	
Social performance	4 items	

5.3.5.1 Operationalisation of sustainable development constructs

Section B of the questionnaire centred on questions on sustainable development. According to Zhou, Keivani & Kurul (2013:234) sustainability is a complicated and multidimensional concept that entails a wider array of concepts from natural conversation and energy utilisation, to stakeholder satisfaction and financial outcomes.

Consistently, Gualandris, Golini and Kalchschmidt (2014:259) state that sustainable development is a multidimensional construct which seldom can be measured directly, but, rather through a set of indicators. Gualandris *et al.* (2014:259) further state that most of sustainability indicators in latent research focus on sustainable accounting at company level.

Commonly, when measuring sustainable development researchers choose and enumerate indicators that pertain to each of the dimensions of sustainable development, namely, economic, environmental and social (Zhou *et al.*, 2013:234). These three dimensions of sustainable development have been regarded in many studies as crucial measurement areas for firms that need to be involved in sustainable practices (Adebanjo *et al.*, 2016:997). Sustainability indicators can be categorised into process based or product based (Gualandris *et al.*, 2014:259). In this case, process based indicators are regarded as sustainability practices or antecedents. Whereas, product based indicators refer to the sustainability performances or outcomes.

Gualandris *et al.* (2014:259) state that sustainability indicators can be derived from any area of sustainability such as environmental aspects (biodiversity, air and water pollution, energy, recycling), working conditions issues (health and safety, training, education) as well as human rights matters (e.g. child labour, discrimination). To measure sustainable development, scales developed by Hogevoold *et al.* (2015), Gualandris *et al.* (2014), Adebanjo *et al.* (2016), and Venkatraman & Nayak (2015) were adopted in this study. The Cronbach alpha test for reliability in these scales ranged between 0.66 and 0.68, which is satisfactory as they were greater than the threshold of 0.6 and acceptable. Furthermore, some items were developed for this study as indicated in table 5.3 below.

Table 5.3 Operationalisation of Sustainable Development Construct

Original themes/items	Modified items	Sources
<i>Environmental Sustainability</i>		
Our business prioritises environmentally sound products and processes	Our sustainable business practices focus on environmental issues	Gualandris <i>et al.</i> (2014); Høgevold <i>et al.</i> (2015)
Our sustainable development practices make the most efficient use of the resources available in the environment.	Our sustainable business practices make the most efficient use of the resources available in the environment	Høgevold <i>et al.</i> (2015)
Indicate the effort put in the last 3 years in relation to environmental certification such as EMAs.	Our sustainable business practices are based upon environmental monitoring	Adebanjo <i>et al.</i> (2016); Høgevold <i>et al.</i> (2015)
Indicate the effort put in the last 3 years in relation to pollution emission reduction programmes	Our sustainable business practices recycle, reuse or reduce waste	Adebanjo <i>et al.</i> (2016)
Indicate the effort put in the last 3 years in relation to energy and water consumption reduction programmes	Our sustainable business practices are increasing energy efficiency	Adebanjo <i>et al.</i> (2016) Venkatraman & Nayak (2015)
To what extent is use of renewable energy important for your business?	Our sustainable business practices emphasise on use of renewable energy	Venkatraman & Nayak, (2015)
To what extent is use of reduction/replacement of hazardous chemicals or materials (e.g. substituting hazardous chemicals with less hazardous alternatives)	Our sustainable business practices make use of reduction/replacement of hazardous chemicals or materials (e.g. substituting hazardous chemicals with less hazardous alternatives).	Venkatraman & Nayak, (2015)
Indicate the effort put in the last 3 years in relation to environmental certification such as EMAs.	Our sustainable business practices adhere to Environmental Protection Agency regulations on effluents/emissions/waste	Adebanjo <i>et al.</i> (2016) Venkatraman & Nayak (2015)
<i>Economic sustainability</i>		
Our sustainable development practices rest on economic	Our sustainable development practices rest on economic	Høgevold <i>et al.</i> (2015)

considerations.	considerations such as efficiency and productivity	
Our sustainable development practices focus on survival in the marketplace.	Our sustainable development practices focus on survival in the marketplace.	Høgevold <i>et al.</i> (2015)
Our sustainable development practices saved money to the company at the beginning of implementation.	Our sustainable development practices save money for the firm.	Høgevold <i>et al.</i> (2015)
Indicate to what extent your business meet tax obligations.	Our sustainable development practices meet tax obligations.	Venkatraman & Nayak (2015)
Not applicable	Our sustainable development practices provide products and services that are important for the community	Not applicable
Not applicable	Our sustainable development practices focus on long-term profitability even if it means losses in the short-term	Not applicable
Social sustainability		
Our sustainable development practices take current activities in the community into account.	Our sustainable development practices take current activities in the community into account.	Høgevold <i>et al.</i> (2015)
Our sustainable development practices consider the social well-being of society as a whole.	Our sustainable development practices consider the social well-being of society.	Høgevold <i>et al.</i> (2015)
Indicate to what extent your business provides entitlements to workers.	Our sustainable business practices provide entitlements to workers.	Venkatraman & Nayak, (2015)
Indicate to what extent your business promote women to senior management positions	Our sustainable business practices promote women to senior management positions	Venkatraman & Nayak (2015)

Our sustainable development practices focus on social (i.e. relational or societal) aspects.	Our sustainable business practices focus on equity and safety of the community.	Høgevold <i>et al.</i> (2015)
Not applicable	Our sustainable business practices focus on improving the general education level	Not applicable
Not applicable	Our sustainable business practices promote individual rights both civil and human rights	Not applicable

5.3.5.2 Operationalisation of isomorphism constructs

Section C of the questionnaire measured the isomorphic pressures in the study. Both competitive and institutional isomorphism constituted this section. Empirical literature that contains isomorphism items is very limited. The majority of authors have focused on providing conceptual literature concerning isomorphism. Furthermore, substantive research has been conducted utilising the qualitative approach. As such, the operationalisation of isomorphism is done utilising the theoretical literature and qualitative researches conducted.

To measure institutional isomorphism scales developed by Lin & Sheu (2012) and Liu *et al.* (2010) was adopted for this study. Both scales had Cronbach alpha test of reliability which exceeded 0.7 and is deemed good. Furthermore, the scales are similar to those utilised by Liang, Saraf, Hu & Xue (2007), Liu *et al.* (2010) and Chen (2013). According to Chen (2013:53), these scales were formerly used in the study of internet banking, electronic supply chain management and ERP. Chen (2013) used these institutional isomorphic measures to measure the pressures that nursing facilities experience due to government regulations in reimbursement of Medicare and Medicaid requirements in the United States. However, no former scales could be found that related to competitive isomorphism and as such all the items, herein, were developed from the theoretical

literature. Table 5.4 below shows the constitutes of the isomorphism scale and their sources.

Table 5.4 Operationalisation of Isomorphism Construct

Original themes/items	Modified items	Sources
Coercive Pressures		
Our main suppliers that matter to us believe that we should follow government regulations	....our main customers that matter to us believe that we should use sustainable business practices.	Liang <i>et al.</i> (2007); Liu <i>et al.</i> (2010); Chen (2013)
Our main customers expect that we should implement green certification.	....we may not retain our important customers without sustainable business practices.	Lin & Sheu (2012); Liu <i>et al.</i> (2010)
Our main suppliers believe that we should use green certification.	....our suppliers that matter to us believe that we should use sustainable business practices.	Lin & Sheu (2012) Liu <i>et al.</i> (2010)
The industry association requires our facility to follow government regulations	.....there are rules and regulations that enforce us to use sustainable business practices.	Liang <i>et al.</i> (2007); Liu <i>et al.</i> (2010); Chen (2013)
Normative Pressures		
Green vendor certification has been widely adopted by our suppliers currently.	....sustainable business practices have been widely adopted by our suppliers currently	Lin & Sheu (2012) Liu <i>et al.</i> (2010)
Green vendor certification has been widely adopted by our customers currently.	....sustainable business practices are widely adopted by our customers currently	Lin & Sheu (2012) Liu <i>et al.</i> (2010)
eSCM has been widely adopted by our competitors currently.	....sustainable business practices are widely adopted by our competitors currently	Liu <i>et al.</i> (2010)
Not applicable	....our employees consider sustainability as part of their	Not applicable

	professionalism.	
Our facility provides continuing training for our employees	...sustainable practices is provided to us as part of training in our industry	Liang <i>et al.</i> (2007); Liu <i>et al.</i> (2010); Chen (2013)
Mimetic Pressures		
Our main competitors that have adopted green vendor certification benefited greatly.	...our main competitors that have used sustainable development benefited greatly.	Lin & Sheu (2012)
Our main competitors who have adopted government policies are favourably perceived by customers	...our main competitors that use sustainable development are perceived favourably by customers.	Liang <i>et al.</i> (2007); Liu <i>et al.</i> (2010); Chen (2013)
Our main competitors who have adopted government policies are more competitive	...our main competitors that use sustainable development are more competitive.	Liang <i>et al.</i> (2007); Liu <i>et al.</i> (2010); Chen (2013)
Not applicable	...we employ workers from competitors that are successful in sustainable development.	Not applicable
Not applicable	...we use the same consultants as our main competitors in sustainable development.	Not applicable
Competitive pressures		
Not applicable	...we want to reduce production costs compared to our competitors.	Not applicable
Not applicable	...we want to gain a competitive advantage over our competitors.	Not applicable
Not applicable	... we want to increase the organisation's efficiency more than our competitors.	Not applicable

Not applicable	... we want to increase our share in the market over our competitors.	Not applicable
Not applicable	... we want to increase our survival prospects in the market.	Not applicable

5.3.5.3 Operationalisation of firm performance constructs

Finally, section D of the questionnaire focused on the business performance construct. The research utilised subjective measures of business performance instead of objective measures. According to Salavou and Avlonitis (2008:974), some studies utilise the objective measures in strategy researches. However, when using objective measures, for firm performance, researchers face challenges because the information is hard to find, as management are unwilling to publicise their financial information (Matinez-Conesa *et al.*, 2017:2377). Eventually, more and more, researchers rely on subjective measures, despite of the application of subjective measures being questioned in terms of their validity. Notwithstanding this argument, numerous authors argue that there is consistence and positive correlation between subjective and objective measures of firm performance (see McDermott & Prajogo, 2012:224; Salavou & Avlonitis, 2008:974; Santos & Brito, 2012:97; Pérez-Cabañero *et al.*, 2012:129).

Firm performance has been measured using subjectively through Likert-like scaling whereby top management perceptions are assessed (Selvarajan *et al.*, 2007:11). Subjective measures have the potential to provide additional opportunities for assessing several dimensions of firm performance, and relating them with rivals or former performance outcomes (Shirokova, Bogatyreva, Beliaeva and Puffer, 2016:711). Previous studies show that firm performance can be measured as the mean of a respondent's rating of the selected business constructs chosen for the study (Liozu & Hinterhuber, 2013:599). According to Liozu and Hinterhuber (2013:599), hard financial data from SMEs is prone to be biased due to managerial manipulation because of corporate and personal tax causes.

In this study, firm performance was ascertained by requesting respondents to indicate their firms' relative performance over the past three years based on six various dimensions. Firstly, the utilisation of subjective performance measures in this case is supported by the fact that most firms in this study are from different geographic locations and industries. As such, a multidimensional measure that utilised perceptual firm performance enabled assessments amongst firms and perspectives, i.e. industries, time horizons, and economic conditions (Liozu & Hinterhuber, 2013:599). A study by Kumar *et al.* (2011) established a high correlation (0,8) between subjective and objective data on firm performance, thus, enhancing their validity. Finally, subjective performance measures have been broadly utilised in studies on business strategy (Galbreath & Galvin, 2008; Gruber, Florian, Brettel, & Hungeling, 2010; Lau, 2011; Ortega, 2010).

When using subjective perspective, performance measures such as firm's sales growth, profitability, cash flow as well as market share, can be compared against the competitors by simply indicating on a five point Likert scale ranging from "excellent" to "poor" or from "very poor" to "outstanding (Liozu & Hinterhuber, 2013:599). The dimensions that were used in this study are financial performance, customer satisfaction, employees' satisfaction, innovation performance, environmental performance and social performance. Perceptions of the respondents on sales turnover, profit and sales growth constituted financial measures. Whereas, perceptions of SME owner/managers on the performance of their firms with regards to customer satisfaction, employee satisfaction, innovation, environment and social, were utilised as non-financial measures.

These dimensions were measured on a scale ranging from 1 (significant decline) to 5 (significant increase). To measure firm performance, scales by Ghouri *et al.* (2011), Wang (2016), Martinez-Conesa *et al.* (2017), Santos & Brito (2012) as well as Venkatraman & Nayak (2015) were adopted for this study. Some of the items were also

originally developed for this study. Table 5.5 below presents the items used on firm performance and their specific sources, as well as, the adaptation, if any.

Table 5.5 Operationalisation of Firm Performance Construct

Constructs	Modified items	Sources
<i>Financial Performance</i>		
Average profitability of our company is better than that of key competitors.	How would you describe the performance of your business in the past three years in terms of net revenue?	Wang (2016)
Profit growth of our company is better than that of key competitors.	How would you describe the performance of your business in the past three years in terms of gross profit?	Wang (2016)
Sales growth of our company is better than that of key competitors.	How would you describe the performance of your business in the past three years in terms of sales growth relative to competitors?	Wang (2016)
Number of employees growth	How would you describe the performance of your business in the past three years in terms of number of employees?	Santos & Brito (2012)
Market share growth	How would you describe the	Santos & Brito (2012)

	performance of your business in the past three years in terms of market share	
Customer Satisfaction Performance		
Turn-over	How would you describe the performance of your business in the past three years in terms of sales (turnover)?	Santos & Brito (2012)
In the past three years our company has introduced improvements relative to customer service.	How would you describe the performance of your business in the past three years in terms of customer service?	Martinez-Conesa <i>et al.</i> (2017)
In the past three years our company has introduced improvements relative to relations with customers.	How would you describe the performance of your business in the past three years in terms of relations with customers?	Martinez-Conesa <i>et al.</i> (2017)
In the past three years our company has introduced improvements relative to customer loyalty.	How would you describe the performance of your business in the past three years in terms of Customer loyalty?	Martinez-Conesa <i>et al.</i> (2017)
Employee Satisfaction Performance		
Wages and rewards policy	How would you describe the performance of your business in the past three years in terms of employee remuneration?	Santos & Brito (2012)
In the past three years our	How would you describe the	Martinez-Conesa <i>et</i>

company has introduced improvements relative to the working environment.	performance of your business in the past three years in terms of the working environment?	<i>al.</i> (2017)
In the past three years our company has introduced improvements relative to employees' loyalty and morale.	How would you describe the performance of your business in the past three years in terms of employees' loyalty?	Martinez-Conesa <i>et al.</i> (2017)
In the past three years our company has introduced improvements relative to loyalty and morale.	How would you describe the performance of your business in the past three years in terms of employees' morale?	Martinez-Conesa <i>et al.</i> (2017); Eilers <i>et al.</i> (2016)
<i>Innovation Performance</i>		
The number of new or improved products/services launched to the market is above the average of our industry.	How would you describe the performance of your business in the past three years in terms of the number of new products or improved products/services launched to the market?	Martinez-Conesa <i>et al.</i> (2017)
The number of new or improved internal processes is above average of our industry.	How would you describe the performance of your business in the past three years in terms of the number of new or improved internal processes of transforming	Martinez-Conesa <i>et al.</i> (2017)

	products/services?	
Top management emphasises on research and development	How would you describe the performance of your business in the past three years in terms of top management emphasis on research and development?	Martinez-Conesa <i>et al.</i> (2017)
Changes introduced in our products during the last five years are important.	How would you describe the performance of your business in the past three years in terms of changes introduced in your products or services?	Martinez-Conesa <i>et al.</i> (2017)
<i>Environmental Performance</i>		
Number of projects to improve/recover the environment	How would you describe the performance of your business in the past three years in terms of number of projects to improve / recover the environment?	Santos & Brito (2012)
Use of recyclable materials	How would you describe the performance of your business in the past three years in terms of use of recyclable materials?	Santos & Brito (2012)
Recycling level and reuse of residuals	How would you describe the performance of your business in the past three years in terms of recycling	Santos & Brito (2012)

	level and reuse of residuals?	
Indicate the effort put in the last 3 years in relation to pollution emission reduction programmes	How would you describe the performance of your business in the past three years in terms of success in reduction in pollutants emission?	Venkatraman & Nayak (2015)
Social Performance		
Employment of minorities	How would you describe the performance of your business in the past three years in terms of employment of people from different social backgrounds?	Santos & Brito (2012)
Number of social and cultural projects	How would you describe the performance of your business in the past three years in terms of number of social and cultural projects?	Santos & Brito (2012)
Not applicable	How would you describe the performance of your business in the past three years in terms of promotion of individual and civil rights?	Not applicable
Not applicable	How would you describe the performance of your	Not applicable

	business in the past three years in terms of promotion of women to managerial positions?	
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5.3.6 Sampling Procedure

Sampling is the process of selecting units from a population of interest that will be used to obtain the results which may be fairly generalised to the population from which they were selected. Sampling provides many practical advantages over conducting a census. Sampling reduces the costs, minimises the need for fieldworkers and other labour force, and it collects crucial information over a shorter period of time (Zikmund *et al.*, 2010:387). Sub-sections 5.3.6.1 through to 5.3.6.3 below provide more detailed explanations of this sampling plan.

5.3.6.1 *The target population, elements and sampling units*

The target population is an all-inclusive pool of the observations of interest to the researcher (Burns & Burns, 2008:182). Sampling is administered in line with the population being investigated (Zikmund *et al.*, 2010:387). Thus, the population is the complete set of elements from which the survey is drawn. The population of the SMEs in the Limpopo Province comprises the sample frame for this study. This could be events, organisations, countries, groups, departments, divisions or people (Zikmund *et al.*, 2013:118). According to Sekaran and Bougie (2009:116), sampling units refer to the degree of aggregation of the data gathered during the following data analysis phase. Researchers can collect data at more than a single level of analysis (Zikmund *et al.*, 2013:118). As such, there is need to specify the level at which data is gathered thereby stipulating the unit of analysis.

According to the report by Small Enterprise Development Agency a total of 249 663 are found in various sectors in the Limpopo Province. This number is comprised of 28 054 SMEs who are registered and 207 512 unregistered and the remainder being others (Seda, 2016:16). Specifically, according to Limpopo Economic Development Agency a total of 823 registered SMEs are found in various sectors in the Limpopo Province, Capricorn District Municipality. As stipulated in the report, the majority of SMEs are informally operating in the rural areas. The sampling units in this study refer to the SME enterprises investigated in this study. Executing the sampling plan involves the establishment of a number of steps as detailed in Table 5.6 below.

Table 5.6 Sampling plan for the quantitative phase of the study

Define the Target Population	
Elements	SME Owners and Managers
Sampling units	SMEs
Extent	Limpopo Province, Capricorn District Municipality
Time	August and September 2017
Determine the sampling frame	SME Owners and Managers
Select sampling technique/s	Non-probability, convenience and judgement sampling
Determine the sample size	400 participants
Execute sampling process	Follow the sampling plan

Source: Adapted from Burns and Bush (2014:259) and Malhotra (2012:369).

5.3.6.2 The study area

The study area for this research pertains to the North-eastern province of South Africa, Limpopo Province. The province is on the peripheries of South Africa, marking the borders with Botswana, Mozambique and Zimbabwe. In terms of land and population size, Limpopo is the fifth largest province of South Africa bolstering 125 754 square kilometres and 5 404 868 people (StatsSA, 2011:11-15). Furthermore, the province constitutes five district municipalities, namely, Waterberg, Capricorn, Vhembe, Mopani and Sekhukhune. The five district municipalities are made up of 25 local municipalities. Polokwane is the largest city in the province and is the centre of economic activities and embraces a considerable number of small businesses (Capricorn District Municipality, 2016).

The study area selected for this research supported the nature of this study which is SME based. Apparently, the province of Limpopo is primarily bolstered by small businesses, with a relatively few large businesses found in the province. This is braced by the fact that Limpopo is primarily rural with the majority (71%) of its population being located in rural areas (Provincial Review, 2016). According to SEDA (2016:16), Limpopo has been identified as the fastest growing economy. This is parallel, also, to the SME growth rate which has been noted as the highest at 34%. As such, the province was reckoned appropriate to provide information pertaining to the behaviour of SMEs as it pertains to sustainable development practices.

According to StatsSA (2017:5) the major economic activities in Limpopo province are in the tertiary sector which constitutes industries like, finance, trade, government, transport and personal services. This sector is also regarded as the major sector of the South African economy (StatsSA, 2017:5). This is followed by the primary sector which bolsters the agriculture and mining industries. Finally, the secondary sector is the least prevalent sector in the Limpopo province. The secondary sector comprises industries such as manufacturing, construction and utilities. As such, the SMEs are expected to be spread as per these industries in the province.

5.3.6.3 Sampling techniques

Sampling techniques can be classified as either probability or non-probability sampling. The choice between these two sampling techniques for the current research study was mainly based on the practicality of the given sampling techniques. The absence of a reliable population listing or sampling frame automatically discredits the use of probability sampling. A sample frame needs to be current and updated (Sekaran & Bougie, 2009:268), it also needs to be complete and correct (Blumberg *et al.*, 2011:177). In this instance, it was very challenging and almost impractical to acquire the actual population to enable the utilisation of the probability sampling technique.

The large majority of SMEs are not formally registered, as such, this has adversely affected the prospects of obtaining a sample frame for this study. On the other hand, the formally registered SMEs are provided by different organisations such as SEDA, Limpopo Economic Development Agency, etc. These organisations register SMEs that come to them for the purposes of the services offered, and those that are not concerned with their services register elsewhere. As such, coming up with a perfect sample frame was an impossible task for the scale and nature of this research. Furthermore, a large proportion of those SMEs only exist in the databases whereas in reality they have ceased to operate.

Probability sampling is often preferred than non-probability sampling due to the representativeness of the sample to its population (Bryman & Bell, 2011:190). However, non-probability sampling is often the only option when the population cannot be reasonably ascertained (Blumberg *et al.*, 2011:194). Also, the objective of a research and conclusions to be drawn determine if a researcher really need to utilise probability sampling (Blumberg *et al.*, 2011:193). As such, due to the innate nature of the current research study (the failure to acquire the list for the total population), non-probability sampling proved to be the practical choice. Non-probability sampling is useful when the researcher is more interested in establishing the relationships between concepts or

variables and is not interested in establishing the exact size of an effect on the entire population (Blumberg *et al.*, 2011:193).

In addition, non-probability sampling techniques tend to be less time-consuming, cost-effective and easy to conduct compared to the cumbersome probability sampling (Bryman & Bell, 2011:191). In this research, the sample was arrived at utilising the convenience sampling strategy. According to Bryman and Bell (2011:191), in the business management field convenience sampling is more prevalent and have been prominently utilised compared to probability sampling based samples. Non-probability sampling has the benefits of ease, cost and time savings, particularly in the case of convenience sampling. The convenience and judgemental sampling techniques were therefore selected for the purposes of this study.

5.3.6.4 Sample size

According to Mishra (2015:199), the Law of inertia of large numbers asserts that the larger the sample size the higher the chances for the results to be accurate. In this case, a large sample size was utilised in the study. However, the aspect of sample size determination has been a highly contentious subject within the structural equation modelling community (Westland, 2010:476; Nicolaou & Masoner, 2013:265). According to Westland (2010:476), though the utilisation of SEM in research is significantly increasing, the subject of sample size determination remains a serious vexation amongst SEM based studies. However, Sekaran and Bougie (2009:296) indicate that sample sizes that are between 30 and 500 are deemed proper for the majority of research.

In SEM, the rule of thumb has been that the sample size should be 10 times the number of latent variables. In this case, with the research having 13 latent variables, the minimum sample size would be 130 observations. On the other hand, other researchers

have disagreed that the use of the number of variables alone is enough (Davicik, 2014:63; Westland, 2010:476; Nicolaou & Masoner, 2013:265). Thus, they suggest that the use of a ratio r which is calculated by looking at the number of measured items divided by the total number of constructs. Herein, with 65 items being measured at the hand of 13 constructs, the r would be 5. These researchers then argue that for r is equal to 5, the minimum sample size should be 150. Whilst, for $r=2$ the minimum sample size should be 400, $r=3$ the minimum sample is 200, and $r = 12$ a sample size of at least 50 is deemed appropriate (Westland, 2010:476).

The Raosoft Sample size calculator was used to calculate the sample size as follows; $N=249$ 663 SMEs, margin of error=5%, confidence level=95%, $r=50\%$. The calculation resulted in a sample size of 384. SEM requires at least a sample size of 200 participants, for it to be effective. Sideridis *et al.* (2014) established that a sample size of 50-70 would be enough for a model involving 4 latent variables. Sekaran and Bougie (2009:297) assert that for multivariate research studies, such as the present one, the sample size need to be several times (preferably ten times or more) greater than the total of variables in the study. According to Wolf *et al.* (2013), sample sizes ranging from 30 (Simple Confirmatory Factor Analysis with four indicators and loadings around .80) up to 450 cases (mediation models) are required for SEM. As such, taking into consideration the non-response rate in the calculator (50%) the sample size for the study was 400 SMEs.

5.3.7 PRE-TESTING THE QUESTIONNAIRE

In order to pre-test the measuring instrument, a pilot study was conducted. This is a small-scale preliminary study that is conducted to evaluate the feasibility, adverse effects, cost, time, statistical variability and limitations of the research study (Cooper & Schindler, 2011:347). This is carried out in order to predict an appropriate data collection procedure and improve on the study design prior to the conduct of a full-scale research project. A pilot study can potentially provide valuable insight into the questionnaire design (e.g. wording, format and structure) and ultimately lead to the

adjustment of any such problems. Pilot studies can therefore aid in avoiding time and monetary resources being wasted on despatching an inadequately designed measuring instrument.

The subjects to be included in the pilot study should be within the relevant population but should not be the respondents that will form the final sample as this may influence later behaviour of respondents (Zikmund *et al.*, 2013:63). This will be difficult in the context of this study as the respondents are selected randomly through convenience sampling. However, respondents will be asked if they participated in the study prior to being asked to fill in the adjusted questionnaire.

A total of 15 respondents were asked to fill in the questionnaire. Upon completion of this process, the preliminary questionnaire problems were investigated. Focus was put on questionnaire sequencing, structure and wording in order to produce a final questionnaire that respondents could easily follow. Note was taken on the missing responses in order to establish potential problems with the questions. Respondents were asked to highlight any ambiguities or difficulties regarding the questions or instructions on the questionnaire. The final adjusted questionnaires were then administered to 400 respondents.

5.3.8 Data Analysis

When the process of data collection is completed, the next stage is to conduct data analysis in order to test the hypotheses (Sekaran & Bougie, 2009:304). However, data analysis is not a distinct stage in the research process. The process dovetails from the previous considerations made before final analysis is conducted (Bryman & Bell, 2011:312). Data analysis involves a series of procedures aimed at examining the collected data in a fair manner. Bradley (2007:315) and Zikmund *et al.* (2010:70) remark that data analysis pertains to the identification of meaningful patterns within the data. Thus, data analysis involves the conversion of meaningless information into something

that can be easily managed and understood. To analyse the data for this study, various statistical tests and procedures will be conducted on the data.

Data collection and analysis were carried out with the assistance of the statisticians from the Department of Research at the University of Limpopo. Descriptive and inferential statistics were applied to the data. Below are the data analysis techniques that were employed beginning with the data preparation phase. Data analysis entails three primary steps, conducted basically in the following order (Sachdeva, 2013:205):

- Data preparation which involves translating, editing, coding and organising data in preparation for analysis,
- Descriptive statistics which refer to the describing of data, and
- Inferential statistics which pertain to the testing of hypotheses and models.

5.3.8.1 Data preparation

When data is obtained from the data collection stage, it is seldom in the form that lends itself perfectly for analysis. Raw data is often susceptible to respondent errors as well as non-respondent errors (Zikmund *et al.*, 2013:459). Data preparation precedes the attesting of the hypotheses stage (Sekaran & Bougie, 2009:304). As such, through data preparation, advanced procedures are conducted on the data in order to produce quicker and more accurate data analysis results. Data preparation involves three processes; data editing, data coding and data entry. These three processes are discussed below.

❖ Data editing

Data editing entails critically and thoroughly scrutinising the completed questionnaires to ascertain whether or not they meet the compliance criteria for the required data (Cooper & Schindler, 2008:415). According to Ghauri and Grønhaug, (2010:150), the primary rationale for data editing is to enhance the quality standard of the data. It entails

inspection and where possible making corrections to the questionnaire or observation form. Consistently, Zikmund *et al.*, (2013:460) reiterates that editing is a procedure which entails scrutiny and adjusting data for omissions, consistency, and legibility so as to make the data readable for the computer.

Completed questionnaires were checked for errors and omissions and corrected where possible. Emphasis was on conducting data editing as soon as the fieldworkers received a questionnaire from the respondent (Ghuri & Grønhaug, 2010:150). This essentially enabled the fieldworkers to seek clarity from the respondent in instances where the responses provided were ambiguous. Subsequently, this procedure potentially enhanced the number of questionnaires utilised in the final stages of data analysis (Cooper & Schindler, 2011:403). Clinical editing ensures that the job of coding is easier (Zikmund *et al.*, 2010:468) as such the next section explains the process of data coding.

❖ **Data coding**

Coding is the attaching of numerical values or categorisation of signs as well as the assignment of markings to the segments of data by the utilisation of symbols, category names or numbers. Codes are intended to denote the meaning in the gathered data and simplify data analysis (Zikmund *et al.*, 2010:468). Attaching the numerical notations ensures a faster transfer of data from the questionnaires or interview forms to a computer format (Sekaran & Bougie, 2009:306). According to Ghauri & Grønhaug (2010:151), designing a coding manual or something for that typology, is an essential first stage to the coding phase. The coding manual contains relevant information pertaining to the variables in the questionnaire and is an indispensable tool that could enable other researchers to analyse data without requiring further information (Cooper & Schindler, 2008:417).

Data is either pre-coded or post coded. The answers to the questionnaires in the research study at hand were pre-coded because a structured questionnaire was utilised

(Bradley, 2007:329). The coding process for structured questionnaires is prominently deemed to be anticipatory in nature (Cooper & Schindler, 2008:419). For the purposes of this study, numbers were used. The responses allocated to the questionnaire constructs related to isomorphism, sustainable development and firm performance. When conducting coding, there is need for thoughtfulness of the statistical procedures, especially, where relationships and associations are going to be tested. Thus, each question was properly analysed before codes were assigned. Cooper and Schindler (2008:420) argue that there is need for effective disintegrating of data for testing hypotheses and showing relationships as well as data for comparisons.

In order to ensure, that effective and efficient data entry happens, the coding process needed to ensure that it is completely exhaustive. Thus, coding categories should be assigned for all the response options (Zikmund *et al.*, 2013:469). Furthermore, the assigned coding categories needed to be mutually exclusive (independent) and not overlap in any way (Zikmund *et al.*, 2013:469). The responses for questions that measured the research variables, namely, isomorphism, sustainable development and firm performance had codes assigned during the instrument design stage (Cooper & Schindler, 2008:419). The responses were numbered in descending order as follows; strongly agree, 5; agree, 4; neutral, 3; disagree, 2 and strongly disagree, 1 for isomorphism and sustainable development. Whilst for firm performance, the responses followed the order of significant increase, 5; increase, 4; remained the same, 3; decline, 2; and significant decline, 1. The next section discusses the data entry stage.

❖ **Data entry**

Data entry is also known as data transcribing. According to Sekaran and Bougie (2009:308), data entry encompasses the process of transformation of data acquired from the questionnaires into electronic format. This process can be attained through various ways, for instance, directly punching into statistical software packages such as SPSS or SAS and optical scanning (Cooper & Schindler, 2011:417). Optical scanning is a faster method of entering data but accuracy is not as high as when using manual

entry by people. This is because the human eye can more easily detect errors and mistakes that scanners may miss (Zikmund *et al.*, 2013:476). The data for this research study was manually entered using Microsoft Excel Spreadsheets, a very common tool used in data entry.

To improve the level of data accuracy, the researcher spot-checked the questionnaires randomly in order to make adjustments where necessary. Furthermore, the entered data was checked to see if it is within the acceptable limits. For instance, the limit of the responses indicates that the responses can only be between 1 and 5. Thus, any responses falling outside this range were incorrect - either when the researcher entered the data or when the respondent filled in the questionnaire. The final check for blunders that might have occurred during data entry involves checking that data was entered completely and correctly so that the blunders can be corrected before conducting the final data analysis (Zikmund *et al.*, 2013:476). Subsequent to this vigorous process of data preparation, the data was then analysed.

5.3.8.2 Descriptive statistics

Descriptive statistics are also known as summary statistics which pertain to the preliminary statistical analyses that were conducted on the data. Descriptive statistics help to describe or summarise data in a meaningful way (Zikmund *et al.*, 2010:499). Descriptive statistics use measures of central tendency such as mean and mode, to describe the central position of the frequency distribution of the data collected for the research study. Furthermore, measures of spread in descriptive statistics aid in viewing how spread out the data is (Mishra, 2015:265). For instance, variance and standard deviation can be used. Graphs were also utilised in descriptive research to provide a summary and basic overview of a sample (Ghauri & Grønhaug, 2010:153) in order to make the data become easily visible and interpretable.

The software Statistical Package for Social Sciences (SPSS) version 24 was used to conduct descriptive analysis. Descriptive analysis focuses on aspects such as central

tendency, dispersion, skew, and kurtosis of data. The software SPSS has been primarily used rather than other statistical software because it is more user-friendly (Zikmund, *et al.*, 2010:499; Allan & Bryman, 2011:360). The same software was also used in screening the data in this treatise through coding, treatment of data for missing values, outliers and normality tests. Descriptive statistics cannot be utilised for conclusions to be made beyond the analysed data or to reach conclusions about the hypotheses of the study. As such, inferential analysis was conducted to test the hypotheses and reach the conclusions of the study. The next section discusses the inferential analysis procedures conducted in this study.

5.3.8.3 Structural Equation Modelling

Inferential statistics enable broader conclusions pertaining to the associations within the data to be made. Furthermore, inferential statistics are used to establish, differences in groups as well as cause and effect assertions. As such, inferential statistics are more beneficial because they deliver more in-depth information than descriptive statistics. Also, when convincing assertions about theory are to be provided, inferential statistics are significant. This study primarily utilised the structural equation modelling (SEM) as the inferential analysis procedure. However, before SEM can be conducted, factor analysis needs to be done and was conducted in this study. The following section discusses the concept of exploratory factor analysis in this study.

❖ Exploratory Factor Analysis

Factor analysis is a prototypical multivariate that focuses on statistically testing the significance of the hypotheses developed for the study (Hooper, 2012:1). Factor analysis is utilised primarily for the identification of latent variables and their relationship with a set of manifest indicators. Factor analysis is also utilised for data-reduction purposes which entails minimising a particular set of variables into a reduced set of unrelated variables explaining most of the original variability (Zikmund *et al.*, 2010:593). Factor analysis provides a diagnostic tool in the evaluation of whether or not the

collected data is in line with the theoretically expected pattern of the target construct (Matsunaga, 2010:98). It therefore establishes if the measures used have indeed measured what they are purported to measure.

Firstly, factor analysis reduces a large number of variables into a smaller set of variables (also referred to as factors). Secondly, it establishes underlying dimensions between measured variables and latent constructs, thereby allowing the formation and refinement of theory. Thirdly, it provides construct validity evidence of self-reporting scales (Williams, Onsman & Brown, 2010:5). There are five steps in employing factor analysis. Firstly, data is assessed to establish suitability for factor analysis. Next, there is data screening to prepare the correlation matrix. After this step, the factors may be extracted. In order to increase interpretability, factor rotation follows. Lastly there is the actual interpretation.

When establishing the suitability of factor analysis, the sample size is examined. Although sample size is important in factor analysis, there are varying opinions, and several guiding rules of thumb have been cited in the literature (Tabachnick & Fidell, 2007:35; Trainor, Rapp, Beitelspacher & Schillewaert, 2011:164). There are many complex dynamics of a factor analysis, hence when communalities are high (greater than .60) and each factor is defined by several items, sample sizes can be relatively small (Henson & Roberts, 2006:402). Even 50 cases may be adequate for factor analysis. The sample size of this study of 400, and is in line with most rule of thumb sample sizes to applying factor analysis recommendations of sample sizes (Trainor *et al.*, 2011:164).

When utilising factor analysis, it is recommended that the data be screened. In this instance, the correlation matrix is analysed in order to eliminate variables that are not correlated with any other variables or that highly correlate with other variables. Several tests should be used to assess the suitability of the respondent data for factor analysis. These tests include Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and

Bartlett's Test of Sphericity (Williams *et al.*, 2010:6). The KMO index is particularly recommended when the cases to variable ratio are less than 1:5. The KMO index ranges from 0 to 1, with items with KMO values above 0.5 considered suitable for factor analysis (Tabachnick & Fidell, 2007:36). The Bartlett's Test of Sphericity should be significant ($p < .05$) for factor analysis to be suitable.

The next step to factor analysis is factor extraction. There are numerous ways to extract factors (Williams *et al.*, 2010:5). These methods include principal components analysis, principal axis factoring, maximum likelihood, unweighted least squares, generalised least squares, alpha factoring and image factoring. However, principal components analysis and principal axis factoring are the most commonly used methods in published literature (Tabachnick & Fidell, 2007:38). The aim of the data extraction is to reduce a large number of items into factors in order to produce scale unidimensionality and simplify the factor solutions (Williams *et al.*, 2010:5). However, given the choice and sometimes confusing nature of factor analysis, no single criterion should be assumed to determine factor extraction. The various extraction rules and approaches that exist include Kaiser's criteria (eigenvalue > 1 rule), the Scree test, the cumulative percent of variance extracted, and parallel analysis (Williams *et al.*, 2010:6).

Upon completion of the extraction, factor rotation may be executed. The aim of rotation is to simplify the factor structure of a group of items, that is, high item loadings on one factor and smaller item loadings on the remaining factor (Williams *et al.*, 2010:6). Rotation maximises high item loadings and minimises low item loadings, therefore, producing a more interpretable and simplified solution. There are two common rotation techniques, orthogonal rotation and oblique rotation. Several methods to choose from both rotation options exist, for instance, orthogonal varimax/quartimax or oblique oblimin/promax.

Orthogonal Varimax, which is the most common rotational technique used in factor analysis and which produces factor structures that are uncorrelated, was used in this

study (Mishra, 2015:564). In contrast, oblique rotation produces factors that are correlated, which is often seen as producing more accurate results for research involving human behaviour (Mishra, 2015:564). Regardless of which rotation method is used, the main objectives are to provide easier interpretation of results, and produce a solution that is more sparing (Williams *et. al.*, 2010:7).

Finally, interpretation of the factors can then be done. Interpretation involves an examination of which variables are attributable to a factor, and giving that factor a name or theme (Williams *et. al.*, 2010:9). For example, a factor may have included five variables which all relate to customer satisfaction, therefore, a label should be created for that particular factor. Traditionally, at least two or three variables must load on a factor so it can be given a meaningful interpretation. The reason for thorough and systematic factor analyses is to isolate items with high loadings in the resultant pattern matrices. Factor analysis seeks to find those factors, which when taken together, explain the majority of the responses. It is important that these labels or constructs reflect the theoretical and conceptual intent of the research study.

❖ **Structural Equation Modelling**

For hypothesis testing under inferential analysis, SEM was conducted. SEM is a multivariate technique which is an alternative to multiple regression analysis, path analysis, factor analysis, time series analysis as well as analysis of variance (Hoyle, 2011:1). SEM is also called covariance structure analysis, covariance structural modeling, or analysis of covariance structures, as well as causal modeling. Mishra (2015:598) relates that SEM is a family of superior analytical techniques that are highly efficient because it evaluates a series of dependence and interdependence relationships. (Ghauri & Grønhaug, 2010:194). The SEM technique is regarded as a second-generation multivariate method that integrates multiple regressions and confirmatory analyses to predict simultaneously various interrelationships amongst the constructs of the hypothesised model (Garg & Chauhan, 2015:1322).

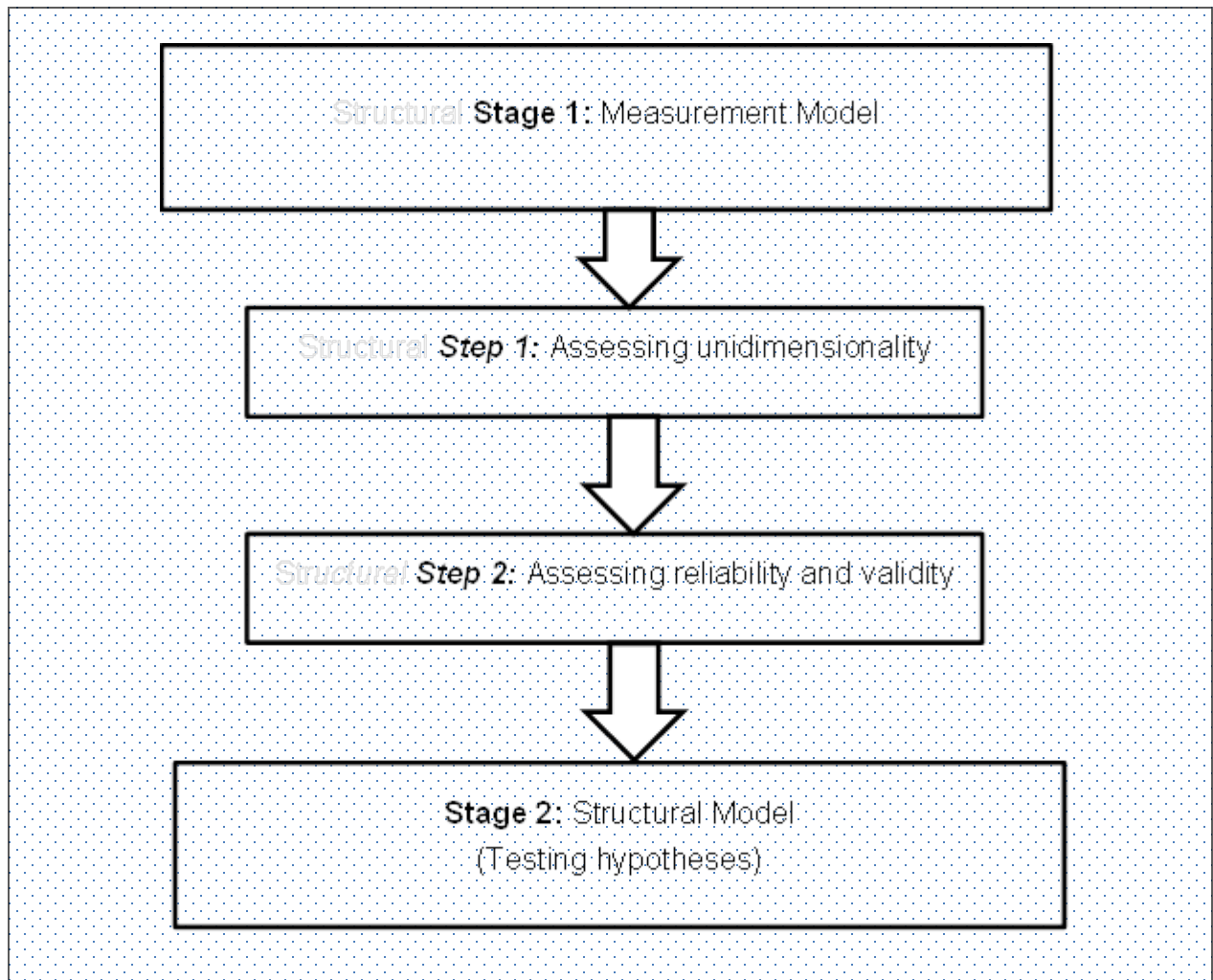
The main goal of SEM is on the assessment of theoretical constructs, which are considered as unobserved (latent) variables. Latent variables are considered as hypothetical or unmeasured variables that are indirectly measured through their effects on observed or manifest variables (Debata, Patnaik, Mahapatra & Sree, 2015:25). The applicability of the SEM technique is perfect in this study, because it is versatile when formulating and analysing complicated relationships between variables that enable researchers to ascertain the underpinnings of a theory at the hand of empirical models (Debata *et al.*, 2015:25; Ghauri & Grønhaug, 2010:194). Considering the multiple constructs being researched in this study, SEM was regarded as the most relevant methodology in this study. According to Farooq (2016:80) SEM is a regarded a superior approach when dealing with matters of unidimensionality as well as multidimensionality. Furthermore, Farooq (2016:80) argues that SEM can be effective when measuring psychometric properties of a scale/construct.

The constructs being investigated in this study, namely, isomorphism, sustainable development and firm performance all manifest in more than one dimension. The SEM technique basically has two primary components, namely, the measurement model and structural model (Ghauri & Grønhaug, 2010:194; Mishra, 2015:601; Garg & Chauhan, 2015:1323; Martínez-López, Gázquez-Abad & Sousa, 2013:132). As such, the SEM technique consists of two approaches that are utilised in conducting the analysis, namely, one-stage and two-stage. Similarly, Debata *et al.* (2015:25) state that SEM integrates path analysis and factor analysis. The one-stage approach, simultaneously measures the measurement model and structural model. Whereas, the two-stage approach, focuses on processing the measurement model initially and thereafter estimate the structural model.

As such, in this thesis the two-stage approach was utilised. The two-stage approach was adopted because of accuracy in the depiction of reliability of the items. The two-stage approach enables reliability of each construct to be effectively carried out in two stages and this avoids any interaction between the measurement and structural models

(Shammout, 2007:125). The diagram (Figure 5.2) below depicts the two-stage approach that was utilised in this study.

Figure 5.2 Two-Stage SEM Approach



Source: Shammout (2007:126)

❖ **Stage 1: Measurement Model**

The measurement model enables the researcher to model or establish relationships that exist among indicators or observed variables and their related latent variables (unobserved variables or constructs) through the definition of a structural model

(Martínez-López *et al.*, 2013:124). Furthermore, the measurement model enables the modeller to utilise several variables (indicators) for one independent or dependent variable (Ghauri & Grønhaug, 2010:194). The measurement model is also known as confirmatory factor analysis and it is a diagrammatic representation of the constructs, indicator variables and interrelationships within the specified model (Mishra, 2015:601; Rajeh, Tookey & Rotimi, 2015:252). The CFA contains quantitative measures pertaining to the reliability and validity of the constructs utilised in the model (Mishra, 2015:601).

CFA concentrates on determining the extent to which the manifest variables satisfactorily measure the latent variables as well as ascertaining matters of validity and reliability (Rajeh *et al.*, 2015:252). Furthermore, CFA is utilised to ascertain unidimensionality directly, especially where the hypotheses pertaining to established theoretical models, such as, the case of the thesis at hand. Unidimensionality measurement models are basically effective because they provide more specific tests of discriminant and convergent validity of factor measurement (Shammout, 2007:125). Confirmatory Factor Analysis also called one-factor analysis was used to determine if a set of measurement items empirically tested a single dimension. Since the scale to be used in the study is mostly adapted, a confirmatory factor analysis was conducted utilising Analysis of Moment Structures (AMOS Ver 24.0) software.

Stage 2: Structural Model

The structural model relates to the path model, which ascertains to the relationship between the independent and dependent variables (Ghauri & Grønhaug, 2010:194). The structural model or path analysis is comprised of a set of dependency relationships that pertain to constructs of the hypothesised model. Together with the statistics from the measurement model, the structural model enables the researcher to accept or reject the hypotheses (Mishra, 2015:601). The structural model explains the relationship between latent variables by the way of determining the variance explained and unexplained. Thus, this becomes similar to the analysis of the relationships in the regression models (Rajeh *et al.*, 2015:252).

Theory occupies a critical position in SEM; as a result, modelling is regarded as a valuable tool to ascertain theories (Ghauri & Grønhaug, 2010:194). The structural model presents a diagrammatical representation of the equations that are tested in the study (Debata *et al.*, 2015:27). The structural model was conducted using AMOS Ver 24.0 software. The structural model is built on various estimation models, and usually it depends on the software that is utilised (Mishra, 2015:602). There are various estimation models that exist, such as, Unweighted Least Squares (ULS), Generalised Least Squares (GLS), Maximum Likelihood (ML) and Generally Weighted Least Squares (WLS) (Dandagi, Bhushi, Bagodi & Sinha, 2016:82). ML is the commonly used approach, and was utilised in this study because it is highly consistent with categorical data within multivariate normality context (Dandagi *et al.*, 2016:82).

There are basically three types of strategy (formulation modes) that researchers can use, namely, confirmatory modelling, competitive modelling, and model development (Martínez-López *et al.*, 2013:123). Firstly, researchers can use a strictly confirmatory modelling strategy which pertains to testing theoretical models with no alterations in, or changes to, the original model (Martínez-López *et al.*, 2013:123). Secondly, the competitive model also called model comparison, involves the researcher analysing and contrasting various or rival models with the ultimate intention of coming up with the most valid one (Martínez-López *et al.*, 2013:123). Lastly, model development or also called model generation, involves the estimation of a model originally specified, and then search for subsequent re-adjustments/re-specifications in the model with an intention of attaining to a model that has better fit (Martínez-López *et al.*, 2013:123).

The commonly utilised approach is the confirmatory approach, with approximately, 70% usage in latent research (Martínez-López *et al.*, 2013:123). As such, this research utilised the confirmatory modelling strategy because the other two alternatives are secondary in latent research. The next section discusses the aspect of model fitness pertaining to SEM.

❖ Model fitness

The aspect of model fitness evaluation is essential in SEM testing. There are two approaches towards model fitness. Firstly, model evaluation can be done through assessing the adequacy (fitness) of parameter estimates through assessing every single parameter within the model. The second approach focuses on assessing the goodness-of-fit (GOF) of the whole model using fitness indices (Bryne, 2010:65). Parameter estimates are considered highly critical in SEM evaluation because they are utilised to generate population covariance matrix within a model (Tabachnik & Fidell, 2007).

The first approach of evaluating adequacy of individual parameters is ascertaining the extent to which each free parameter meaningfully differs from zero (Bryne, 2010). The attainment of parameter estimates simultaneously result in the standard errors for each estimate being achieved. The critical ratio (C.R.) shows the relationship between the estimated parameter and the standard error. C.R. value is a ratio which is deemed to be normally distributed and is computed through the division of the parameter with its respective standard error (Byrne, 2010; Schumacker and Lomax, 2010). The C.R. ratio which is also called the Z-value of parameter estimates should be equal to or greater than +/- 1.96 for significance to be accepted.

Secondly, SEM has a series of GOF indices which ascertain the extent to which a model fits the data. However, researchers have been recommended to report several of these fit indices and the selection of the indices should be conducted from different groups (Siddiqui, Mirani & Fahim, 2015:112). They are three groups of GOF fit indices that have lately been identified by SEM users, namely, absolute, incremental and parsimonious fit indices. The following section looks at absolute fit indices.

Absolute fit indices

Absolute fit focuses on the extent to which the covariance's implied through the projected model are identical to the observed covariance's, as such absolute fit indices characteristically measure the 'badness of fit' (Siddiqui *et al.*, 2015:112; Iacobucci, 2010:91). The most commonly utilised GOF measure within this category is the Chi-square (χ^2). Other Indices encompassed in this classification are: RMSEA, GFI, AGFI, RMR and SRMR. These fit indices are regarded as the most crucial assessment of the extent to which the proposed theory fits the data well (Hooper, Coughlan & Mullen, 2008:54). According to Siddiqui *et al.* (2015:112), the likelihood ratio or chi-square test is usually constantly reported and is the foundation for several other indices.

In contrast to the other SEM fit indices, the χ^2 is regarded as the lone inferential statistic with the rest being descriptive. Thus, the χ^2 involves statements pertaining to significance or hypothesis testing, whereas with others, they only constitute "rules-of-thumb" to ascertain goodness-of-fit. Therefore, this attribute potentially make χ^2 as the only index to always report (Iacobucci, 2010:91). For a model to fit the data, the χ^2 needs to be insignificant at p-value 0.05 (Iacobucci, 2010:91). However, the χ^2 is susceptible to a couple of problems. The utmost prominent shortfall of χ^2 is its sensitivity to sample size, especially those above 200. It has been noted that as N increases, χ^2 will become significant (indicating a poor fit) (Siddiqui *et al.*, 2015:112; De Carvalho & Chima, 2014:10). Thus, other fit indices get to be used because of this sample sensitivity of the chi-square test.

The second absolute GOF index utilised in this study is the Goodness-of-Fit Index (GFI). The GFI index assesses the relative extent of variance together with covariance explained by the model (Hooper *et al.*, 2008:54). Through considering the variances and covariances explained by the model, the GFI indicates the extent of closeness of the predicted model with regards to replicating the observed variance (Hooper *et al.*, 2008:54). The GFI test is estimated through contrasting the discrepancy value for the estimated model and the discrepancy value for a model that is considered to be saturated (a 100% fit model or 1.0) (Shammout, 2007:131). Furthermore, the GFI index

ranges between 0 (signifying poor fit) to 1 (signifying perfect fit). However, the GFI index ignores the aspect of degrees of freedom and has been regarded to be too sensitive when sample size and the number of estimated parameters is taken into consideration, thereby, discrediting the exclusive dependence on this measure in ascertaining model fit.

The Adjusted Goodness-of-Fit Index (AGFI) is another absolute fit measure that is used in this study. The AGFI is calculated based on the GFI through taking into consideration the degrees of freedom in the model. As such, the AGFI value is always smaller than the GFI and the statistic value ranges between 0 (meaning poor fit) and 1 (meaning perfect fit). However, values above 0.90 are deemed as signifying that the estimated model fits the data well (De Carvalho & Chima, 2014:10). The AGFI measure is expected to increase as the sample sizes grow. However, it is more favourable towards models that are more parsimonious. Thus, it is not favourable towards more complex models. As such, researchers use neither the GFI nor the AGFI in exclusivity. Hence, the RMSEA is discussed below, as an alternative index for over model fitness.

The Root Mean Square Error of Approximation (RMSEA) is regarded as a non-centrality parameter and it is deemed less sensitive to sample size, even though it tends to overestimate goodness-of-fit when it comes to small sample sizes (Siddiqui *et al.*, 2015:112). Cangur and Ercan (2015:157) posit that the RMSEA pertains to the variance in relation to the observed covariance matrix per degree of freedom and the assumed covariance matrix which represents the model. According to Iacobucci (2010:96), the RMSEA tends to over-reject true models for small sample sizes of less than 250, and fitness is problematic with increase in the number of variables in the model. According to Cangur and Ercan (2015:157), superior fitness values for RMSEA are obtained with large sample sizes in contrast to smaller sample sizes. Comparatively, Siddiqui *et al.* (2015:112) argue that the RMSEA index is a prominent measure of fitness, because it does not involve any form of comparison to a tentative model.

The RMSEA threshold values that have been suggested in literature for good model fitness pertain to RMSEA which is smaller than or equal to .05, and with values less than or equal to .08 reflecting adequate fit (Siddiqui *et al.*, 2015:112; Cangur & Ercan, 2015:157). RMSEA values that are between 0.08 and 0.10 are noted as representing a fit which is neither good nor bad (Cangur & Ercan, 2015:157). Therefore, this study utilised the demarcation presented in the above studies of values less than .08 indicate good model fit while those less than .10 are for a reasonable fit (see Table 6.14 below).

The Standardised Root Mean Squared Residual (SRMR) is another absolute index that is discussed and used in this study. SRMR is the average of the covariance residuals which is in a standardised summary nature (De Carvalho & Chima, 2014:10). The SRMR index behaves almost similar to the RMSEA, however, it is calculated differently and it performs differently (Iacobucci, 2010:96). More specifically, the RMSEA considers model complexity as it also encapsulates the degree of freedom (Cangur & Ercan, 2015:157). A zero SRMR value means the model estimations match the data impeccably (Iacobucci, 2010:91; De Carvalho & Chima, 2014:10). According to Cangur & Ercan (2015:157) and Iacobucci (2010:91), the SRMR represents acceptable fit if the value is less than 0.10, even though the notion of good fit is preferred when the value falls below 0.05.

Iacobucci (2010:91) cites that the SRMR index is improved (minimised) when the measurement model is flawless (thus, contains superior factor loadings). Thus, the SRMR is considered as being highly susceptible to model misspecifications compared to sample size as well as problems with distributional assumptions (Iacobucci, 2010:91). Consequently, the index is deemed a relatively perfect pointer of the extent to which the model used by the researcher supports the data (Cangur & Ercan, 2015:157). Misfits in SRMR relatively signify inconsistencies in specifications within the measurement or structural models. Conclusively, the primary merit towards the preference of SRMR is that it is not sensitive to sample size (Iacobucci, 2010:91).

Incremental fit indices

Incremental fit indices pertain to the extent to which the tentative model is better off to an alternate model. Incremental fit indices are different to absolute fit indices in that larger values signify better perfection of the proposed model compared to an alternative model (Siddiqui *et al.*, 2015:113). The first index to be discussed that is used in this study is the Normed Fit Index (NFI). NFI is also known as the Bentler-Bonett Normed Fit Index and pertains to the goodness-of-fit for a statistical model, which is free from the influence of the number of parameters/variables in a given model (Hooper *et al.*, 2008:55). In this case, adequacy of fit is ascertained by way of comparing the model of concern to a model which consists of fully uncorrelated variables.

Alternatively, the NFI is equivalent to the difference concerning the chi-square in the null model and the chi square of the proposed model, divided by the chi-square of the null model. Thus, an NFI of .95, for instance, signify that the model of interest increases the fit by 95% compared to the null or independence model. When it comes to small samples, the fit tends to be underestimated. In addition, the fit tends to be overestimated with an increase in the number of parameters and the NNFI overcomes this problem (Kenny, 2015). Theoretically, the NFI statistic have values ranging between 0 (poor fit) and 1 (perfect fit), and the values are regarded to depict fit adequacy when they are located above 0.90. The second incremental fit index to be discussed is the Tucker and Lewis Index (TLI).

Also called, the Non-Normed Fit Index (NNFI), TLI is a fit index that was formulated in consideration with the shortfalls of the Normed Fit Index of being sensitive to the sizes of the sample (Cangur & Ercan, 2015:158). Consequently, the primary advantage of the TLI index is that it is not affected by the sample size (Cangur & Ercan, 2015:158). According to Siddiqui *et al.* (2015:114), the TLI/NNFI performs better when the ML estimation is utilised, while it becomes seriously downwardly influenced when different approaches of estimation are utilised as well as in the case of small sample sizes. For a good model fit, the TLI index is required to be a value close to 0.90 with larger values signifying better-fit model (Cangur & Ercan, 2015:158). As such, TLI/NNFI values

greater than 0.95 are depicted as representing perfect fit model (Siddiqui *et al.*, 2015:114; Cangur & Ercan, 2015:158). However, the TLI is not restricted to range between 0 and 1 because it is non-normed, thus, the cut-off presented is 0.97 (Cangur & Ercan, 2015:158). Comparative Fit Index (CFI) is another incremental fit index, herein.

The CFI index is the revised version of the relative non-centrality index and it depicts the degree to which the verified model is better than the alternate model established (Cangur & Ercan, 2015:158; Iacobucci, 2010:90). Thus, the CFI statistic takes into consideration the comparative goodness-of-fit, or the fit of one's proposed model as an empirical increment above a simpler model (Iacobucci, 2010:90). Furthermore, the CFI endeavours to take into consideration model complication as well as parsimony through encapsulating the degrees of freedom utilised in the model directly into the calculation (Iacobucci, 2010:90). The CFI is relatively preferred when compared to other incremental fit statistics as its values range within the familiar 'normed' array (Siddiqui *et al.*, 2015:113) of 0 and 1 with higher values signifying better fitness (Iacobucci, 2010:90). The CFI index is comparatively insusceptible to the sample size and results in better values when it comes to small sample size (Cangur & Ercan, 2015:158). Accordingly Siddiqui *et al.* (2015:113) postulated that values close to 0.90 can review a good model fit.

Parsimonious fit indices

Parsimonious indices castigate lack of parsimony, as *ceteris paribus*, complex models are bound to generate better fit compared to less complex ones. Parsimonious indices have different cut-offs than their counterparts, as such, the higher parsimonious measures indicate good fitness. The parsimony ratio (PR) of any model is the base for several parsimonious measures and can be computed as the ratio of degree of freedom (df) used by a model to total degree of freedom available. Below (Equation 5.1) is the formula used to compute PR.

Equation 5.1 Parsimony ratio (PR)

$$PR = \frac{d}{di}$$

Where d is the degrees of freedom of the hypothesised model and di is the degree of freedom of the independence/null model (Arbuckle, 2008). The PR is not a fit index but is utilised to compute indices such as PGFI, PCFI and PNFI. Parsimony Goodness-of-Fit Index (PGFI), Parsimony Comparative Fit Index (PCFI) and Parsimony Normed Fit Index (PNFI) can be considered as Parsimony Fit Indices based on PR (Elshaer, 2012:119; Hooper *et al.*, 2008:55). The PGFI, PCFI and PNFI are based on the GFI, CFI and NFI, respectively, by adjusting for loss of degrees of freedom. The values range between 0 and 1.00; with two models compared and the one with the higher values is preferred based on the combination of fit and parsimony characterised by the index (Hooper *et al.*, 2008:55). However, PGFI, PCFI and PNFI values greater than 0.5 can be regarded as acceptable (Tabachnick and Fidell, 2007).

Pertaining to parsimonious fit indices, the Parsimonious Normed-Fit-Index (PNFI) or the Akaike Information Criterion (AIC) are commonly utilised in research. However, there is no usage of the Parsimonious Goodness-of-fit Index (PGFI) and PCFI that have been observed in latent literature (Martínez-López *et al.*, 2013:129). As such, this research made use of PNFI and AIC as parsimonious measures. The AIC index belongs to the other category of parsimonious fit indices, namely, information criteria indices. Apart from the AIC, there are a few of these indices famously applied in latent research, namely, Consistent Akaike Information Criterion (CAIC), and Bayesian Information Criterion (BIC). This study utilised the AIC value alone from this category.

Table 5.7 Criteria for goodness-of-fit indices

Index name	Abbreviation	Acceptable level	Interpretation
Absolute fit indices			
Chi-square	χ^2	Low χ^2 value (relative to <i>df</i>) with insignificant level of $>.05$	Susceptible to large sample sizes
Goodness-of-Fit	GFI	0 (zero fit) to 1 (perfect fit)	Values close 0.90 indicate a good model fit
Adjusted Goodness-of-Fit	AGFI	0 (zero fit) to 1 (perfect fit)	Values close 0.90 indicate a good model fit
Normed Chi-square	χ^2/df	Between 1.0 and 5.0	Lower limit is 1.0 and upper limit is 3.0 and 5.0 is acceptable
Root Mean Square Error of Approximation	RMSEA	Between 0.05 and 0.1	Values $<.08$ indicate good model fit $<.10$ reasonable fit
Incremental fit indices			
Tucker-Lewis Index	TLI	0 (zero fit) to 1 (perfect fit)	Values close 0.90 indicate a good model fit
Normed Fit Index	NFI	0 (zero fit) to 1 (perfect fit)	Values close 0.90 indicate a good model fit
Comparative Fit Index	CFI	0 (zero fit) to 1 (perfect fit)	Values close 0.90 indicate a good model fit
Parsimonious fit indices			
Parsimonious Normed-Fit-Index	PNFI	0 (zero fit) to 1 (perfect fit)	Values close 0.50 indicate a good model fit
Akaike Information Criterion	AIC	No defined level	

The AIC is a goodness-of-fit index which adjusts model chi-square to penalise for model complexity (thus, for lack of parsimony and overparameterisation). Thus, AIC reviews the discrepancy between model-implied and observed covariance matrices. AIC is not interpreted for a single model but is utilised to contrast models. It may be used to compare models with different numbers of latent variables. The absolute value of AIC has no intuitive value, except by comparison with another AIC, in which case the lower AIC reflects the better-fitting model. Unlike model chi-square, AIC may be used to compare non-hierarchical as well as hierarchical (nested) models based on the same dataset, whereas model chi-square difference is used only for the latter. It is possible to obtain AIC values < 0 . AIC close to zero reflects good fit and between two AIC measures, the lower one reflects the model with the better fit.

In adjusting the model fitness, standardised residuals were the primary tool that was used as they are highly informative and show the location and magnitude of the discrepancies in the covariances (De Carvalho & Chima, 2014:10). Furthermore, where poor fitness was experienced, each construct was examined individually to ascertain items with weaknesses, especially those with low loadings (Hooper *et al.*, 2008:56). Amidst numerous fit indices, there is lack of consensus amongst researchers concerning the fit indices to be used by researchers. Also, SEM lacks resolute and straightforward significance levels in determining the model fit (Debata *et al.*, 2015:27). The researcher used the above-discussed fit indices to reflect how the measurement and structural models were fitting the data. It is recommended that various indices should be reported as different indices capture various aspects of the model as discussed in the above. Although the chi-square in the model is often problematic, it was reported in all cases as it is often the practice with its accompanying degrees of freedom and p-value (Hooper *et al.*, 2008:56).

5.3.9 Reliability and Validity of the Instrument

When utilising inferential statistics, it is imperative to assess the reliability and validity of the measuring instrument. The measuring instrument for the study was evaluated on the reliability and validity of the results from the collected data. The section below explains how the reliability and validity of the measuring instrument were achieved.

5.3.9.1 Reliability

Reliability seeks to establish the ability of a measuring instrument to produce the same results when used repeatedly. According to Sachdeva (2013:72), though in general, reliability implies dependable and trustworthy, precisely in research, the concept pertains to repeatability and the extent to which a measure yields consistent results. Thus, reliability determines the extent to which a measurement is free of unstable or random errors (Cooper & Schindler, 2008:293). A measure is regarded to be reliable when various endeavours to measure a particular aspect produce the same results (Zikmund *et al.*, 2013:301). The Cronbach's coefficient alpha tests the extent to which there is consistency in the respondent's response to the items within a measure (Sekaran & Bougie, 2009:162). Shammout (2007:135) asserts that, the (α) approximates the internal consistency of the individual research constructs. If an instrument is consistent with reliability measures, then it is deemed to be robust because it can be effectively utilised under different circumstances.

This study used the total scale reliability coefficient values and Cronbach's coefficient alpha (α) greater than 0.7 as measures of reliability. According to Zikmund *et al.* (2010:306), the coefficient alpha is the most prominently utilised method of estimating reliability in a multiple-item scale. An (α) of above 0.7 is acceptable in most research situations. Apart from the coefficient alpha, researchers can use the test-retest method and the split-half method. In order to ensure reliability, the questionnaire was reviewed to ensure that it was error free in terms of question structuring, wording and phrasing.

Furthermore, the questionnaire was pre-tested on a total of 15 subjects in its development stage. The researcher also made use of Composite Reliability (CR) and Average Variance Extracted (AVE) to ascertain the measurement reliability. These results are presented in chapter six that follows (See Section 6.7.1.4).

5.3.9.2 Validity

The validity of a measuring instrument is concerned with its ability to measure that which it is purported to measure. Validity refers to the extent to which differences in observed scale scores reflect true differences between objects on the characteristics being measured, rather than systematic or random errors. For the purpose of this study, the validity criteria considered are face/ content validity and construct validity. Face validity ascertains that the measure appears to be assessing the intended construct being investigated.

❖ Content Validity

Content validity is the degree to which the instrument investigates its intended construct (Cooper & Schindler, 2003:211). It is the extent to which the measuring instrument is viewed as covering the concept it claims to measure (Gravetter & Forzano, 2012:8). In order to ensure face validity, the researcher embarked on extensive literature review relevant to the study topic. Also, feedback on the measuring instrument was obtained from a panel of experts who are familiar with the research constructs (Research supervisor, department lecturers and statisticians). Finally, the measuring instrument was pre-tested in a pilot study to allow changes in the question wording, phrasing or structuring should the pre-test indicate such problems.

❖ Construct validity

Construct validity refers to the degree to which a construct is compatible with the theoretical and empirical meaning attached to the construct being investigated (Mishra, 2015:76; Bryman & Bell, 2011:39; Cooper and Schindler, 2008:291). In order to enhance construct validity in this study, the researcher ensured that the objectives were clearly defined and operationalised. Furthermore, feedback was also obtained from experts and academics in the strategic management field with emphasis on the sustainability, isomorphism and firm performance. And lastly, the issues raised from the pre-testing phase were considered and implemented on the final questionnaire that was sent out to the respondents. Construct validity is divided into two types, namely: convergent and discriminant validity (Bryman & Bell, 2011:39).

Convergent validity is ascertained in incidences when there is high correlation between scores from two instruments that are not the same (Sekaran & Bougie, 2009:160). Convergent validity is established when high levels of correlation are seen between two sources that are not the same but responding to the same measure (Sekaran & Bougie, 2009:327; Cooper & Schindler, 2008:292). Zikmund *et al.* (2010:308) state that convergent validity exists when concepts that are intended to be associated are indeed associated, thus highly reliable scales posit high convergent validity. Thus, Ghauri and Grønhaug (2010:81) argue that convergent validity explains the extent to which multiple measures of and/or multiple methods utilised to ascertain a similar construct result in identical or comparable outcomes.

Discriminant validity which is also termed divergent validity (Ghauri & Grønhaug, 2010:81) pertains to the lack of strong correlation between concepts or measurements that are intended to be unrelated (Bryman & Bell, 2011:39). Sekaran & Bougie (2009:160) indicate that discriminant validity is established when two concepts that are theoretically deemed to be different are really empirically uncorrelated. Thus, discriminant validity is ascertained by the absence of high correlation amongst unique or distinctive theoretical operationalisations (Zikmund *et al.*, 2010:308; Sachdeva, 2013:69;

Ghauri & Grønhaug, 2010:81). In this study, convergent validity was measured using Item-to-total correlation, factor loadings and Average Variance Extracted (AVE) values. On the other hand, discriminant validity was measured using AVE values versus Inter-Construct Correlation Matrix. Furthermore, a more stringent measure for discriminant validity is measured through the comparison between AVE and the Squared Inter-construct correlation (SIC).

For discriminant validity to transpire the AVE values of a construct should be greater than the corresponding SIC estimates in the SIC matrix. On the other hand, the Pearson Correlation Coefficient is a measure of how well the variables are related; it reflects the linear relationship between two variables. The correlation coefficient thereby measures the degree of linear association between two continuous variables. The values provided by PCC range between +1 and -1; where +1 is total positive correlation, 0 is no correlation and -1 is total negative correlation (Cooper & Schindler, 2011:282). A positive correlation indicates that as the values of one variable increase the values of the other variable increase, whereas a negative correlation indicates that as the values of one variable increase the values of the other variable decrease. Herein, for discriminant validity the coefficient values should be less than 0.80 to indicate lack of high correlation.

5.3.10 Reporting the Research Results

After the analysis of the data, the last and the major phase is the preparation of a research report (Sreejesh *et al.*, 2014:21). A summary of the major findings of the research study is contained in Section 7.3 of this report. The report then concludes with the limitations and recommendations derived from the research. The purpose of conducting any research is to obtain information that can aid in efficient decision-making. The research findings are detailed in chapter seven.

5.4 ETHICAL CONSIDERATIONS

Researchers are required to be conversant with ethical issues when their intended research involves human beings. In this regard, the University of Limpopo through the TREC committee requires ethical clearance to be obtained for all studies that involve human subjects prior to carrying out the fieldwork. Thus, prior to gathering the data in the field, the researcher applied for ethical clearance from the University of Limpopo Ethics Committee (See Annexure 2). Herein, several ethical procedures were considered to ensure the study was ethically compliant. Firstly, the researcher ensured that there was no potential harm towards people that resulted from the procedures conducted or the nature of the study.

Furthermore, the measuring instrument had an information leaflet containing information on the purpose of the research as well as the significance of the study. The respondents were also informed that the researcher was a Doctoral student with the University of Limpopo and was exclusively conducting research for the fulfilment of academic purposes. In addition, the information leaflet included the duration of questionnaire completion, assurance of confidentiality as well as the voluntary participation of the participants to the survey. Lastly, before carrying out the survey informed consent was obtained from the participants through the signing of the consent form which was part of the questionnaire.

5.5 SUMMARY OF THE CHAPTER

This chapter provided an intricate discussion of the research methodology followed in this study. A justification of the selected survey area and research method was given. The target population of the study was established. Consequently, the sampling type and technique selected for the research study was highlighted. Furthermore, self-administered questionnaires were chosen for data collection and the operationalisation of the measures in the questionnaire was given. The procedure followed for the pre-testing of the measuring instrument and the purposes thereof were emphasised.

Subsequently, the data analysis procedure was highlighted. The steps followed for data preparation, the descriptive and inferential statistics were ascertained. Of importance, also, the methods used by the researcher to ensure reliability and validity of the questionnaire were provided. The chapter closed off with a discussion of the ethical issues considered in the study and the limitations. The following chapter (chapter six) details the data analysis and provides a logical presentation of the research findings.

CHAPTER 6: DATA ANALYSIS

6.1 INTRODUCTION

The previous chapter provided a detailed research methodology that was utilised to test the theoretical model, and to attest the postulated research hypotheses in this study. In that regards, the current chapter focuses on presenting the data analysis results and to test the hypotheses. The chapter begins with an introduction, followed by a section on data preparation. Following this, the sample characteristics are discussed preceded by a discussion on the response rate. The chapter then presents the Structural Equation Modelling (SEM) procedures of the measurement model and the structural model that were applied on the data. Finally, the chapter presents the results that pertain to the testing of the hypotheses which is followed by the summary of the chapter.

6.2 PRELIMINARY ANALYSES

Initially, the data preparation procedure was conducted to ensure that data was ready for the analysis stage. Section 5.3.8.1, in chapter 5, discussed the procedures and steps that were conducted in data preparation, namely, editing, coding and entry. Next, the first stage in this section involves screening for missing data and outliers. Furthermore, as part of the screening procedure, the entered data was assessed to ascertain the normality of distribution through kurtosis and skewness measurements which are prerequisites for structural equation modelling. Lastly, the response rate in the sampling phase is discussed in this section. The following section discusses the screening procedures that were conducted on the data.

6.2.1 Data Screening

The first stage in the data analysis phase involved screening which is also called data screaming. Data was screened for missing values, outliers and normality assessment. Data screening is an essential phase which is aimed at ensuring that data have been

properly entered as well as ascertaining whether or not the distributions of variables to be utilised in the analysis satisfy normality requirements (Shammout, 2007:143). Normality assessments are discussed under in section 6.4 together with other descriptive statistics. Furthermore, the usability, reliability and validity of data for evaluating causal theory depend, to a larger extent, on data screening (Gaskin, 2012).

6.2.1.1 Missing data analysis and remedy

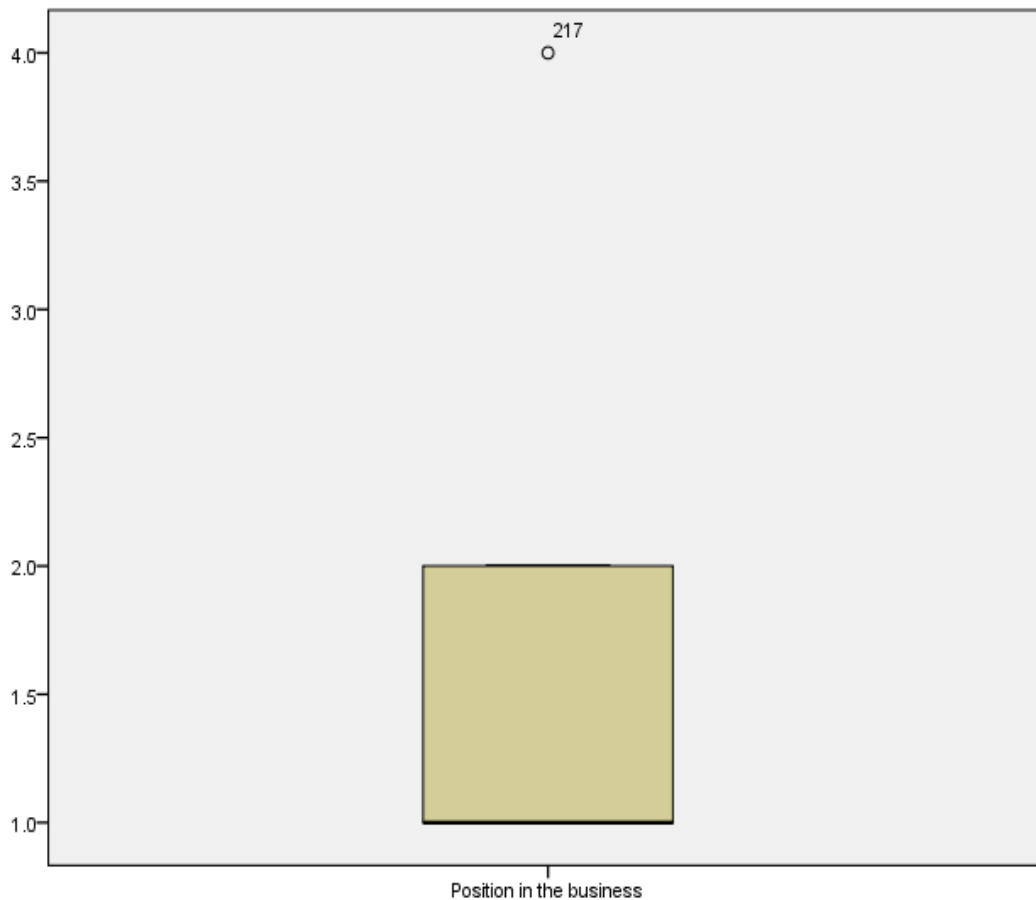
With data gathering, the occurrence of missing data is virtually inexcusable and common. Decisions as well as procedures should be conducted pertaining to missing data before hypotheses testing and further analyses are conducted. Missing data often transpire when the respondent fails to respond to certain questions in the questionnaire. Respondents may accidentally fail to respond to survey questions or they may be just unwilling to respond thereby resulting in missing data (Bryman & Bell, 2011:315). However, missing data must be dealt with particularly in the context of structural equation modelling. According to Gaskin (2012), when data is missing, it may be impossible to run EFA, CFA as well as SEM because there is need for adequate data points for these techniques to be able to compute the required estimates.

Another problem associated with missing values is that they introduce bias issues (Gaskin, 2012). The SPSS statistical procedures provide three options for dealing with missing data. The first option involves excluding cases listwise, thus, the analysis only includes cases when all data on all variables are available. The second option involves excluding cases pairwise whereby the case is only excluded if it is missing the data that is required for a specific analysis. However, the case will still be involved in other analyses for which it has the required information. Lastly, the replacement with mean option can be used, whereby the mean value of the variable is calculated and given to every missing case (Pallant, 2007). In this study, 24 uncompleted questionnaires were excluded due to an extreme number of unanswered questions and then the remaining missing values were treated through the replacement with mean method.

6.2.1.2 Outliers and extreme values

Outliers pertain to cases with scores that are considerably dissimilar from the rest of the scores within a specific set of data (Byrne, 2009:105). Simply put, an outlier is regarded as a value that is not within the expected population of values. Two types of outliers exist, namely, univariate and multivariate. A univariate outlier pertains to an extreme value on one variable whilst a multivariate outlier contains extreme values of at least two variables. Outlier values are undesirable in the data because they result in distortion in the representation of the sample and thereby misconstruing the analysis as well as the statistical analyses. Furthermore, outliers can be very high or very low and have the potential of distorting the normality of data (Shammout, 2007:145). As a result, the data was assessed for any outliers as shown in Figure 6.1 below.

Figure 6.1 Outliers



Thus, Box plots were utilised in order to ascertain outliers in this thesis at the hand of the SPSS software. Outlier values in SPSS emerge as little circles with an attached number (Pallant, 2007) as shown in Figure 6.1 above. The only outlier in this study pertained to the variable position in business which had only two options manger or owner, which were signified by two codes 1 and 2. So the value 4, in this case, was an outlier it was treated by revisiting the questionnaire according to the numbers and the value was found to be 2.

6.2.2 Response Rate

As outlined in the previous chapter on research methodology (see section 5.3.6.3) 400 questionnaires were distributed for the purpose of data collection. The data collection was conducted in the month of September 2017 throughout the various areas of the Limpopo province. Of the questionnaires obtained 246 were returned which represents a 61.5% response rate. Thus, the remaining 154 questionnaires that were not returned represented the non-response rate which was 38.5%. Out of them 24 returned questionnaires were carrying responses that had less than 75% of all the responses. As recommended in latent research, a questionnaire that qualifies to be included should have less than 25% missing responses (Shammout, 2007:149). As such, considering the 24 questionnaires which were discarded because of partial responses, 222 questionnaires were finally used. This yields an effective final survey response rate of 55.5%.

As such, the yielded 55.5% of the questionnaires were utilised in the final analysis of the research at hand. This rate is deemed ideal primarily because of two underpinning justifications. Firstly, sample size is consistent with the requirements for structural equation modelling. As a general rule, the minimum required sample sizes for structural equation modelling can vary from 30-200 (Davcik, 2014:62). According to a structural model with 7 latent variables would require as little as 109 sample size.

6.3 SAMPLE CHARACTERISTICS

Section A in the questionnaire (See Annexure 1, pp. 283) focused on gathering information pertaining to the description of the sample elements. The information is essential because it enabled the classification of the respondents and the businesses that were surveyed. This information is vital for further studies as well as unravelling important information through qualitative studies such as grounded theory or phenomenological studies which seek in-depth information. In this section, the data contained include the gender, age and education levels of the respondents. Furthermore, the section contains information pertaining to the characteristics of the SMEs that were surveyed, namely, duration of business operations, number of employees, position of the respondent in the businesses, location of the business, as the well as the industry sector where the business belonged, are outlined. Firstly, the respondents' gender representation is discussed.

Table 6.1 below illustrates that 46.8 percent of the individuals (104 out of 222) surveyed were male respondents. On the other hand, 53.2 percent of the respondents (118 out of 222) who participated in the survey were females. As such, the majority of the respondents in the study were females. The age distribution in the study is presented next.

Table 6.1 Respondents' Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	104	46.8	46.8	46.8
	Female	118	53.2	53.2	100.0
	Total	222	100.0	100.0	

The distribution and frequencies in the survey respondents according to age categories as indicated in Table 6.2 shows that the majority of the respondents belonged to the 31-40 years age group with 39.6 percent, thus, 88 out 222 people. This is followed by those within the age group of 20-30 years constituting 33.8 percent (75 out of 222). The third

most prevalent age category in the survey were those between 41-50 years old who constituted 20.7 percent, thus, 46 out of 222 people. Respondents within the age group of 50 years and above constituted 5 percent (11 out of 222) participants in the sample. Finally, the smallest percentage, in terms of age in the sample, was for those in the age category of 20 years and below. This group constituted 0.9 percent (2 out of 222) in the sample. The education levels of the respondents in the sample for this study are discussed next.

Table 6.2 Age of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 20	2	.9	.9	.9
	20-30 years	75	33.8	33.8	34.7
	31-40 years	88	39.6	39.6	74.3
	41-50 years	46	20.7	20.7	95.0
	Above 50 years	11	5.0	5.0	100.0
	Total	222	100.0	100.0	

As shown in Table 6.3 below, the percentage of owner/managers with a diploma or certificate was equivalent to that of owner/managers with matric. Thus, both categories had 35.6 percent (79 out of 222) apiece in the sample. This was followed by the category of respondents who were in possession of a degree as constituted by 13.1 percent (29 out of 222). Furthermore, the category of individuals who had education that is below matric constituted only 12.6 percent (28 out of 222) in the sample. Finally, the least representation in the sample in terms of education pertained to respondents who had no formal education who constituted 3.2 percent (9 out of 222) of the sample. The next discussion focuses on the age of the businesses surveyed.

Table 6.3 Education of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No formal education	7	3.2	3.2	3.2
	Below Matric	28	12.6	12.6	15.8
	Matric	79	35.6	35.6	51.4
	Diploma/Certificate	79	35.6	35.6	86.9
	Degree	29	13.1	13.1	100.0
	Total	222	100.0	100.0	

The majority (100 out of 222), thus 45 percent of the SMEs surveyed in this study, had been in operation for a period of one to five years. On the other hand, SMEs that have been in operation for six to ten years constituted 32.4 percent (72 out of 222) of the sample participants. Furthermore, the segment of SMEs who have been in operation for more than 10 years comprised 14.9 percent (33 out of 222), whereas those who have only spent less than a year in business constituted the smallest segment with only 7.7 percent (17 out of 222). This information is illustrated in Table 6.4 below. The following information pertains to the sizes of the businesses in terms of number of employees.

Table 6.4 Sample representation on age of the business

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 1 year	17	7.7	7.7	7.7
	1-5 years	100	45.0	45.0	52.7
	6-10 years	72	32.4	32.4	85.1
	More than 10 years	33	14.9	14.9	100.0
	Total	222	100.0	100.0	

In this study, the number of employees was used as the mechanism of indicating the size of the businesses, thus, to indicate the difference between micro, very small, small and medium enterprises. As such, according to number of employees, the survey comprised of 35.6 percent micro, 43.2 percent very small, 17.6 percent small and lastly

3.6 percent medium sized enterprises. Thus, out of the 222 surveyed small businesses, 79, 96, 39 and 8 were micro, very small, small and medium enterprises, respectively. This means that the majority of the surveyed firms were very small businesses. Table 6.5 presents this information.

Table 6.5 Sample representation on number of employees

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	5 and Below	79	35.6	35.6	35.6
	6-20 employees	96	43.2	43.2	78.8
	21-50 employees	39	17.6	17.6	96.4
	51-200 employees	8	3.6	3.6	100.0
	Total	222	100.0	100.0	

The study utilised owners and managers in the study as the respondents because they were deemed to have the information that was required for data collection purposes. According to Table 6.6 below, the majority (55.4 percent) of the respondents in the study were owners of the businesses that were surveyed. The remaining percentage (44.6 percent) of the small businesses was represented by small business managers. Information pertaining to the geographical location of the businesses that were surveyed is presented next.

Table 6.6 Sample representation on status in the business

		Frequency	Percent	Valid	Cumulative
Valid	Owner	123	55.4	55.4	55.4
	Manager	99	44.6	44.6	100.0
	Total	222	100.0	100.0	

As shown in Table 6.7 below, the majority of the SMEs in the study were located in the urban areas of the Limpopo province. Herein, the percentage of urban-based SMEs in this study is almost four fifth of the sample, thus 79 percent (177 out of 222). Thus, the

remaining one fifth, thus, 20.3 percent (45 out of 122) were from the rural areas of Limpopo province. The last information to be provided pertaining to sample characteristics relates to the distribution of the businesses surveyed according to the different industries.

Table 6.7 Sample representation on location in the business

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Rural	45	20.3	20.3	20.3
	Urban	177	79.7	79.7	100.0
	Total	222	100.0	100.0	

Table 6.8 below presents information on the sample representation in terms of the different sectors of business. From the information obtained, the modal business sector in the study was the retail sector which constituted 39.6 percent (88 out of 222).

Table 6.8 Sample representation on sector of the business

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Manufacturing	21	9.5	9.5	9.5
	Wholesaling	13	5.9	5.9	15.3
	Retailing	88	39.6	39.6	55.0
	Agriculture	24	10.8	10.8	65.8
	Mining	2	.9	.9	66.7
	Tourism	4	1.8	1.8	68.5
	Service	70	31.5	31.5	100.0
	Total	222	100.0	100.0	

As shown in Table 6.8 above, the second largest representation in the sample was businesses that belonged to the services sector which comprised 31.5 percent (70 out of 222). Furthermore, the sample representation of SMEs within the agricultural sector

which occupied 10.8 percent (24 out of 222) was almost the same with those who belonged to the manufacturing sector that comprised 9.5 percent (21 out of 222). Lastly, the least represented sectors in the sample was the tourism and mining sectors which have 1.8 percent (4 out of 222) and 0.9 percent (2 out of 222), respectively. After discussing the sample characteristics, the next section discusses the descriptive statistics.

6.4 DESCRIPTIVE ANALYSIS

Descriptive statistics assist in outlining, showing and summarising the data in a simple, but meaningful manner. In this study, Table 6.1 below shows the descriptive statistics results that were conducted. The descriptive statistics are based on the 5-point Likert scale that was utilised in this study. Specifically, the mean as a measure of central tendency and shows that the minimum mean value was 2.49 for EP2 and EP3 as shown below. However, the maximum mean value in the data was 3.99 for Com5. The standard deviation values were also computed as measures of dispersion. The standard deviation values indicate that the minimum value was .791 and the maximum value was 1.369. These standard deviation values on all the questionnaire items indicate that these values were less concentrated around the mean and were adequately dispersed.

Assessment for normality was also conducted and according to Mahmoud and Khalifa (2015:349), assessing normality is an essential assumption within the context of multivariate analyses like SEM, especially when using AMOS software. The concept of normality pertains to the distribution shape of the data of each individual metric variable with regards to normal distribution and in this study, skewness and kurtosis were the main statistical techniques that were used. However, normality probability plots were used also to diagrammatically check how the data was distributed. For large sample sizes, such as 200 and above, the small differences in normality can be considerable but not fundamental (Aminu & Shariff, 2014:127). Thus, for large samples a particular variable may have skewness and kurtosis values that are statistically significant but that

does not amount to substantive deviations in normality to disturb the ultimate analyses (Shammout, 2007:145).

Skewness pertains to the extent to which the distribution of a specific measure diverges from symmetry. Herein, a symmetrical distribution has the mean, median and mode located in one location. On the other hand, kurtosis pertains to the extent to which the distribution shape of the data resembles 'peakedness' or 'flatness' when contrasted with normal distribution (Cooper & Schindler, 2008:440). For both, skewness and kurtosis, the closer the coefficients are to zero the more perfect the distribution with zero representing perfect normal distribution (Mishra, 2015:301). However, several criteria for evaluating distribution (skewness and kurtosis) have been suggested in literature. George & Mallery (2010) ascertain that the expected values for asymmetry in skewness and kurtosis between -2 and +2 are considered acceptable in order to prove normal univariate distribution. Data variables with absolute values of univariate skewness indexes (standard error values) that exceeded 3.0 were regarded to be highly skewed, while for kurtosis 8.0 was the minimum value in this study (Shammout, 2007:145).

The probability plots were further used to visually assess the normality distribution. Utilising the SPSS software, the distribution of variables along the straight line indicated no severe disparities from normality. Consequently, no data transformation was required. According to Kline (2011), for skewness and kurtosis, in moments of extreme non-normality (skewness > 2 or kurtosis > 7) the data ought to be transformed in SEM through the utilisation of weighted least square estimate. Table 6.9 below, shows the univariate normality of the items used in this study and illustrates that according to skewness, the data exhibited strong normal distribution. Furthermore, the kurtosis assessment criteria show the data set contained no item to render it substantively kurtotic. The next section discusses the stage of factor analysis prior to conducting structural equation modelling.

Table 6.9 Descriptive Statistics and Normality Assessment Results

Variables	N	Skewness		Kurtosis		Descriptive	
	Statistic	Statistic	Std. Error	Statistic	Std. Error	Mean	Std. Deviation
Env1	222	.236	.163	-.991	.325	2.83	1.260
Env2	222	.014	.163	-1.006	.325	2.97	1.209
Env3	222	.083	.163	-.948	.325	2.92	1.234
Env4	222	-.010	.163	-1.190	.325	2.87	1.333
Env5	222	-.059	.163	-1.230	.325	2.93	1.369
Env6	222	.066	.163	-1.158	.325	2.77	1.289
Env7	222	.015	.163	-1.233	.325	2.85	1.350
Env8	222	-.345	.163	-.806	.325	3.23	1.246
Eco1	222	-.505	.163	-.322	.325	3.58	1.033
Eco2	222	-.505	.163	.043	.325	3.79	.935
Eco3	222	-.629	.163	.331	.325	3.91	.890
Eco4	222	-.543	.163	-.193	.325	3.89	.926
Eco5	222	-.833	.163	.589	.325	3.91	.930
Eco6	222	-.862	.163	.387	.325	3.87	.985
Soc1	222	-.608	.163	.125	.325	3.68	.971
Soc2	222	-.969	.163	1.144	.325	3.81	.947
Soc3	222	-.577	.163	.056	.325	3.78	.947
Soc4	222	-.786	.163	.429	.325	3.70	1.003
Soc5	222	-.584	.163	-.003	.325	3.82	.959
Soc6	222	-.911	.163	.556	.325	3.81	.995
Soc7	222	-1.069	.163	1.136	.325	3.91	.983
Coe1	222	-.133	.163	-.989	.325	3.10	1.247
Coe2	222	-.139	.163	-.933	.325	3.00	1.186
Coe3	222	.095	.163	-1.186	.325	3.03	1.314
Coe4	222	.011	.163	-1.213	.325	3.05	1.300
Nor1	222	-.025	.163	-1.066	.325	2.98	1.264
Nor2	222	-.044	.163	-1.098	.325	3.00	1.275
Nor3	222	.124	.163	-1.141	.325	2.84	1.322
Nor4	222	-.055	.163	-1.192	.325	3.02	1.349
Nor5	222	-.030	.163	-1.204	.325	2.97	1.357
Mim1	222	-.123	.163	-.749	.325	3.16	1.106
Mim2	222	-.094	.163	-.845	.325	3.16	1.183
Mim3	222	-.030	.163	-.711	.325	3.12	1.125
Mim4	222	.214	.163	-.589	.325	2.84	1.150
Mim5	222	.421	.163	-.662	.325	2.64	1.216

Com1	222	-.946	.163	.519	.325	3.71	1.075
Com2	222	-.929	.163	.490	.325	3.86	1.032
Com3	222	-.936	.163	.687	.325	3.88	1.009
Com4	222	-1.094	.163	.931	.325	3.88	1.048
Com5	222	-1.242	.163	1.657	.325	3.99	.970
FP1	222	-.492	.163	.131	.325	3.27	.954
FP2	222	-.778	.163	.402	.325	3.35	.938
FP3	222	-.608	.163	.377	.325	3.26	.852
FP4	222	-.635	.163	1.227	.325	3.36	.799
FP5	222	-.165	.163	-.153	.325	3.17	.911
CSP1	222	-.448	.163	.434	.325	3.33	.828
CSP2	222	-.344	.163	.440	.325	3.58	.807
CSP3	222	-.680	.163	.668	.325	3.54	.940
CSP4	222	-.706	.163	.700	.325	3.58	.947
ESP1	222	.073	.163	.271	.325	3.27	.800
ESP2	222	-.121	.163	1.176	.325	3.24	.791
ESP3	222	-.342	.163	.323	.325	3.32	.924
ESP4	222	-.391	.163	-.064	.325	3.34	.969
IP1	222	-.139	.163	-.496	.325	3.08	1.039
IP2	222	-.233	.163	-.660	.325	3.09	1.083
IP3	222	-.082	.163	-.967	.325	2.83	1.160
IP4	222	-.253	.163	-.974	.325	2.96	1.182
EP1	222	.035	.163	-.765	.325	2.62	1.043
EP2	222	.203	.163	-.920	.325	2.49	1.152
EP3	222	.300	.163	-.828	.325	2.49	1.187
EP4	222	.261	.163	-.775	.325	2.57	1.204
SP1	222	-.658	.163	-.361	.325	3.26	1.171
SP2	222	-.537	.163	-.855	.325	3.05	1.224
SP3	222	-.501	.163	-.581	.325	3.21	1.200
SP4	222	-.871	.163	.115	.325	3.55	1.140
Valid N (listwise)	222						

6.5 FACTOR ANALYSIS

When conducting factor analysis, researchers have an option of utilising EFA or CFA. Factor analysis is utilised for data reduction with the intention of attaining parsimonious

analysis. The rule of parsimony stipulates that a description in research that involves a fewer elements is more desirable than one that has many components (Zikmund *et al.*, 2010:595). CFA is appropriately conducted when the researcher possesses knowledge or ideas about the internal structure of the scale utilised (Browne & Moore, 2013:2). Thus, CFA is adopted by the researcher when the hypotheses pertaining to the relationship between latent variables and their underlying observed variables are clear. On the contrary, EFA is utilised when the researcher has some uncertainties pertaining to the dimensionality of a scale or they require to identify the minimum number of factors that observed variables are linked to (Mahmoud & Khalifa, 2015:348).

The primary goal of both EFA and CFA is to provide observed relationships pertaining to a set of indicators using the possible fewer latent variables, thereby upholding the concept of scientific parsimony in research (Browne & Moore, 2013:2; Mishra, 2015:559). Researchers can use either of the two (CFA or EFA) in each study depending on whether or not they have knowledge of the dimensionality of the items used. There is an option for researchers to utilise both approaches depending on the nature of the scale (Farooq, 2016:78). According to Mishra (2015:556), in most empirical researches that use SEM there is sequence of EFA, CFA and then SEM. As such, this sequence was also utilised in this study, considering that the instrument that was utilised in this study contained some items that were formulated by the researcher.

In conducting EFA, the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and the Bartlett's Test of Sphericity were applied to ascertain the appropriateness of the data in conducting factor analysis (Trainor *et al.*, 2011:164). As required, the KMO test for all factors was above the threshold of 0.50, as shown in Table 6.10 below, indicating the significance of the data for factor analysis (Mishra, 2015:566). Furthermore, the results of Bartlett's Test of Sphericity augment the adequacy of the data too. The p value for the Bartlett's test static is required to be below 0.05 and as indicated in the Table 6.10 below, all the factors had a significant test (Bartlett's test of $p < 0.05$). Thus,

the KMO statistics and Bartlett's test of sphericity indicate that the sample data was appropriate for carrying out factor analysis (Mishra, 2015:572).

Table 6.10 Bartlett's Test, KMO Test and Eigenvalue analyses

Measures	Eigenvalue	Total Variance Explained (%)	KMO Test	Bartlett's Test
Isomorphism		84.306	0.905	0.000
Coercive Isomorphism	1.239	16.047		
Normative isomorphism	2.439	23.601		
Mimetic isomorphism	1.465	20.459		
Competitive isomorphism	11.275	24.109		
Sustainable development		70.283	0.879	0.000
Environmental sustainability	10.617	27.084		
Economic Sustainability	2.292	22.391		
Social sustainability	1.851	20.808		
Firm performance		83.424	0.897	0.000
Financial performance	2.821	16.343		
Customer satisfaction	1.912	7.288		
Employee satisfaction	12.202	17.728		
Innovation performance	2.004	15.716		
Environmental performance	1.213	12.609		
Social performance	1.704	13.739		

In addition, information on the eigenvalues and total variance explained is shown in Table 6.10 above. The use of eigenvalues requires that factors with a value of at least 1 be considered and retained for further analysis according to *Kaiser's rule*. Accordingly, for all the factors that were retained in factor analysis the eigenvalues were above 1 (Mishra, 2015:570). Lastly, total variance explained was also satisfactory with the cumulative percentage of total variance explained of 84%, 70% and 83% the factors extracted, namely, isomorphism, sustainable development and firm performance, respectively. With the threshold for this value being 60% the values were highly

significant. Thus, according to the information on eigenvalues, total variance explained, KMO test and Bartlett's test the conduct of EFA was satisfactory.

Against the backdrop of the above analysis to factor analysis, then EFA was conducted. To conduct EFA in this study, the principal component analysis was utilised as the extraction method. Furthermore, the data was regarded to be orthogonal and as such the Varimax rotation was used in this study. Orthogonal rotation is utilised when factors are deemed to be uncorrelated and make use of a 90° rotation of factors from each other (Cooper & Schindler, 2008:564; Yong & Pearce, 2013:84). The three prominent orthogonal rotation techniques are quartimax, equimax and varimax. Varimax was preferred because it reduces number of variables that contain high loadings on each given factor and aims to ensure that small loadings are even more minimised (Yong & Pearce, 2013:84).

Basically, a factor loading signifies the extent to which a particular measured variable is strongly correlated with a given factor (Zikmund *et al.*, 2010:594). The primary aim was to determine the unidimensionality of the factors. Using the software SPSS version 24 the results of factor analysis are presented in the sections that follow. In determining which variables or items to retain, the cut-off value of 0.5 coefficient was used (Mishra, 2015:557) in this study. Furthermore, only those variables that did not produce high cross-loadings on more than one factor were retained.

However, factor loadings are also determined or dependent on the sample size. As such, different cut-offs have been posited in latent literature depending on the sample sizes (Pearson & Mundform, 2010:359). Table 6.10 on the next page, indicates the factor loading cut-offs as per the sample sizes. Consequently, based on the sample size for this study which was 222 responses, the cut off for significant factor loadings was between 0.35 and 0.40. However, the general rule of thumb that factor loadings need to be above 0.5 regardless of the sample size was applied in this study.

Table 6.11 Factor Loading Cut-offs based on sample size

FACTOR LOADING	SAMPLE SIZE NEEDED FOR SIGNIFICANCE
0.30	350
0.35	250
0.40	200
0.45	150
0.50	120
0.55	100
0.60	85
0.65	70
0.70	60
0.75	50

The discussion that follows pertaining to factor loadings also captures the aspect of reliability. The Cronbach's alpha test was used to ascertain the extent to which variations in the factor scores was as a result of random chance as well as the testing of internal consistency per the factors (Sachdeva, 2013:73). The alpha value falls between 0-1 and the nearer the value is to 1 the more reliability or internal consistency of the measures within a variable. The commonly used threshold for accepting reliability is 0.70 and this was used in this study. The next section discusses factor analysis for the isomorphism construct.

6.5.1 Factor Analysis for the Isomorphism Variable

As indicated in Table 6.12 below, factor loadings for all the items that measured the sub-constructs under isomorphism were significantly positive. Furthermore, the items loadings were above the recommended threshold of 0.50. As for reliability analysis, the Cronbach's alpha values were significantly above the minimum recommended of 0.70. Herein, all the coefficient alpha values were above 0.90. Lastly, the reliability coefficient (0.961) for the whole isomorphism scale was also excellent as it was very close to 1. As such, all the factors were retained for further analysis under isomorphism.

Table 6.12 Factor Analysis and reliability for isomorphism

Variables	Component (Factor loadings)			
	Coercive Isomorphism	Normative Isomorphism	Mimetic Isomorphism	Competitive Isomorphism
Coe 1	.781			
Coe 2	.790			
Coe 3	.770			
Coe 4	.646			
Nor 1		.846		
Nor 2		.858		
Nor 3		.871		
Nor 4		.721		
Nor 5		.710		
Mim 1			.748	
Mim 2			.781	
Mim 3			.693	
Mim 4			.824	
Mim 5			.806	
Com 1				.800
Com 2				.833
Com 3				.903
Com 4				.875
Com 5				.883
Cronbach's alpha	0.964	0.946	0.930	0.950
Total scale reliability coefficient for isomorphism = 0.961				

6.5.2 Factor Analysis for the Sustainability Variable

Table 6.13 below presents the results pertaining to the factor analysis of the sustainability variable. The factor loadings were all significantly positive and also exceeded the cut-off level of 0.50. As such, there were no significant cross-loadings

leading to the retention of all the items for further analysis, except one item (Eco6) under economic sustainability was dropped for high loadings on more than one factor. The Cronbach's alpha test resulted in above 0.90 significant reliability coefficients in this construct, as well as, a highly significant total scale reliability coefficient of 0.948.

Table 6.13 Factor Analysis and reliability for sustainable development

Variables	Component (Factor loadings)		
	Environmental Sustainability	Economic Sustainability	Social Sustainability
Env 1	.751		
Env 2	.844		
Env 3	.812		
Env 4	.896		
Env 5	.881		
Env 6	.890		
Env 7	.732		
Env 8	.636		
Eco 1		.665	
Eco 2		.765	
Eco 3		.988	
Eco 4		.949	
Eco 5		.632	
Soc 1			.693
Soc 2			.781
Soc 3			.841
Soc 4			.733
Soc 5			.887
Soc 6			.670
Soc 7			.504
Cronbach's alpha	0.946	0.912	0.903
Total scale reliability coefficient for sustainability = 0.948			

6.5.3 Factor Analysis for the Firm Performance Variable

As shown in Table 6.14 below, the computed factor loadings for the 6 variables of the firm performance construct were all significant.

Table 6.14 Factor Analysis and reliability for firm performance

Variables	Component (factor loadings)					
	Financial	Customer satisfaction	Employee satisfaction	Innovation	Environmental	Social
FP1	.830					
FP2	.804					
FP3	.809					
FP4	.760					
FP5	.794					
CSP1		.779				
CSP2		.748				
CSP3		.504				
ESP1			.642			
ESP2			.766			
ESP3			.863			
ESP4			.805			
IP1				.843		
IP2				.850		
IP3				.710		
IP4				.813		
EP1					.507	
EP2					.857	
EP3					.903	
EP4					.801	
SP1						.739
SP2						.916
SP3						.901
SP4						.752
Cronbach's alpha	0.915	0.863	0.934	0.922	0.944	0.920
Total Scale reliability coefficient for firm performance = 0.978						

As shown in Table 6.14 above, the factor loadings were above the recommended 0.50 and most of the items positively loaded on all the factors with values ranging between 0.51 and 0.92. However, for the customer satisfaction component a single variable was dropped because it cross-loaded with values above 0.50 on more than one variable. This item, labelled as CSP4 from the questionnaire which was described as “how would you describe the performance of your business in the past three years in terms of customer loyalty?” Finally, for reliability tests, the coefficient alpha values under firm performance were significantly high ranging between 0.863 and 0.944, thus, exceeding the 0.70 threshold value. The summated reliability value for the firm performance value was also significantly high at 0.978. This indicates that the variables included in the construct had significantly high internal consistency.

6.6 STRUCTURAL EQUATION MODELLING

As outlined in section 5.3.8.3 the structural equation modelling approach that is followed in this treatise utilised a two-stage approach, namely, measurement model and structural model. The measurement model specifies the hypothesised constructs and the observed variables that were utilised to assess the constructs. The second-stage, structural model, was conducted to assess the causal or paths relationships between the exogenous and endogenous variables. In this thesis, the exogenous variables were institutional isomorphism (coercive, normative and mimetic) and competitive isomorphism. The endogenous variables are sustainable development practices (economic, social and environment) as well as financial firm performance and non-financial performance (customer satisfaction, employee satisfaction, innovation performance, environmental performance and social performance). The following discussion focuses on the two stages of SEM.

6.6.1 Stage One: Measurement Model

As indicated before, the measurement model is part of the structural equation model. The primary purpose of the measurement model is to outline the relationship between

observed variables and the latent variables which are also called composite or unobserved variables (Shammout, 2007:153). According to Mishra (2015:627), a measurement model pertains to the specifications of each construct and the indicators of each construct. The measurement model constitutes the factor analytic aspect of structural equation modelling. The three major constructs in this study, namely, isomorphism, sustainable development and firm performance constitute the latent variables that were assessed in the section. In assessing the observed variables and latent variables, factors such as missing data, outliers, multicollinearity and normality of the data often affect the performance of CFA. In this study, these attributes that may affect the CFA analysis and sometimes cause error messages were treated as discussed in Section 6.2.

The measurement model constituted two aspects, namely, confirmatory factor analysis and the assessment of reliability and validity (Rajeh *et al.*, 2015:252). The latent constructs were assessed for fitness and how the observable variables loaded towards the measure. The assessment was rigorously conducted utilising the software Analysis of a Moment Structure (AMOS) version 24. Amos software has been regarded as an easy-to-use package within the structural equation modelling spectrum (Siddiqui *et al.*, 2015:112). In SEM, manifest or observed variables also called indicators represent the questionnaire items using rectangles or squares (Mishra, 2015:600). The latent variables or constructs, which are also called unobserved variables, represent the hypothesised variables and appear as circles or ellipses. Through the use of CFA, this study was able to determine a comprehensive parsimonious aspect within the study (Brown & Moore, 2013:2). The discussion below focuses on the assessment of unidimensionality for the isomorphism construct.

6.6.1.1 Assessing unidimensionality for Isomorphism

As observed in literature and in the conceptual model, the concept of isomorphism constitutes four variables in this study, namely, coercive, normative, mimetic and competitive isomorphism. This information is illustrated in the Table 6.15 below.

Table 6.15 Isomorphism Items and their Description

Item Description	Item Label	Item Deleted
Our main customers that matter to us believe that we should use sustainable business practices.	Coe 1	Deleted
We may not retain our important customers without sustainable business practices.	Coe 2	
Our suppliers that matter to us believe that we should use sustainable business practices.	Coe 3	
They are rules and regulations that enforce us to use sustainable business practices.	Coe 4	
Sustainable business practices have been widely adopted by our suppliers currently	Nor 1	Deleted
Sustainable business practices are widely adopted by our customers currently	Nor 2	
Sustainable business practices are widely adopted by our competitors currently	Nor 3	Deleted
Our employees consider sustainability as part of their professionalism.	Nor 4	
Sustainable practices is provided to us as part of training in our industry	Nor 5	
Our main competitors that have used sustainable development benefited greatly.	Mim 1	
Our main competitors that use sustainable development are perceived favourably by customers.	Mim 2	Deleted
Our main competitors that use sustainable development are more competitive.	Mim 3	
We employ workers from competitors that are successful in sustainable development.	Mim 4	Deleted
We use the same consultants as our main competitors in sustainable development.	Mim 5	
We want to reduce production costs compared to our competitors.	Com 1	Deleted
We want to gain a competitive advantage over our competitors.	Com 2	

We want to increase the organisation's efficiency more than our competitors.	Com 3	
We want to increase our share in the market over our competitors.	Com 4	Deleted
We want to increase our survival prospects in the market.	Com 5	

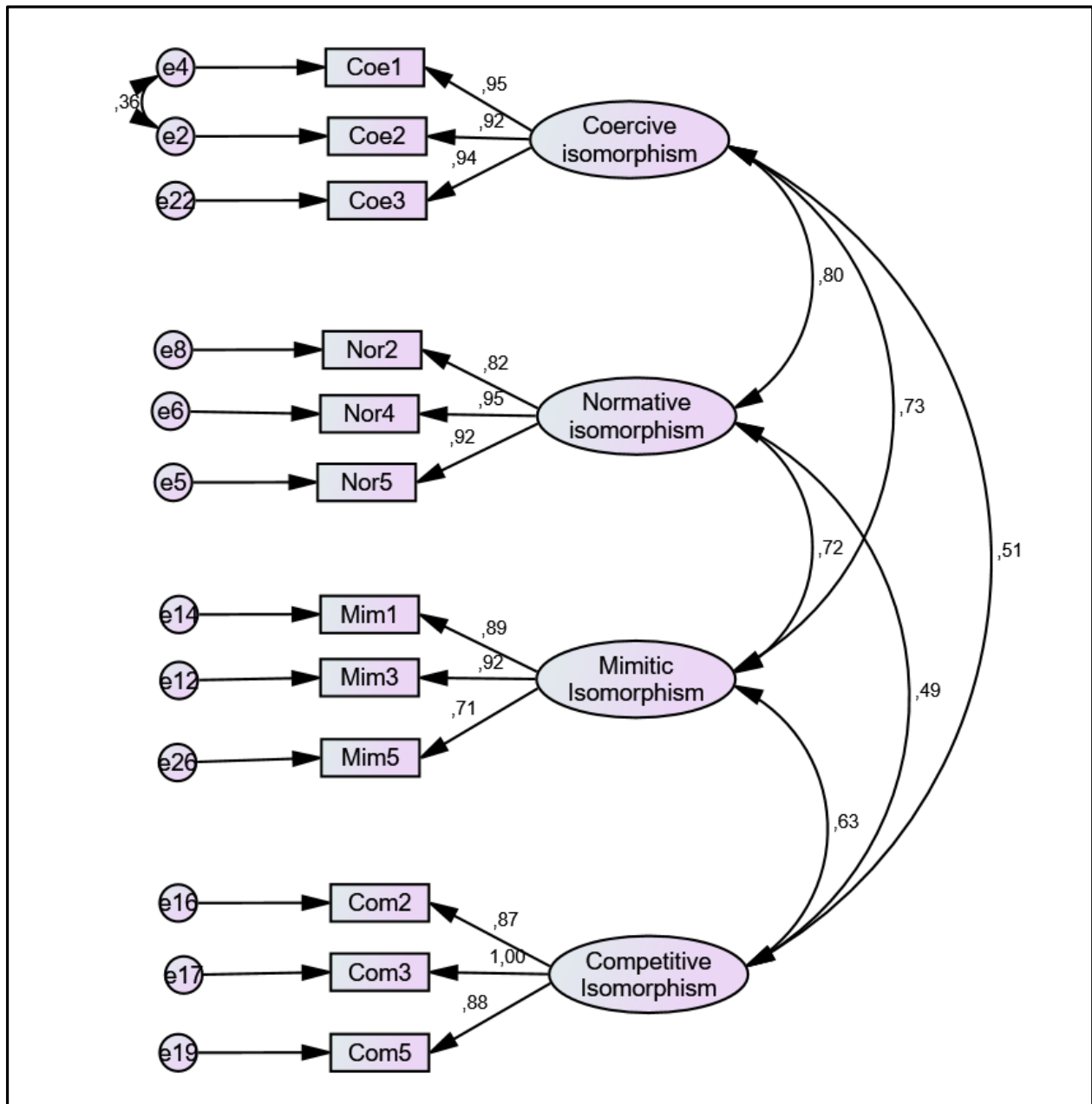
In total 19 items were used to measure the isomorphism construct. In this case, the coercive isomorphism was measured using four questionnaire items, namely, Coe 1 to Coe 4; normative isomorphism was measured by five items labelled as Nor 1 to Nor 5; mimetic isomorphism was measured labelled as Mim 1 to Mim 5 and finally competitive isomorphism Com 1 to Com 5, as per Table 6.14 above.

After conducting EFA for this factor, no items were dropped because of low factor loadings. As such all the items under isomorphism variables were included in the CFA procedure. After conducting CFA for the isomorphism measurement model the majority of the fit indices did not satisfy the required standards. The model initially resulted in a significant chi-square (Chi-square=786.226, df=145, P=.000, N=222). Furthermore, the GFI was .742, AGFI = .662, RMSEA = .141, NFI = .857, CFI = .880, TLI = .858, cmin/df = 5.422 and SRMR = 0.536. As indicated by these indices, the model needed respecification. All the items loaded high above the minimum threshold of 0.70 on their respective factors. The initial model had issues of multicollinearity as the intercorrelation value between coercive isomorphism and mimetic was high at 0.84. Thus, the model also needed to be readjusted (respecification) considering this lack of discriminant validity.

As such, in order to improve the model the assessment of standardised residuals was conducted. Apart from the indicator Mim4, much of the residual values satisfied the recommended threshold of within +/- 2.58 values. Thus, initially Mim4 was dropped. Further assessments were conducted in order to improve the model by evaluating the modification indices. Herein, the modification indices showed that indicators Coe4, Nor1, Nor3, Mim2, Com1 and Com4 were highly correlated with other indicators with high values. The decision was made to drop these items instead of correlating the items

in the model by using double-headed arrows. The dropping of the items also was in line with the concept of parsimony in research which strives for explaining concepts with minimum variables as much as possible. Figure 6.2 below diagrammatically shows the final CFA analysis for the isomorphism construct in this study.

Figure 6.2 Confirmatory factor analysis for Isomorphism



Chi-square=104.125, GFI=.925, NFI=.964, CFI=.972, TLI=.972, RFI=.950, AGFI=.876, RMR=.042, RMSEA.097, SRMR=.0277, Chi-square/df=2.215

As shown in Figure 6.2 above, out of the 19 items that were originally used to measure the isomorphism construct, 7 indicators (Coe4, Nor1, Nor3, Mim2, Mim4, Com1 and Com4) were dropped. Thus, 12 items were retained for inclusion in the second stage of SEM. The items retained had significantly higher loadings and the deletion in the other items was deemed to retain the meaning in the constructs as all the constructs were measured using the minimum recommended three items per variable. After conducting the above mentioned adjustments, eventually good model fitness was attained (Chi-square=104.125, df=47, p=.000, N=222). Furthermore, the GFI=.925, NFI=.964, CFI=.972, TLI=.972, RFI=.950, AGFI=.876, RMR=.042, RMSEA.097, SRMR=.0353, and the Chi-square/df=2.215.

Furthermore, there was a significant improvement in the constructs intercorrelatedness as all the correlation coefficients eventually were ranging between 0.49 and 0.80 (See Figure 6.2 on the double-headed arrows on the constructs). The chi-square was nonetheless significant showing a poor goodness-of-fit. However, the chi-square fitness is almost never going to fit in large samples and complex models as in this study. Thus, achievement of goodness of fit for this construct was achieved as indicated in Figure 6.2 above. The following section focuses on the assessment of unidimensionality of sustainable development.

6.6.1.2 Assessing unidimensionality for sustainable development construct

The second-order construct of sustainable development practices was measured using three first-order constructs, namely, economic sustainability, environmental sustainability and social environmental sustainability. These constructs were measured at the hand of 21 items in the questionnaire. After conducting EFA for sustainable development practices (see Section 6.5.2) one item (Eco6) under economic sustainability was dropped. Thus, in conducting CFA for sustainability 20 items were eventually used as shown in Table 6.16 on the next page.

Table 6.16 Sustainable development practices Items and their Description

Item Description	Item Label	Item Deleted
Our sustainable business practices focus on environmental issues	Env 1	Deleted
Our sustainable business practices make the most efficient use of the resources available in the environment	Env 2	
Our sustainable business practices are based upon environmental monitoring	Env 3	Deleted
Our sustainable business practices recycle, reuse or reduce waste	Env 4	
Our sustainable business practices are increasing energy efficiency	Env 5	
Our sustainable business practices emphasise use of renewable energy	Env 6	Deleted
Our sustainable business practices make use of reduction/replacement of hazardous chemicals or materials (e.g. substituting hazardous chemicals with less hazardous alternatives).	Env 7	Deleted
Our sustainable business practices adhere to Environmental Protection Agency regulations on effluents/emissions/waste	Env 8	Deleted
Our sustainable development practices rest on economic considerations such as efficiency and productivity	Eco 1	Deleted
Our sustainable development practices focus on survival in the marketplace.	Eco 2	
Our sustainable development practices save money for the firm.	Eco 3	
Our sustainable development practices meet tax obligations.	Eco 4	
Our sustainable development practices provide products and services that are important for the community	Eco 5	Deleted
Our sustainable development practices take current activities in the community into account.	Soc 1	Deleted
Our sustainable development practices consider the social well-being of society.	Soc 2	
Our sustainable development practices provide entitlements to workers.	Soc 3	
Our sustainable development practices promote women to senior management positions	Soc 4	Deleted
Our sustainable development practices focus on equity and safety of the community.	Soc 5	
Our sustainable development practices focus on improving the general education level	Soc 6	Deleted
Our sustainable development practices promote individual rights both civil and human rights	Soc 7	Deleted

Thus, as shown in Table 6.16 above, environmental sustainability was measured by eight questionnaire items labelled as Env1 to Env7, whereas, economic sustainability

using five items, namely, Eco1 to Eco5. Finally, social sustainability was measured using seven items labelled as Soc1 to Soc7.

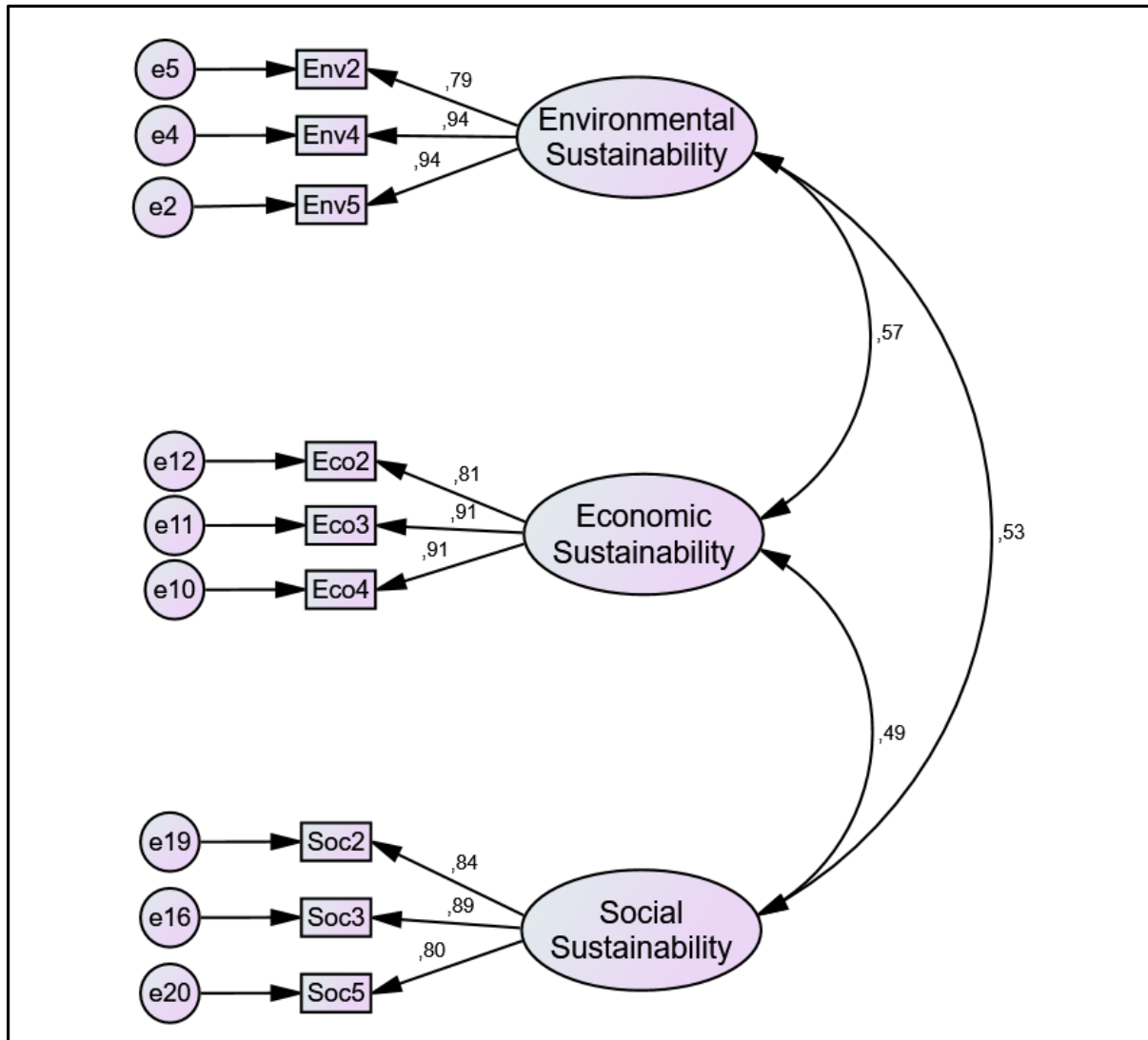
The assessment of unidimensionality for the sustainable development constructs was simultaneously conducted for the purposes of achieving a parsimonious model as well as attaining discriminant validity by looking at the constructs' intercorrelatedness. The initial CFA resulted in significant factor loadings on all the indicators. However, the model fitness indices showed that there was need for respecification of this measurement model. The chi-square was significant (Chi-square=1160.277, df=186, $p=.000$, N=222). The other fit indices also did not show good fit, thus, GFI=.675, NFI=.747, CFI=.777, TLI=.748, RFI=.714, AGFI=.597, RMR=.081, RMSEA.154, SRMR=.0728, Chi-square/df=6.238. On a positive side, the correlation coefficients between the constructs were within the expected parameters. As such, further analysis was conducted to achieve acceptable fitness as indicated below in Figure, 6.3.

The model evaluation process indicated that the model could be improved by considering the modification indices considering that all the factor loadings were above the recommended threshold. Firstly, the analysis of standardised residuals showed that one indicator (Eco5) under economic sustainability had residuals of 3.016 and 2.666 which were above the recommended of within +/- 2.58 values. As such, it was deleted as it potentially caused fitness problems. Furthermore, modification indices showed that the model could be improved by correlating items in the model that had high correlations or delete them. The decision was made to delete the items that had high intercorrelations for as long as a minimum of three items per variable could be achieved.

As such, pertaining to the environmental sustainability construct, five items were deleted, namely, Env1, Env3, Env6, Env7 and Env8. Furthermore, for the economic sustainability variable one indicator was deleted which was labelled as Eco1. Finally, for the social sustainability variable, three indicators were deleted as follows, Soc1, Soc4

and Soc6. Although the above deletions appear to be many, the remaining items had significantly higher loadings and as such were deemed to capture the meaning for the respective constructs measured. After the above modifications Figure 6.3 below indicate that the entire sustainable development practices construct was eventually measured using 9 indicators.

Figure 6.3 Confirmatory factor analysis for sustainable development practices



Chi-square=63.118, GFI=.948, NFI=.960, CFI=.974, TLI=.960, RFI=.940, AGFI=.902, RMR=.047, RMSEA.086, SRMR=.0448, Chi-square/df=2.630

The remaining 9 indicators that were used to measure sustainable development practices are as indicated in the above diagram (Figure 6.3). Environmental

sustainability was eventually measured at the hand of three items (Env2, Env4, Env5). Economic sustainability was measured through Eco2, Eco3 and Eco4 whilst social sustainability was measured through Soc2, Soc3 and Soc5. This model resulted in a significant chi-square (chi-square=63.118, df=24, p=.000, N=222) signifying a poor model fit. As noted earlier, the chi-square is most likely never going to be insignificant on large sample sizes of above 200. However, considering other goodness-of-fit indices, namely, GFI=.948, NFI=.960, CFI=.974, TLI=.960, RFI=.940, AGFI=.902, RMR=.047, RMSEA.086, SRMR=.0448, and the Chi-square/df=2.630 the model presented significant good fitness, The intercorrelatedness amongst the variables also remained significantly lower as shown in the above, they ranged between 0.57 and 0.49. The following section focuses on the unidimensionality assessment for the firm performance construct.

6.6.1.3 Assessing unidimensionality for firm performance construct

The concept of firm performance was measured through six latent constructs, namely, financial, customer satisfaction, employee satisfaction, innovation, environment and social performance. These constructs were correlated in this model due to the fact that they were utilised to measure a higher order dimension, firm performance. The firm performance construct was originally measured through 25 Likert questionnaire items. As indicated in section 6.5.3 these items were subjected under exploratory factor analysis, from whence one questionnaire item (CSP4) under customer satisfaction performance was dropped because of high cross-loadings on more than one factor. Thus, in conducting CFA for the firm performance construct 24 items were employed.

As shown in Table 6.17 on the next page, financial performance was measured through 5 items labelled as FP1 to FP5 whereas, customer satisfaction performance through 3 items, CSP1 to CSP3. The remaining four factors where measured through four items per each latent variable as follows, employee satisfaction used ESP1 to ESP4, innovation performance with IP1 to IP4, environmental performance through EP1 to

EP4, and social performance through SP1 to SP4. All these items loaded significantly high on their respective constructs from the EFA analysis stage (See section 6.5.3).

Table 6.17 Firm performance Items and their Description

Item Description	Item Label	Item Deleted
How would you describe the performance of your business in the past three years in terms of net revenue?	FP1	
How would you describe the performance of your business in the past three years in terms of gross profit?	FP2	
How would you describe the performance of your business in the past three years in terms of sales growth relative to competitors?	FP3	
How would you describe the performance of your business in the past three years in terms of number of employees?	FP4	Deleted
How would you describe the performance of your business in the past three years in terms of market share	FP5	Deleted
How would you describe the performance of your business in the past three years in terms of sales (turnover)?	CSP1	
How would you describe the performance of your business in the past three years in terms of customer service?	CSP2	
How would you describe the performance of your business in the past three years in terms of relations with customers?	CSP3	
How would you describe the performance of your business in the past three years in terms of employee remuneration?	ESP1	Deleted
How would you describe the performance of your business in the past three years in terms of the working environment?	ESP2	
How would you describe the performance of your business in the past three years in terms of employees' loyalty?	ESP3	
How would you describe the performance of your business in the past three years in terms of employees' morale?	ESP4	
How would you describe the performance of your business in the past three years in terms of the number of new products or improved products/services launched onto the market?	IP1	
How would you describe the performance of your business in the past three years in terms of the number of new or improved internal processes of transforming products/services?	IP2	
How would you describe the performance of your business in the past three years in terms of top management emphasis on research and development?	IP3	
How would you describe the performance of your business in the past three years in terms of changes introduced in your products or services?	IP4	Deleted
How would you describe the performance of your business in the past three years in terms of number of projects to improve / recover the environment?	EP1	Deleted

How would you describe the performance of your business in the past three years in terms of use of recyclable materials?	EP2	
How would you describe the performance of your business in the past three years in terms of recycling level and reuse of residuals?	EP3	
How would you describe the performance of your business in the past three years in terms of success in reduction in pollutants emission?	EP4	
How would you describe the performance of your business in the past three years in terms of employment of people from different social backgrounds?	SP1	
How would you describe the performance of your business in the past three years in terms of number of social and cultural projects?	SP2	
How would you describe the performance of your business in the past three years in terms of promotion of individual and civil rights?	SP3	
How would you describe the performance of your business in the past three years in terms of promotion of women to managerial positions?	SP4	Deleted

The assessment of unidimensionality for the firm performance constructs was also simultaneously conducted for the purposes of achieving a parsimonious model as well as attaining discriminant validity through assessing the constructs' intercorrelations. The results of the initial CFA revealed all indicators had high factor loadings on their respective factors. However, the model fitness indices showed that there was need for the measurement model to be re-specified. The chi-square was significant (Chi-square=1224.667, df=233, p=.000, N=222). The other fit indices also indicated poor model fitness, thus, GFI=.687, NFI=.806, CFI=.835, TLI=.805, RFI=.770, AGFI=.597, RMR=.087, RMSEA.139, SRMR=.0829, Chi-square/df=5.256. However, the correlation coefficients between the constructs were within the expected parameters. Following a poor model fit, additional analysis was conducted to attain acceptable.

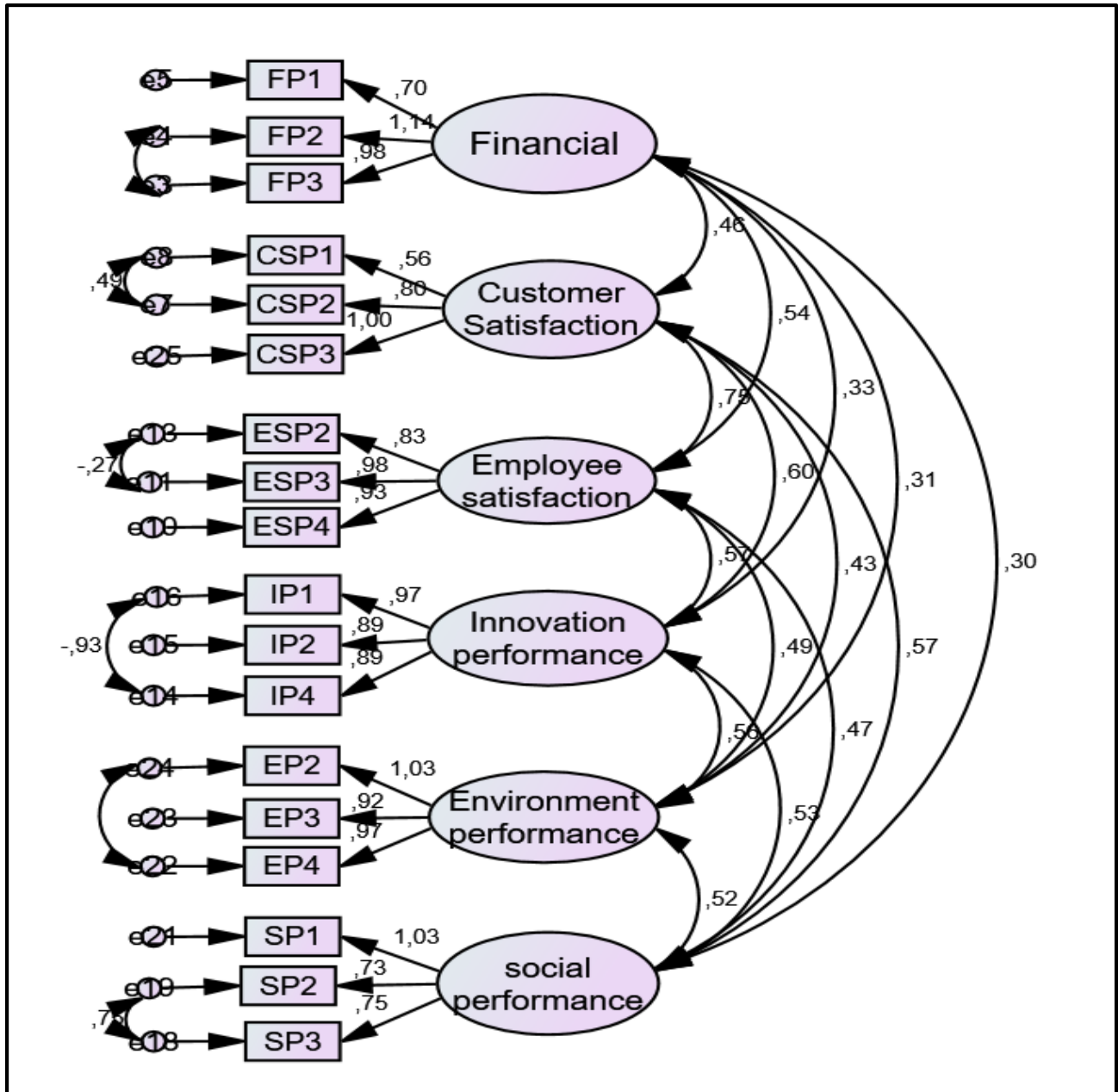
Since all the indicators had significant factor loadings, the model evaluation indicated that improvements could be attained through the assessment of modification indices. Herein, the evaluation of standardised residuals showed that a couple of indicators had residuals that were beyond the recommended threshold of +/-2.58 which potentially would result in fitness challenges. The residual values on the indicators were financial

performances (FP4=4.309 and FP5=3.546), Employee satisfaction performance (ESP1=2.635), Innovation performance (IP3=4.981) Environmental performance (EP1=3.277) and finally social performance (SP4=2.594). As such, these indicators were deleted from the model resulting in significant fitness improvements. However, modification indices showed that the model could be improved by correlating items in the model that had high correlations or delete them. In this instance, since all the latent variables now had a minimum of three items accordingly, the decision was made to correlate them in order to improve model fitness as indicated below in Figure 6.4.

Thus, after these modifications to the six-factor model the firm performance construct was eventually measured through 18 questionnaire items, the model constituted 3 items per construct. As shown in Figure 6.4 below, the constructs in the final model were financial performance (FP1, FP2, FP3), customer satisfaction performance (CSP1, CSP2, CSP3), employee satisfaction performance (ESP2, ESP3, ESP4), innovation performance (IP1, IP2, IP3), environmental performance (EP2, EP3, EP4) and social performance (SP1, SP2, SP3). The remaining items were deleted as indicated in Table 6.16 above. These above deletions did not affect the intercorrelations between constructs which remained below the threshold of 0.80. Also, the returned items had significantly higher loadings and as such were deemed to capture the meaning for the respective constructs measured.

As indicated in Figure 6.4 below, the resultant model had a significant chi-square (chi-square=422.538, df=114, p=.000, N=222) signifying a poor model fit. As indicated earlier, the chi-square is susceptible to large sample sizes of above 200. However, the other goodness-of-fit indices indicated an acceptable goodness-of-fit model, namely, GFI=.838, NFI=.906, CFI=.929, TLI=.905, RFI=.874, AGFI=.757, RMR=.060, RMSEA.097, SRMR=.0609, and the Chi-square/df=3.706. Figure 6.4 below indicates the entire firm performance construct model which was included in the structural model. The following section focuses on the reliability and validity of the measurement model.

Figure 6.4 Confirmatory factor analyses for firm performance



Chi-square=422.538, GFI=.838, NFI=.906, CFI=.929, TLI=.905, RFI=.874, AGFI=.757, RMR=.060, RMSEA.097, SRMR=.0609, Chi-square/df=3.706

6.6.1.4 Reliability and validity assessments

Having completed the unidimensionality assessments, the second goal of the measurement model was to ascertain reliability and validity issues within the utilised

constructs. Prior to the conduct of hypotheses testing in the structural model (stage two), reliability and validity of the measurement model need to be ascertained. As such, in this study the reliability of the constructs was determined through Cronbach's alpha, construct reliability (CR) and total scale reliability coefficients. As shown in section 6.6, the Cronbach alpha coefficients for all the constructs reviewed, high internal consistency as shown by the values that exceeded the recommended 0.7. Similarly, the total scale reliability coefficients were also highly above the 0.7 threshold, thereby indicating high reliability levels. This information on Cronbach's alpha coefficients and total scale reliability coefficients is presented in tables 6.12, 6.13 and 6.14, respectively.

Construct reliability (CR) which is also called composite reliability was computed utilising information on factor loadings as well as error variances. The CR values exceeding 0.7 or preferably 0.8 and above are regarded to be acceptable (Mishra, 2015:621). As shown in Table 6.18 all the CR values are highly above the recommended 0.8 thereby indicating high levels of reliability of the scale utilised. However, as observed, reliability alone is not adequate to determine the scale acceptability, as such validity assessments were also conducted. Construct reliability (CR) and average variance extracted (AVE) were used to measure convergent validity of the constructs. Herein, CR and AVE were computed at the hand of the formulas in Equation 6.1 and 6.2 below.

Equation 6.1: Construct reliability

$$CR = \frac{\left(\sum_{i=1}^n \lambda_i\right)^2}{\left(\sum_{i=1}^n \lambda_i\right)^2 + \left(\sum_{i=1}^n \delta_i\right)}$$

Equation 6.2: Average variance extracted

$$AVE = \frac{\sum \lambda_i^2}{\sum \lambda_i^2 + \sum_i \text{var}(\varepsilon_i)}$$

Where:

λ_i : the i^{th} standardised factor loadings on the corresponding factor

$1 - \lambda_i^2$: the variance of the measurement error of each indicator

n : the number of indicators

Table 6:18 Construct reliability and average variance extracted

Constructs	Average Variance Extracted (AVE)*	Composite Reliability*
Coercive Isomorphism	0.89	0.96
Normative Isomorphism	0.81	0.93
Mimetic Isomorphism	0.71	0.88
Competitive Isomorphism	0.84	0.94
Environmental sustainability	0.80	0.92
Economic sustainability	0.77	0.91
Social sustainability	0.72	0.88
Financial performance	0.92	0.97
Customer satisfaction performance	0.65	0.84
Employee satisfaction performance	0.84	0.94
Innovation performance	0.84	0.94
Environmental performance	0.95	0.98
Social performance	0.72.	0.88

* See Annexure 3 for reference to the regression weights used to calculate CR and AVE

The first approach utilised to assess convergent validity is through the evaluation of factor loadings. Herein, factor loadings or regression weights of 0.50 and above indicate convergent validity while those above 0.70 are preferred (Mishra, 2015:620). Consequently, according to the CFA conducted in section 6.7.1 above, all the standardised factor loadings were above the threshold. Thus, according to factor loadings all the constructs depicted excellent convergent validity. Secondly, CR and AVE were used to ascertain convergent validity. Similarly, all the constructs had AVE

and CR values that exceeded the threshold values of 0.60 and 0.70, respectively (Mishra, 2015:621). This is shown in Table 6.18 above.

The element of construct validity was determined through convergent as well as discriminant validity. As far as discriminant validity is concerned all the constructs had inter-construct correlation coefficients that were below 0.80. However, the inter-construct correlation between normative and coercive was slightly higher than 0.80 at 0.801. The respective inter-construct correlation values of mimetic and coercive $r=0.718$; coercive and competitive $r=0.505$; normative and mimetic $r=0.700$; normative and competitive $r=0.482$; as well as mimetic and competitive $r=0.611$ show satisfactory discriminant validity for isomorphism constructs. The AVE values were also above 0.50 showing discriminant validity in the isomorphism constructs as shown in Table 6.19.

Table 6.19 Isomorphism Inter-Construct Correlation Matrix (standardised)

	AVE	Coercive	Normative	Mimetic	Competitive
Coercive	0.89	1			
Normative	0.81	.801	1		
Mimetic	0.71	.718	.700	1	
Competitive	0.84	.505	.482	.611	1

Furthermore, a more stringent approach was used to ascertain discriminant validity. In this case, discriminant validity was assessed through contrasting the average variance extracted (AVE) value with the squared inter-construct correlation (SIC) estimate of any given two constructs. For discriminant validity to transpire there is need for the AVE to be greater than the SIC in the SIC matrix as indicated in section 5.3.9.2. The comparisons between AVE and SIC for the isomorphism construct are shown in Table 6.20. The information on the comparison shows that all the SIC values were below the AVE values thereby attesting to the discriminant validity.

Table 6.20 Isomorphism Squared Inter-construct Correlation Estimates and AVE

	AVE	Coercive	Normative	Mimetic	Competitive
Coercive	0.89	1			
Normative	0.81	.64	1		
Mimetic	0.71	.52	.49	1	
Competitive	0.84	.26	.23	.37	1

The inter-construct correlation values for sustainable development constructs were all below 0.80 showing discriminant validity. As shown in Table 6.21, the inter-construct correlation values are environmental and economic $r=.576$; environmental and social $r=.532$; and economic and social $r=.499$. Furthermore, AVE values are 0.80, 0.77 and 0.72 for environmental, economic and social, respectively. Thus, the three sustainability constructs exceed the cut-off value of 0.50 showing satisfactory discriminant validity.

Table 6.21 Sustainability Inter-Construct Correlation Matrix (standardised)

	AVE	Environmental	Economic	Social
Environmental	0.80	1		
Economic	0.77	.576		
Social	0.72	.532	.499	1

Furthermore, according to the more stringent approach used to ascertain discriminant validity through contrasting the average variance extracted (AVE) value with the squared inter-construct correlation (SIC) estimate in the constructs. As indicated in section 5.3.9.2, for discriminant validity evidence there is need for the AVE to be greater than the SIC in the SIC matrix. The comparisons between AVE and SIC values shown in Table 6.22 indicate that there was also discriminant validity within the sustainability constructs. Thus, all the AVE values exceeded the SIC values for this construct.

Table 6.22 Sustainability Squared Inter-construct Correlation Estimates and AVE

	AVE	Environmental	Economic	Social
Environmental	0.80	1		
Economic	0.81	0.33	1	
Social	0.71	0.28	0.25	1

The inter-construct correlation values for firm performance constructs were also all below 0.80 showing discriminant validity. As indicated in Table 6.23 below, the inter-construct correlation values show that the constructs were divergent enough and did not measure similar items. The inter-construct values ranged between the lowest $r=0.290$ for social performance (SFP) and financial performance (FFP) and the highest $r=0.746$ for customer satisfaction performance (CSP) and employee satisfaction performance (ESP). AVE values are all above the cut-off 0.5 reflecting satisfactory variance in the first-order constructs that measured the firm performance construct as well as the manifest variables.

Table 6.23 Firm performance Inter-Construct Correlation Matrix (standardised)

	AVE	FFP	CSP	ESP	IFP	EFP	SFP
FFP	0.92	1					
CSP	0.65	.445	1				
ESP	0.84	.529	.746	1			
IFP	0.84	.326	.600	.576	1		
EFP	0.95	.322	.449	.512	.576	1	
SFP	0.72	.290	.551	.454	.522	.522	1

Financial performance (FFP), customer satisfaction (CSP), social performance (SFP), employee satisfaction (ESP), environmental performance (EFP), innovation performance (IFP).

Furthermore, a more stringent assessment was utilised to evaluate discriminant validity. Herein, discriminant validity was assessed through contrasting the average variance extracted (AVE) value with the squared inter-construct correlation (SIC) estimate of any given constructs. As indicated before, for discriminant validity to transpire the AVE needs to be greater than the SIC in the SIC matrix as discussed in section 5.3.9.2. The results shown in Table 6.24 indicate significant discriminant validity within the firm performance constructs, as all the AVE values exceeded the SIC values.

Table 6.24 Firm performance Squared Inter-construct Correlation Estimates and AVE

	AVE	FFP	CSP	ESP	IFP	EFP	SFP
FFP	0.92	1					
CSP	0.65	0.20	1				
ESP	0.84	0.28	0.56	1			
IFP	0.84	0.11	0.36	0.33	1		
EFP	0.95	0.10	0.20	0.26	0.33	1	
SFP	0.72	0.08	0.30	0.21	0.27	0.27	1

Financial performance (FFP), customer satisfaction (CSP), social performance (SFP), employee satisfaction (ESP), environmental performance (EFP), innovation performance (IFP).

6.6.2 Stage Two: Structural Model

The preceding discussion focused on the measurement model and accomplished unidimensionality assessment pertaining to whether the observed variables were perfect indicators of their latent variables. Whilst the measurement model pertains to the relationships between latent variables and their respective observed variables, the structural model is concerned with the relationships between the latent variables (De Carvalho & Chima, 2014:8). Following the validation and attainment of satisfactory fitness on all the constructs in the measurement model, the structural model can be

assessed as the second and last stage of SEM. Thus, in this case, the causal relationships between the isomorphism, sustainable development and firm performance are assessed. Alternatively, the causal relationships that were stipulated under the conceptual framework (See Fig 4.1) in chapter 4 are evaluated in the structural model.

In this segment, SEM is utilised to test the theory as outlined in chapter four. As a method, SEM has become a popular methodology in nonexperimental research (Bryne, 2009:4) because it is versatile in integrating theory and data. Furthermore, it confronts theory to ascertain the theoretical attestations previously made at their ability to fit the data. AMOS Version 24.0 software was utilised to conduct SEM through the use of the Maximum Likelihood Estimation (MLE) method. The MLE is utilised where the data is deemed useful and where the normality assumption has been satisfied, thus, satisfactory skewness and kurtosis. Furthermore, MLE favours conditions where there are not many outliers and missing data as well as a minimum sample size of 200 (Tabachnick & Fidell, 2007; Bryne, 2010). Through the assessment of the covariance structure AMOS Version 24.0 was used in testing the hypotheses stipulated in this study. The software enabled the drawing of both the measurement and the path diagrams as indicated in Figure 6.4.

Amos software can calculate the multiple regression path as well as factor analyses. The SEM approach can either be model development, model comparisons or confirmatory and this study utilised the confirmatory approach. As mentioned before, the concepts measured here, namely, isomorphism, sustainable development practices and firm performance were multidimensional in nature. Consequently, the specification, identification, estimation, evaluation as well as hypotheses testing focused on two SEM models that were used to test the hypotheses. The first model (See Figure 6.4) presents SEM results for the analysis of the first constructs which pertain to the secondary hypotheses as presented in the conceptual framework (See Figure 4.1). The second model (See Figure 6.5) presents SEM results for the second order constructs which pertain to the primary hypotheses.

6.6.2.1 First order constructs structural model

As shown in Table 6.18 there were thirty (30) causal paths that were estimated in the model pertaining to first order constructs. Herein, the isomorphism latent variables (coercive, mimetic, normative, and competitive) are the exogenous constructs. Whereas, endogenous constructs in this study are sustainable development practises (environment, economic and social) as well as firm performance variables (financial performance and non-financial performance). Non-financial performance in this study is comprised of customer satisfaction, employee satisfaction, innovation performance, environmental performance and social performance.

Exogeneous variables (competitive isomorphism and institutional isomorphism) in the model do not have any single-headed arrow pointing towards them. On the other hand, endogenous variables (sustainability variables and firm performance variables) have at a least one single-headed arrow pointing towards them. Thus, the straight single-headed arrows depict the causal relationships or paths between exogeneous or independent variables and endogenous or dependent variables. This study was only concerned with the direct effects and no indirect effects were hypothesised in this study. The path coefficients computed in line with the hypothesised relationships between the independent variables and the dependant variables accompany the straight single headed arrows.

The assumptions needed to be considered prior to the application of SEM were all satisfied. The discussion on the assumptions was considered in section 5.3.8.3 and the assessments for missing data, outliers, normality, singularity and multicollinearity were conducted also (See Section 6.2 on preliminary analysis and Section 6.7.1 on unidimensionality assessments). Having accomplished these assessments, the following sections focus on specifying, identifying, estimating, evaluating, modification and hypotheses testing in the structural model.

Per the Figure 4.1, the conceptual model hypothesised in this study provides the basis for model specification, whereby 30 secondary hypotheses (see Section 4.3) are estimated which are used to explain the three primary hypotheses (see Section 1.6). Amos software version 24 utilised enabled the integration of both the structural model and the measurement model as presented in Figure 6.5 below. Subsequently, Figure 6.5 indicates that in total, 117 regression weights were estimated in the model, with the first 61 being fixed with regards to 13 factor loadings, 39 error variances and 9 factor variances. Thus, 56 are estimated with 30 path coefficients and 26 factor loadings. This information is presented in Table 6.25 below. Furthermore, the initial model constituted no multicollinearity problems and 548 degrees of freedom means the model was over-identified. Following the completion of model specification and identification, the next step pertains to model evaluation.

Table 6.25 First Order Structural Model Parameter Summary

	Weights	Covariances	Variances	Means	Intercepts	Total
Fixed	61	0	0	0	0	61
Labelled	0	0	0	0	0	0
Unlabelled	56	14	52	0	0	122
Total	117	14	52	0	0	183

Model evaluation in the structural model focused on the parameter estimates and model fitness. Firstly, as shown in Table 6.26 below, all the critical ratio (C.R.) values are consistent with the rules of parameter adequacy. C.R. values which are required to be positive and above 1.96, for statistical significance. Herein, when the C.R. value is above 1.96 the estimates are statistically different from zero, and the null hypothesis which states that there is no relationship, is rejected. However, the analysis resulted in some standardised estimate values that exceeded 1.0. There were four manifest variables, namely, FP2, CSP3, EP2 and SP1 that had standardised estimates which exceeded the threshold 1.0. The major cause for these inconsistencies in other studies has been noted to be outliers, misspecified models or problems of sampling (Bryne, 2010). These problems could not be identified in this study as explained below.

The sample size was deemed to meet the sampling requirements under SEM as previously discussed. Furthermore, the data was cleaned of any outliers and with 548 degrees of freedom; the model is overidentified as previously indicated. As such, the problem of outliers and misspecification cannot also apply in this case. The discussion below on model fitness also does not indicate severe model misfit to allude to the problem of model misspecification. As such, the inconsistencies were regarded to be minor and without significant impact on model fitness in the current study. Thus, in general the measurement produced acceptable model fit.

Table 6.26 Path Coefficients and R-squared of the Measurement Model

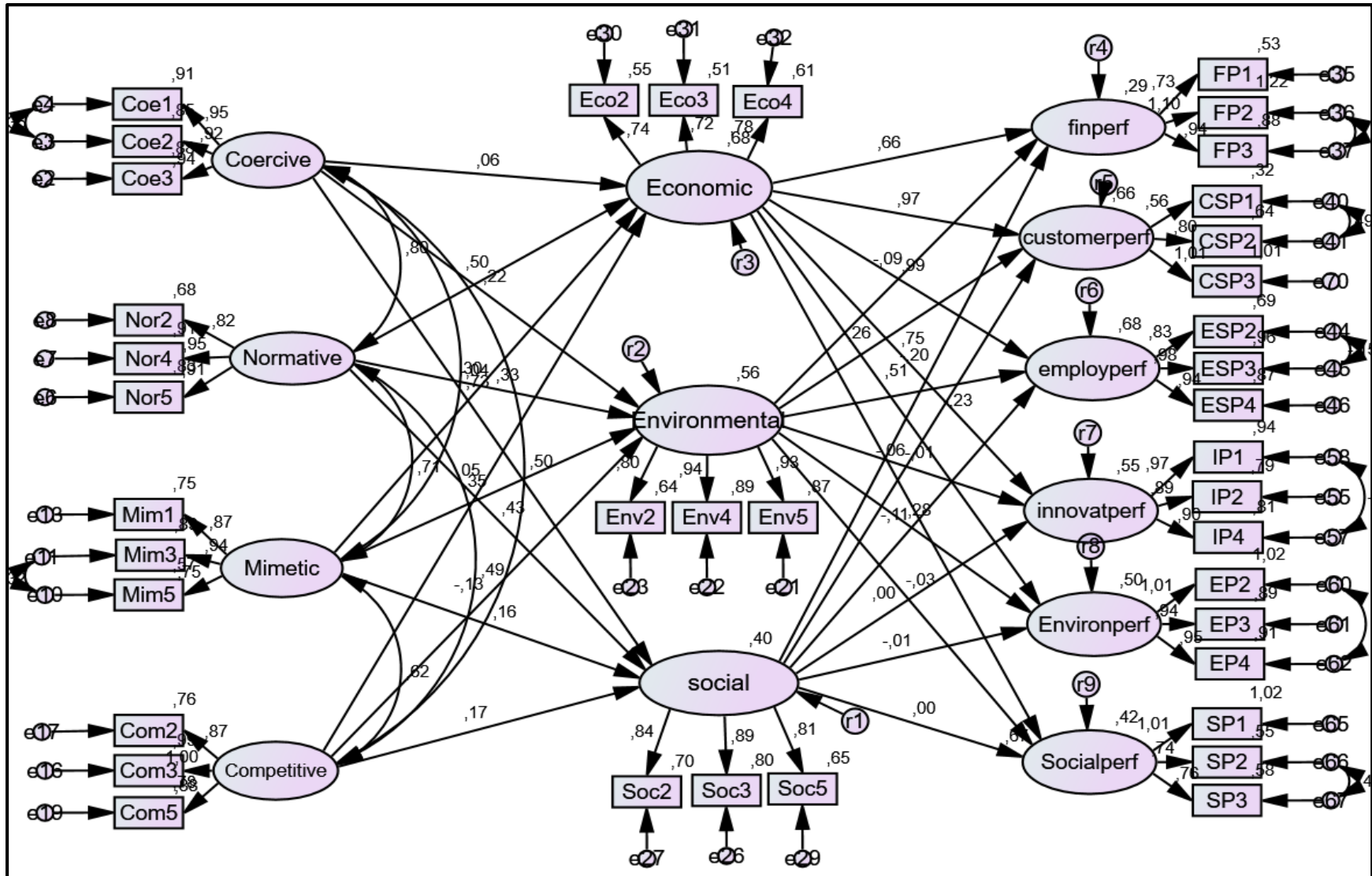
			Estimate	St. Est	S.E.	C.R.	P-value	R ²
Coe3	<---	Coercive	1,038	,939	,041	25,556	***	,881
Coe2	<---	Coercive	,921	,923	,028	33,232	***	,853
Coe1	<---	Coercive	1,000	,953				,907
Nor5	<---	Normative	1,176	,911	,067	17,465	***	,828
Nor4	<---	Normative	1,220	,951	,065	18,650	***	,910
Nor2	<---	Normative	1,000	,825				,680
Mim5	<---	Mimetic	1,000	,753				,563
Mim3	<---	Mimetic	1,157	,941	,089	13,019	***	,886
Mim1	<---	Mimetic	1,047	,867	,084	12,528	***	,754
Com3	<---	Competitive	1,118	,997	,047	23,980	***	,995
Com2	<---	Competitive	1,000	,872				,752
Com5	<---	Competitive	,953	,884	,050	19,241	***	,738
Eco4	<---	Economic	1,046	,781	,089	11,797	***	,782
Eco3	<---	Economic	,924	,718	,086	10,754	***	,515
Eco2	<---	Economic	1,000	,740				,547
Soc3	<---	Social	1,000	,893				,797
Soc2	<---	Social	,937	,837	,061	15,325	***	,700
Soc5	<---	Social	,917	,808	,063	14,612	***	,653
Env2	<---	Environment	1,000	,802				,643
Env4	<---	Environment	1,294	,941	,076	17,091	***	,886
Env5	<---	Environment	1,315	,932	,078	16,892	***	,868
FP1	<---	Finperf	1,000	,727				,529
FP2	<---	Finperf	1,500	1,104	,166	9,012	***	1,218

			Estimate	St. Est	S.E.	C.R.	P-value	R²
*FP3	<---	Finperf	1,153	,937	,140	8,240	***	,878
CSP1	<---	customerperf	1,000	,561				,315
CSP2	<---	customerperf	1,397	,800	,120	11,657	***	,641
CSP3	<---	customerperf	2,054	1,006	,220	9,342	***	1,011
ESP2	<---	employperf	1,000	,829				,688
ESP3	<---	employperf	1,385	,979	,072	19,188	***	,959
ESP4	<---	employperf	1,385	,935	,081	17,007	***	,875
IP2	<---	innovatperf	1,000	,889				,940
IP4	<---	innovatperf	1,105	,900	,067	16,605	***	,790
IP1	<---	innovatperf	1,047	,970	,054	19,289	***	,809
EP2	<---	Environperf	1,000	1,009				1,107
EP3	<---	Environperf	,963	,942	,029	33,265	***	,887
EP4	<---	Environperf	,988	,953	,040	24,823	***	,908
SP1	<---	Socialperf	1,000	1,010				1,021
SP2	<---	Socialperf	,766	,741	,069	11,080	***	,549
SP3	<---	Socialperf	,773	,762	,068	11,396	***	,581

***p <0.001 S.E: standard error, C.R: critical ratio, Est (Estimate): unstandardised regression weight, St. Est (Standardised Estimate): standardised regression weight, R²: R-squared

Following satisfactory parameter adequacy, the second part of model evaluation was conducted using the goodness-of-fit (GOF) indices. As indicated in section 5.3.8.3, several model fit indices are used to ascertain model fitness. The indices are from the three categories namely, absolute fit, incremental fit and parsimonious fit. Figure 6.5 below diagrammatically illustrates a summary of the results obtained from path analysis in the structural model.

Figure 6.5 Structural Model First Order Constructs



Chi-square= 1483.259, DF = 548, P = .000, N = 222, GFI=.846, NFI=.927, CFI=.939, TLI=.908, AGFI=.787, RMR=.067, RMSEA.097, SRMR=.0602, PNFI=.719, AIC=2247.023, Chi-square/df=2.706.

The GOF indices show suggestion of moderate fit of the model to the data, regardless of the chi-square being significant (chi-square = 1483.259, df = 548, P = .000, N = 222). As indicated earlier, the chi-square is subjective to large sample sizes of above 200. Furthermore, chi-square has been observed to be sensitive and increase relative to model complexity. The other fit indices also indicated acceptable model fitness, thus, GFI=.846, NFI=.927, CFI=.939, TLI=.908, AGFI=.787, RMR=.067, RMSEA.097, SRMR=.0602, PNFI=.719, AIC=2247.023, Chi-square/df=2.706.

Having obtained this acceptable model fitness, other models were attempted using both reversal approach and forward approach in the endeavour to improve model fitness. The reversal approach involves the deletion of some regression paths whilst the forward approach pertains to the addition of regression paths in the structural model. Both approaches did not result in any significant improvements in the GOF indices. The most likely rationale is the complexity of the model utilised in this study with 548 degrees of freedom. Thus, with most of the GOF indices being computed based on the chi-square value, the stipulated superior GOF cut-off values cannot be achieved with large models. As such, several extant researches have indicated that the cut-off values are not prescriptive rather recommendations which in this study were relaxed (Kenny, 2015; Hayduk, Cummings, Boadu, Pazderka-Robinson & Boulianne, 2007). Table 6.27 below indicate that out of the 30 hypothesised relationships, this model produced only eight that were insignificant and not supported.

The study was primarily concerned with the direct relationships between isomorphism and sustainable development as well as the direct relationship between sustainable development and firm performance. These relationships constituted the primary hypotheses for this study which pertained to the major constructs, namely, isomorphism, sustainable development and firm performance. These primary hypotheses of the study, as shown in Section 1.6, resulted in the 30 secondary hypotheses based on the 13 sub constructs in the study.

Table 6:27 Testing Hypotheses Using Standardised Estimates

			Est.	St. Est	S.E.	C.R.	P	Label
Environment	<---	Coercive	,177	,217	,080	2,207	,027	Supported
Environment	<---	Normative	,308	,334	,090	3,431	***	Supported
Environment	<---	Mimetic	,371	,350	,100	3,690	***	Supported
Economic	<---	Coercive	,361	,342	,092	3,693	***	Supported
Economic	<---	Normative	,327	,497	,062	5,276	***	Supported
Economic	<---	Mimetic	,228	,303	,065	3,510	***	Supported
Social	<---	Mimetic	,151	,163	,098	3,534	***	Supported
Environment	<---	Competitive	-,140	-,130	,068	-2,046	,041	Not Supported
Economic	<---	Competitive	,037	,049	,044	,845	,398	Not Supported
Social	<---	Competitive	,155	,165	,071	2,194	,028	Supported
Social	<---	Normative	,348	,433	,093	3,747	***	Supported
Social	<---	Coercive	-,029	-,040	,083	-,345	,730	Not Supported
Finperf	<---	Environment	-,066	-,092	,050	-1,321	,186	Not Supported
Customerperf	<---	Environment	,124	,258	,034	3,601	***	Supported
Employperf	<---	Environment	,155	,227	,047	3,329	***	Supported
Innovatperf	<---	Environment	-,013	-,014	,067	-,201	,841	Not Supported
Environperf	<---	Environment	,330	,277	,077	4,283	***	Supported
Socialperf	<---	Environment	,035	,229	,089	3,393	***	Supported
Firmperf	<---	Economic	,666	,661	,124	5,355	***	Supported
customerperf	<---	Economic	,947	,987	,098	9,659	***	Supported
Employperf	<---	Economic	1,043	,749	,128	8,173	***	Supported
Innovatperf	<---	Economic	,849	,508	,123	6,885	***	Supported
Environperf	<---	Economic	1,142	,667	,148	7,701	***	Supported
Socialperf	<---	Economic	,162	,197	,058	2,790	,005	Supported
Firmperf	<---	Social	,310	,257	,034	2,931	***	Supported
customerperf	<---	Social	,086	,110	,049	2,753	,080	Supported
Employperf	<---	Social	-,002	-,001	,072	-,023	,982	Not Supported
Innovatperf	<---	Social	-,013	-,009	,081	-,159	,874	Not Supported
Environperf	<---	Social	-,003	-,002	,097	-,031	,975	Not Supported
Socialperf	<---	Social	,652	,967	,093	7,050	***	Supported

***p <0.001 S.E: standard error, C.R: critical ratio, Est (Estimate): unstandardised regression weight, St. Est (Standardised Estimate): standardised regression weight, P: P-value

The conceptual model presented how the secondary hypotheses were drawn from the primary hypotheses in this study. However, structural equation modelling enabled the analysis of these primary hypotheses through the use of second-order constructs in the structural model (Rajeh *et al.*, 2015:254). The Amos Version 24, software could not accommodate the primary and secondary hypotheses to be assessed simultaneously. Thus, the next section focuses on SEM for the second-order constructs.

6.6.2.2 Second order constructs structural model

As discussed in section 6.2 the measurement model resulted satisfactory fitness on all the constructs in the measurement model, to enable structural model to be performed. Thus, in this case, the causal relationships between the isomorphism, sustainable development and firm performance are assessed. Alternatively, the causal relationships pertaining to the second order constructs of the first order constructs that were stipulated under the conceptual framework (See Fig 4.1) in chapter 4 are evaluated below.

Subsequently, Figure 6.6 indicates that in total there are 104 regression weights that were estimated in the model, with the first 66 being fixed with regards to 16 factor loadings, 39 error variances and 11 factor variances, thus, 38 are estimated (with 3 path coefficients and 35 factor loadings). This information is presented in Table 6.28 below. Furthermore, no multicollinearity problems were identified as shown by a correlation coefficient $r=0.56$ (which is below the threshold of 0.80) between the independent variables, namely, competitive isomorphism and institutional isomorphism. Additionally, the model proposed constituted 591 degrees of freedom, meaning that the model was over-identified. After the attainment of model specification and identification, the following discussion focuses on the aspect of model evaluation through considering the goodness-of-fit indices to the second order model.

Table 6.28 Structural Model Parameter Summary

	Weights	Covariances	Variances	Means	Intercepts	Total
Fixed	66	0	0	0	0	66
Labelled	0	0	0	0	0	0
Unlabelled	38	9	52	0	0	99
Total	104	9	52	0	0	165

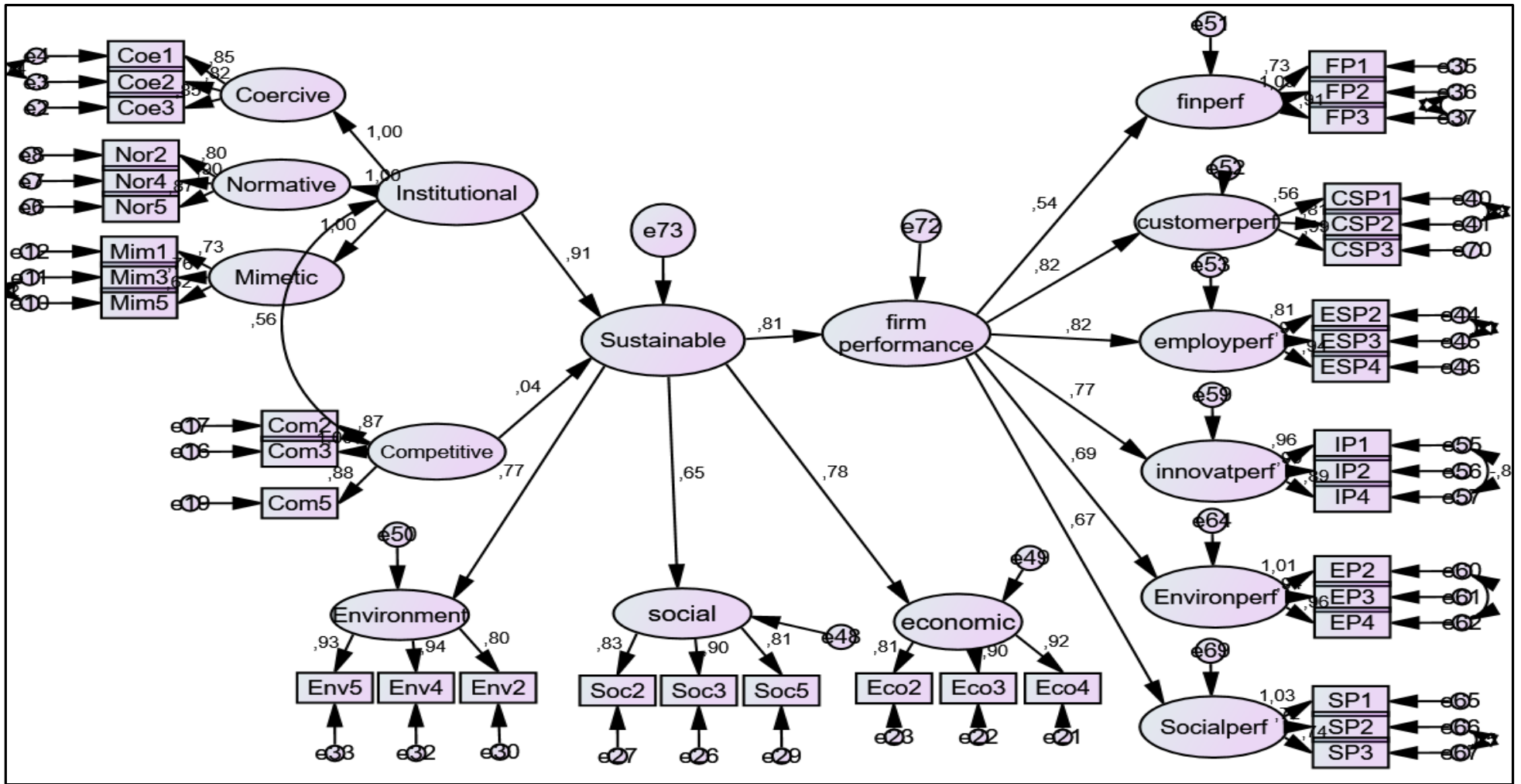
As in the first order structural model, the model evaluation in the second order structural model focused on the parameter estimates and model fitness. As indicated in Table 6.28 below, all the critical ratio (C.R.) values are falling within the threshold rules for parameter adequacy. The C.R. values should be positive and more than 1.96 for statistical significance, implying that the estimates are statistically different from zero, and the null hypothesis which states that there is no relationship, is rejected. After attaining satisfactory parameter adequacy, the next part of model evaluation was conducted through the use of goodness-of-fit (GOF) indices.

Table 6.28 Path Coefficients of the Measurement Model

			Est.	St. Est	S.E.	C.R.	P-value
Coercive	<---	Institutional	,957	1,000	,069	13,968	***
Mimetic	<---	Institutional	,740	1,000	,076	9,754	***
Normative	<---	Institutional	1,000	1,000			
Finperf	<---	firm_performance	1,000	,543			
Economic	<---	Sustainable	,839	,776	,091	9,241	***
social	<---	Sustainable	,692	,649	,090	7,666	***
Environment	<---	Sustainable	1,000	,767			
customerperf	<---	firm_performance	1,008	,821	,204	4,947	***
employperf	<---	firm_performance	1,382	,816	,248	5,576	***
innovatperf	<---	firm_performance	2,019	,768	,355	5,690	***
Environperf	<---	firm_performance	2,134	,695	,381	5,603	***
Socialperf	<---	firm_performance	2,123	,667	,382	5,553	***

Figure 6.6 below, diagrammatically illustrates a summary of the results obtained from path analysis in the second order constructs structural model.

Figure 6.6 Structural Model Second Order Constructs



Chi-square=1732.486, DF=591, GFI=.823, NFI=.903, CFI=.916, TLI=.89, AGFI=.762, RMR=.071, RMSEA=.099, SRMR=.0617, PNFI=.718, AIC=2529.509, Chi-square/df=2.7931

The GOF indices indicate a suggestion of moderate fit of the model to the data, even though the chi-square is significant (chi-square = 1732.486, df = 591, P = .000, N = 222). As indicated earlier, the chi-square is sensitive to large sample sizes of above 200. Furthermore, chi-square has been observed to be sensitive and increase relative to model complexity. The other fit indices also indicated moderate model fitness, thus, GFI=.823, NFI=.903, CFI=.916, TLI=.894, AGFI=.762, RMR=.071, RMSEA=.099, SRMR=.0617, PNFI=.718, AIC=2529.509, and Chi-square/df=2.7931.

Other models were attempted in the endeavour to improve model fitness using both the reversal approach and forward approach. Both methods failed to result in significant improvements in the GOF indices. As such, the model presented in Figure 6.6 below was used for the testing of hypotheses. The most likely underpinning rationale is the complexity of the model utilised in this study with 591 degrees of freedom. Table 6.29 below indicates that out of the three primary hypotheses, postulated pertaining to the three parental relationships, this model produced only one that was found to be insignificant.

Table 6:29 Testing Hypotheses Using Standardised Estimates

			Est	St. Est	S.E.	C.R.	P	Label
Sustainable	<---	Institutional	,663	,918	,071	9,325	***	Supported
Sustainable	<---	Competitive	,028	,039	,037	,755	,450	Not Supported
Firm performance	<---	Sustainable	,884	,644	,111	7,960	***	Supported

***p <0.001, S.E: standard error, C.R: critical ratio, Est (Estimate): unstandardised regression weight, St. Est (Standardised Estimate): standardised regression weight, P: P-value

6.7 RESULTS OF TESTING THE HYPOTHESES

After the model development procedure illustrated in the above revealed that the model fitness was generally acceptable. Model adequacy assessment leads to the evaluation of the general structural equation model to ascertain the associations among the latent

variables being attested in the study. Eventually, after the models being respecified and using modification indices, the final modified model which shows acceptable model adequacy should be used for testing the hypotheses. Related to the statistical significance of the structure coefficient or path in the model, there is need for evaluation of the structure coefficient (standardised estimate or regression weight), standard error, z-value and p-value for one to be able to ascertain whether the null hypothesis should be accepted or rejected (De Carvalho & Chima, 2014:10).

The study involved 33 hypotheses, thus, three primary hypotheses and 30 secondary hypotheses. Table 6.27 and Figure 6.4 present the hypotheses testing results for the 30 secondary hypotheses, whilst, Table 6.29 and Figure 6.5 present the hypotheses testing results for the three primary hypotheses. The discussion on the conclusions established pertaining to these hypotheses is ascertained at three significant levels, namely, alpha level of .10 (90% confidence level), .05 (95% confidence level), as well as .01 (99% confidence level). The significance level (α) also known as alpha level is utilised in hypothesis testing. This study utilised all the levels accordingly and to interpret the hypotheses discussed below. The discussion combines the results of hypotheses testing from both the first-order and second order structural models.

6.7.1 Institutional Isomorphism and Sustainability practices

The first primary hypothesis (H1) for this study pertained to ascertaining the existence of significant and positive relationship between perceived institutional isomorphism and sustainability practices of SMEs in South Africa. Herein, institutional isomorphism and sustainability practices are the second order constructs. From the first primary hypothesis, further 9 secondary hypotheses, namely, H1a, H1b, H1c, H1d, H1e, H1f, H1g, H1h, and H1i were developed which tested the first order constructs, in relation to institutional isomorphism and sustainable development:

H1 There is a significant positive relationship between perceived institutional isomorphism and sustainability practices of SMEs in South Africa.

H1a There is a significant positive relationship between perceived coercive pressures and economic sustainability practices of SMEs in South Africa.

H1b There is a significant positive relationship between perceived coercive pressures and environmental sustainability practices of SMEs in South Africa.

H1c There is a significant positive relationship between perceived coercive pressures and social sustainability practices of SMEs in South Africa.

H1d There is a significant positive relationship between perceived mimetic pressures and economic sustainability practices of SMEs in South Africa.

H1e There is a significant positive relationship between perceived mimetic pressures and environmental sustainability practices of SMEs in South Africa.

H1f There is a significant positive relationship between perceived mimetic pressures and social sustainability practices of SMEs in South Africa.

H1g There is a significant positive relationship between perceived normative pressures and economic sustainability practices of SMEs in South Africa.

H1h There is a significant positive relationship between perceived normative pressures and environmental sustainability practices of SMEs in South Africa.

H1i There is a significant positive relationship between perceived normative pressures and social sustainability practices of SMEs in South Africa.

An assessment of the path coefficients as well as the P-values pertaining to the first primary hypothesis and the associated 9 secondary hypotheses is shown in Table 6.30 below. The path coefficient pertaining to the first primary hypothesis is 0.92 and the P-value is highly significant ($P < 0.001$). Thus, the first primary null hypothesis concerning the relationship between institutional isomorphism and sustainable development practices is rejected in support of the alternative hypothesis. This means that, in overall, institutional isomorphism is significantly and positively related to sustainable development practices.

Table 6.30 Hypotheses Testing on Institutional Isomorphism and Sustainable Development Practices

Hypothesis	Hypothesised relationships			Est	S.E.	C.R.	P	Supported
H1	Sustainable	<---	Institutional	,918	,071	9,325		Yes
H1a	Economic	<---	Coercive	,342	,092	3,693	***	Yes
H1b	Environment	<---	Coercive	,217	,080	2,207	,027	Yes
H1c	Social	<---	Coercive	-,040	,083	-,345	,730	No
H1d	Economic	<---	Mimetic	,303	,065	3,510	***	Yes
H1e	Environment	<---	Mimetic	,350	,100	3,690	***	Yes
H1f	Social	<---	Mimetic	,163	,098	3,534	***	Yes
H1g	Economic	<---	Normative	,497	,062	5,276	***	Yes
H1h	Environment	<---	Normative	,334	,090	3,431	***	Yes
H1i	Social	<---	Normative	,433	,093	3,747	***	Yes

***p <0.001, S.E: standard error, C.R: critical ratio, Est (Estimate): unstandardised regression weight, St. Est (Standardised Estimate): standardised regression weight, P: P-value

As illustrated in Table 6.30 above, the assessment of the 9 secondary hypotheses resulted in only one path that was insignificant. Thus, hypothesis (H1c) pertaining to the relationship between coercive isomorphism and social sustainability was insignificant and negative (-0.04, P=0.73). Thus, the study failed to reject the null hypothesis for hypothesis H1c which stated that there is no relationship between coercive isomorphism and social sustainability. On the other hand, the remaining eight secondary hypotheses were found to be positive and significant. As such, this provides evidence for the null hypothesis to be rejected over these hypotheses. These hypotheses are H1a (0.34, P<0.001) for coercive isomorphism and economic sustainability as well as H1b (0.34, P=0.027) for coercive isomorphism and environmental sustainability, respectively.

Furthermore, all the types of sustainability practices were positively and significantly related to mimetic isomorphism. Thus, hypothesis H1d for mimetic isomorphism and economic sustainability (0.30, P<0.01), H1e for mimetic isomorphism and environmental sustainability (0.35, P<0.01), and H1f for mimetic isomorphism and social sustainability (0.16, P<0.01) were supported. Lastly, all the types of sustainability practices were also positively and significantly related to normative isomorphism. Thus, H1g for normative isomorphism and economic sustainability (0.497, P<0.01), H1h for normative

isomorphism and environmental sustainability (0.334, $P < 0.01$), and H1i for normative isomorphism and social sustainability (0.433, $P < 0.01$) were also supported (See Table 6.30 on the previous page).

6.7.2 Competitive Isomorphism and Sustainability Practices

The second primary hypothesis for this study focused on perceived competitive isomorphism and sustainability practices. Pertaining to this hypothesis, competitive isomorphism, though not a second order construct, it is assessed against the second order construct of sustainability because competitive isomorphism was deemed different from institutional isomorphism. From the second primary hypothesis (H2), three more secondary hypotheses were proposed, namely, H2a, H2b, and H2c as below:

H2 There is a significant positive relationship between perceived competitive isomorphism and sustainability practices of SMEs in South Africa.

H2a There is a significant positive relationship between perceived competitive pressures and economic sustainability practices of SMEs in South Africa.

H2b There is a significant positive relationship between perceived competitive pressures and environmental sustainability practices of SMEs in South Africa.

H2c There is a significant positive relationship between perceived competitive pressures and social sustainability practices of SMEs in South Africa.

According to the structural equation modelling results indicated in Table 6.26, the path coefficient or standardised regression weight between competitive isomorphism and sustainable development practices was positive at 0.028 and insignificant at $P = 0.450$. This means that the null hypothesis pertaining to the primary hypothesis H2 is not rejected. Thus, the alternative which stipulated that there is a significant positive relationship between perceived competitive isomorphism and sustainability practices of SMEs in South Africa is not supported in this regard (See Table 6.31 below). The results from the analysis of the secondary hypotheses pertaining to this primary hypothesis substantiated this result.

As illustrated in Table 6.31 below, from the three secondary hypotheses pertaining to competitive isomorphism and the three types of sustainable development practices only one path (H2c) was positive and significant. The SEM results in Table 6.26 above, showed that the hypothesised relationship (H2a at 0.037 and P=0.398) between competitive isomorphism and economic sustainability was positive but insignificant at $\alpha = 0.1, 0.05$ and 0.01 significance level. On the other hand, H2b (-0.140, P=0.041) was significant at α level 0.05, however, the path coefficient was negative. As such, the null hypotheses could not be rejected meaning that H2a and H2b were both not supported. However, H2c which pertained to the relationship between competitive isomorphism and social sustainability was positive and significant (0.155, P=0.028). Conclusively, this suggests that the data supports the rejection of the null hypothesis in support of the alternative H2c.

Table 6.31 Hypotheses Testing on Competitive Isomorphism and Sustainable Development Practices

Hypothesis	Hypothesised relationships			Est	S.E.	C.R.	P	Supported
H2	Sustainable	<---	Competitive	,028	,037	,755	,450	No
H2a	Economic	<---	Competitive	,037	,044	,845	,398	No
H2b	Environment	<---	Competitive	-,140	,068	-2,046	,041	No
H2c	Social	<---	Competitive	,155	,071	2,194	,028	Supported

***p <0.001, S.E: standard error, C.R: critical ratio, Est (Estimate): unstandardised regression weight, St. Est (Standardised Estimate): standardised regression weight, P: P-value

The following section focuses on the hypotheses testing results pertaining to the third primary hypothesis and the associated secondary hypotheses.

6.7.3 Sustainability Practices and Firm Performance

The third primary hypothesis for this study assessed the relationship between sustainability practices and firm performance. In this regard, sustainability practices and firm performance are second order constructs. Sustainability practices constituted three first order constructs (economic, environmental and social) whilst firm performance had six, namely, financial performance, customer satisfaction performance, employee satisfaction performance, innovation performance, environmental performance and

social performance. Out of these first order constructs, 18 secondary hypotheses (H3a, H3b, H3c, H3d, H3e, H3f, H3g, H3h, H3i, H3j, H3k, H3l, H3m, H3n, H3o, H3p, H3q, and H3r) were postulated for this study. The third primary hypothesis and the accompanying 18 hypotheses are as below.

H3 *There is a significant positive relationship between perceived sustainability practices and firm performance of SMEs in Limpopo Province.*

H_{3a} *There is a significant positive relationship between economical sustainability practices and financial performance of SMEs in Limpopo Province.*

H_{3b} *There is a significant positive relationship between economical sustainability practices and customer satisfaction performance of SMEs in Limpopo Province.*

H_{3c} *There is a significant positive relationship between economical sustainability practices and employee satisfaction performance of SMEs in Limpopo Province.*

H_{3d} *There is a significant positive relationship between economical sustainability practices and innovation firm performance of SMEs in Limpopo Province.*

H_{3e} *There is a significant positive relationship between economical sustainability practices and environmental performance of SMEs in Limpopo Province.*

H_{3f} *There is a significant positive between relationship economical sustainability practices and social firm performance of SMEs in Limpopo Province.*

H_{3g} *There is a significant positive relationship between environmental sustainability practices and financial performance of SMEs in Limpopo Province.*

H_{3h} *There is a significant positive relationship between environmental sustainability practices and customer satisfaction performance of SMEs in Limpopo Province.*

H_{3i} *There is a significant positive relationship between environmental sustainability practices and employee satisfaction performance of SMEs in Limpopo Province.*

H_{3j} *There is a significant positive relationship between environmental sustainability practices and innovation firm performance of SMEs in Limpopo Province.*

H_{3k} *There is a significant positive relationship between environmental sustainability practices and environmental performance of SMEs in Limpopo Province.*

H_{3l} *There is a significant positive relationship between environmental sustainability practices and social firm performance of SMEs in Limpopo Province.*

H_{3m} There is a significant positive relationship between social sustainability practices and financial performance of SMEs in Limpopo Province.

H_{3n} There is a significant positive relationship between social sustainability practices and customer satisfaction performance of SMEs in Limpopo Province.

H_{3o} There is a significant positive relationship between social sustainability practices and employee satisfaction performance of SMEs in Limpopo Province.

H_{3p} There is a significant positive relationship between social sustainability practices and innovation firm performance of SMEs in Limpopo Province.

H_{3q} There is a significant positive relationship between social sustainability practices and environmental performance of SMEs in Limpopo Province.

H_{3r} There is a significant positive relationship between social sustainability practices and social firm performance of SMEs in Limpopo Province.

According to the SEM results of the third primary hypothesis (H3), as indicated in Table 6.29 above, the relationship between sustainable development and firm performance was found to be significant and positive (0.644, $P < 0.001$). Consequently, the third primary null hypothesis was rejected in support of the alternative hypothesis which stated that there is a significant positive relationship between perceived sustainability practices and firm performance of SMEs in Limpopo Province (See Table 6.32 below). On the other hand, the SEM results for the 18 secondary hypotheses emanating from the third primary hypothesis are illustrated in in Table 6.26 above. In general, 13 out of 18 hypotheses were significant and positive and the other 5 out of 18 could not be supported by the data. Table 6.32 below presents the results of hypotheses testing pertaining to these 18 hypotheses.

Firstly, in line with the three forms of sustainability practices, the relationship between economic sustainability and the six forms of firm performance resulted in all the paths being supported, namely, H3a, H3b, H3c, H3d, H3e and H3f. More specifically, hypotheses:

- H3a on economic sustainability and financial performance (0.661, $p < 0.001$),

- H3b on economic sustainability and customer satisfaction performance (0.987, $p < 0.001$),
- H3c on economic sustainability and employee satisfaction performance (0.749, $p < 0.001$),
- H3d on economic sustainability and innovation performance (0.508, $p < 0.001$),
- H3e on economic sustainability and environmental performance (0.749, $p < 0.001$), as well as,
- H3f economic sustainability and social performance (0.197, $P = 0.005$); the coefficients were all supported because of their coefficient paths being positive and the p-values being all significant at α level 0.01.

Thus, the associated null hypotheses were rejected, accordingly (see Table 6.32 below).

Secondly, the relationship between environmental sustainability and the six forms of firm performance resulted in four paths that were supported and two that were not supported. In this case, two paths pertaining to hypothesis H3g on environmental sustainability and financial performance (-0.092, $p = 0.186$), as well as, H3j on environmental sustainability and innovation performance (-0.014, $p = 0.841$), could not be supported. Thus, the data did not provide evidence for their null hypotheses to be rejected. On the other hand, the remaining four hypotheses, namely,

- H3h on environmental sustainability and customer satisfaction performance (0.258, $p < 0.001$),
- H3i on environmental sustainability and employee satisfaction performance (0.227, $p < 0.001$),
- H3k on environmental sustainability practices and environmental performance at 0.277, $P < 0.001$, as well as,
- H3l on environmental sustainability practices and social performance at 0.277, $P < 0.001$, were significant and positive.

Herein, H3g and H3j were not supported because the relationships were both insignificant and negative. On the other hand, H3h, H3i, H3k and H3l had significant and

positive relationships. As such, the null hypothesis for H3h, H3i, H3k and H3l is rejected in favour of the alternative hypothesis (see Table 6.32 below). The next paragraph focuses on the analysis of social sustainability and the six forms of firm performance in this study.

Lastly, the relationship between social sustainability and the six forms of firm performance resulted in only 3 out of 6 paths that were supported. According to Table 6.32 below, hypothesis H3m on social sustainability and financial performance (0.257, $p < 0.001$), had a positive and significant outcome. Furthermore, H3r which pertained to the relationship between social sustainability and social performance was also positive and significant with path coefficient of 0.967 and p-value of $p < 0.001$. Lastly, H3n on social sustainability and customer satisfaction performance (0.110, $p = 0.080$) had a positive and significant at $\alpha = 0.1$ significance level. Therefore, this means the null hypotheses is rejected in favour of the stated alternative hypotheses. On the contrary, hypotheses H3o, H3p, and H3q were not supported as shown by the path analysis results below. Thus,

- H3o on social sustainability and employee satisfaction performance (-0.001, $p = 0.982$),
- H3p on social sustainability and innovation performance (-0.009, $p = 0.874$), as well as,
- H3q on social sustainability and environmental performance (-0.002, $p = 0.975$), were all not supported because of their coefficient paths being either negative and/or insignificant p-values at α levels 0.01, 0.05 and 0.1.

Precisely, hypotheses H3o, H3p and H3q in the data utilised resulted in all the relationships that were tested being negative and insignificant. Thus, the data did not support the rejection of the null hypothesis in relation to H3o, H3p, and H3q (See Table 6.32 on the next page).

Table 6.32 Hypotheses Testing on Sustainable Development Practices and Firm Performance

Hypothesis	Hypothesised relationships			Est	S.E.	C.R.	P	Supported
H3	Firm performance	<---	Sustainable	,644	,111	7,960	***	Supported
H3a	Finperf	<---	Economic	,661	,124	5,355	***	Supported
H3b	Customerperf	<---	Economic	,987	,098	9,659	***	Supported
H3c	Employperf	<---	Economic	,749	,128	8,173	***	Supported
H3d	Innovatperf	<---	Economic	,508	,123	6,885	***	Supported
H3e	Environperf	<---	Economic	,667	,148	7,701	***	Supported
H3f	Socialperf	<---	Economic	,197	,058	2,790	,005	Supported
H3g	Finperf	<---	Environment	-,092	,050	-1,321	,186	No
H3h	Customerperf	<---	Environment	,258	,034	3,601	***	Supported
H3i	Employperf	<---	Environment	,227	,047	3,329	***	Supported
H3j	Innovatperf	<---	Environment	-,014	,067	-,201	,841	No
H3k	Environperf	<---	Environment	,277	,077	4,283	***	Supported
H3l	Socialperf	<---	Environment	,229	,089	3,393	***	Supported
H3m	Finperf	<---	Social	,257	,034	2,931	***	Supported
H3n	Customerperf	<---	Social	,110	,049	2,753	,080	Supported
H3o	Employperf	<---	Social	-,001	,072	-,023	,982	No
H3p	Innovatperf	<---	Social	-,009	,081	-,159	,874	No
H3q	Environperf	<---	Social	-,002	,097	-,031	,975	No
H3r	Socialperf	<---	Social	,967	,093	7,050	***	Supported

***p <0.001, S.E: standard error, C.R: critical ratio, Est (Estimate): unstandardised regression weight, St. Est (Standardised Estimate): standardised regression weight, P: P-value

Having obtained and presented the results pertaining to the hypotheses, the next section is a summary of the chapter.

6.8 SUMMARY OF THE CHAPTER

The chapter presented the analyses of data under the following sub-headings, preliminary analyses, sample characteristics, descriptive analyses, factor analysis, structural equation modelling and hypothesis testing. In the preliminary analyses, procedures for outliers and missing data were conducted, together with the response rate analysis. The chapter outlined the two stages of SEM which are measurement model and structural model. Through the measurement model, the dimensionality of the

constructs assessed here was ascertained. All the constructs satisfied the model fitness requirements as well as factor loadings. The results of the structural model also indicated good model fit and enabled the hypotheses testing procedure to be conducted. As such, the conceptualised model was tested and found to be fitting the data. The following chapter discusses the conclusions and recommendations pertaining to the study.

CHAPTER 7: FINDINGS, RECOMMENDATIONS AND CONCLUSIONS

7.1 INTRODUCTION

The discussions in this chapter dovetail from the empirical results of the structural equation modelling stage that were presented in the preceding chapter. The chapter begins by providing a discussion on the achievement of the objectives for this study and the associated hypotheses. The subsequent section presents the findings of the study pertaining to the objectives of the study using the postulated three primary hypotheses (See section 1.6). Thereafter, the section that follows focuses on discussing the research contributions. The recommendations and implications of the study are provided towards the SME owners/managers, researchers as well as policy makers. Furthermore, the limitations that are associated with this research study are delineated. Lastly, the chapter outlines further gaps for future research work to be conducted in the future. The following section focuses on the achievement of the research objectives.

7.2 ACHIEVEMENT OF THE OBJECTIVES

The study's primary aim was to provide an empirical analysis on the relationship between isomorphic pressures and sustainable development practices and the subsequent relationship of sustainable development practices on the performance of SMEs in the Limpopo province. In order to achieve this aim, the research involved the conduct of a cross-sectional survey in the Limpopo province. The research utilised a structured questionnaire to obtain the opinions and perceptions of SME owner/managers regarding the three parental concepts in this study, namely, isomorphism, sustainable development practices and firm performance. This was done after a thorough and extensive literature review pertaining to these concepts.

The research aim was further delineated into four objectives and three primary hypotheses outlined in Section 1.5 and Section 1.6, respectively. The first objective was to ascertain the sustainable development practices of SMEs in Limpopo Province.

Herein, the literature review conducted provided in chapter 2 provided an understanding of what constitutes a SME in the study. The literature provided a contextual understanding of sustainable development practices of SMEs in general. The roles played by SMEs in sustainability were identified to be innovation, poverty alleviation, social activities, economic growth as well as employment creation. However, SMEs have been found to contribute negatively towards sustainability through activities, such as, pollution, environmental degradation, wastage and wastefulness.

Furthermore, the sustainability practices of SMEs are subject to challenges such as globalisation and competition, financial constraints, inadequate skills, technological inadequacy and crime. The thesis also established the motivations and drivers of sustainability practices amongst SMEs as stakeholders' patronage, business practices and risk reduction. Lastly, the achievement of the first objective was conducted through chapter 3, 4, 5 and 6. Chapter 3 provided theoretical literature understanding of sustainability practices and the underpinning drivers (isomorphism). Chapter 4 presented the hypotheses towards measuring the practices while Chapter 5 presented the methodology through which findings were established. These findings were presented in Chapter 6, with Section 6.4 providing the descriptive statistics on the sustainability practices utilised by SMEs in the Limpopo province. The findings reveal that on a scale of 1-5, lowest mean practice was 2.77. Thus, on average, SMEs in Limpopo province were practising sustainability practices as per the questions asked. Thus, the first objective was achieved.

The second objective was to investigate the role that isomorphism plays towards sustainable development practices on SMEs in Limpopo Province. According to Section 1.6, the first two primary hypotheses (H1 and H2) were used to investigate this objective. Thus, H1 hypothesised that there is a significant positive relationship between perceived institutional isomorphism and sustainability practices of SMEs in Limpopo Province. On the other hand, H2 hypothesised that there is a significant positive relationship between perceived competitive isomorphism and sustainability practices of

SMEs in Limpopo Province. These two primary hypotheses were separated into 12 secondary hypotheses as outlined in the conceptual model in Figure 4.1 and Section 4.3. Furthermore, the role that isomorphism plays towards sustainable development practices of SMEs was theoretically discussed in chapter 2, 3 and 4.

Chapter 5 outlined the methodology that was utilised in assessing the outlined hypotheses in this study through the Structural Equation Modelling approach. Chapter 6 shows the SEM results in relation to the two primary hypotheses and their associated secondary hypotheses. The major findings pertaining to these hypotheses are presented in this chapter under Section 7.2 that follows. Generally, the findings established that institutional isomorphism had a more significant and positive relationship with sustainability practices than compared to competitive isomorphism. As such, objective 2 was achieved in this study. The study concludes that the role that isomorphism plays towards sustainable development practices on SMEs in Limpopo province depends on the type of isomorphism.

The third objective for this study was to examine whether sustainable development practices have a positive impact on SMEs performance in Limpopo Province. This objective was achieved through hypothesis formulation as outlined in Section 1.6. The third primary hypothesis H3 was stated as, there is a significant positive relationship between perceived sustainability practices and firm performance of SMEs in Limpopo Province. This hypothesis was further demarcated into 18 secondary hypotheses as outlined in the conceptual model in Figure 4.1 and Section 4.3. Theoretically, the relationship between perceived sustainability practices and firm performance of SMEs was discussed in chapter 2, 3 and 4.

Empirically, Chapter 5 outlines the methodology that was utilised in achieving the outlined hypotheses in this at hand of the SEM approach. The empirical SEM results of the third primary hypothesis and its associated secondary hypotheses testing are established in Chapter 6. Section 7.2, which follows in this chapter presents the major

findings pertaining to these hypotheses. Generally, the findings established that sustainability practices had a significant and positive relationship with firm performance. Consequently, objective 3 was attained in this study. In relation to this objective, the study concludes that there is a significant positive relationship between perceived sustainability practices and firm performance of SMEs in Limpopo Province.

The last objective for this study was to provide recommendations on the influence of isomorphism on the sustainable development practices of SMEs in Limpopo Province. Against the backdrop of the achievement of the above objectives, the research aspired to provide recommendations. Thus, chapter one to six, as well as the preceding sections to section 7.5, in the current chapter, provide the input towards the formulation of recommendations. Consequently, section 7.5 focuses on providing the recommendations to this study, thereby leading to the achievement of the last objective. The recommendations are provided in twofold, namely, theoretical and policy.

7.3 MAJOR RESEARCH FINDINGS

The discussion in this section focuses on explaining the results of testing pertaining to the relationships concerning the three parental concepts in this study, namely, isomorphism, sustainable development practices and firm performance. The discussion follows the three primary hypotheses that were postulated in line with the three primary constructs and their associated sub-constructs, respectively. Section 7.3.1 below, focuses on the first relationship between isomorphism and sustainable development practices.

7.3.1 Institutional Isomorphism and Sustainable Development Practices

The proposed model, in this study postulated that institutional isomorphism had a strong and positive relationship with sustainability practices on SMEs using the context of Limpopo province. This hypothesis constituted the first primary hypothesis (H1) in this study and wherefrom nine further secondary hypotheses were developed, namely, H1a,

H1b, H1c, H1d, H1e, H1f, H1g, H1h, and H1i. These secondary hypotheses represented the relationships between the three sub-constructs for institutional isomorphism (coercive, mimetic and normative) and the three sub-constructs for sustainable development practices (economic, environmental and social).

Through SEM results, this study established (See section 6.8.1) that there is a positive and significant relationship between isomorphism based on the null primary hypothesis being rejected. This general finding concerning the major constructs was also supported by the analysis of the sub-constructs. All the proposed relationships were found to be significant and positive, except for the relationship between coercive isomorphism and social sustainable development practices. Thus, there is strong evidence to suggest that institutional isomorphism has a significant and positive impact on all the dimensions of sustainable development practices. The discussion below addresses the findings pertaining to different types of isomorphism and their impact on sustainable development practices.

7.3.1.1 Coercive isomorphism and sustainable development practices

Coercive isomorphism was found to strongly and positively influence economic and environmental sustainable development practices. However, the study did not find a significantly positive relationship between coercive isomorphism and social sustainability. This means that coercive forces such as government pressures and other regulatory bodies had an impact on firms embarking on environmental and economic sustainability practices. Literature that is directly related to coercive isomorphism and sustainable development practices is scarce. As such, findings of this study are examined in light of findings in other studies that pertain to the variables hypothesised, herein.

The results of this study are consistent with the findings of Bondy (2009) who found that coercive isomorphic pressures such as government and regulatory bodies were very

significant in determining behaviours that are sustainable. Bondy's (2009) study focused on multinational companies in the United Kingdom and utilised a qualitative research approach. The role of coercive isomorphic pressures towards sustainable development behaviours was established in a study by Joseph *et al.*, (2014) conducted in Malaysia. Although the study related to municipalities, it established that there was a significant and positive relationship between coercive isomorphism and an example of environmental sustainability practices, namely, environmental sustainable disclosure. Also, specifically, the results of the current study are consistent with the findings of studies by Jamil *et al.*, (2015) and Othman *et al.*, (2011) which established that coercive pressures positively affected environmental management practices.

However, since there was no significantly positive relationship between isomorphism and social sustainable development practices, it appears that SMEs owner/managers are of the perception that coercive pressures do not encourage them to participate in social sustainability.

7.3.1.2 Normative isomorphism and sustainable development practices

Normative isomorphism had a significant and positive relationship with all the types of sustainable development practices in this study. Thus, normative pressures were found to positively and significantly contribute towards the three dimensions of sustainable development practices, namely, economic, environmental and social. This means that the more normative pressures existed the more firms were bound to adopt economic, environmental as well as social sustainable development practices. Factors that are found under normative pressures, such as, sustainable development education, professionalisation and ethics are critical towards making SMEs to become more sustainable in their behaviours.

Studies by Perez-Batres (2010) and González (2010) established that elements such as business publications, training and development at business schools and other

educational venues contribute to homogenisation behaviours within an organisational field. The contribution of these factors emanates from their consistency with cultural support for the norms and values of CSR which are closely related to sustainable development. According to González (2010:195), firms are prone to respond in a sustainable manner if they are members of trade or employer associations structured in a manner that encourages sustainable behaviour. However, as far as environmental sustainability is concerned, these findings contradict findings in studies by Jalaludin *et al.* (2011) as well as Jamil *et al.* (2015) which established that normative pressures did not affect environmental management.

7.3.1.3 Mimetic isomorphism and sustainable development practices

Lastly, pertaining to institutional isomorphism and sustainable development practices, the relationship between mimetic isomorphism and sustainable development was confirmed in this study. All the dimensions of sustainable development (economic, environmental and social) were significantly related to mimetic isomorphism. Thus, the degree to which SMEs adopt sustainable development in their business practices depends to a larger extent on the mimetic pressures. Small businesses are possibly imitating large businesses and their successful counterparts on the issues of sustainability. The fear to demise and get secluded is one of the mimetic forces; therefore, it follows that without SMEs copying their successful counterparts and large corporations they may be faced with legitimacy problems.

These results contradict previous empirical evidence from studies by Jalaludin *et al.* (2011) as well as Jamil *et al.* (2015) which suggested that mimetic isomorphism had no impact especially on environmental sustainability practices. However, the results of this study are consistent with findings of a study by Perez-Batres (2010) which established a statistically significant relationship between mimetic isomorphism and sustainable development practices.

7.3.2 Competitive Isomorphism and Sustainable Development Practices

As a second primary hypothesis (H2), the study hypothesised that there is a strong and positive relationship between competitive isomorphism and sustainable development practices on SMEs using the context of Limpopo province. This hypothesis constituted further three secondary hypotheses, namely, H2a, H2b, and H2c. These secondary hypotheses represented the relationships between competitive isomorphism and the three sub-constructs for sustainable development practices, namely economic, environmental and social.

In this study, competitive isomorphism is regarded as the pressure of searching for efficiency by organisations, which is more prevalent for those situations in which free and open competition exists. As presented in section 6.8.2, the SEM results in this study ascertained that, there was a positive, but weak relationship between competitive isomorphism and sustainable development according to the second primary hypothesis. Thus, broadly, the results reveal that the hypothesised significant direct effect of competitive pressures on the homogenisation of SMEs in the context of sustainable development was not supported. This general finding was consistent with the findings of the secondary hypotheses. Of the three proposed secondary hypotheses, only one relationship was found to be significant and positive, thus the relationship between competitive isomorphism and social sustainability practices was supported.

However, the relationship between competitive isomorphism and economic as well as environmental sustainability was not supported. The results indicate that there is a weak positive relationship between competitive isomorphism and economic sustainability. This means that competitive isomorphism does not significantly result in the homogenisation of SMEs in terms of economic sustainability. On the other hand, there was a significant but negative relationship between competitive isomorphism and environmental sustainability. This means that the more competitive pressures exist, the more unlikely SMEs are likely to adopt environmental sustainability practices. However, there is strong evidence to suggest that competitive isomorphism does impact social

sustainability as a dimension of sustainable development practices amongst SMEs in the Limpopo province.

There is no literature and empirical studies that are closely related to the relationship between competitive isomorphism and sustainable development practices. These results are consistent with the study of González (2010) who investigated the impact of competitive isomorphism and sustainable development practices in the electricity industry. González (2010:192) established that competitive isomorphism did not result in the adoption of CSR which is closely related to sustainability development practices.

7.3.3 Sustainable Development Practices and Firm Performance

Lastly, the third primary hypothesis (H3) in this study postulated that sustainable development practices are significantly and positively related to firm performance in SMEs. As shown in section 6.8.3 in the previous chapter, the results of SEM analysis pertaining to this hypothesis confirmed the expectations in this study, thus, H3 was supported. This means that on a broader perspective, sustainable development practices have a positive and significant direct effect on firm performance. This finding contradicts findings of Aggrawal (2013) which considered sustainability practices impact on firm performance of large firms.

More specifically, this result on the third primary hypothesis is largely confirmed by the results of the associated secondary hypotheses. This was after the third primary hypothesis was further analysed using 18 hypotheses, namely, H3a, H3b, H3c, H3d, H3e, H3f, H3g, H3h, H3i, H3j, H3k, H3l, H3m, H3n, H3o, H3p, H3q, and H3r. Whence, out of these 18 hypotheses, 13 were supported in this study by being positive and significant and the remaining 5 hypotheses were not supported. The following section (Section 7.3.3.1) discusses the findings for economic sustainability and the six forms of firm performance.

7.3.3.1 Economic sustainability and firm performance

The first six secondary hypotheses (H3a, H3b, H3c, H3d, H3e and H3f) under the third primary hypothesis assessed the relationship between economic sustainability and the six forms of firm performance measured in this study. Thus, the six hypotheses measured the relationship between economic sustainability and financial performance, customer satisfaction performance, employee satisfaction performance, innovation performance, environmental performance, as well as social performance. Through the SEM analytical approach all these constructs under firm performance were found to be positive and significantly related to economic sustainability in this study. This means that there is evidence to support the tentative statements that were proposed in that economic sustainability positively impact financial performance, customer satisfaction performance, employee satisfaction performance, innovation performance, environmental performance, as well as social performance.

Thus, the more SMEs involve themselves in economic sustainable development practices there are higher prospects of their firm performance in all dimensions being enhanced. The opposite is also true, in that the less SMEs embark on economic sustainable development practices the more likely the dimensions of firm performance to behave negatively.

7.3.3.2 Environmental sustainability and firm performance

The next six secondary hypotheses (H3g, H3h, H3i, H3j, H3k and H3l) under the third primary hypothesis assessed the relationship between environmental sustainability and the six forms of firm performance measured in this study. Accordingly, the six hypotheses pertain to the relationship between environmental sustainability and financial performance, customer satisfaction performance, employee satisfaction performance, innovation performance, environmental performance, as well as social performance. Herein, the SEM analytical approach resulted in the majority of these

propositions being consistent with the assumptions that were outlined earlier in the thesis. Thus, only the two relationships between environmental sustainability and financial performance (H3g) and innovation performance (H3j), were not supported. Thus, the research established that the more environmental sustainability practices a firm gets involved in, the less financial performance and innovation performance is experienced.

According to Tachizawa, Gimenez and Sierra (2015:1547) there is plenty of latent literature on the impact of environmental practices on firm performance. However, the relationship between supplier-related environmental practices and firm performance is a contentious subject. The results of SEM analysis failed to substantiate the earlier studies concerning the impact of environmental sustainability and financial performance (Russo & Tencati, 2009; Groenewald & Powell, 2016). On the other hand, Theyel and Hofmann (2012) findings pertaining to a positive relationship between environmental sustainability and innovation performance were contradicted. Thus, these relationships were not supported in this study. Concerning environmental sustainable practices and financial performance (H3g), the study established a weak and negative relationship. This means that the environmental sustainability does insignificantly influence the financial performance of SMEs.

Considering the relationship between environmental sustainability and innovation performance (H3j), surprisingly, there was a significant but negative outcome that was established. This means that SME owners/managers perceive that the more their firms participate in environmental sustainable practices the less innovation they are going to experience. Furthermore, the same finding was established between environmental sustainability and employee satisfaction performance (H3i). Thus, according to SME owner/managers the more environmental sustainability practices the firm got involved in the less employee satisfaction performance is experienced. Pertaining to the relationship between environmental sustainability practices and innovation performance (H3j) the research ascertained that these constructs were found to be negative and insignificantly related. Thus, impliedly, the perceptions of SME owners/managers in this

study were that small businesses' involvement in environmental sustainable development practices did not significantly influence the businesses' innovation performance.

7.3.3.3 Social sustainability and firm performance

Finally, last six secondary hypotheses (H3m, H3n, H3o, H3p, H3q, and H3r) under the third primary hypothesis explored the relationship between social sustainability and the six forms of firm performance measured in this study. Accordingly, the six hypotheses pertained to the relationship between social sustainability and financial performance, customer satisfaction performance, employee satisfaction performance, innovation performance, environmental performance, as well as social performance. The SEM analytical approach resulted in three of these propositions being consistent with the assumptions that were outlined in the thesis, while the other three were inconsistent.

Herein, following the support of H3m, H3n and H3r, the study established that social sustainability was positively and significantly linked to financial performance, customer satisfaction performance and social performance, respectively. These findings are consistent with results of Lassala, Apetrei & Sapena (2017). This means that the SME owner/managers perceived that increase in social sustainability practices potentially enhanced financial performance, customer satisfaction performance as well as social performance of their small firms.

On the contrary, the SEM results determined that H3o, H3p and H3q were not supported. Thus, respectively, there was no perceived relationship that was significant and positive between social sustainability practices and employee satisfaction, innovation performance and environmental performance. All these relationships were found to be negative and insignificant. This implies that SME owner/managers perceived that social sustainability practices did not strongly influence these three forms of firm performance, namely, employee satisfaction performance, innovation

performance and environmental performance. Herein, the study was consistent with Theyel and Hofmann (2012) which found no relationship between social sustainability and innovation performance.

7.4 RESEARCH CONTRIBUTIONS

The primary contribution of this study to the field of business management is through considering the impact of isomorphism towards the adoption of sustainable development practices. Furthermore, the research contributed through the ascertaining the relationship between sustainable development practices and firm performance. Contributions made through this study can be regarded in three areas, namely, the theoretical aspect (sustainable development, isomorphism and firm performance), the methodological aspect and the managerial aspect (contributions towards SMEs owner/manager approach).

7.4.1 Theoretical Contribution

This study provides understanding and contributions towards the parental concepts, namely, isomorphism, sustainable development and firm performance. Firstly, the study critically examined the definitions and literature pertaining to these concepts. The study clearly considered the various ways in which the concepts are defined and which ways are applicable. The study discovered that the three concepts are multidimensional constructs. Through the proposed conceptual framework, the study examined the different dimensions underpinning these concepts. Furthermore, through a critical review of literature the study posited how the different dimensions can be operationalised. For instance, with isomorphism the study reveals the difference between institutional and competitive isomorphism.

To date, literature that exists, especially on sustainable development practices has not been structured and properly defined. In this regard, the study contributes significantly by structuring literature as well as contributing towards the scarce works on the

operationalisation of the concepts. Furthermore, pertaining to the multidimensionality of the concepts investigated in this study, the study contributes towards understanding the different relationships amongst these concepts. Thus, the research ascertained which elements of isomorphism had an impact on which forms of sustainable development practices as well as which elements of sustainable practices had an impact on which form of firm performance. Lastly, theoretically, the study provides a model through which the impact of isomorphism on sustainable development and the impact of sustainable development on firm performance can be measured.

7.4.2 Methodological Contribution

Methodologically, several contributions emanate from this study. In the research fraternity, various statistical techniques have been employed to ascertain the dimensionality of constructs. This study methodologically, utilised EFA and CFA to ascertain the multidimensionality of the concepts under study. Most of the studies have used EFA or CFA in exclusivity, but this study utilised both in a sequence. Thus, Kline (2011) posits that EFA and CFA can be utilised to determine the dimensionality of constructs in a study. To the author's knowledge, this is the first study to examine the dimensionality of isomorphism under competitive and institutional isomorphism. Also, it is the first study to examine the dimensionality of firm performance as defined by six dimensions, namely, financial performance, customer satisfaction performance, employee satisfaction performance, innovation performance, environmental performance as well as social performance.

In addition, the study postulates a complex SEM model and outlines the limitations and considerations that need to be made concerning the use complex structural models within the complicated business management sphere. To the knowledge of the researcher, the isomorphism, sustainable development and firm performance structural equation model utilised in this study, is one of the complicated models used. Furthermore, the researcher presented two-structural models to measure the

relationships between the first-order as well as second order constructs. These can be utilised in future studies. Lastly, the scale developed in this study contains many additional items which were proven to be highly valid and reliable pertaining to isomorphism, sustainable development practices and firm performance aspects. The scale can be utilised in future studies.

7.4.3 Managerial Contribution

In addition to methodological and theoretical contribution, the study contributes towards the management of sustainable development. Foremost, the literature in this study provides a better classification of practices in the sustainability context. The study will enhance the understanding of SME/managers as far as the three dimensions of sustainability are concerned. Apparently, it is becoming increasingly demanding for managers of both large and small businesses to be conversant of corporate sustainability practices. As such, this study will contribute towards the managerial competency, particularly, SMEs within the sustainable development context.

Furthermore, the findings of this study will assist managers in clarifying the relationships between sustainable development, firm performance as well as the antecedent factors underpinning the proliferation of the sustainability phenomenon in the business world. The study has gone beyond the usual approach of assessing firm performance through considering financial and non-financial performance metrics. The study further operationalised the non-financial performance variable into five dimensions, namely customer satisfaction performance, employees' satisfaction performance, innovation performance, environmental performance and social performance. As such, this will enhance the evaluation of firm performance by managers.

7.5 RECOMMENDATIONS

This section provides the recommendations towards the SME sector with the intention of how to improve their sustainable development practices as well as subsequent firm performance.

7.5.1 Theoretical Recommendations

Strategies and frameworks for sustainable development should be structured as many of the practices have not been properly formulated. Literature on sustainable development is voluminous; however, it is not well structured and defined. More especially, there is need for literature on sustainable development in line with SMEs to be developed, as much of sustainability literature has been developed with large corporations in mind. In support, Hutchins and Sutherland (2008:1688) argue that more knowledge and acquaintance on matters that pertain to sustainable development is required. Similarly, as the prevalence of sustainability in the business strategies and activities is increasing, more measurement matrices and definitions of firm performance to evaluate decisions made in line with sustainable development are required.

The use of grounded theory and phenomenological studies in the area of sustainable studies is essential. The current study utilised the positivism approach in establishing the results. However, positivism epistemological approach and objectivism ontological underpinnings have been criticised for their inability to unearth in-depth information pertaining to research objects. It is the belief of the researcher that if phenomenological studies or grounded theory research designs can be adopted in the context of sustainability significant findings can be attained. Furthermore, the research reviewed how the available theory and literature is inadequate with the current status of the three parental concepts researched. Thus, these recommended research methodologies would enable the availability of theory, since they are theory developing centred approaches.

7.5.2 Policy Recommendations

The government should put into place programmes that re-establish the manufacturing sector so as to eradicate poverty amongst the people. In the past, the education system for South Africa had Technikons which focused on providing the population with skills such as agriculture, carpentry, welding and other technical skills. These skills are needed for the development of the manufacturing sector which is really essential for productivity to increase in South Africa. Apparently, there are inadequate initiatives that have been utilised to meet the level of the previous Technikons.

Furthermore, government needs to observe the role that institutional forces play towards sustainable development adoption, especially coercive and normative. As observed in the study, there was a significant relationship between coercive isomorphism and the three dimensions of sustainable development. This means that for sustainable development practises to increase amongst SMEs, policies, laws and regulations are instrumental. There is need for government to be explicit at every government level, from national to local. Sustainability is a paramount aspect that cannot be treated at an ad hoc approach but rather more formalised programmes and even a ministry on sustainable development is needed, since sustainability is a long-lasting phenomenon. There is need for training programmes and systems to enhance sustainability knowledge and practices by government. The same way Seta's have been formulated that train people in critical areas, sustainable development is a critical area which cannot be left to the discretion of the greater populace.

As has been observed, there is a significant relationship between coercive isomorphism and sustainable development practices. With government being a critical and major isomorphic pressure, their contribution in this regard has the potential to increase sustainability amongst SMEs. Especially, when the defragmentation nature of SMEs is taken into consideration. The larger portion of SMEs does not belong to organised professional associations which can assist them with training and developmental

knowledge of this nature. According to González (2010:295), there is a huge potential for firms to behave in a sustainable manner if they form part of a trade or employer associations established and organised in a manner that encourages sustainable behaviour.

The way most black business people operate their business needs to improve. In most of the business owned by Black people that were interviewed the owners were not available at the premises. Their attention and effort towards the business is somewhat different and does not really match up with their white counterparts. Lack of concentration and prioritisation of the business threatens to be counterproductive from the sustainable business perspective. One of the requirements for economic sustainability is that business should be able to survive when started. As such, failure to provide the needed level of attention towards the business decreases chances for survival of small businesses.

7.6 LIMITATIONS OF THE STUDY

The major limitation was the literature constraint that the researcher faced. Theory and literature are vital aspects of the structural equation modelling approach. In this case, the available literature was not satisfactory for the study of this magnitude. Although was satisfactory for firm performance, literature on sustainable development and isomorphism was found to be very limited. Also, empirical studies in these areas are very scarce. Furthermore, the research was only conducted in Limpopo province. As such, the findings of this study seldom represent the South African context. Thus, for proper representation the study can be conducted on a national scale. Lastly, the research did not categorise SMEs in terms of size or industries, findings can be more precise if SMEs are categorised.

7.7 AREAS OF FURTHER STUDY

Theoretically, the current study focused on three parental concepts, namely, isomorphism, sustainable development and firm performance. The study utilised a multidimensional approach towards the three concepts. However, when it comes to firm performance, studies are needed to properly delineate the concept of performance. Substantial suggestions are made in literature for the concept of firm performance to be measured away from the traditional approach of utilising a simplistic view to the concept. The subject of sustainable firm performance is the buzzword in the context of measurement and analysis of firms. As such, future studies can exploit the gap between sustainable practices and sustainable performance. There is a gap in literature pertaining to the measurement indices that firms can use pertaining to firm performance.

The current study utilised the structural equation modelling as an analysis technique. Indisputably, the SEM method use is increasing in latent research in the business management science. However, the current study experienced certain challenges pertaining to the use of this technique. Studies have observed that several aspects of SEM are susceptible to sample size and model complexity. The majority of latent researches that have been conducted utilising SEM have focused on using simple models. To the knowledge of the researcher, no study conducted has been found that have tested more than twenty hypotheses. In this scenario, the model that was utilised tested a total of thirty hypotheses. As such, studies that have described the use of complex models and SEM have advocated that the complexity of a model does not affect model fitness.

However, this recommendation has not been supported in this study. There is need for more studies pertaining to the use of SEM within the context of business science research. Considering the nature at which the management problems are increasingly becoming sophisticated and complex, SEM is an instrumental mechanism. For instance, this study used the multidimensional factor of firm performance at the hand of six

dimensions. In the contemporary sustainable development era, firm performance. The AMOS version 24 that was used could only accommodate a limit of 49 iterations from hence no further modifications could be allowed to better the model. As such, there is need to understand the versatility of SEM within these parameters.

Lastly, research is needed to identify how the different typologies of SMEs are placed on the praxis of the proposed theory in the study. The present study took an aggregated approach to the analysis of SMEs pertaining to the concepts of isomorphism, sustainable development and firm performance. Future studies can investigate the same concepts based on the differences found in the SMEs. Such differences could be geographic (regions, country, globally), size, duration as well as industrial segments.

7.8 SUMMARY OF THE CHAPTER

The presentation in this chapter concludes the study through discussing how the objectives of the study were achieved, research findings, research contributions, recommendations, limitations as well as areas of further study. The major findings of the study were presented according to the three primary hypotheses. In the first primary hypothesis, which pertained to institutional isomorphism and sustainable development, the study found that generally institutional isomorphism caused sustainable development practices amongst SMEs in the Limpopo province. More specifically, the findings pertaining to the nine secondary hypotheses were all found to be significant except only one. Thus, of the relationships between the dimensions of isomorphism (coercive, mimetic and normative) and sustainable development dimensions (economic, environmental, and social) only coercive isomorphism and social sustainability were not related.

Furthermore, the findings also discussed pertained to the second primary hypothesis on competitive isomorphism and sustainable development. The associated three secondary relationships measured the relationship between competitive isomorphism

and the three dimensions of sustainable development practices. The study found that, in general, competitive isomorphism did not impact on sustainable development practice. The same was found for the specific results as measured by the secondary hypotheses, as out of the three hypotheses only one was significant. However, in contrary, findings of the third primary hypothesis indicated that, generally, the data supported the hypothesis which pertained to the relationship between sustainable development practices and firm performance amongst SMEs in Limpopo province.

Furthermore, pertaining to the third primary hypotheses, the associated 18 hypotheses, which pertained to the three dimensions of sustainable development and the six dimensions of firm performance (financial, customer satisfaction, employee satisfaction, innovation, environmental and social) were also broadly supported. Out of the 18 relationships, only five were not supported, namely, (1) environmental sustainability and financial performance, (2) environmental sustainability and innovation performance, (3) social sustainability and employee satisfaction performance, (4) social sustainability and innovation performance, and (5) social sustainability and environmental performance.

The research's contributions towards theory, methodology and SME management are also made in the chapter. Theoretically, the study contributes towards understanding, operationalisation, and model suggestion in line with isomorphism, sustainable development, and firm performance. Methodologically, the study contributes through the utilisation of complex SEM model which satisfied parsimonious fitness, as well as, the scale which included new questions. In addition, recommendations were made towards theory and policy recommendations. Theoretically, the study recommended the use of phenomenological and grounded theory in the area of isomorphism, sustainability, and firm performance to build theory, as theory in these areas is scarce. The policy recommendations made pertain to the acknowledgement of the institutional isomorphic forces in ensuring the wide adoption of sustainability on the part of SMEs. Government and its agencies, have a critical role to play in ensuring sustainability is adopted by firms, and the study has proven and recommended in that regard.

Finally, the chapter presented the limitations and areas of future studies. The major limitation was the unavailability of adequate literature and theory for perfect utilisation of the SEM model, as well as, unavailability of a translator. Lastly, in terms of future studies, the gap between sustainable practices and sustainable performance can be exploited by future studies. Also, future studies can investigate the concepts of isomorphism, sustainable development practices and firm performance based on the differences found in the SMEs. Such differences could be geographic (regions, country, globally), size, duration as well as industrial segments. The results are expected to be more specific as compared to the current study.

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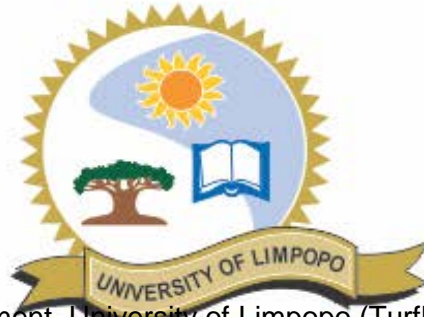
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Annexure 1: QUESTIONNAIRE



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Information Leaflet

ISOMORPHISM AND SUSTAINABLE DEVELOPMENT PRACTICES OF SMALL BUSINESSES IN LIMPOPO PROVINCE, SOUTH AFRICA

This information sheet is for you to keep

About the researcher

My name is Mr Reginald Masocha, I am a student in the Department of Business Management at the University of Limpopo, Turfloop Campus. I have enrolled for my PHD studies with the same institution under the supervision of Prof. O.O. Fatoki.

Why you have been chosen

You have been chosen to participate in this study because you are a manager or owner of a small business in the Capricorn District Municipality in Limpopo province.

The purpose of this research

The study intends to establish the relationship between isomorphism (factors causing organisations to be the same) that drive SMEs towards adopting sustainable development practices and the subsequent impact on firm performance.

Possible benefits of the research

This is primarily for academic purposes and will enable me to proceed with my studies. The research findings are also expected to immensely contribute towards theory and policy on sustainable development and SMEs. Organisations are also expected to gain an understanding on the impact of sustainable development on firm performance.

What the survey involves

The survey involves the completion of a questionnaire which has been designed to not take too much of your time. The questions in the questionnaire address your perceptions concerning three aspects, namely, isomorphism pressures (pressures that cause change of organisations), sustainable development practices and firm performance. The questionnaire should not last more than 15 minutes.

Your participation in this research

I appreciate that the time you take completing this questionnaire may inconvenience you. As such, your time and responses towards this survey are highly valued and appreciated. Please take note, your participation in this survey are highly voluntarily and you are not obligated to participate or answer questions that you are not comfortable with. Furthermore, in case you consent to participate, you may withdraw at any time.

Confidentiality

Results of the study will be handled with the highest level of confidentiality and anonymity. You are guaranteed of privacy and anonymity throughout the research and during analysis of data and even in reports or publications that may ensue.

Results and enquiries

In case of any enquiries concerning any area of the study, the manner in which it was conducted or if you would want to find the ultimate findings of the research, please contact.

Prof. O. O. Fatoki
Head of Department
Department of Business Management
University of Limpopo
Tel: +27 15 268 3897
E-mail: olawale.fatoki@ul.ac.za

If you would want to contact the researcher in line with any area of this research please contact

Mr Masocha Reginald

Dcom Student

Tel: +27 15 268 2802

Cell: +27 83 725 6267

E-mail: reginald.masocha@ul.ac.za

Thank you for your consideration

Masocha Reginald

QUESTIONNAIRE

Please tick on the appropriate box for your answer below and mark the box with X

SECTION A: DEMOGRAPHIC QUESTIONS AND ORGANISATION INFORMATION

1. Indicate your gender.

Male	<input type="checkbox"/>	Female	<input type="checkbox"/>
------	--------------------------	--------	--------------------------

2. Indicate your age group.

Below 20	<input type="checkbox"/>	20-30	<input type="checkbox"/>	31-40	<input type="checkbox"/>	41-50	<input type="checkbox"/>	Above 50	<input type="checkbox"/>
----------	--------------------------	-------	--------------------------	-------	--------------------------	-------	--------------------------	----------	--------------------------

3. What is your educational level?

No formal education	<input type="checkbox"/>	Below matric	<input type="checkbox"/>	Matric	<input type="checkbox"/>	Diploma/certificate	<input type="checkbox"/>	Degree	<input type="checkbox"/>
---------------------	--------------------------	--------------	--------------------------	--------	--------------------------	---------------------	--------------------------	--------	--------------------------

4. How long has your business been in operation?

Below 1 year	<input type="checkbox"/>	1-5 years	<input type="checkbox"/>	6-10 years	<input type="checkbox"/>	Above 10 years	<input type="checkbox"/>
--------------	--------------------------	-----------	--------------------------	------------	--------------------------	----------------	--------------------------

5. How many workers including owner/ manager does your business have?

5 and below	<input type="checkbox"/>	6 to 20	<input type="checkbox"/>	21 to 50	<input type="checkbox"/>	51-200	<input type="checkbox"/>
-------------	--------------------------	---------	--------------------------	----------	--------------------------	--------	--------------------------

6. What position do you hold in the business?

Owner/	<input type="checkbox"/>	Manager	<input type="checkbox"/>
--------	--------------------------	---------	--------------------------

7. How best do you classify the location of your business?

Manufacturing	area	Mining	<input type="checkbox"/>
Wholesaling	<input type="checkbox"/>	Tourism	<input type="checkbox"/>
Retailing	<input type="checkbox"/>	Service	<input type="checkbox"/>
Agriculture	<input type="checkbox"/>	Other, specify	<input type="checkbox"/>

8. Which business sector does your business belong to?

SECTION B: SUSTAINABILITY PRACTICES

Indicate with an X to what extent do you agree to your firm applying the following sustainability practices by using the scale below where: **1= Strongly Disagree and 5=Strongly Agree**

ENVIRONMENTAL SUSTAINABILITY Our sustainable business practices.....					
....focus on environmental issues	1	2	3	4	5

....make the most efficient use of the resources available in the environment	1	2	3	4	5
....are based upon environmental monitoring	1	2	3	4	5
.....recycle, reuse or reduce waste	1	2	3	4	5
.... are increasing energy efficiency	1	2	3	4	5
... emphasise use of renewable energy	1	2	3	4	5
...make use of reduction/replacement of hazardous chemicals or materials (e.g. substituting hazardous chemicals with less hazardous alternatives).	1	2	3	4	5
....adhere to Environmental Protection Agency regulations on effluents/emissions/waste	1	2	3	4	5
ECONOMIC SUSTAINABILITY Our sustainable business practices.....					
....rest on economic considerations such as efficiency and productivity	1	2	3	4	5
....focus on survival in the marketplace.	1	2	3	4	5
....save money for the firm.	1	2	3	4	5
.... meet tax obligations.	1	2	3	4	5
... provide products and services that are important for the community	1	2	3	4	5
... focus on long-term profitability even if it means losses in the short-term	1	2	3	4	5
SOCIAL SUSTAINABILITY Our sustainable business practices.....					
.....take current activities in the community into account.	1	2	3	4	5
...consider the social well-being of society.	1	2	3	4	5
....Provide entitlements to workers.	1	2	3	4	5
... promote women to senior management positions	1	2	3	4	5
... focus on equity and safety of the community.	1	2	3	4	5
.... focus on improving the general education level	1	2	3	4	5
....promote individual rights both civil and human rights	1	2	3	4	5

SECTION C: ISOMORPHIC PRESSURES

On the scale of 1 to 5, how would you describe the reasons behind your business practising sustainable development over the following areas? Where: **1= Strongly Disagree and 5=Strongly Agree.**

COERCIVE PRESSURES Our sustainable development practice are because.....					
....our main customers that matter to us believe that we should use sustainable business practices.	1	2	3	4	5
....we may not retain our important customers without sustainable business practices.	1	2	3	4	5
....our suppliers that matter to us believe that we should use sustainable business practices.	1	2	3	4	5
....they are rules and regulations that enforce us to use sustainable business practices	1	2	3	4	5

NORMATIVE PRESSURES Our sustainable development practice are because.....					
....sustainable business practices have been widely adopted by our suppliers currently	1	2	3	4	5
....sustainable business practices are widely adopted by our customers currently	1	2	3	4	5
....sustainable business practices are widely adopted by our competitors currently	1	2	3	4	5
....our employees consider sustainability as part of their professionalism.	1	2	3	4	5
...sustainable practices is provided to us as part of training in our industry	1	2	3	4	5
MIMETIC PRESSURES Our sustainable development practice are because.....					
....our main competitors that have used sustainable development benefited greatly.	1	2	3	4	5
....our main competitors that use sustainable development are perceived favourably by customers.	1	2	3	4	5
....our main competitors that use sustainable development are more competitive.	1	2	3	4	5
....we employ workers from competitors that are successful in sustainable development.	1	2	3	4	5
....we use the same consultants as our main competitors in sustainable development.	1	2	3	4	5
COMPETITIVE PRESSURES Our sustainable development practice are because.....					
....we want to reduce production costs compared to our competitors.	1	2	3	4	5
...we want to gain a competitive advantage over our competitors.	1	2	3	4	5
... we want to increase the organisation's efficiency more than our competitors.	1	2	3	4	5
... we want to increase our share in the market over our competitors.	1	2	3	4	5
... we want to increase our survival prospects in the market.	1	2	3	4	5

SECTION D: FIRM PERFORMANCE

On the scale of 1 to 5, how would you describe the performance of your business in the past three years in the following areas?

	Significant decline 1	Decline 2	Remained the same 3	Increase 4	Significant Increase 5
Financial performance					
Net revenue					
Gross Profit					
Sales growth relative to competitors					
Number of Employees					
Market Share					
Customer Satisfaction Performance					
Sales (turnover)					
Customer service					
Relations with customers					
Customer loyalty					
Employee satisfaction Performance					
Employee remuneration					
The working environment					
Employees' loyalty					

Employees' morale					
Innovation Performance					
The number of new products or improved products/services launched to the market					
The number of new or improved internal processes of transforming products/services					
Top management emphasis on research and development					
Changes introduced in our products or services					
Environmental Performance					
Number of projects to improve / recover the environment.					
Use of recyclable materials.					
Recycling level and reuse of residuals					
Success in reduction in pollutants emission					
Social Performance					
Employment of people from different social backgrounds					
Number of social and cultural projects					
Promotion of individual and civil rights					
Promotion of women to managerial positions					

Thank you for your cooperation

Annexure 2: ETHICAL CLEARANCE LETTER



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TURFLOOP RESEARCH ETHICS

COMMITTEE CLEARANCE CERTIFICATE

MEETING: 02 November 2017

PROJECT NUMBER: TREC/305/2017: PG

PROJECT:

Title: Isomorphism and sustainable development practices and small business in Limpopo Province, South Africa

Researcher: R Masocha

Supervisor: Dr OA Oni

Co-Supervisor: Prof OO Fatoki

School: Economics and Management

Degree: PhD in Business Management


PROF TAB MASHEGO

CHAIRPERSON: TURFLOOP RESEARCH ETHICS COMMITTEE

The Turfloop Research Ethics Committee (TREC) is registered with the National Health Research Ethics Council, Registration Number: REC-0310111-031

Note:

- i) Should any departure be contemplated from the research procedure as approved, the researcher(s) must re-submit the protocol to the committee.
The budget for the research will be considered separately from the protocol.
PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES.

Finding solutions for Africa

Annexure 3: REGRESSION ESTIMATES

Estimates (Group number 1 - Default model)

Scalar Estimates (Group number 1 - Default model)

Maximum Likelihood Estimates

Regression Weights: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
Coe2 <--- Coercive_isomorphism	,887	,039	22,974	***	
Coe1 <--- Coercive_isomorphism	,958	,038	25,096	***	
Nor5 <--- Normative_isomorphism	1,000				
Nor4 <--- Normative_isomorphism	1,029	,042	24,295	***	
Nor2 <--- Normative_isomorphism	,845	,048	17,545	***	
Mim3 <--- Mimitic_Isomorphism	1,000				
Mim1 <--- Mimitic_Isomorphism	,949	,050	18,997	***	
Com5 <--- Competitive_Isomorphism	1,000				
Com3 <--- Competitive_Isomorphism	1,172	,047	25,075	***	
Com2 <--- Competitive_Isomorphism	1,050	,054	19,280	***	
Coe3 <--- Coercive_isomorphism	1,000				
Mim5 <--- Mimitic_Isomorphism	,839	,065	12,928	***	

Standardized Regression Weights: (Group number 1 - Default model)

	Estimate
Coe2 <--- Coercive_isomorphism	,924
Coe1 <--- Coercive_isomorphism	,950
Nor5 <--- Normative_isomorphism	,917
Nor4 <--- Normative_isomorphism	,949
Nor2 <--- Normative_isomorphism	,825
Mim3 <--- Mimitic_Isomorphism	,919
Mim1 <--- Mimitic_Isomorphism	,887
Com5 <--- Competitive_Isomorphism	,885
Com3 <--- Competitive_Isomorphism	,997
Com2 <--- Competitive_Isomorphism	,873
Coe3 <--- Coercive_isomorphism	,941
Mim5 <--- Mimitic_Isomorphism	,713

Estimates (Group number 1 - Default model)

Scalar Estimates (Group number 1 - Default model)

Maximum Likelihood Estimates

Regression Weights: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
Env2 <--- Environmental_Sustainability	,741	,045	16,430	***	
Env5 <--- Environmental_Sustainability	1,000				
Env4 <--- Environmental_Sustainability	,972	,040	24,192	***	
Eco4 <--- Economic_Sustainability	1,123	,070	15,998	***	
Eco3 <--- Economic_Sustainability	1,076	,067	15,956	***	
Eco2 <--- Economic_Sustainability	1,000				
Soc5 <--- Social_Sustainability	,970	,071	13,732	***	
Soc2 <--- Social_Sustainability	1,000				
Soc3 <--- Social_Sustainability	1,065	,070	15,266	***	

Standardized Regression Weights: (Group number 1 - Default model)

	Estimate
Env2 <--- Environmental_Sustainability	,789
Env5 <--- Environmental_Sustainability	,941
Env4 <--- Environmental_Sustainability	,940
Eco4 <--- Economic_Sustainability	,914
Eco3 <--- Economic_Sustainability	,911
Eco2 <--- Economic_Sustainability	,807
Soc5 <--- Social_Sustainability	,805
Soc2 <--- Social_Sustainability	,841
Soc3 <--- Social_Sustainability	,895

Estimates (Group number 1 - Default model)

Scalar Estimates (Group number 1 - Default model)

Maximum Likelihood Estimates

Regression Weights: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
FP3 <--- Financial	,785	,043	18,451	***	
FP2 <--- Financial	1,000				
FP1 <--- Financial	,630	,070	9,035	***	
CSP2 <--- Customer_Satisfaction	1,000				

	Estimate	S.E.	C.R.	P	Label
CSP1 <--- Customer_Satisfaction	,715	,062	11,485	***	
ESP4 <--- Employee_satisfaction	1,000				
ESP3 <--- Employee_satisfaction	1,009	,036	27,805	***	
ESP2 <--- Employee_satisfaction	,732	,042	17,264	***	
IP4 <--- Innovation_performance	1,000				
IP2 <--- Innovation_performance	,921	,056	16,540	***	
IP1 <--- Innovation_performance	,955	,054	17,718	***	
SP3 <--- social_performance	,741	,062	11,919	***	
SP2 <--- social_performance	,736	,064	11,588	***	
SP1 <--- social_performance	1,000				
EP4 <--- Environment_performance	,988	,039	25,057	***	
EP3 <--- Environment_performance	,924	,031	30,217	***	
EP2 <--- Environment_performance	1,000				
CSP3 <--- Customer_Satisfaction	1,451	,090	16,087	***	

Standardized Regression Weights: (Group number 1 - Default model)

	Estimate
FP3 <--- Financial	,982
FP2 <--- Financial	1,135
FP1 <--- Financial	,703
CSP2 <--- Customer_Satisfaction	,802
CSP1 <--- Customer_Satisfaction	,559
ESP4 <--- Employee_satisfaction	,929
ESP3 <--- Employee_satisfaction	,983
ESP2 <--- Employee_satisfaction	,833
IP4 <--- Innovation_performance	,890
IP2 <--- Innovation_performance	,894
IP1 <--- Innovation_performance	,966
SP3 <--- social_performance	,745
SP2 <--- social_performance	,726
SP1 <--- social_performance	1,032
EP4 <--- Environment_performance	,974
EP3 <--- Environment_performance	,923
EP2 <--- Environment_performance	1,030
CSP3 <--- Customer_Satisfaction	,999

Annexure 4: LANGUAGE EDITOR'S LETTER

N J Nel

PO Box 365, BENDOR PARK 0713

Tel: 074184 9600

CERTIFICATE

This serves to certify that I have language edited the Doctoral Thesis of

Mr Reginald Masocha,

Student number: **201648881**

entitled:

"ISOMORPHISM AND SUSTAINABLE DEVELOPMENT PRACTICES OF SMALL BUSINESSES IN LIMPOPO PROVINCE, SOUTH AFRICA"

A handwritten signature in black ink, appearing to read 'NJ Nel', is written over a light blue rectangular background.

N J Nel

Lecturer of English, Department Applied Languages

Tshwane University of Technology

(Retired)

11 Nov 2017

Annexure 5: ORIGINALITY REPORT

ISOMORPHISM AND SUSTAINABLE DEVELOPMENT PRACTICES OF SMALL BUSINESSES IN LIMPOPO PROVINCE, SOUTH AFRICA

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"TO BUSINESS EDITOR:.", PR Newswire, April

7 2000 Issue

Publication

Abbas Mardani, Dalia Streimikiene, Edmundas
Zavadskas, Fausto Cavalaro, Mehrbakhsh o
Nilashi, Ahmad Jusoh, Habib Zare.
"Application of Structural Equation
Modeling (SEM) to