The Impact of Green Marketing Practices on Competitive Advantage and Business Performance among Manufacturing Small and Medium Enterprises (SMEs) in South Africa

By

Eugine Tafadzwa Maziriri

A THESIS

Submitted in fulfilment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

Business Sciences (Marketing)

Under the Supervision of:

Professor Richard Chinomona and Dr Norman Chiliya

in

The School of Economic and Business Sciences,

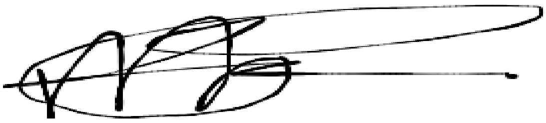
at the

UNIVERSITY OF THE WITWATERSRAND

2018

DECLARATION

- This doctoral thesis is my own original effort.
- All the sources which were utilised or referred to have been provided in the doctoral thesis in the appropriate format.
- This doctoral thesis has not been previously submitted in full or partial fulfilment as deemed mandatory for the attainment of a higher education qualification or equivalent at an educational institution.
- APA was used as the referencing style.



Eugine Tafadzwa Maziriri

2018

ACKNOWLEGDMENTS

I praise God, the Almighty, for giving me the energy, discipline and strength to complete this thesis. It is only due to His blessings that I could finish my thesis. I would like to express my heartfelt indebtedness and deep appreciation to several people who played a major role in completion of this thesis:

- Firstly, I would like to thank Professor Richard Chinomona for the exceptional learning experience provided by his guidance and supervision. Thank you for having confidence in my potential and your valuable advice and intellectual support throughout the journey will never be underestimated. I would never have made this far without your guidance.

- To Dr Norman Chiliya. Thank you, co-supervisor, for your invaluable advice and guidance.

- I would like to acknowledge both of my parents, Mr Herbert Maziriri and Mrs Tariro Maziriri, whose love, unwavering support and words of wisdom I will never forget.

- I am indebted to all the respondents who freely gave their valuable time to share their experiences with me and for returning the questionnaires. Their contributions are much appreciated

- To Jennifer Croll for her expertise the language editing of this thesis.

- Finally, to the staff members of the Commerce library (University of the Witwatersrand) for their painstaking effort in obtaining the requested information in the form of specific journal articles and textbooks.

DEDICATION

It is with most profound love, respect and admiration that I devote this thesis to my mom, **Tariro Maziriri**. My mother, inspired and supported me throughout my scholarship. I am hubled by her consolation and tremendous help in every one of the challenges I experienced. My mom's unprecedented confidence in me and our confidence in God have guided me to the fulfillment of this undertaking.

ABSTRACT

The phenomenon of "green marketing" has developed particular significance in the modern market, emerging in the developing and developed world as an important concept, and is seen as an essential approach to assist with sustainable development. As green marketing becomes an essential tool for sustainable business strategy, companies are applying green marketing practices to achieve competitive advantage and business performance. This thesis sought to determine the impact of green marketing practices on competitive advantage and business performance of SMEs in the manufacturing sector of South Africa. A quantitative research approach was used for this study and the target population for this study was restricted to managers and Heads of Marketing Departments within manufacturing SMEs in the Gauteng province of South Africa. The data analysis was done in SPSS 25 for demographic data analysis and AMOS 25 was used for the structural equation modelling and path modelling. Smart PLS 3 was also utilised to test for the mediating effect of the mediating variable.

According to the results of the structural equation modelling analysis, the tested relationships produced satisfactory results consistent with how they were hypothesised. Precisely, it was found out that green packaging, green advertising, and green product innovation had a positive impact on competitive advantage. In addition, it was also found out that green packaging, green advertising; competitive advantage, green product innovation and green process innovation had a positive impact on business performance. Green process innovation emerged to have a negative impact on competitive advantage. Additionally, four more hyphotheses, namely, hypothesis ten, eleven, twelve and thirteen, were also supported as the mediation results indicated that competitive advantage positively and significantly mediates the relationship between green packaging and business performance, green product innovation and business performance and green process innovation and business performance. It was also found that, althougth competitive advantage positively mediated the relationship between green advertising and business performance; it does not significantly mediate the relationship between green advertising and business performance. This research broadens the knowledge base that currently exists in the field of green marketing, competitive advantage and SMEs business performance. Also, this investigation is noteworthy to manufacturing SME proprietors and supervisors since most them endeavour to have a competitive advantage and additionally, to boost profitability as well as the business' interest.

Key words: *Green packaging, green advertising, green product innovation, green process innovation, competitive advantage, business performance*

GLOSSARY OF TERMS

GDP: Gross domestic product

SEM: Structural equation modelling

AVE: Average Value Extracted

CR: Composite Reliability

HSV: Highest Shared Variance

CFI: Comparative fit index

CFA: Comfirmatory factor analysis

GFI: Goodness-of-fit Index

IFI: Increment fit Index

AMOS: Analysis of moment structure

AVE: Average variance extracted

TLI: Tucker-Lewis index

NFI: Normed fit index

RMSEA: Root mean square error of approximation (RMSEA)

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

1 CHAPTER ONE: INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 Introduction

The chapter presents a background to the study, identification of research gaps and problem statement, purpose of the study, research questions, conceptual model of the study, hypothesis statements, an overview of the study's methodology, as well as the various contributions of the study.

1.2 Background to the study

Small and Medium Enterprises (SMEs) have become a topical subject among management as well as research practitioners all over the world and, this has led to a proliferation of research interests centred on SMEs (Mafini & Omuruyi 2013). According to Van-Scheers and Makhitha (2016), the total number of SMEs in South Africa is just over 2 million and they contribute between 52 and 57% to the nation's GDP and provide about 61% of the people employed. A previous study conducted by Fourie (2015) indicated that the South African SME industry accounts for 91% of formal businesses and that these SMEs contribute up to 57% to the South African GDP. Nyman, Kennon, Schutte and Von Leipzig (2014) also mentioned that SMEs contribute considerably to the national GDP and to private sector employment. Love and Roper (2013) stated that SMEs play a vital role in economic development as they have been the main source of employment generation and output growth, both in developing as well as in developed countries. SMEs are also the fastest growing segment of most economies and are perceived to be more flexible and adaptable in terms of structure and speed of response than larger organisations (Kumar 2012).

Terziovski (2010) explains that SMEs in the manufacturing sector make a significant contribution to economic growth. According to the Small Enterprise Development Agency (SEDA) (2012), SMEs have been identified as key drivers in the quest to create more employment in all economic sectors and specifically, the manufacturing sector. The Gauteng provincial government intends to support and grow SMEs in the manufacturing sector by developing partnerships with successful SME initiatives through agencies (governmental and nongovernmental) and local municipalities within the province (Small Enterprise Development Agency, 2012).

Ebitu (2016) explains that SMEs find themselves in a competitive environment both locally and globally, hence effective marketing practices are required to have a competitive edge over competitors, as well as to improve the business performances of the SMEs. Carneiro, Cunha, Fereira and Shamsuzzoha (2013) point out that in order to survive in today's competitive business environment, manufacturing firms, especially SMEs, are required to join efforts and to collaborate and share the needed knowledge, capabilities, capital and vital mass to grow innovative businesses and deliver higher quality and multifaceted products.

In addition, to compete and survive in a highly competitive global marketplace, it is important for manufacturing SME managers to resort to the utilisation of green marketing practices in order to have a competitive edge over their rivals, as well as to improve business performance (Osuga, 2016). Also, Kimani (2015) contends that green marketing practices in general, influence performance and that in relation to individual measures of performance, green marketing practices have a statistically significant effect on innovativeness, effectiveness, as well as competitive advantage.

In light of the above, this study examines the impact of four green marketing practices, namely, green product innovation, green process innovation, green packaging and green advertising on the competitive advantage and their impact on competitive advantage, as well as business performance among manufacturing SMEs in South Africa.

1.3 Problem statement and research gap

Despite the apparent significance of SMEs, and the numerous policy initiatives introduced by respective governments in the developing economies during the past decade to accelerate the growth and survival of SMEs, the performance of SMEs has been disappointing (Njoroge 2015). Ebitu, Ufot and Olom (2015) are of the view that small businesses face many problems. Mazanai (2012) points out that, in South Africa, SMEs in the manufacturing sector are faced with a great challenge of fighting competition with large established businesses. Omar and Anas (2014) concur that extensive competition among SMEs, large firms' competition, and seasonal demand are also among the serious problems that are often experienced by SMEs. Cant and Wiid (2013) are also of the view that competition is a marketing factor which has a negative impact on SMEs.

In addition, Mthabela (2015) emphasises that despite the attempts made by the South African government to assist in developing the SME sector, most manufacturing SMEs in Johannesburg are failing to develop into successful and sustainable businesses. Lekhanya (2010) investigated the use of marketing strategies by SMEs, and the results revealed that there was a lack of marketing knowledge and expertise and limited use of marketing strategies by the owners/managers of rural SMEs.

Available literature related to green marketing practices, competitive advantage and business performance of SMEs has many deficiencies. Notably, most international studies conducted in inter alia, Peru, Mexico and the US, have examined SMEs by mainly focusing on crisis management and strategic orientation (Parnell, 2015). Other studies included entrepreneurial orientation and SME performance in China's changing environment (Tang & Tang 2012); entrepreneurial orientation and business performance of small and medium scale enterprises in Sri Lanka (Faizol; Haribuni& Tanaka 2010); innovation and competitive advantage with the moderating effects of firm age in foods' manufacturing SMEs in Malaysia (Aziz & Samad 2016); SME performance in Nigeria (Aminu & Shariff 2015); intellectual capital as competitive advantage in Latin America (Jardon, & Martos, 2012); E-business, organisational innovation and firm performance in manufacturing SMEs in Spain (Soto-Acosta, Popa & Palacios-Marqués 2016), as well as the effects of intangible resources and competitive strategies on the export performance of metal, textile, chemical and furniture industry in Turkey (Kumlu 2014). Inferring from the aforementioned studies, it is essential to note that most of the studies were carried out in European, Asian and West African countries, but literature does not provide any evidence of southern African countres, particularly, South Africa, a country on the southernmost tip of the African continent.

It is also imperative to note that, despite the theoretical contributions made by many international scholars on green marketing practices, competitive advantage and business performance, it appears that within the South African context, there is a dearth of research studies that have shed light on the impact of green marketing practices on competitive advantage as well as how competitive advantage has an impact on the business performance of manufacturing SMEs in South Africa. Previous researchers in South Africa have examined SMEs in various contexts by focusing on why SMEs go green (Hamann, Smith, Tashman & Marshall 2017); the effectiveness of E-commerce among SMEs in Polokwane, South Africa (Molapo 2014); barriers to effective supply chain management and implementation, and the impact on business performance of SMEs in South Africa (Dubihlela & Omoruyi 2014); the impact of entrepreneurial orientation on access to debt finance and performance of SMEs in South Africa (Fatoki 2012); a literature review of small and medium enterprises (SME) risk management practices in South Africa (Smit & Watkins 2012); enterprise resource planning in manufacturing SMEs in the Vaal Triangle (Dlodlo, 2011).

Considering the above gap, the researcher is convinced that there is a scarcity of research in the reported literature that has investigated the impact of green marketing practices on competitive advantage and how competitive advantage has an impact on the business performance of manufacturing SMEs in the context of developing countries in Africa. Therefore, this thesis seeks to expose the theoretical deficiencies of the literature and to make an addition to it with empirical results. Furthermore, it is also essential to mention that there is limited literature that focuses on green marketing practices as the predictor variables of competitive advantage among SMEs. In addition, little is known about competitive advantage as a mediator variable of the relationship between green marketing practices and business performance. Gupta (2015) points out that in business schools and business circles; much emphasis is placed on the role of competitive advantage as a predictor of the economic fortunes of a nation. Moreover, the literature on competitive advantage and business performance concentrated mainly on larger firms, while little evidence is available for SMEs. This is confirmed by Chong (2008) as well as Harif, Hoe and Ahmad (2013), who pointed out that a large proportion of the existing literature is devoted to studies on how large organisations measure their performance. In addition, Chong (2008) and Harif, Hoe and Ahmad (2013) argued that there is an apparent gap in understanding how SMEs measured their performance. Additionally, Kumar (2015:1) points out that "though a sufficient number of studies have focused upon green marketing practices and innovations in companies, and their strategic importance, our knowledge of factors shaping green marketing decisions and practices of small firms is relatively underdeveloped".

On the basis of the research problem outlined above, and the research lacuna alluded, this study aimed at determining the impact of green marketing practices on competitive advantage as well as to determine if competitive advantage has an impact on business performance of SMEs in the manufacturing sector of South Africa.

1.4 OBJECTIVES OF THE STUDY

1.4.1 Primary objective

The primary objective of this study was to determine the impact of green marketing practices on competitive advantage, as well as to determine how competitive advantage has an impact on business performance of SMEs in the manufacturing sector of South Africa.

1.4.2 Theoretical objectives

To address the primary objective of the study, the theoretical objectives were to review the literature on:

- resource advantage theory of competition
- natural resource-based view theory
- resource-based view model
- the balanced scorecard theory
- the stakeholder theory
- Porter's five forces model
- green packaging
- green advertising
- green product innovation
- green process innovation
- competitive advantage
- business performance

1.4.3 Empirical objectives

In line with the theoretical and primary objectives of this study, the following empirical objectives were formulated:

- To determine the impact of green packaging, green advertising, green product innovation and green process innovation on competitive advantage
- To examine the impact of green packaging, green advertising, green product innovation and green process innovation on business performance

- To determine the impact of competitive advantage on business performance
- To examine the mediating impact of competitive advantage on the relationship between green packaging and business performance; green advertising and business performance; green product innovation and business performance as well as green process innovation and business performance

1.4.4 Research Questions

To accomplish the purpose of this study, an effort was made to answer the following research questions:

RQ1: Does green packaging, green advertising, green product innovation and green process innovation have a positive impact on competitive advantage?

RQ2: Is there any positive impact of green packaging, green advertising, green product innovation and green process innovation on business performance?

RQ3: Does competitive advantage have a positive impact on business performance?

RQ4: Does competitive advantage positively mediate the relationship between green packaging and business performance; green advertising and business performance; green product innovation and business performance as well as green process innovation and business performance?

1.5 Significance of the Study

Significance of this study was projected to be drawn from both theoretical and practical values.

1.5.1 Proposed theoretical value

This research extends the knowledge base that currently exists in the field of green marketing, competitive advantage, as well as SMEs business performance. The researchers and academic community could use this study as a yardstick for further studies. The students and academicians could use this study as a reference point and try to improve on the areas that are not covered by the researcher in the future within this field of green marketing, competitive advantage and SMEs business performance. Moreover, it is anticipated that the findings will be of value to future researchers and scholars who may use this study to conduct further studies. This study aims to provide practical implications.

1.5.2 Proposed practical value

This study will be of significance to manufacturing SME owners and managers since most of them aim to maximise profitability and the business' interest. This study will also help SMEs owners and marketing managers of SMEs operating within the manufacturing sector to identify the necessary green marketing practices that will give them a competitive advantage, as well as enhance their business performance. Explicitly, manufacturing SMEs that develop new and improved products and services with environment inputs in mind give themselves access to new markets, increase their profit sustainability, and enjoy a competitive advantage over the companies which are not concerned for the environment. Maiywa (2013) asserts that there are basically five reasons for which a marketer should go for the adoption of green marketing. They include opportunities or competitive advantage, corporate social responsibilities (CSR), government pressure, competitive pressure and cost or profit issues (Maiywa, 2013). Moreover, it can also be pointed out that competitors will use the study as a tool to analyse weakness and strength of their opponents to enable them to make decisions to outperform them.

1.5.3 Proposed policy value

The results of this study may be used to generate new policies and revise existing ones. Preceisely, the study will be beneficial for effective policy formulation by various entities such as the Government of South Africa which is charged with the responsibility of ensuring organisations like manufacturing SMEs follow the set regulations in carrying out their businesses to ensure environmental sustainability. Bodies like the National Business Initiative (NBI); Environmental Evaluation Unit (EEU); Wildlife and Environment Society of South Africa (WESSA) and Earthlife Africa, will also use this research for effective policy formulation on environmental management issues.

1.6 Preliminary literature review

This section provides a preliminary review of the research constructs used in the study. The constructs of interest include green packaging; green advertising, green product innovation, green process innovation, competitive advantage and business performance. Subsequently, the main review of this study is covered in chapter 4.

Table 1.1: Definitions of Research Constructs

Variable	Definition and Source
Green packaging	Green advertising is related to communicating organisational commitment towards sustainability, environmental initiatives of companies and green product attributes in the market place (Ghodeswa & Kumar, 2014).
Green advertising	Green advertising is defined as "any ad that explicitly or implicitly addresses the relationship between a product/service and the biophysical environment, promotes a green lifestyle with or without highlighting a product/service and presents a corporate image of environmental responsibility" (Alniacik & Yilmaz, 2012, p. 209)
Green product innovation	Green product innovation refers to the application of innovative ideas leading to the design, manufacturing and marketing of new products whose newness and greenness significantly outperform conventional or competing products (Wong 2012).
Green process innovation	Green process innovation refers to the modification of the current operating processes and systems, aiming to produce new or significantly improved green products which can reduce environmental impact (Meeus & Edquist, 2006).
Competitive advantage	Competitive advantage of a small enterprise is defined as the combination of factors that distinguish a small enterprise from its competitors, thus ensuring its unique position on the market (Renko, Sustic & Butigan, 2011).
Business performance	Davood and Morteza (2012) view business performance as the ability of a firm to generate acceptable results and actions.

Source: Compiled by the researcher

1.7 Conceptual model and hypothesis development

A conceptual model was proposed to guide the empirical study, as shown in figure 1. The conceptual model suggested that green packaging, green advertising, green product innovation, and green process innovation were the predictor variables, while competitive advantage was the mediator variable and business performance was the outcome variable. The hypothesised relationships between the research constructs are stated hereafter.

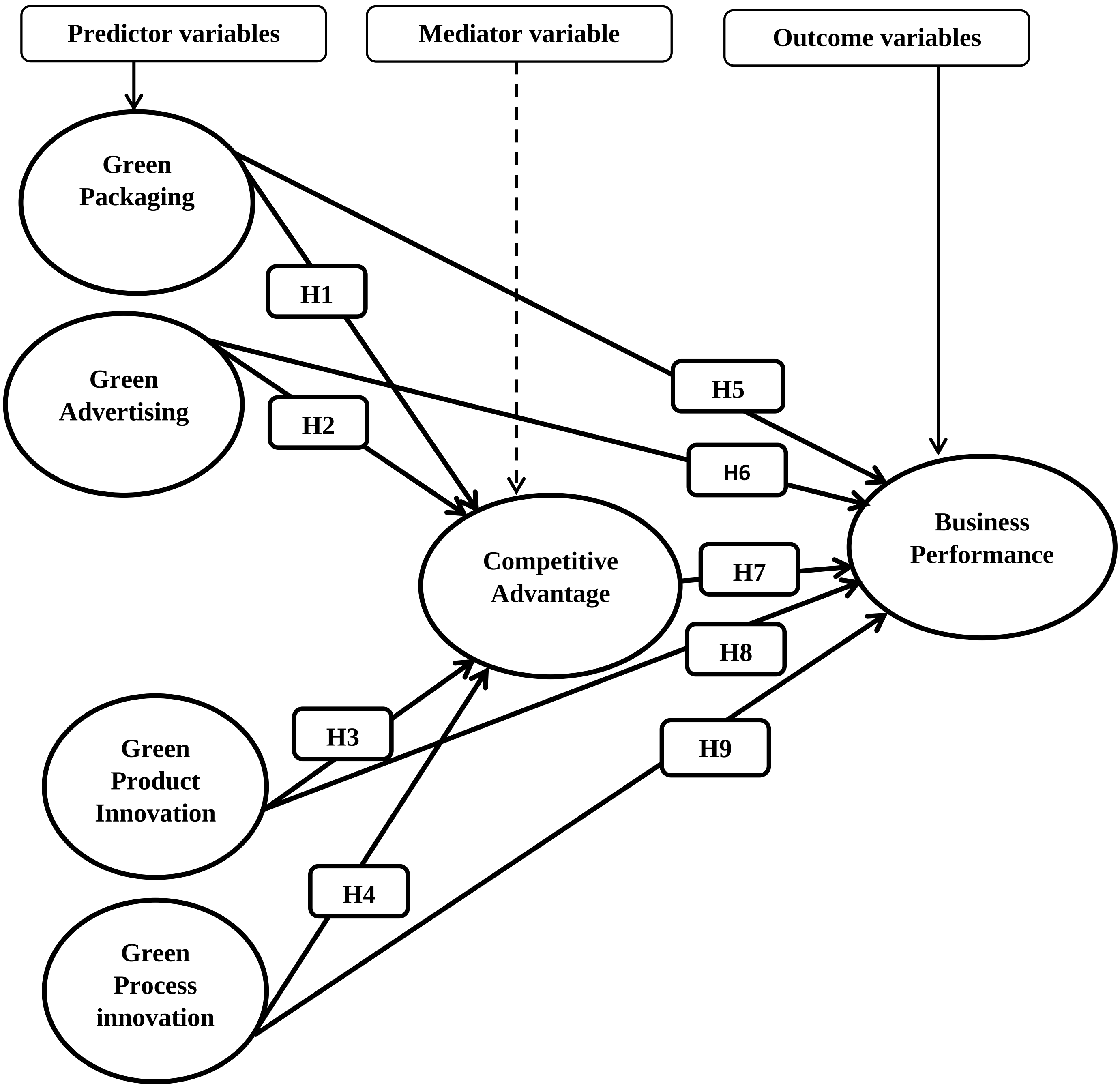


Figure 1.1: Conceptual model

1.7.1 Hypotheses of the study

The following hypotheses were formulated from the conceptual model and they are presented as follows:

H1: Green packaging has a positive impact on competitive advantage

H2: Green advertising has a positive impact on competitive advantage

H3: Green product innovation has a positive impact on competitive advantage

H4: Green process innovation has a positive impact on competitive advantage

H5: Green packaging has a positive impact on business performance

H6: Green advertising has a positive impact on business performance

H7: Competitive advantage has a positive impact on business performance

H8: Green product innovation has a positive impact on business performance

H9: Green process innovation has a positive impact on business performance

H10: Competitive advantage positively mediates the relationship between green packaging and business performance

H11: Competitive advantage positively mediates the relationship green advertising and business performance

H12: Competitive advantage positively mediates the relationship green product innovation and business performance

H13: Competitive advantage positively mediates the relationship green process innovation and business performance

1.8 Research methodology

Research methodology represents the procedures of research methods followed by the researcher (Krippendorf 2004). Traditionally, research has been the creation of true, objective knowledge, following a scientific method. In turn, this is presented as data and facts of reality; it is possible to acquire a reasonably adequate basis for empirically grounded conclusions in a specific discipline when using the right methodology (Alvesson & Sköldberg 2009). Research methodologies directly impact the validity and generalisation of a study (McGrath & Brinberg, 1983), and in turn, play a vital role in knowledge development of international business (Yang, Wang & Su, 2006). Comprehending and using a relevant methodology in the present study is essential to identify the proper unit of analysis and employ compatible methods that will provide the intended results. A research design typically includes:

- How data is to be acquired (sampling design)
- What instruments will be employed (measurement items, source and measurement scale)

- How the instruments will be utilised (data collection method), and
- The intended means for analysing the data collected (data analysis procedure and statistical approach)

1.8.1 Research Philosophy

Every research process should involve a degree of philosophical introspection and this process involves, at every step, making choices, which require philosophical underpinnings (Cohen 2006). All research has a philosophical foundation and assumptions that shape the processes of research and conduct of enquiry within a paradigm. Kuhn (1996) defines a paradigm or worldview as a set of generalisations, beliefs, and values of a community of specialists. Barker (1992) asserts that it establishes or defines boundaries and gives direction for a research study. The paradigm is therefore a way to model possible patterns and relationships and give coherence to research studies (Trafford & Leshem, 2012). The main research paradigms that dominate the contemporary literature include post-positivism, constructivism, participatory and pragmatism (McMillian & Schumacher, 2010).

For this study, a positivism paradigm was adopted to guide the researcher in philosophical assumptions about the research and in the selection of tools, instruments, participants, and methods used in the study. Positivism relies on the hypothetico-deductive method (McGrath & Johnson 2003), and this enabled the researcher to verify *a priori* hypotheses which was be converted into mathematical formulae to express causal relationships of the variables. According to Ponterotto (2005), the primary goal of positivism inquiry is an explanation, which results in the projection and control of phenomena. Positivism is related more closely to the logic of, and ways for, conducting quantitative research (Erisson & Kovalainen 2008).

1.8.2 Quantitative research approaches

Sheldon (2015) is of the view that the quantitative research approach pays attention to the objective measurement and the statistical, mathematical, or numerical analysis of the collected data by making use of polls, questionnaires, and surveys, or by controlling pre-existing statistical data using computational techniques. In quantitative research, data are quantified to apply statistical techniques to gain meaningful insights into relationships (Dhurup, Mafini & Dumasi 2014). From a broader perspective, it can be defined as a type of empirical research into a social phenomenon or human problem, testing a theory consisting of variables, which are measured with numbers and analysed with statistics in order to determine if the theory explains or predicts phenomena of interest (Yilmaz 2013).

The researcher opted for a quantitative research approach for this study, because it enhances the accuracy of results through statistical analysis (Berndt & Petzer 2011) and avoids the elements of subjectivity associated with the qualitative approach (Du Plessis & Rosseau 2007). Moreover, the researcher followed a quantitative approach, since quantitative research is used to answer questions about relationships among measured variables with the purpose of explaining, predicting and controlling phenomena (Lotz & Van der Merwe 2013).

1.9 Sampling design

Tustin et al. (2005) observed that a sampling design was an outline that is employed in determining who takes part in a study, which specific respondents to consider, the number to choose and the strategy to select. Respondents were outlined in the current study based on: the target population, the sampling frame, sampling method, and sample size.

1.9.1 Target population

Malhotra (2010) defines a target population as a collection of homogeneous elements or objects that possess the information sought by the researcher and about which inferences are to be made. The population comprised all small and medium business organisations classified as SMEs operating within the manufacturing sector and who are located within the Gauteng region of South Africa. Precisely, this study was restricted to managers of SMEs and Heads of Marketing Departments within manufacturing SMEs operating in the Gauteng region of South Africa.

1.9.2 Sample frame

The sampling frame can be thought of as the realistic version of the study population, which the researcher can identify and access (Davis, Gallardo & Lachlan 2012). A sample frame constitutes a list of all eligible sampling units or a database for obtaining a representation of the elements of the target population (Maholtra 2010). Some common sources of sample frames are lists of registered ratepayers, customer lists or voters' lists. For this study, the sampling frame for the study consisted of manufacturing SMEs operating within the Gauteng region. A list of 1945 manufacturing small and medium enterprises in Gauteng was obtained from the Small Enterprise Development Agency (SEDA), a centre of excellence for small enterprise development in South Africa. Respondents who were included in the survey were provided with questionnaires which they had to complete. The next section discusses the sampling method used in this study.

1.9.3 Sampling method

The choice of the sample method depends on factors such as the nature of the research problem, the research objectives, cost and time limitations (McDaniel & Gates 2008). Tustin, Ligthelm, Martins and Van Wyk (2010) explain that non-probability sampling involves sampling techniques that rely on the personal judgement of researchers instead of the use of chance selection procedures. Additionally, non-probability samples may yield good estimates of the population characteristics (Sudman & Blair 2002). Malhotra (2010) states that probability samples are selected in such a way that every element of the population has a known likelihood of being included in the sample, with probability sampling techniques including random, systematic, stratified, cluster and multistage sampling. This study employed a probability sample, mainly because of its representativeness of the target population, which enhances the generalisability of the results to a larger population (Berndt & Petzer, 2011). Precisely, simple random sampling technique was used in the study, since each element of the population has an equal and known chance of being selected as part of the sample (Weideman, 2014).

1.9.4 Sample size

A sample can be defined as a portion of a larger population (Dube, Roberts-Lombard & Van Tonder, 2015). Roets (2013) defines sample size as the count of factors involved in the study. Kumar (2014), as well as Gupta (2011), posits that the number of subjects in a study is called the sample size and refers to the elements to be included in a research study. The determination of a sample size is influenced by many factors, including the research design; the average sample size used in similar studies, the number of variables and proposed methods of data analysis (Malhotra 2010). In determining the sample size for the study, the list of the SMEs was obtained from the Small Enterprise Development Agency (SEDA). The sample size was calculated using the Raosoft sample size calculator, which takes into consideration four factors in determining sample size, namely, the margin of error, the confidence level, the population and the response distribution.

The margin of error: The margin of error (also known as the confidence interval) measures the precision with which an estimate from a single sample approximates the population value. The margin of error ranges from 3% to 7% in business research, with 5% being the most commonly accepted.

Confidence level: The confidence level is the estimated probability that a population estimate lies within a given margin of error. It is the amount of uncertainty that the researcher can tolerate. The confidence interval in business research varies from 90% to 100% with 95% being the most commonly accepted.

The population: This population to be used for the study.

Response distribution: This answers the question, “for each question in the questionnaire, what does the researcher expects the answer to be”. If the answer is skewed highly one way or the other, the population is probably skewed too. 50% is usually used as the response distribution as it gives the largest sample size (Raosoft, 2009).

The researcher chose the default settings on Raosoft© which had a margin of error at 5%, confidence level at 95%, population size at 1945, and a response distribution of 50%. Raosoft© then calculated that the sample size needed for the survey would be 321 respondents.

1.10 Data collection

The data was collected in Gauteng Province, South Africa. According to Berndt and Petzer (2011), data collection comprises the actual collection of responses from the identified sample. A self-administered, structured questionnaire was used for collecting the necessary data. McDaniel and Gates (2007) highlight that survey methods involve the use of structured questionnaires, with the objective being to extract specific data from participants. The survey method was chosen due to its low cost and ease of administration (Malhotra 2010).

1.10.1 The data preparation

The data preparation process is the first step when analysing data in completed questionnaires (Cooper & Schindler 2011). According to Hair, Lukas, Miller and Ortinau (2008), data preparation is regarded as a process of converting data from a questionnaire into a format that can be analysed. The process of data preparation involved checking the data for accuracy before entering it into the computer (Cooper & Schindler 2006). There were four phases of data preparation, which the researcher employed in this study, namely data editing, coding, capturing and cleaning. These phases were employed to ensure that the data collected was complete and ready for analysing (Kumar, Aaker & Day 2004).

1.10.2 Data editing

According to Malhotra (2010), editing is the review of the questionnaires with the objectives of increasing accuracy and precision. Zikmund and Babin (2013) maintain that editing consists of checking completed questionnaires for omissions, incomplete or otherwise unusable responses, illegibility and obvious inconsistencies. McDaniel and Gates (2005) describe editing as going through each questionnaire to make certain that the skip pattern is followed and the required questions are completed. In this study, the minimum quality standards imposed included discarding questionnaires where more than 10 percent of the responses were missing, as well as those with ambiguous responses.

1.10.3 Data coding

According to Zikmund and Babin (2010), coding is regarded as the technical procedure by which raw data are transformed into symbols and it involves specifying the alternative categories or classes into which the responses are to be placed and assigning code numbers to the class. Data coding describes the process of grouping and assigning numeric codes to responses of a question or statement (McDaniel & Gates 2013). For this study, a code book was prepared in order to successfully enter the information from the research questionnaire into the format that SPSS can understand.

1.10.4 Data capturing

Data capturing is a method of transferring coded information from the questionnaires or coding sheet directly into the computer by keypunching (Malhotra 2010). In this study, the researcher, using the Microsoft Excel program, performed data capturing whereby data was entered directly from the questionnaires with the use of a personal computer and then fed into a Microsoft Excel spread sheet.

1.10.5 Data cleaning

The cleaning process consisted of dealing with values that fall outside of a scale code and data that was left out (Fourie 2015). Data cleaning was done by making use of wild code checks to detect codes that are not defined for a variable, including extreme cases for responses to a variable that is far from ordinary (Malhotra 2010).

1.11 Questionnaire design and measurement instrument

A self-administered, structured questionnaire was used as the research instrument. Leedy and Ormrod (2010) posit that a questionnaire is research in which the researcher poses a series of questions to willing participants, summarises their responses with percentages, frequency counts, or more sophisticated statistical indices, from which references are drawn about a population. The questionnaire was divided into nine (9) sections, Section A measured the demographic profile; Sections B, C, D and E were questions on the independent variables, Section F provided questions on the mediating variable, while the Section G was questions on the outcome variable.

The research scales were operationalised on the basis on previous work. Proper modifications were made, to fit the current research constructs and purpose. For the measurement of green packaging, a five-item scale was adapted from Sambu (2016) and Kong, Harun, Sulong and Lily (2014). "Green advertising" was measured using a six-item scale adapted from Ghodeswa and Kumar (2014). "Green product innovation" was measured on a seven-item scale which was adapted from Cheng, Yang, and Sheu (2014). Additionally, "green process innovation" was measured on a four-item scale which was adapted from Kawai, Strange and Zucchella (2016). Futhermore, "competitive advantage" was measured using an eleven-item scale adapted from Almahamid (2008). Moreover, business performance was measured using sixteen item-scales adapted from Zulkiffli and Perera (2011).

Respondents were requested to indicate the extent of their agreement with each statement by means of a five-point Likert scale, where 1= strongly disagree, 2 = disagree, 3 = neither disagree nor agree/neutral, 4 = agree and 5 = strongly agree.

1.12 Statistical analysis

Once the data was collected, the researcher made sense of them. To achieve this, the researcher organised and coded the data so that it could be analysed. Descriptive statistics were used to describe and present the data gathered for the research study. To make inferences of the data obtained, the Statistical Packages for Social Sciences (SPSS) and the Analysis of Movement Structures (AMOS) packages were used for testing and confirming relationships among hypothesised variables.

1.12.1 Descriptive statistics

Liphadzi (2015) explains that descriptive statistics are used to present quantitative descriptions in a manageable form. It analyses the responses either as percentages, if the sample is large, or as actual numbers, if the sample is small (Yokwana 2015). Descriptive statistics describe what the data is showing, as well as providing the researcher with a snapshot of what the data looks like (Liphadzi 2015). The main goal of using descriptive statistics is to describe and summarise the characteristics of a sample (O'Leary 2010). Therefore, this study made use of descriptive statistics to analyse the composition and normality of the data.

1.12.2 Reliability and validity analysis

In this study, both reliability and validity tests were conducted to ensure that the appropriate research instrument was utilised. Tichaawa and Mhlanga (2015) define reliability as the extent to which test scores are accurate, consistent or stable. Reliability verification includes testing for composite reliability and Cronbach alpha (Churchill & Brown 2007). Therefore, composite reliability and Cronbach alpha were used to measure internal consistency (Ha, Janda & Muthaly 2010). Malhotra (2010) suggests that the minimum accepted composite reliability values should be 0.70. The acceptable value for the Cronbach alpha coefficient should also be greater than 0.70 (Pietersen & Maree 2007).

Validity is the extent to which a measure accurately and truthfully represents the characteristics being measured (Burns & Bush 2010). In this study, convergent and discriminant validity were assessed.

Convergent validity is the extent to which a scale correlates positively and is related to the high association between constructs (Malhotra 2010). In the case of this study, convergent validity was determined using correlation analysis. Convergent validity was also ascertained by using correlation coefficients. In addition, item loadings, AVE and Cronbach values were used to establish convergent validity.

Discriminative validity determines whether a scale does or does not adequately differentiate itself between groups that should or should not differ, based on theoretical reasons or previous research (Golafshani, 2003). This study assessed discriminant validity through the computation of the inter-construct correlation matrix among the various constructs to ensure that they were not too highly correlated. Comparison of average variance extracted (AVE) with the shared variance (SV) between constructs were also undertaken whereby discriminant validity was achieved by having AVE values which exceeded SV values.

1.12.3 Data analysis procedure and statistical approach

This section focuses on the data analysis procedures and statistical approaches used in this study. The research data gathered for this study was coded in short phrases and cleansed using Excel spread sheets to make it easier to enter the analysing software for further analysis. Descriptive analysis for personal and company information of the managers within manufacturing SMEs was performed using the SPSS 25 software package.

1.12.3.1 Model fit assessment

The data collected on the research constructs was analysed using a two-step procedure, as suggested by Anderson and Gerbin (1988), in Chinomona (2013). First, the accuracy of multi-item construct measures was assessed, followed by a test of the research model and hypotheses. In both data analysis stages, the current study tended towards the use of the structural equation modelling technique (SEM). A confirmatory factor analysis (CFA) was performed using Amos 25 to access the measurement model. In addition, Amos 25 was employed as the computation SEM software. The following model fit indicators were used to assess the fitness of the model to the sample data: chi-square value over degree of freedom ($\chi 2$/df), the values of Goodness-of-Fit Index (GFI/AGFI), Comparative Fit Index (CFI), Incremental Fit Index (IFI), and Tucker-Lewis Index (TLI) and the Root Mean Square Error of Approximation (RMSEA).

1.12.3.2 Hypotheses testing

To test the research hypotheses, a path analysis was performed to indicate the path coefficient and significance levels of the posited nine linear relationships between the six research constructs.

1.13 Ethical Consideration

The current study was governed by the University of the Witwatersrand's condition that necessitates studies concerning human participation to apply for human research ethics committee's approval before a study could be carried out. The researcher acquired the Ethics Clearance certificate from the designated Ethics Committee at the University before questionnaires were given out to respondents. The Protocol Number was H17/06/26 and a copy of the certificate is attached in the Appendix section.

1.13.1 Informed consent

A consent form was given to each of the participants prior to their participating in the study. Participants then became aware of what the researcher wanted them to do regarding the probable risk prior to approving to take part in the actual data collection. Participants could withdraw from the study if they felt uncomfortable in answering the questions as honestly as they could.

1.13.2 Maintenance of confidentiality and anonymity

Confidentiality and anonymity was ensured in the entire research process. The researcher assured participants that any information they provided, as far as the study was concerned was safe and sound and no unauthorised individuals would have access to it. Participants were also assured that copies of the findings could be made available to them upon request. The data was collected and analysed as summative entities without given specifics on respondents' feedbacks or the demographic information.

1.14 The Structure of the Thesis

This thesis is structured in the following way: Chapter 2 provides an overview of the context of the study, chapter 3 discusses the theoretical groundings of the study; chapter 4 discusses empirical literature relating to the construct in the study; this is followed by chapter 5 which is centred on the discussion of the conceptual model and hypotheses development; the research methodology is covered in chapter 6, while the statistical analysis is discussed in chapter 7. The last two chapters discuss the findings of the study (chapter 8) and the concluding remarks are provided in chapter 9. Figure 2 shows the diagrammatic structure of the entire thesis.

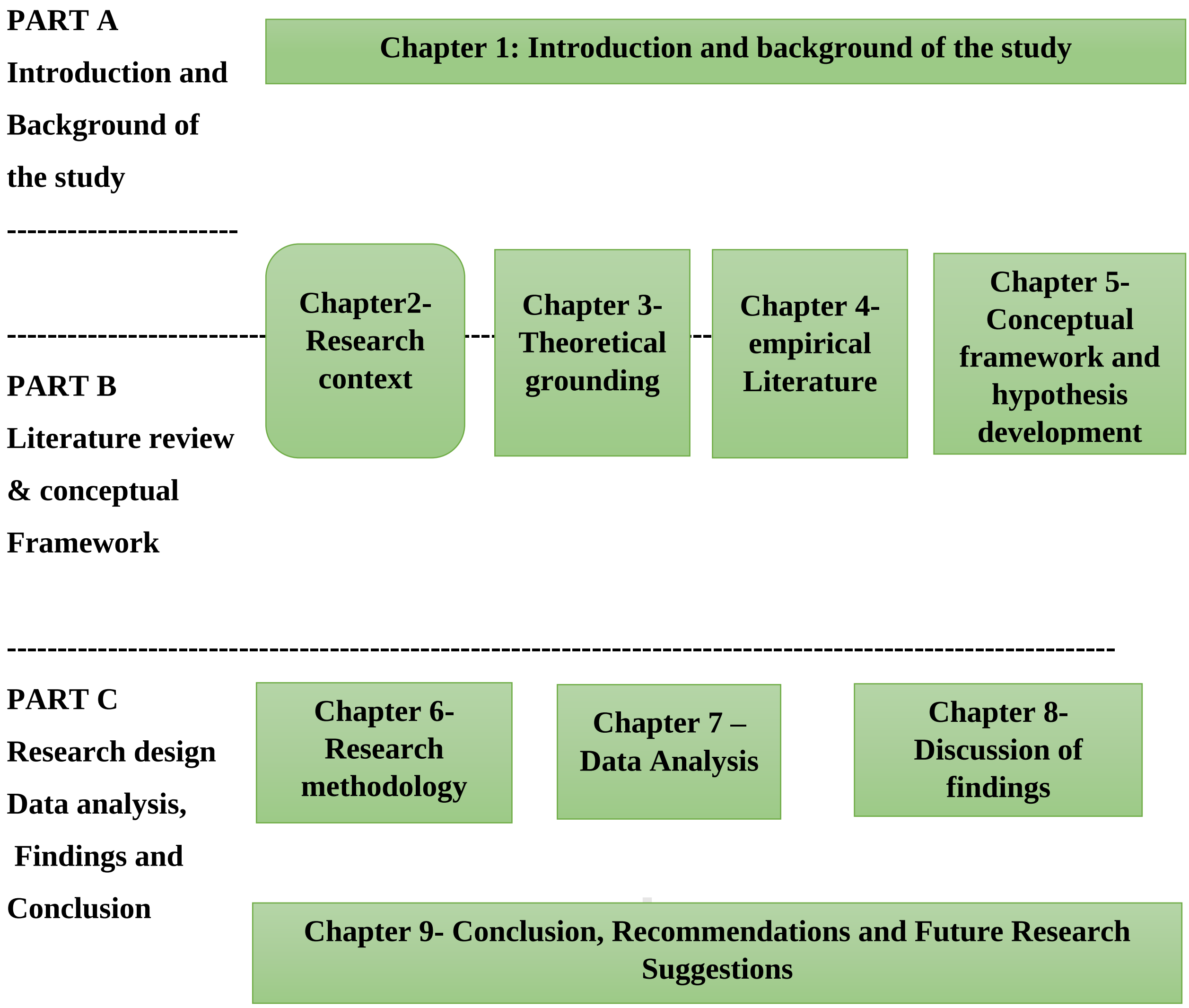


Figure 1.2: Thesis Structure

Source: Compiled by the researcher

1.15 Chapter summary

This chapter gave an overview of the current study. Initially, the problem statement, purpose of the research, research objectives and justification of the study were presented. In addition, the research methodology and design are presented. Subsequently, ethical considerations of research were discussed. The chapter ended with an outline of the research and the structure of the thesis. The following chapter elaborates on the context of the present study.

2 CHAPTER TWO: RESEARCH CONTEXT

2.1 Introduction

Chapter 1 outlined the purpose of the thesis and this current chapter (Chapter 2) delineates the research context. This chapter discusses the research context by providing background into South African Manufacturing SMEs and an overview of the South African Manufacturing sector. Precisely, this chapter presents the research context based on the items that have been arranged under the following headings: South Africa as the Study Area, the concept of manufacturing, an overview of South Africa's manufacturing sector, describing Small and Medium Enterprises (SMEs): A Worldwide Perspective, description and classification of manufacturing Small And Medium Enterprises in South Africa, the role of manufacturing SMEs in the South African economy and challenges faced by manufacturing small and medium enterprises.

2.2 South Africa as the study area

South Africa is a young democracy and a middle-income developing country (Butler, 2017). Situated latitudinally between 22 per cent south to 3 per cent south, and longitudinally between 17 per cent east and 33 per cent east, South Africa covers a total area of 470, 689 square miles, 1 219 080 square kilometres (Afọlayan, 2004). Bounded on the southwest by the Atlantic Ocean and in the southeast by the Indian Ocean, South Africa shares boundaries with Namibia in the northwest, with Botswana and Zimbabwe in the north, and with Swaziland, Lesotho and Mozambique in the northeast (Afọlayan, 2004). In addition, South Africa occupies a dominant economic position within Africa, which far exceeds its position in terms of both physical and population size (Leste, Binns & Nel, 2014).

Beck (2013, p.101) claims that "South Africa, which occupies only 4 percent of the African land mass, has the largest gross national product (GNP) of any country on the continent – larger than that of Egypt, Kenya and Nigeria combined. More than one-third of the nation's GNP is produced in the smallest province, Gauteng which includes Johannesburg and Pretoria". Conversely, Herbst and Mills (2015) stress that the overwhelming challenge that South Africa faces, and has to date failed to address, is unemployment, which falls especially on African youths who were promised a better future after 1994. In addition, Sam (2002) highlighted that South Africa, as a developing country, faces many problems such as high unemployment, low levels of working skills, poverty and rampant crime. The encouragement of the development of SMEs might help to alleviate these problems and improve the levels of skills in the country (Sam, 2002). Patterson and Winston (2016) also explain that SMEs make a significant contribution to socio-political stability in developing economies such as South Africa. Successful SMEs absorb not only a significant part of unemployment, but also reduce crime and government expenditure on security and legal services (Patterson & Winston, 2016). The study area is shown in figure 2.3:

Figure 2.1: South Africa on the geographical map of Africa

2.3 The Concept of Manufacturing

Manufacturing is a segment of the market accountable for generating a broad variety of merchandise varying from food and beverages to chemicals, textiles and diverse metal products (Nze, 2016). In addition, Bashar (2012, p. 328) asserts that "manufacturing is significant for the transformation of any country". According to Sunjka and Emwanu (2015), manufacturing may be described as a process involving tools and labour to produce goods for use or sale as intermediaries, or as final products, either domestically or internationally. Van der Walt (2010:1) elucidates that "manufacturing comprises units engaged in the physical or chemical transformation of materials, substances, or components into new products". Momba

(2016) suggests that manufacturing is the process of transforming raw materials or semi-finished products into finished products that have value in the market place, in order to use or sell in the market. Additionally, the materials, substances, or components transformed are raw materials that are products of agriculture, forestry, fishing, mining or quarrying as well as products of other manufacturing activities (Van der Walt, 2010). In addition, Nzawou (2013) views that manufacturing is not just about producing better goods than competitors, rather it is about delivering an appropriate package of product and services as a solution to customer problems.

2.4 An overview of South Africa's manufacturing sector

According to Kambule (2014), the manufacturing sector is an essential sub-sector of the industrial sector and this is because of its economic value and contribution to the economy at large. Shafi (2016) is also of the view that the manufacturing sector is often seen as a vehicle for diversifying the economy and attaining sustainable economic growth in both developed and developing economies. However, Ho, Ahmad and Ramayah (2016) have shown that the manufacturing sector is still highly relevant to a nation's economy: (1) the manufacturing and services sector are inseparable, (2) the manufacturing sector serves as an important source of jobs for individuals at many skill levels, and (3) the manufacturing sector is important to improve the trade account balance of a country.

Nzawou (2013) states that the South African manufacturing sector is well developed compared to most developing countries and the sector is dominated by industries such as agri-processing, automotive, chemicals, ICT and electronics, metals and textiles, clothing and footwear. In addition, the manufacturing sector in South Africa (SA) is one of the largest contributors to the country's gross domestic product (GDP) and has the greatest potential to generate employment opportunities and enhance national economic growth (Urban & Naidoo, 2012). In addition, the large and diverse manufacturing sector of South Africa is a major contributor to the achievement of its macroeconomic objectives (SEDA, 2012). According to Caga (2012), the manufacturing sector is a large contributor towards foreign direct investment, job creation and retention and it also improves the balance of trade in South Africa. In foreign trade, the manufacturing sector in South Africa accounts for 20 per cent of export goods (Caga 2012).

Over the past decade, the manufacturing sector has been among the largest consumers of energy, accounting for more than 50% of the total energy used in South Africa (USAID, 2012). The nature of work carried out in the manufacturing sector explains and arguably justifies its energy intensity and emissions level (Kambule 2014). Furthermore, manufacturing is an important sector of the South African economy, contributing 18% to the Gross Domestic Product and employing more than one million people (Nzawou, 2013). In addition, throughout history, the manufacturing sector has been considered as being at the forefront of an economy that is advancing to higher levels of innovation and efficiency (Wentzel & De Hart, 2015). The South African manufacturing sector is well developed compared to most developing countries (Fedderke & Simbanegavi, 2005). Boris and Reggie (2012) point out that the manufacturing sector in South Africa (SA) is one of the most important contributors to the country's Gross Domestic Product (GDP) and has the greatest potential to create jobs and boost national growth. The South African manufacturing sector contributes approximately 35% towards the country's GDP and employs approximately 18% of SA's workforce (Naidoo & Urban 2010). Nzawou (2013) points out that within the manufacturing sector, there are industries such as agri-processing, automotive, chemicals, ICT and electronics, metals and textiles, clothing and footwear. Mpatane (2015) also concurs that the manufacturing sector is dominated by industries such as these.

According to Mpatane (2015, p. 5) "manufacturing appears as an important sector of the South African economy as it continues to appear among the top-three sectors with the highest multiplier effects in terms of output, employment, export earnings and fiscal revenue". According to Stats SA (2017), the manufacturing sector in South Africa forms part of the three major sectors that build up the country's economy. The sector also forms part of the largest power consuming sectors in the economy and manufacturing has a substantial direct employment creation potential and is central to the country's export strategy (Department of Trade and Industry (DTI). Figure 2.1 shows the percentage of manufacturing activity for each province in South Africa.

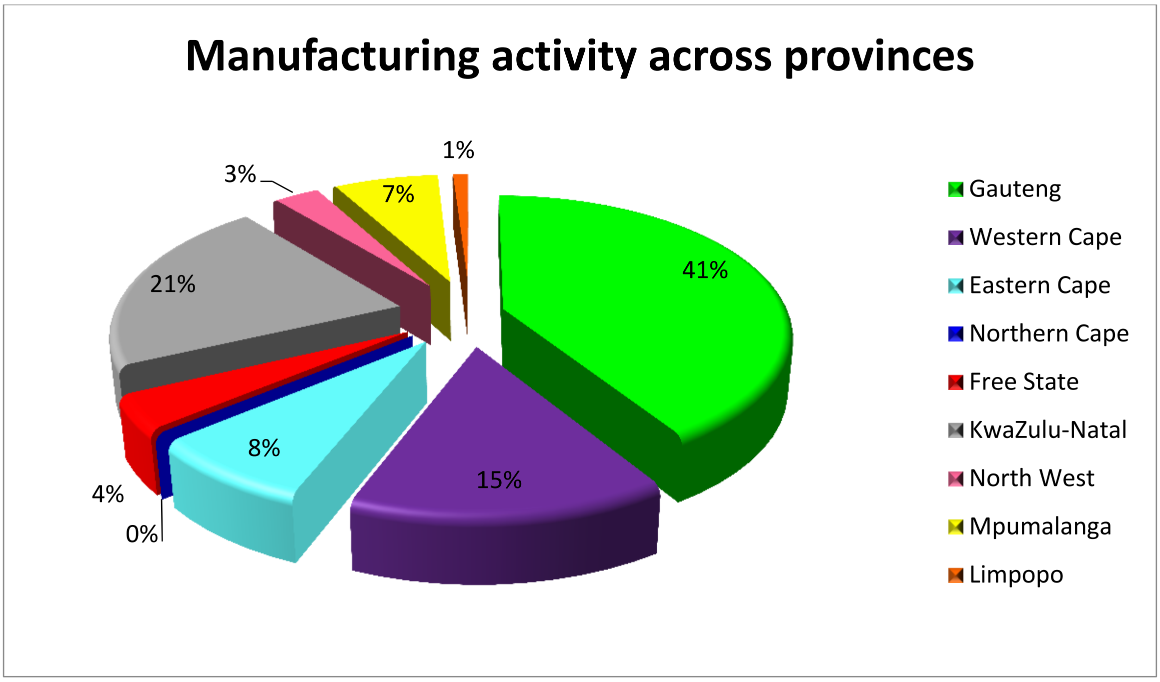


Figure 2.2: Provincial manufacturing activity

Source: adapted from Kambule (2014).

Gauteng is the leading province in the formal and informal sectors in terms of the number of SMEs (Sitharam, 2014). Deducing from figure 2.1, it can be pointed out that 41% of manufacturing activity in South Africa comes from the Gauteng province of South Africa. Mbatha (2014) concurs that the Gauteng Province contributes 40.8% to the country's total manufacturing output. Kambule (2014) points out that this is the reason why Gauteng is regarded as the economic hub of the nation. Furthermore, Kambule (2014) states that some of Gauteng's manufacturing firms are located in people's homes, backyards, and formal rental spaces, and this is mostly applicable in the light manufacturing clusters. Brief discussions of the dominating manufacturing clusters within the Gauteng province are elucidated as follows:

2.4.1 Agro-Processing

The agro-processing sector is defined in statistical terms by the food processing and beverage manufacturing sub-sectors (Mpatane, 2015:5). These subsectors deal with the processing of fresh water, aquaculture and mariculture, exotic and indigenous meat, nuts, herbs and fruits (Mpatane, 2015:5). In addition, Dube (2014) points out that agriculture contributes 4 per cent to South Africa's gross domestic product (GDP) and consists largely of cattle and sheep farming, with only 13 per cent of the land used for growing crops.

2.4.2 Automotive

According to Naude (2013), the automotive industry has grown to become the leading manufacturing sector in South Africa's economy, and as a result of its growth, is recognised as a mature industry. In addition, Naude (2013) points out that the South African automotive industry compares favourably with similar industries in developing countries with regard to infrastructure, raw material availability, emerging market cost advantages, flexible production capability and government support. However, Barnes, (2009) points out that despite these positive aspects, the South African automotive industry’s competitiveness is under severe pressure as it experiences challenges such as high labour costs, poor infrastructure and dated technology. Furthermore, the automotive component sector at a recent conference focused its aim of the global green economy on automotive component manufacturing (Christelis, 2013). Manufacturers were encouraged to diversity as components manufactured for vehicles can also be used in the renewable energy sector, as they were informed they needed to prepare themselves for change (Christelis, 2013). In addition, South Africa's automotive industry accounts for about 10 per cent of South Africa's manufacturing exports, making it a crucial cog in the economy (Dube, 2014). Moreover, the South African government has identified the automotive industry as a key growth sector, with the aim of increasing vehicle production to 1.2 million units by 2020, while significantly increasing local content at the same time (Dube, 2014).

2.4.3 Chemicals

This sector is made up of several sectors, such as the basic chemicals, which include liquid fuels, organic solvents and industrial mineral derivatives, plastic products, pharmaceuticals, inorganic chemicals, primary polymers and rubbers, organic chemicals, rubber products, bulk formulated, consumer formulated chemicals; pure functional, chemicals (Kambule, 2014). It is evident that SMEs have a strong presence in the chemical industry and play an important role in its overall growth and performance (Lampadarios, 2014).

2.4.4 Information Technology and Communications

Information and Communication Technology (ICT) plays a very important role in helping SMEs to have an edge over competitors in terms of accessibility to global markets (Olatunji, 2015). Within the information technology and communications sector in South Africa, becoming green is inevitable as energy demands increase and overall plans of energy conservation, efficiency, and renewable generation necessitate that technology adapts and solves environmental resource use and waste generation accordingly (Christelis, 2013). The Information Technology Association of South Africa (ITA), along with industry partners and organisations endeavour to guide the industry to address environmental and electronic waste (e-waste) problems in South Africa (ITA, 2011).

2.4.5 Clothing and textile

The clothing and textile cluster includes the production of traditional African clothing, shirts, hats, overalls, curtains, pillows, duvets, bedspreads, wedding gowns and dresses (Kambule, 2014; Maphala 2011). Netshandama (2001) emphasises that the contribution of the two sub-sectors (clothing and textile), not only to the manufacturing industry, but also to the economy, has been enormous. Furthermore, the two sectors are also important employers for Black women who make approximately 76% of clothing workers and 34% of textile workers as compared with an average of 31% for the entire manufacturing sector (Netshandama 2001).

2.4.6 Metalworks

The cluster is established in several formal industrial areas across the Witwatersrand metropolitan area, which operates as backyard metal working (Kambule, 2014; Maphala 2011).

2.4.7 Wood-working

According to Ncube (2016), this cluster is characterised by the production of office furniture, household furniture, bedding; hospitality furniture, outdoor furniture and case goods. Furthermore, the wood-working cluster includes activities such as cabinet makers and furniture producers and operates from industrial township mini factories (Maphala 2011).

2.4.8 Paper and pulp

According to Doorasamy (2015), the pulp and paper industry is an over-capacitated commodities industry that is highly sensitive to global market influences on price and cost. Bras, Realff and Carmichael (2004:5-7) "describe the industry as one with excessive production capacity, high fixed costs, cutthroat pricing schemes, increasing competition from foreign impacts, yet still producing more paper even though this meant higher marginal cost implications of the law of diminishing returns". In addition, Doorasamy (2015) elucidates that paper and pulp manufacturing operates in a cyclical industry with global economic conditions causing volatility in paper and pulp prices. Maphala (2011) points out that the activities include the manufacturing of products sourced from wood and forestry sectors. Examples include paper products such as boxes, tissues, posters, newspapers, books and magazines. The final products made from these raw materials might seem obvious, but there are also the less obvious final products made from these raw materials such as viscose, cigarette filters and detergents (Kambule, 2014).

2.5 Describing small and medium enterprises (SMES): a worldwide perspective

There is no universal definition for Small and Medium Enterprises (SMEs) and it varies from size, type, assets, revenue, employees, as well as industry to industry from one country to another (Ilori 2014). According to Ajmal (2017), the definition should involve both the quantitative dimension, for instance, the number of employees, measures of transactions, financial, non-financial resources and liquidity, and the qualitative dimension, including the method of organising and function performance. Internationally, an SME is defined by the annual turnover and the number of full-time employees in the firm (Wolmarans & Meintjes 2015). The United Nations Industrial Development Organisation (UNIDO) posits that SMEs are small and medium entities that represent over 90% of private businesses and contribute more than 50% to employment and to the Gross Domestic Product (UNIDO 1999).

In Zimbabwe, according to the Small and Medium Enterprises Institute, SMEs are defined as registered enterprises with employment levels ranging from 30 to 70 depending on the types of industry (Mbizi, Hove, Thondhlana, & Kakava 2013). In Indonesia, SMEs are defined as small enterprises with assets less than RP 200 million, excluding land and buildings and annual sales volume not more than RP 1 billion and medium enterprises with assets more than RP 200 million but less than RP 10 billion, excluding land and buildings and annual sales volume more than RP 1 billion (Azmi, 2017). In Pakistan, SME is defined as an employment size up to 250 people, assets up to Rs. 100 million and annual sales turnover up to Rs 300 million for the manufacturing sector while for trading and services sectors, employment size is up to 50 employees, assets up to Rs 50 million and annual sales turnover up to Rs 100 million (Azmi, 2017).

According to Elshamly (2013), SMEs within the European Union are defined by their size, according to three measures. The first is that an SME employs not more than 250 members of staff. The second is that the maximum annual turnover of an SME is fifty million Euro and its balance sheet amounts to less than forty-three million Euros. The third criterion is that not more than twenty-five percent of its shares can be owned by another enterprise. In addition, Moloi (2013) points out that the United States of America's (USA) classification of SMEs differ slightly to that of the European Union; based on USA business criteria, for a company to be classified as an SME it should be based on the industry within which the company operates, the form of ownership, revenue and number of employees which, in some cases, may be as high as 1500. Yeboah-Boateng (2013) points out that the Federal Government in Canada, under the auspices of the Small Business and Special Surveys Division, defines SMEs as any business establishment with 0 to 499 employees and less than $50 million in gross revenues. However, the British Columbia Statistics (a province in Canada) defines SMEs as companies with less than 50 employees, without reference to revenues (Yeboah-Boateng, 2013)

2.6 Description and classification of small and medium enterprises in south africa

In South Africa, the Department of Labour (DoL) uses the acronyms SMME for Small, Micro and Medium Enterprises and SME for Small and Medium Enterprises (Maladzhi, 2012). Aminu and Shariff (2015) also point out that, in South Africa, SMEs are defined as distinct and separate business entities; including co-operative enterprises and non-governmental organisations that are self-managed by a single owner or more which includes its branches or subsidiaries, if any. The most widely used definition of SMEs in South Africa is the one given by the National Small Business Act (102 of 1996) and the National Small Business Amendment Bill (2003), where SMEs are defined as businesses with fewer than 250 full-time, paid employees (Department of Trade and Industry 2005; Abor & Quartey, 2010; Fatoki & Garwe, 2010; Ferreira & Loggerenberg 2012; Okusolubo 2013). In addition, Desta (2015:25) also elucidates that the National Small Business Act defines SMEs as "a separate and distinct entity including cooperative enterprises and non-governmental organizations 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".

In South Africa, numerous authors have defined and classified SMEs differently, for instance, Maphiri (2015) characterised SMEs as one-person businesses, in which the working staff can be family members who are often unpaid, but are active in the enterprise. This is in line with Falkena (2000), who points out that an SME is defined as any enterprise, whether or not incorporated or registered under the law, which consists mainly of persons carrying on small business concerns in any economic sector, or which has been established for promoting the interests of small business concerns. Furthermore, in a study entitled *"Using ICTs to become* *a competitive SME in South Africa"*, Modimogale and Kroeze (2009) defined small to medium enterprises (SMEs) as businesses that employ 150 people or fewer and are not a subsidiary of a public limited company. Moonsamy (2016) also conducted a study that focused on open innovation in South African SMEs, and classified SMEs as formal businesses (business's registered with CIPRO) with fewer than 200 employees. In observing the classification of the SMEs' characteristics in South Africa, the figure 2.3 shows the classes of SMEs in South Africa.

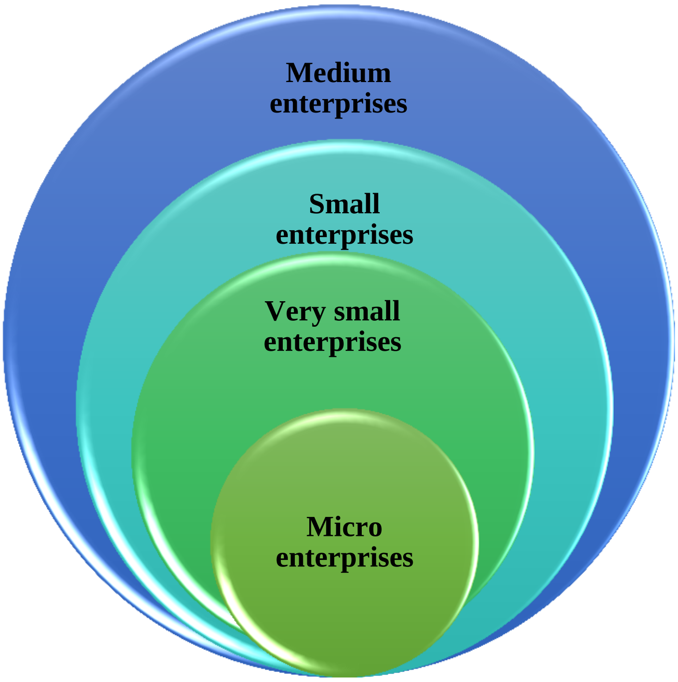


Figure 2.3: Classification of SMEs in South Africa

Source: adapted from Lose (2016)

2.7 Different categories of SMEs in South Africa

The following sub-headings outline the different categories of SMEs in South Africa. These include micro-enterprises; very small businesses, small businesses and medium businesses.

2.7.1 Microenterprises

According to Cant (2017, p. 78) "micro-enterprises are enterprises that do not register their business formally (no license) as their turnover is less than the amount stipulated by the South African value-added tax registration limit (R300 000)". These businesses do not employ more than five people, usually family members. Owners usually have the basic training and business skills and have the potential to transform their business to the formal sector (Cant, 2017). They include, for example, spaza shops, minibus taxis and household industries (Sitharam, 2014).

2.7.2 Very small enterprises

These are ventures that recruit fewer than 10 paid people, apart from mining, electricity, manufacturing and construction sectors, in which the number is 20 employees (Nze, 2016). In the same vein, Cant (2017, p. 78) elucidates that "a very small enterprise can be seen to operate in the formal sector and do not hire more than ten employees, unless, in construction, mining, electricity or manufacturing sector, in which they do not employ more than 20 employees; these enterprises have access to ICT/ technology".

2.7.3 Small enterprises

A small enterprise can be seen to operate in the formal sector and employ not more than 50 employees and such businesses can be seen to operate with a more complex business structure (Cant, 2017). Small enterprises are generally more established than very small enterprises and exhibit more complex business practices (Sitharam, 2014).

2.7.4 Medium businesses.

Cant, (2017) views that a medium enterprise can be seen to include additional management structures within their business, they employ a maximum of 100 employees, however, if they fall within the construction, mining, electricity or manufacturing sector, the enterprise could employee up to 200 employees. The highest number of workers is 100 or 200 for the mining, electricity, manufacturing and construction sectors. These enterprises are repeatedly characterised by the devolution of authority to a further administrative level (Nze, 2016).

2.8 Classification of manufacturing small and medium enterprises: a worldwide perspective

Manufacturing small and medium enterprises (MSMEs) are described differently from country to country. Obokoh and Goldman (2016) conducted a study on infrastructure deficiency and the performance of small- and medium-sized enterprises in Nigeria's liberalised economy and defined manufacturing small and medium enterprises as those businesses operating in the formal manufacturing sector with the number of employees, not above 300 or their capital base not above N200 million. In their study entitled *"Innovation and performance in Spanish manufacturing SMEs"*, Van Auken, Madrid-Guijarro and García-Pérez-de-Lema (2008) categorised manufacturing small and medium enterprises (MSMEs) as those firms that employed fewer than 250 employees and had annual sales less than 50 million euros or total assets less than 43 million euros. Aziz and Samad (2016) conducted a study which focused on examining the influence of innovation on competitive advantage in foods' manufacturing SMEs in Malaysia and they described manufacturing small and medium enterprises as those manufacturing enterprises or companies providing services related to manufacturing with sales turnover not exceeding RM50 million and employs full-time workers not exceeding 200 people.

2.9 Description and classification of manufacturing small and medium enterprises in South Africa

In this study, the delineation of manufacturing Small and Medium Enterprises emanates from Table 2.1 which shows the classification of SMEs according to the National Small Business Act 102 of 1996.

Table 2.1: Classification of SMEs according to the National Small Business Act 102 of 1996

Sector	Category	Number of employees	Annual turnover in Rands (R)	Total gross asset value
Agriculture	Medium	100	R4,000,000	R4, 000, 000
	Small	50	R2, 000,000	R2,000, 000
	Very small	10	R400, 000	R400,000
	Micro	5	R150, 000	R100,000
Mining and Quarrying	Medium	200	R30, 000,000	R18, 000,000
	Small	50	R7, 500,000	R4, 500,000
	Very small	20	R3, 000,000	R1, 800,000
	Micro	5	R150, 000	R100, 000
Manufacturing	**Medium**	**200**	**R40.00 m**	**R15.00 m**
	Small	**50**	**R10.00 m**	**R 3.75 m**
	Very small	**20**	**R 4.00 m**	**R 1.50 m**
	Micro	**5**	**R 0.15 m**	**R 0.10 m**
Electricity, Gas and Water	Medium	200	R40, 000,000	R15, 000,000
	Small	50	R10, 000,000	R3, 750,000
	Very small	20	R4, 000,000	R150, 000
	Micro	20	R4, 000,000	R150, 000

Sector	Category	Number of employees	Annual turnover in Rands (R)	Total gross asset value
Construction	Medium	200	R20, 000,000	R4, 000,000
	Small	50	R5, 000,000	R1, 000,000
	Very small	20	R2, 000,000	R400, 000
	Micro	5	R150, 000	R100, 000
Retail and Motor Trade and Repair Services	Medium	100	R30, 000, 000	R5, 000, 000
	Small	50	R15, 000, 000	R2, 500, 000
	Very small	10	R3, 000, 000	R500, 000
	Micro	10	R3, 000, 000	R500, 000
Wholesale Trade, Commercial Agents and Allied Services	Medium	100	R50, 000, 000	R8, 000, 000
	Small	50	R25, 000, 000	R4, 000, 000
	Very small	10	R5, 000, 000	R500, 000
	Micro	10	R5, 000, 000	R500, 000
Catering, Accommodation and other Trade	Medium	100	R10, 000, 000	R2, 000, 000
	Small	50	R5, 000, 000	R1, 000, 000
	Very small	10	R1, 000, 000	R200, 000
	Micro	10	R1, 000, 000	R200, 000
Transport, Storage and Communications	Medium	Medium	100	R20, 000, 000
	Small	Small	50	R10, 000, 000
	Very small	Very Small	10	R2, 000, 000
	Micro	Micro	5	R150, 000
Finance and Business Services	Medium	Medium	100	R20, 000, 000
	Small	Small	50	R10, 000, 000
	Very small	Very Small	10	R2, 000, 000
	Micro	Micro	5	R150, 000
Community, Social and Personal Services	Medium	Medium	100	R10, 000, 000
	Small	Small	50	R5, 000, 000
	Very small	Very Small	10	R1, 000, 000
	Micro	Micro	5	R150, 000

Source: Adapted from Nze (2016).

The definition of manufacturing small and medium enterprises is depicted in table 2.1, whereby (MSMEs) can be defined using the categories which are small and medium, a number of employees ranging from 50 to 200, annual turnover from R10.00m to R40.00m and total gross asset values which are from R3.75m to R15.00m respectively.

2.10 The role of manufacturing SMEs in South African economy

Within the manufacturing sector of South Africa, 92 % of all business units are SMEs and provide 37 % of the total employment within the sector (Moritz 1994). In the same vein, Van der Walt (2007), as well as Caga (2012), points out that in South Africa, at least 90% of the manufacturing sector is made up of SMEs. In addition, Urban and Naidoo (2012) argue that the manufacturing sector contributes approximately 35 per cent to the GDP and employs approximately 18 per cent of South Africa's workforce. According to Nematatane (2017), these manufacturing SMEs operate in almost every part of the economy in South Africa, by engaging in food processing, toiletry making, garments, leather, rubber, metal fabrication, furniture manufacturing, construction, art, and so on. Mupemhi, Duve and Mupemhi (2013) mention that manufacturing small and medium enterprises employ varied means of production ranging from quasi-cottage systems to automated assembly line systems, and their activities are in leather and textile, paper and paper products, wood and wood products, electrical and electronics, chemical and pharmaceuticals, metal and fabrication food and beverages, and glass and ceramics.

In their study entitled *"Issues in SME development in Ghana and South Africa",* Abor and Quartey (2010) pointed out that SMEs contribute to a country's national product by either manufacturing goods of value, or through the provision of services to both consumers and/or other enterprises. Furthermore, according to the International Monetary Fund African Department (2014), in South Africa, more than 85 % of the goods exported by SMEs are manufactured goods. Thus, this gives an indication that SMEs are highly active in the manufacturing of their own products. In addition, the importance of the manufacturing sector is seen in its housing of small, micro medium firms (Serebro & Creamer's Media Research Council, 2010). Estimations show that 90% of the manufacturing sector is comprised of SMMEs and approximately 10% (580,000) of SMMEs make up the manufacturing sector and generate an annual turnover of about R214 million (USAID, 2012a).

Small businesses contribute significantly to a country's national product, either by the production of valuable goods or through the rendering of services to consumers and/or other enterprises (Abor *et al.*, 2010:223). They enhance the proficiency of domestic markets, have the ability to make productive use of scarce resources thereby aiding the effort towards long-term economic growth through ingenuity (Kayanula *et al.*, 2000:6) and they supply products and services to foreign buyers and in so doing, contribute significantly to export performance (Abor *et al.*, 2010).

Small firms thus play a vital role in the development of the country (Feeney & Riding 1997). It is conceivable, for this reason, that Kongolo (2010) urges the government to recognise and acknowledge SMEs as a significant part of South Africa's development process. The contribution of SMEs differs considerably across countries. In South Africa, the economy is dominated by small medium and micro firms (Sawers, *et al.,* 2008).

Since South Africa is in the process of engaging more in the world economy and in a transition to globalisation while battling against challenges such as poverty, unemployment (Sawers *et al.,* 2008), income inequality (Maas & Herrington 2006), low economic growth, high inflation (Fatoki 2011) and uncertain market conditions (Urban & Naidoo 2012), the government has come to view SME development as a matter that is of utmost importance (Sawers *et al.,* 2008). The belief is that not only can the SMEs alleviate difficulties, but they can also enhance the competitiveness of the country (Kesper 2001; Swanepoel, Strydom & Nieuwenhuizen 2010; Sawers *et al.,* 2008; Maas *et al.,* 2006).

According to Kongolo (2010), small businesses in comparison to large-scale businesses, have more advantages in that they have the ability to adjust to market conditions with ease and can withstand unpleasant economic conditions given their supple character. Since they are more labour-intensive than larger firms and therefore have lower capital costs (Kongolo 2010), they possess the ability to address the high levels of unemployment in South Africa more effectively (RSA, 1995). In fact, the 1995 *White Paper on National Strategy for Development and Promotion of Small Business in South Africa* (RSA, 1995), identified SMEs not only as the key to unemployment alleviation but also as drivers for:

- Stimulating local competition through the creation of market niches and unlocking opportunities by tapping into international markets;
- Redressing the disparities that exist as a result of the Apartheid period; and
- Buffering the endorsement of Black Economic Empowerment and playing a vital role in the process of supporting people with basic needs in the absence of social support systems.

In addition to the aforementioned contributions, literature further highlights that SMEs contribute to:

Employment: According to Oualalou (2012, p. 57), "SMEs play a very important economic and social role, both through their prominence in the economy and in job creation, a role which is greatly appreciated in these times of crisis and rising unemployment". Additionally, Sibanda (2013) concurs with the assertion that the SMEs sector plays a critical role in the South African economy by creating employment opportunities for communities within the second economy, as well as providing livelihoods to the dependents. Ayandibu and Houghton (2017) stated that the contribution of SMEs towards employment generation is significant because they support the building up of systemic productive capacities. In addition, Ayandibu and Houghton (2017) note that SMEs account for over 76% of the total employment within the South Africa economy. Furthermore, small firms are accountable for a large percentage of the employment in South Africa since they represent the majority of SMEs (nearly 70%) in comparison to medium-sized and micro firms that constitute about 15%, collectively (Jeppesen 2005). Nonetheless, SMEs are not only perceived as the creators of employment, but are also adopters of retrenched people coming from the private and public sector (Ntsika 2001). Such actions by Small and Medium Enterprises have elicited praise which is evident from the 2003 Human Development Report (UNDP 2003) for South Africa. Since these SMEs hold a key role in the development of South Africa, the country has even come to be viewed as an "engine of growth" for the African continent, generating 45% of the continent's GDP (van Wyk, Dahmer & Custy 2004:259).

Cultivating wealth: SMEs create wealth by enticing demand for investment, for capital commodities and trading (Dana 2001; Lange, Ottens & Taylor 2000; Bosma & Harding 2006; Robertson, Collins, Medeira & Slater 2003).

Economic growth: The contribution of small and medium enterprises (SMEs) to a healthy economy has long been recognised and capability development of small firms remains critical to economic prosperity (Lekhanya 2010). SMEs support economic growth by establishing new markets, reviving stagnant industries and play a key role in economic expansion and enforcing a lively business culture (Santarelli & Vivarelli 2007; Pretorius & van Vuuren 2003; Thomas & Mueller 2000; Henning 2003; Miller, Besser, Gaskill & Sapp 2003). In addition, Van Vuuren and Groenewald (2007, p. 274) indicate that "SMEs form 97.5% of all business in South Africa". They generate 34.8% of the gross domestic product (GDP), contribute to 42,7% of the total value of salaries and wages paid in South Africa, and employ 54,5% of all formal private sector employees (Lekhanya 2010).

Innovation and technology promotion: SMEs are known for introducing new products and services, discovering and serving new markets, as well as endorsing technological change and entrepreneurship (Rwigema & Venter 2004; OECD 2002). According to Omoruyi (2015), the classification and characteristics of SMEs such as economies of scale, risk takers, owners and managers of their businesses, indicates that SMEs have a determined entrepreneurial drive and motivation to be more innovative to improve on business efficiency, productivity and performance. This is because SMEs personality and characteristics are coupled with being innovative. Therefore, there is a high uniqueness between SMEs and product innovation, which can affect product and business performance positively (Omoruyi 2015).

Capacity to improvise: According to McKnight and Bontis (2002, p. 1), improvisation is the "ability to spontaneously recombine knowledge processes and structure in real time, resulting in creative problem solving that is grounded in the realities of the moment". SMEs are resourceful in that they can make the best use of local technologies, local raw material and the local knowledge base (Rwigema & Karungu 1999; Luiz 2002; Romijn 2001). They also can overcome crises in relation to a recession, natural disasters and conflicts (Gurol & Atsan 2006; USAID 2003; Nichter & Goldmark 2009).

Socio-economic transformation: Momba (2016) elucidates that SMEs are essential to the economy of any country, whether developed or developing, and play an important role in social and economic growth in their role in a number of industries in terms of gross domestic product (GDP) contribution and total employment. SMEs are believed to be key in empowering their local communities with a particular focus on the marginalised segments and reducing poverty through support for entrepreneurship and providing income through employment (Ladzani & van Vuuren 2002; Mogale 2005; Tustin 2001; Abor *et al.,* 2010).

Small and Medium enterprises are a sector that is perceived to serve as an entrepreneurial 'seedbed' where some SMEs may graduate to run larger industries (Mcpherson 1996). Although the business environment greatly impacts on the development of Small and Medium Enterprises (Delmar & Wiklund 2008) in South Africa, the environment is somewhat accommodative of SMEs growth as it is composed of a refined infrastructure, legal system, natural and human resources, telecommunication network and financial services (van

Wyk *et al.*, 2004). Perhaps, this is the case owing to government efforts to support the SME sector ever since the country became democratic (Berry, Von Blottnitz, Cassim, Kesper, Rajaratnam & van Seventer 2002; Laforet & Tann 2006). Figure 2.2 illustrates the contribution made by South African Small and Medium Enterprises in diagrammatic form. Each contribution is indicated as discussed above.

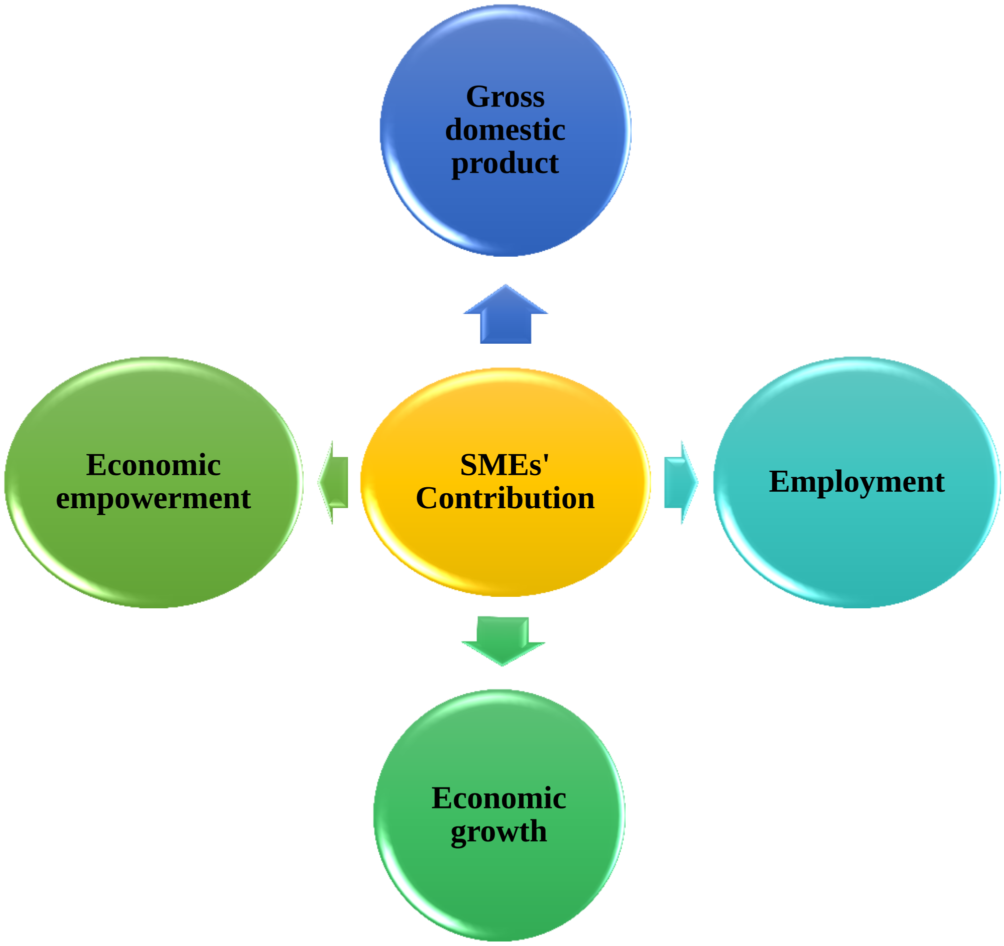


Figure 2.4: Diagrammatic Representation of SMEs' Contribution in South Africa

Source: Compiled by the researcher

2.11 Challenges faced by manufacturing small and medium enterprises

Manufacturing SMEs within the South African economy are confronted with numerous challenges. The operational challenges bedevilling manufacturing SMEs are acknowledged by the Global Competitiveness Index that ranked South Africa as one of the lowest emerging economies in terms of manufacturing competitiveness (Mafini & Muposhi 2017; World Economic Forum 2016). Mthabel (2015) assessed the causal failures that are confronted by manufacturing SMEs in South Africa and found out that the high failure rate of manufacturing SMEs can be, to some extent, ascribed to the following factors: the lack of support that the small, medium and micro-enterprises receive from Government and its policies; lack of sponsorship from well-established organisations that could provide SMEs with commercial advantages such as legitimacy of the brand; and also their own internal processes that are weak in organisational design and execution of strategies.

2.11.1 Lack of product proliferation in manufacturing SMEs

According to Barroso and Giarratana (2013), product proliferation enables firms to generate demand synergies, because they offer 'one-stop shopping' and thus capture more customers with greater willingness to pay for customised versions. However, Maupin and Stauffer (2012) highlight the problem of product proliferation, by emphasising that manufacturing SMEs are often less profitable when compared to large manufacturers. Therefore, there is a need for a common practice of instant production of new products, which is done with little regard for compatibility with other products and production (Singh, Matthews, Mullineux, & Medland, 2009). Furthermore, the problem of product proliferation in SMEs is also illustrated by. According to them, these enterprises are more customer focused (concentrating on getting a product to the customer) than market focused. In addition, Singh, Matthews, Mullineux and Medland (2009) point out that there is little attention given to product development or long-term planning to bring products to the market and this results in a large product portfolio without any real rationalisation. The improvement of product development practice can be reached only with less complex modification of processes suitable for small manufacturers who are usually short for financial resources and lack a broad range of technical skills (Singh, Matthews, Mullineux & Medland, 2009).

2.11.2 Competition

Small businesses are unable to deal with natural market competition, and therefore, according to Sitharam (2014), competition is ranked as the third greatest obstacle to growth for businesses. According to Khan and Khalique (2014, p. 41), "due to lack of competencies, SMEs are not able to compete at national as well as international level". Therefore, SMEs have fierce challenges for their survival in a competitive environment (Khalique, Shaari, Isa, Md & Ageel, 2011). Local SMEs find it increasingly difficult to survive or even maintain their current business position in their respective markets (Singh, Garg & Deshmukh, 2010). With the opening of free trade agreements, SME products are being challenged by the foreign imported products which have flooded the market (Sitharam, 2014). The operational challenges bedevilling manufacturing SMEs are acknowledged by the Global Competitiveness Index that ranked South Africa as one of the lowest emerging economies in terms of manufacturing competitiveness (Mafini & Muposhi, 2017). This increases the need for both researchers and practitioners to continue to seek ways of mitigating these challenges in order to boost the survival rate of SMEs in South Africa (Mafini & Muposhi, 2017).

2.11.3 Lack of innovation

One may consider manufacturing firms to be the heart of innovation; however, SMEs are lagging behind in innovativeness, regarded as key for these entities to sustain themselves in a competitive environment (Matsoso, 2014). Innovations may come in various forms, such as the capability to produce and introduce new products that suit the market and attain the customer satisfaction level (Matsoso 2014; Margues & Ferreira, 2009). Therefore, much attention is required to ensure that the manufacturing sector is well-developed and performance measurement systems are in place.

2.11.4 Lack of access to finance

One of the major factors impeding the success of SMEs, especially in the manufacturing environment, is the lack of access to finance (Matsoso, 2014; Beck & Demirguc-Kunt, 2006). This prohibits these firms from expanding their businesses, which may enable greater employment opportunities, thus alleviating poverty, and as Beck and Demirguc-Kunt (2006. P. 2932) assert, efforts targeted at the SME sector are usually focused on the basis that SMEs are the "engine for growth", although market imperfections and institutional weaknesses prohibit them from growth. Musara's (2012, p.5786) study found that "lack of funds and a lack of information of instantaneous financial gains are challenges militating against manufacturing SMMEs in South Africa".

2.11.5 Lack of Skills and Training

Nze (2016) argued that many entrepreneurs have inadequate business administrative skills necessary to run a business, which makes them prone to failure. Olawale and Garwe (2010) point out that lack of education and training has reduced management capacity within the SMEs in South Africa. Lose (2016, p. 26) points out that "at times entrepreneurial ventures lack entrepreneurial skills and have limited technical skills, are inflexible and have insufficient experience as well as poor quality management; these are among the factors that could lead to business failure".

Deducing from the aforesaid discussions, it is imperative to note that the ever-growing concern on environmental sustainability, the challenges confronting SMEs in the manufacturing sector is becoming amplified (Urban & Naidoo 2012). As noted by Mafini and Muposhi (2017), environmentalism continues to influence corporate strategy in the 21st century. Furthermore, Chiloane-Tsoka, Mabiza-ma-Mabiza and Mbohwa (2014) point out those actors who can play a central role in making the green economy a reality are small and medium-sized enterprises (SMEs) because they are the engine of the global economy. Therefore, the next section focuses on the importance of green marketing for South African manufacturing SMEs.

2.12 SMEs going green

In today's post-modern era, South African consumers, like their international counterparts, are becoming increasingly responsible and informed when it comes to environmental matters (Le-Riche, 2008). According to Viviers, (2009, p. 32), "today's consumers want to know about where, how, when and what in even the most mundane products and are concerned about the impact their purchases will have on the environment and their health." Hence, that is why in South Africa there are now numerous businesses that have actively embraced the notion of "going green" as well as incorporating green marketing in their businesses. Yee (2016) points out that due to environmental sustainability problems, green marketing is not only applicable to large companies, but also for small and medium companies. In addition, green marketing has become a significant approach for the firms to survive in the market and to sustain the market competitive advantage (Chahal, Dangwal, & Raina 2014).

Baumann-Pauly *et al.* (2013) and Berrone *et al.* (2010) argue that SMEs and family-owned firms, respectively, are more environmentally responsive. Mukonza (2016) posits that Small and Medium-sized (SMEs) enterprises are essential for green growth as key drivers of entrepreneurship and key players in emerging green industries. In addition, Hamann, Smith, Tashman, and Marshall, (2017) wrote an article that set out to investigate why SMEs go green and, using survey data as well as comparative case studies of wine firms in South Africa, the authors found out that managers' environmental responsibility is the most important driver of environmental behaviour. Furthermore, Hamann, Smith, Tashman, and Marshall (2017) suggest that environmental responsibility plays a crucial role in motivating SMEs' pro-environmental behaviour, but that this role is positively enhanced by expectations of competitiveness gains, especially cost savings. Moreover, in her study entitled *"Going green: a SMME perspective*" Viviers (2009) investigated the level of environmental awareness and engagement among local SMME owners/managers in South Africa. The findings indicate that SMMEs are becoming more aware of the impact of their actions on the natural environment and engage in actions to reduce electricity use, recycle paper and replace hazardous materials. Moreover, Lekhanya (2014) conducted an exploratory study which focused on the level of awareness regarding green marketing and its managerial implications, among selected South African manufacturing Small, Medium and Micro Enterprises (SMMEs), in the province of KwaZulu–Natal (KZN). Findings of the research indicate that SMMEs in the study are aware of green marketing and its managerial implications (Lekhanya, 2014). It further reveals that SMMEs' owners/managers indicate that the South African Environmental Act and Consumer Protection Act are additional factors that influence their businesses operations (Lekhanya, 2014).

2.13 Chapter summary

This chapter discussed the research context, where it examined the literature related to South African manufacturing SMEs and an overview of the South African manufacturing sector. From the chapter, it can be observed that the SME sector holds a particular relevance in the business environment as well as in academia. This implies that literature is rife with studies in relation to the SME sector generally, but this chapter only concerns the body of literature relative to the issues that are applicable to the current study.

The chapter was structured with five main headings:

- South Africa as the Study Area
- The Concept of Manufacturing
- An overview of South Africa's manufacturing sector
- Describing Small and Medium Enterprises (SMEs): A Worldwide Perspective
- Description and Classification of Manufacturing Small and Medium Enterprises In South Africa
- The Role of Manufacturing SMEs In South African Economy
- Challenges Faced by Manufacturing Small and Medium Enterprises
- SMEs going green.

The study's theoretical framework is described in the next chapter. This subsequent chapter (Chapter 3) elaborates on theories that capture the intricacies surrounding green marketing practices, competitive advantage, as well as business performance.

3 CHAPTER THREE: LITERATURE REVIEW: THEORETICAL FRAMEWORK

3.1 Introduction

The preceding chapter (Chapter 2) was focused on the research context of the study and this current chapter presents a detailed theoretical framework. It is imperative to note that the study of a phenomenon becomes easy to grasp if it has a defined framework (Nwaizugbo & Anukam, 2014). To create an academic context for the study, it is imperative for the researcher to identify a theoretical framework for guidance (Kolanchu, 2011). Therefore, a theoretical framework is a well-developed explanation of events that help the researchers to locate their studies and to signal the origin of their proposed research (Vithal & Jansen 2010). Furthermore, Creswell (1994) and Burns and Bush (2006) point out that the theoretical framework comprises literature that helps to understand the concepts surrounding the research more broadly. Therefore, this chapter presents theories that serve as the theoretical literature of the study.

A theory is thus an essential tool of research for stimulating the advancement of knowledge (Inglis & Maclean, 2005; Kawulich, 2009). Vosloo (2014) concurs that a theory is primarily concerned with providing an explanation; and that it, therefore, focuses on determining cause-and-effect relationships. Overall, a theoretical framework, consequently, helps the researcher summarise any previous information and guides the future course of action (Vosloo, 2014). Simultaneously, the formulation of a theory may indicate missing ideas or links and the additional data required to fully understand how things are connected, and to establish sets of propositions or generalisations (Henning *et al.*, 2004).

The theoretical literature of this study is anchored in the framework of the resource advantage theory of competition, natural resource-based view theory, resource-based view model, the balance scorecard theory, the stakeholder theory as well as Porter's five forces model. These theories and models were used to serve as underpinnings to ground the study. They are the pivotal theories in this research because they explain fundamental concepts used by the research and provide a central point of reference for arguments generated in the research (Easterby-Smith, *et al.*, 1991; Johnson & Christensen, 2008).

3.2 The resource advantage theory of competition (RA)

Since its original conceptualisation in Hunt and Morgan (1995), the theory of competition known as resource-advantage (RA) theory has been developed in numerous articles, books, and book chapters in the marketing, management/general business, and economics literatures (Hunt & Morgan, 2005). Schlegelmilch (2002) argues that R-A theory is a treasure chest for promising research avenues and it rejects the silo approach of many theories. It is interdisciplinary in the sense that it has been developed in a number of different disciplines, research traditions and theories (Doherty, 2010). Resource-advantage theory suggests that firms can achieve superior performance through occupying marketplace positions of competitive advantage (Green, Toms & Clark, 2015). The resource-advantage theory argues that the value of a resource to a firm is seen in terms of its potential to yield competitive differentiation and/or customer value delivery that enhances performance outcomes (Hunt, 2000). According to Goh (2003, p. 98) "the resource-advantage theory proposes that organizations learn through competition because of the feedback loops from relative performance 'signalling' relative market position which in turn signals relative resources". Thus, the resource-advantage theory posits that a resource assortment can be a comparative advantage (Green, Toms & Clark, 2015). In addition, Peranginangin (2015) points out that resource advantage theory emphasises the importance of building values through resources, which organisations internally possess. Yen and Chen (2010, p. 616) referred that "the central premise of this theory is that firms seek resources to gain comparative advantages in an effort to develop superior marketplace". Due to the resource immobility, resource heterogeneity can persist through time, despite attempts by firms to acquire similar resources of particularly successful firms (Yen & Chen 2010).

According to Adiprabowo (2014, p. 9) "the RA theory, competition is actually favoured as it will create economic growth and also, the RA theory explains that resources are heterogeneous as well as imperfectly mobile amongst firms, the differences in resources owned by each firm will create a comparative advantage". Thus, firms will each have different strategies on how to allocate their resources and will then compete on maximising their comparative advantage to achieve superior financial performance, which also explains the namesake of the Resource Advantage theory (Adiprabowo, 2014). Seggie and Griffith (2008) are of the view that the R-A theory traces its pedigree to the following 11 different research traditions: evolutionary economics, Austrian economics, heterogeneous demand theory, differential advantage theory, historical tradition, industrial-organisation economics, resource-based tradition, competence-based tradition, institutional economics, transaction cost economics, and economic sociology (Seggie & Griffith 2008). Drawing on different aspects of these theories, R-A theory provides a strong theoretical framework to explore the firm's resources and the competencies necessary for serving a diverse customer clientele. Specific to R-A theory are the tenets that:

- demand is heterogeneous across industries, heterogeneous within industries and is dynamic;
- consumer information is imperfect and costly;
- human motivation is constrained self-interest seeking;
- the firm's objective is superior financial performance;
- the firm's information is imperfect and costly;
- the firm's resources are financial, physical, legal, human, organisational, informational and relational;
- the firm's resources are heterogeneous and imperfectly mobile;
- the role of management is to recognise, understand, create, select, implement and modify strategies (which consists of allocations among resources);
- And competitive dynamics are disequilibrium-provoking, with innovation endogenous (Hunt & Morgan, 1995, 1996, 1997; Hunt, 1999, 2000, 2001).

To sum up, Doherty (2010, p. 79) emphasises that "the R-A theory stresses the importance of market segments; heterogeneous firm resources; a comparative advantage/disadvantage in resources; and market place positions of competitive advantage/disadvantage".

3.3 Natural resource-based view theory (NRBV)

The natural resource-based view theory (NRBV) aids this research by providing a theoretical mechanism through which the link between green marketing practices, competitive advantage and business performance can be established. Natural resource-based view (NRBV) theory is known to be the theoretical foundation of green marketing (Kumar, 2015). The NRBV emerged from an earlier theoretical contribution of the resource-based view (RBV) (Hart, 1995). By and large, researchers have relied on the NRBV to connect environmental strategy to firm performance, using environmental performance measures as a proxy for environmental strategy (e.g. Hart & Ahuja, 1996; King & Lenox, 2002; Russo & Fouts, 1997).

Russo and Fouts (1997) elucidate that the natural resource-based view (NRBV) provides a conceptual basis for this integrative approach. According to the NRBV, “constrained by and dependent upon ecosystems,” a firm’s “strategy and competitive advantage will be rooted in capabilities that facilitate environmentally sustainable economic activities” (Russo & Fouts, (1997, p.). In particular, the NRBV proposes that firms with a demonstrated capability will be able to accumulate the resources necessary for pollution prevention, which eventually contributes to reductions in emissions (Lee & Kim, 2017). Furthermore, Akkucuk (2015) explains that the the natural resource-based view theory (NRBV) is characterised by the association between organisational resources, capabilities and competitive advantages, while encouraging the internal discovery of sources of organisational competitive advantage than external, by finding the most competitive environment for it.

Canepari (2017) points out that the Natural Resource-Based View (NRBV) adds that those resources, upon which internal capabilities are developed, should be intended as linked with the environmental performance of the company. Like the Porter hypothesis, NRBV suggests that as many firms repeatedly invest too little in environmental strategies, at the current state of the art, companies integrating environmental issues and concerns in their strategic decision-making as well as focusing on pro-environment resources are more likely to develop valuable and rarer organisational capabilities, allowing them to pursuit a competitive advantage (Canepari, 2017).

According to Hart (1995), historically, various marketing theories have ignored the constraints imposed by the biophysical (natural) environment. The three capabilities mentioned in NRBV theory are, namely: pollution prevention, product stewardship and sustainability (Rahim & Rahman, 2013). Pollution prevention refers to efforts to reduce, change, or prevent emissions and effluent discharges through better housekeeping, materials substitution, recycling, or changes in the production process (Willig, 1994). Secondly, Hart and Dowell (2010) explain that product stewardship includes the entire value chain or “life cycle” of the firm’s product systems. Through stakeholder engagement, the “voice of the environment” can be effectively integrated into the product design and development process (Hart & Dowell 2010). It is conceptualised as the product-oriented environmental practices of firms where environmental issues are taken into account in such product-related aspects as product design, materials used, and product packing (Hart, 1995).

Product stewardship should thus afford a firm the opportunity for sustained competitive advantage through accumulation of socially complex resources, involving fluid communication across functions, departments, and organisational boundaries (Christina, 2011). Thirdly, there is an issue of sustainable development having two notable differences from pollution prevention or product stewardship strategies (Hart & Dowell, 2010). Sustainable development, also referred to as sustainability, is defined as the development that meets the needs of the present without compromising the ability of future generations to meet their own needs, and it implies economic growth that integrates protection of the environment as well as meeting human social needs (Choongo, Van Burg, Paas, & Masurel, 2016).

Therefore, it is imperative for SMEs operating within the manufacturing sector to function as sustainable businesses. Landrum and Edwards (2009) define a sustainable business as one that operates in the interest of all current and future stakeholders in a manner that ensures the long-term health, as well as survival of the business, and it is associated with economic, social, and environmental systems. Moreover, it is likely that corporate strategy and competitive advantage in the coming years will be rooted in capabilities that facilitate environmentally sustainable economic activity as a natural resource-based view of the firm (Hart, 1995). Therefore, in order for manufacturing SMEs to succeed (improving the business performance), the concept of natural resource-based view strategy should be included in the business's environmental corporate strategy to enable it to achieve and sustain competitive advantage. This is in line with Esu (2015, p. 576) who assumes that “it is an imperative that businesses should increase and make effective use of their competitive advantage in the environment”. Moreover, Wang (2014), and Adeniran and Johnston (2012) state that the resource-based view perceives the business as a combination of strategic resources which are diversely distributed across organisations to achieve a sustained competitive advantage.

3.4 The resource-based view model

Akio (2005) defines resources as stocks of available factors that are owned or controlled by the firm, which is converted into final products or services. Rothaermel (2012) enlightens that the resource-based view (RBV) is a model that sees resources as key to superior firm performance. If a resource exhibits VRIO attributes, the resource enables the firm to gain and sustain competitive advantage (Rothaermel, 2012). Figure 3.1 provides a representation of the resource-based view model.

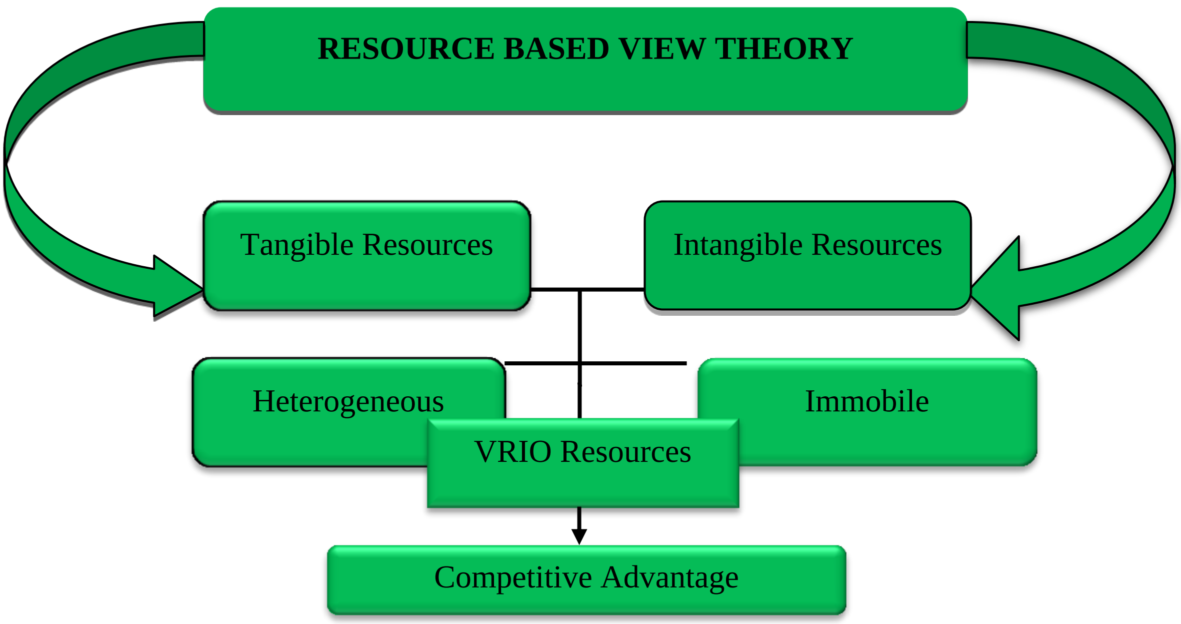


Figure 3.1: The resource-based view model

Source: Abiodun and Harry (2013)

In the RBV model, resources are given the major role in helping companies to achieve higher organisational performance (Jurevicius 2013). Resources refer to tangible and intangible assets that firms use to conceive of and implement their strategies (Kozlenkova, Samaha & Palmatier 2014). Kostopoulos, Spanos, and Prastacos (2002), as well as Jurevicius (2013), agree that resources are either tangible (financial or physical) or intangible (i.e., employee's knowledge, experiences and skills, firm's reputation, brand name, organisational procedures).

Schriber and Löwstedt (2015:54) inductively identified resources as "tangible to the extent that they had physical, manifest properties, such as the "plant and equipment which can be purchased off-the-shelf". In addition, Enz (2009, p. 125) states that "tangible resources can be seen, touched, and/or quantified and these resources tend to be easy to imitate". Conversely, Enz (2009) is also of the view that some of the most important resources are intangible, and these resources are more difficult to quantify and the most difficult resources to imitate. For example, knowledge about how to innovate is much more difficult to imitate than any particular architectural design or building material innovation (Enz, 2009). Van Auken, Madrid-Guijarro and García-Pérez-de-Lema (2008) emphasised that firms can gain a competitive advantage through intangible resources that competitors do not possess.

In addition, as reflected by the RBV model, the two critical assumptions are that resources must also be heterogeneous or immobile. Madhani (2009) points out that competitive advantage occurs only when there is a situation of resource heterogeneity (different resources across firms) and resource immobility (the inability of competing firms to obtain resources from other firms). Resource heterogeneity is the most basic condition of resource-based theory and it assumes at least some resource bundles and capabilities underlying production are heterogeneous across firms (Barney, 1991). However, Alvarez and Busenitz (2001) argue that heterogeneity is necessary, but not sufficient for a sustainable advantage. For example, a firm can have heterogeneous assets, but not the other conditions suggested by resource-based theory, and those assets will only generate a short-term advantage until they are imitated (Alvarez & Busenitz 2001; Alvarez, & Busenitz, 2007).

On the other hand, Begemann (2006, p. 23) points out that “the resource immobility assumption is the second pivotal assumption besides heterogeneity of resource distribution”. Furthermore, Begemann (2006, p. 23) elucidates that “heterogeneity and immobility are intercausally related, i.e, sustained competitive advantages because of resource heterogeneity requires a degree of resource immobility and vice versa”. It is important to note, however, that resources need to bear a degree of specificity which means that they are inseparably tied to an organisation order to qualify for immobile resources in contrast to mobile resources like machines or financial resources (Grant, 1991).

Additionally, having heterogeneous and immobile resources is critical in achieving competitive advantage; it is not enough alone if the firm wants to sustain it (Jurevicius 2013). Barney (1991) has identified a VRIN framework that examines if resources are valuable, rare, costly to imitate and non-substitutable. Jurevicius (2013) points out that the framework was later improved from VRIN to VRIO by adding the following question: “Is a company organised to exploit these resources?” It is imperative to note that a resource must fulfil ‘VRIO' criteria in order to provide competitive advantage and sustainable performance. A‘VRIO'criterion is explained below.

Valuable (V): According to Gutierrez, Alcaraz, Susaeta, Suárez and Pin (2015), resources must create value for the firm. Resources provide value if they help firms in exploiting market opportunities or help in reducing market threats (Madhani, 2009). In addition, Cardeal and Antonio (2012) assert that the resource creates value when it allows the company to devise and implement strategies that will improve its efficiency and effectiveness.

Rare (R): Resources must be difficult to find among the existing and potential competitors of the firm (Madhani, 2009). Regarding the "rare" resources, Brunetti, Teixeira, de Castro, and

Lara, (2015) state that a valuable resource of company cannot be a competitive advantage if many competitors or potential competitors own it. If a resource or ability, considered valuable, is present in a large number of competitors, each of them has the ability to adopt a strategy that exploits the value of the resource or capability, thus the resource not being rare will be unable to generate competitive advantage (Brunetti, Teixeira, de Castro, & Lara, 2015).

Inimitability (I): If valuable and rare resources are easily imitable, competitors would quickly copy them and the potential for competitive advantage would disappear (Cardeal & Antonio, 2012). Regarding imitability, Barney and Hesterly (2010, p. 76) ask: “Do firms without a resource or capability face a cost disadvantage in obtaining or developing it compared to the firms that already possess it?” Imitability lies at the boundary between temporary and sustainable competitive advantage (Anderson & Birrer, 2011). If a valuable and rare resource cannot be obtained or developed or substituted for by competitors, then the focal organisation should enjoy a sustainable competitive advantage (Anderson & Birrer, 2011).

Organization (O): To obtain a competitive advantage, a firm must be organised with policies and procedures directed at exploiting resources (Gutierrez, Alcaraz, Susaeta, Suárez & Pin, 2015). Barney (1991) explains that firm resources that are rare, valuable, difficult to imitate and organised can provide a sustained competitive advantage. Peng (2013) is of the view that appropriate formal structures, control systems, and HR policies and practices are some examples of a firm’s organisation.

From the authors’ elucidations, it can be noted that only the firm that can exploit the valuable, rare, imitable resources and is organised to capture the value of resources can achieve sustained competitive advantage.

3.5 The stakeholder theory

Green marketing is a broad phenomenon whose practice requires a meticulous counterbalancing of vested interests of various stakeholders (Peattie 2001). Stakeholders are defined as the groups or individuals, inside or outside the enterprise that have a stake or can influence the organisation's performance (Kaplan 2010). The stakeholder theory, made popular during the 1980s, suggested that corporations should look beyond the shareholder theory of profit maximisation, and take into consideration other stakeholder groups that the corporation is associated with, and who contribute to the company's achievements (Nwanji & Howell 2008). Kaplan (2010) points out that stakeholder theory offers another multi-dimensional approach for enterprise performance measurement. According to Miles (2011), the stakeholder theory first developed and used in business ethics and organisational management, stipulates that a firm has stakeholders over and above shareholders or owners to whom management needs to be accountable.

Stakeholder theory pertaining to managing organisations has become one of the "major paradigm shifts of the last century" (Amaeshi & Crane, 2006, p. 247) and is concerned with the nature of the relationship between the firm and its stakeholders (Ayuso, Rodrıguez, & Ricart, 2006). According to the stakeholder theory, as brought forward by Freeman and colleagues (e.g., Freeman, 1984; Freeman *et al.,* 2010), the key objective of business is to create value for all stakeholders involved, that is, "those groups and individuals who can affect or be affected" by the business (Freeman, 1984, p. 25).

Stakeholder theory postulates that organisations must engage with stakeholders for normative and instrumental reasons (Pillay, 2010). In the normative explanation, relationships between the organisation and stakeholders takes place on an ethical basis, suggesting that managers must consider the interests of those stakeholders who have a legitimate stake in the organisation (Preble, 2005). In normative theory, there is a moral obligation for the organisation to engage with stakeholders (Greenwood, 2007) and people have a democratic right to participate in the decision-making process (Reed, 2008). By contrast, instrumental theory sees stakeholders as being valuable in helping the organisations achieve objectives since participation is seen as a means to an end (Donaldson & Preston, 1995; Preble, 2005). Accordingly, the organisation achieves its objectives by managing this relationship with stakeholders (Ayuso, Rodrıguez, & Ricart, 2006; Donaldson & Preston, 1995; Preble, 2005; Reed, 2008). Via this approach, organisations address the interests of those who have influence, recognising that managing these interests will ultimately lead to superior performance and superior decisions (Ayuso, Rodrıguez, & Ricart, 2006; Reed, 2008).

The stakeholder theory defines a stakeholder as a group or individuals with the capacity to influence or be affected by the operations of the organisation (Freeman 1984). It is important to note that the identification of green marketing stakeholders is central to the practice of green marketing as effective implementation requires the building of transformative relationships with all parties involved in green marketing initiatives (Kirchoff *et al.*, 2011).

The key stakeholders in green marketing practice are identified as governments, consumers, employees, retailers, marketers, suppliers and environmentalists (Kinoti 2011:271; Mishra & Sharma 2010). The identified stakeholders influence all aspects involved in the practice of green marketing strategy, such as green product development, marketing, consumption and green marketing programmes (Rasha & Igbaza 2011).

3.5.1 Critiques on the stakeholder theory

It is evidently clear that the stakeholder theory helps to clarify the importance of stakeholders in organisations having resultant competitive advantages. However, there is other reflective evidence that puts the stakeholder theory into criticism. Criticisms of stakeholder theory from philosophical and theoretical standpoints have been thoroughly analysed and widely commented upon in the scientific literature (Donaldson & Dunfee, 1994; Donaldson & Preston, 1995; Gibson, 2000; Gond & Mercier, 2004; Kaler, 2003; Key, 1999; Moore, 1999; Sternberg, 1996; Weiss, 1995). There have also been serious attempts to integrate theory with research from disparate areas to further develop the stakeholder theory (Andriof *et al.* 2002; Jawahar & McLaughlin, 2001; Venkataraman, 2002). Jensen (2001), as well as Lindsey, Mauck and Olsen (2017:1), offers the following with respect to stakeholder theory:

"What is commonly known as stakeholder theory, while not totally without content, is fundamentally flawed because it violates the proposition that a single-valued objective is a prerequisite for purposeful or rational behaviour by any organization. In particular, a firm that adopts stakeholder theory will be handicapped in the competition for survival because, as a basis for action, stakeholder theory politicizes the corporation and leaves its managers empowered to exercise their own preferences in spending the firm's resources"

According to Phillips, Freeman and Wicks (2003), another common critique concerns the "radical under-determinism" of stakeholder theory. That is, "In rejecting the maximisation of long-term owner value as the purpose of business, and requiring business instead simply to 'balance' the interests of all stakeholders, stakeholder theory discards the objective basis for evaluating business action" (Sternberg 2000, p. 51) and the theory fails to be "illuminatingly action-guiding" (Marcoux 2000). In one sense, this critique is accurate, since the stakeholder theory does fail to provide an algorithm for day-to-day managerial decision-making (Phillips, Freeman & Wicks 2003).

Sternberg (1997) elucidates that the stakeholder theory equally precludes organisations from having as their goals, housing the homeless and conducting scientific research, since all organisations with substantive ends aim at something other than ‘balanced stakeholder benefits’, they are all ruled out by stakeholder theory. Moreover, although stakeholder theory is sometimes positively associated with the notion of trusteeship, it makes trusteeship equally impossible: the obligation to balance stakeholder benefits overrides the specific obligations that trustees have to their designated beneficiaries (Sternberg, 1997; Peston, 1996). Additionally, the stakeholder theory does not allow for the variety of organisations and organisational purposes; according to stake-holder theory, there is only one type of legitimate organisation, the one that balances stakeholder benefits (Sternberg, 1997).

Lau (2014, p. 763) asserts that “the most serious problem with the theory roots in the identity of stakeholders”. That is, the theory, on one hand, talks about the fact that a firm contains all these normative or derivative constituency groups, on the other hand, the theory does not have an inclination to address who these groups actually are and the entailed relationships a firm should be having with them (Lau 2014). In addition, Fassin (2008) elucidates that the theory tends to be over-simplified where more complex dynamics of relationships are observed in a firm. Furthermore, Fassin (2008) further argues that the most obvious “shortcomings” emerge from the identity problem of stakeholders which comprises at least two issues: Firstly, stakeholders can have heterogeneous roles, i.e., the roles of stakeholders could be debatable, based on how their identities are defined. Secondly, stakeholders’ inter-dependence and reciprocity may not be as equal and direct as the theory suggests; it is not uncommon to see changes in relationship when factors determining such relationship change.

3.6 The balanced scorecard theory

According to Njoroge (2015), the balanced scorecard theory emanated from the works of Kaplan and Norton (1990) as an innovative business performance measurement system. In 1990, Kaplan and Norton led a research study of many companies with the purpose of exploring new methods of performance measurement and the importance of the study was a growing belief that financial measures of performance were ineffective for the modern business enterprise (Akbarzadeh 2012). Representatives of the study companies, along with Kaplan and Norton, were convinced that reliance on financial measures of performance had an effect on their ability to create value and the group discussed a number of possible alternatives, but settled on the idea of a scorecard, featuring performance measures capturing activities throughout the organisation—customer issues, internal business processes, employee activities, and of course, shareholder concerns (Akbarzadeh 2012).

Wu (2009) elucidates that the balanced scorecard is perhaps the most well-known performance measurement framework and many people even believe it is the most important as well as a widely used management theory. The balanced scorecard theory emphasises the need to provide management with a set of information that covers all relevant areas of performance in an objective way (Njoroge 2015). In addition, many scholars such as Kaplan and Norton (1996); Grigoroudisn *et al*. (2012); Wu and Chang (2012); Amado *et al.* (2012); Fu and Yang (2012) as well as Tan, Zhang and Khodaverdi (2017) point out that the balanced scorecard is a theoretical framework to convert an organisation's strategic objectives into a set of performance measures within the consideration of four perspectives, namely, financial, customer, internal business processes, and learning and growth.

Thus, an important issue in regard to strategic performance measurement and SMEs is the enabling role that can be played by the balanced scorecard (BSC) to align performance measures and strategy based on the four perspectives of the BSC namely; financial perspectives, customer perspectives, internal process perspectives and innovation and learning/growth perspectives (Chimwani, Nyamwange, & Otuyo, 2013). Gumbus and Lussier (2006) state that if an SME does not measure its financial, customer, process and learning and growth aspects, the SME's manager and other stakeholders cannot know how well the SME is performing. In addition, Gumbus and Lussier (2006) argue that if the SME wants to manage these aspects of the business, they have to be measured. The balanced scorecard can help SMEs by tracking performance and the balanced scorecard will also help by providing a clear focus on the firm's goals and promoting growth (Kirsten, Vermaak and Wolmarans, 2015). Figure 3.2 shows the diagram of the balance scorecard framework and subsequently, four perspectives of the BSC are elucidated.

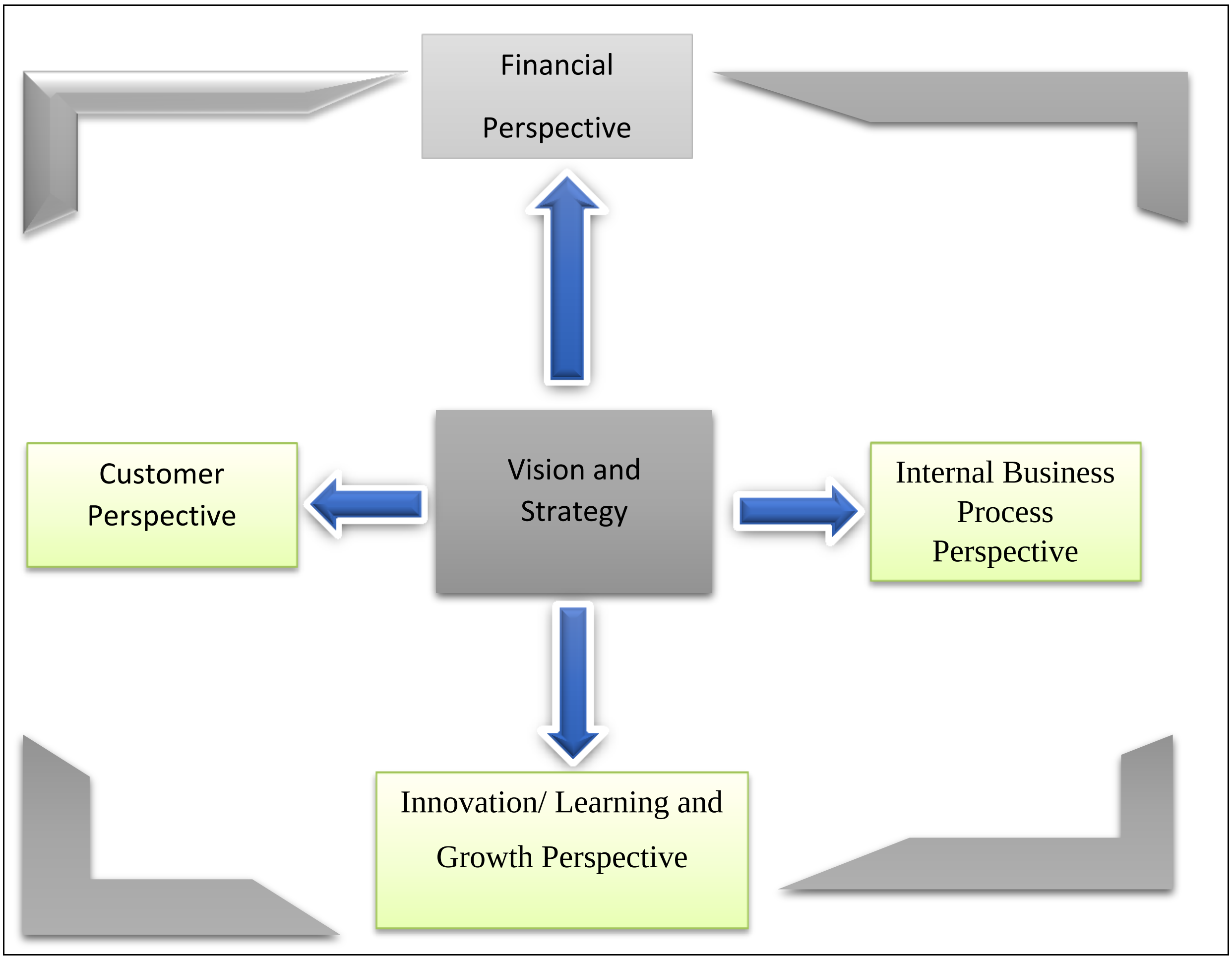


Figure 3.2: The balance scorecard framework

3.6.1 Financial Perspective

Bhagwat and Sharma (2007) explain that financial perspective links the company to its shareholders and those with a goal of achieving profitability and financial interest, development in sales revenue and exploiting the wealth of shareholders. According to Chimwani, Nyamwange and Otuyo (2013), financial measures remain an important dimension within the BSC and financial performance measures indicate whether a company's strategy, implementation, and execution are contributing to bottom-line improvement.

3.6.2 Customer Perspective

The source of existence of any organisation, whether it is private or public, is the need to serve a certain group of consumers, also referred to as customers (Khomba 2011). In addition, Drucker (2007) suggests that a company’s first task is to create and keep a customer. Therefore, corporate executives are always reminded that in any organisational setting, the customer is the king or queen and thus decides any future business (Dixit & Friedmann, 2010). In the Balanced Scorecard model, Kaplan and Norton (1996) acknowledge the above scenario by including the customer perspective as one of the key perspectives. In their study, Appia-Adu and Singh (1998) concluded that SME practitioners who were able to inject customer-oriented measures into their business had a distinct possibility of achieving a competitive edge.

3.6.3 Internal Business Process Perspective

Tan, Zhang and Khodaverdi (2017) state that the internal business process perspective identifies the critical internal processes which the organisation must achieve. This assessment emphasises internal processes that will have high influence on the customer value proposition, fulfilment and accomplishing an organisation's financial goals (Asosheh *et al*. 2010; Grigoroudisn *et al.* 2012). Internal business process measures indicate the level of a company's performance with respect to activities that are critical to meet customer and financial objectives (Decoene & Bruggeman, 2006).

3.6.4 Innovation/ Learning and Growth Perspective

According to Sengfeng (2012, p.14) "this perspective touches on the people side of the organisation and the prevailing organisational culture and climate". It also focuses on leadership issues and how the organisation paces itself to deliver value to customers (Sengfeng, 2012). Van Staden (2009) points out that the enablers for learning and growth come primarily from three sources: employees, systems and organisational alignment. Furthermore, Van Staden (2009, p. 18) states that "strategies to ensure superior performance will generally require significant investment in people, systems and processes that build organisational capabilities".

3.7 Porter's theory of competitive advantage

According to Kharub, Kharub, Sharma and Sharma (2017), Michael E. Porter has been regarded as a leading authority on competitive strategy in a nation and, more recently, the application of competitive analysis on social and environment aspect of business activities. In addition, Porter (1990) provided a model which was widely accepted and is used to measure the competitive advantage of a nation (Kanakulya & Jinzhao 2017). In addition, Porter suggested that there are five forces in the industry that determine the scale and extent of competition, which together affects the attractiveness of the industry as well as the competitive strategy of existing enterprises (Kanakulya & Jinzhao, 2017). The "five forces" Porter's model has been regarded as the major analytical framework of the competitive positioning paradigm and this framework allows a firm to assess its competitive positioning through an evaluation of the strength of the threat of new entrants and substitute products; the power of buyers and suppliers; as well as the degree and nature of rivalry among businesses

(Kharub, Kharub, Sharma, & Sharma, 2017). Thus, these five competitive forces are those forces close to a firm and that affect a firm's ability to serve its customers and make a profit. Dhlomo (2017) also quoted Porter's Five Forces theory, stating that these forces govern the nature and intensity of competition within an industry and are the background against which the choice of generic strategy should be made. A change in any of the forces normally requires an SME to reassess the marketplace (Adeyemi, 2009). Mita (2017) observed that a correct analysis of the five forces will assist a firm to choose one of the generic strategies that will successfully enable the organisation to compete profitably in an industry. Therefore, it is important for the owners/managers to understand the competitive forces and their underlying causes. This reveals the roots of an industry's current profitability while providing a framework for anticipating and influencing competition (and profitability over time) (Porter, 2008). The five competitive forces are diagrammatically illustrated in Figure 3.3, below.

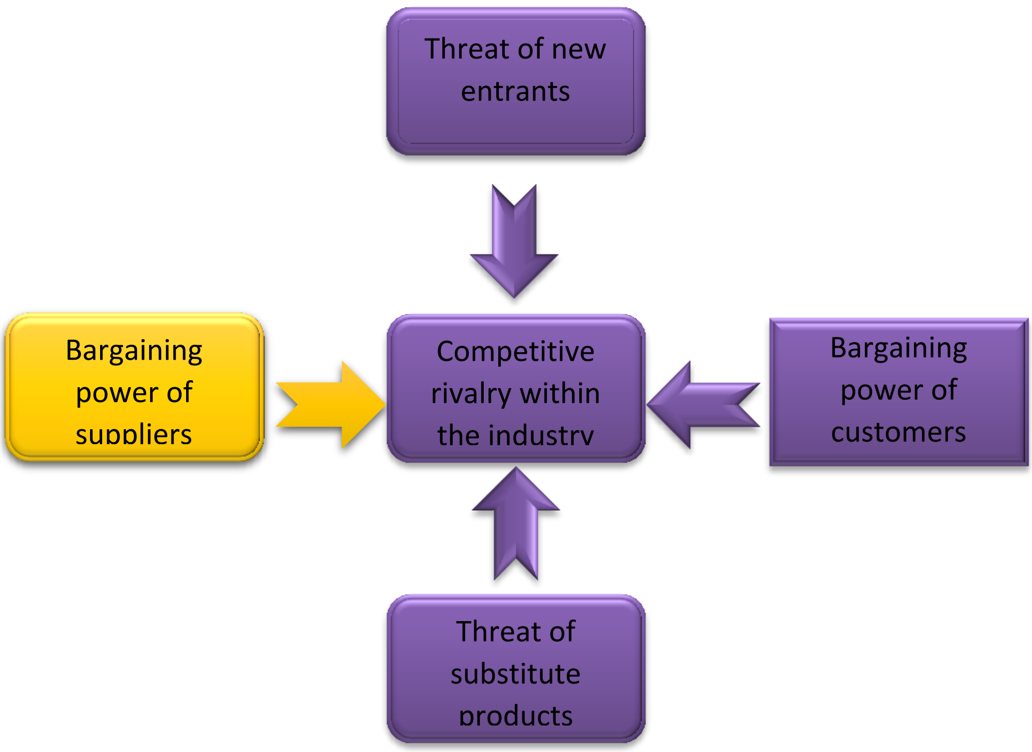


Figure 3.3: Porter's Five Competitive Forces Model

Source: Adapted from Porter (2008)

3.7.1 Threat of new entrants

The threat of new entrants refers to new entrants to an industry that can raise the level of competition, thereby reducing the attractiveness of the market (Grahn, 2013). Additionally, Dess, Lumpkin and Eisner (2010, p. 56) are of the view that "threat of new entrants refers to the possibility that the profits of established firms in the industry may be eroded by new competitors". This threat is high when the industry is attractive (when existing participants are making good profits) and when there are low barriers to entry (Macmillan & Tampoe, 2000). For instance, when the incumbents (existing participants) do not continuously provide the market with new forms of value, they open opportunities for new entrants who are able to provide them. New entrants to an industry bring new capacity and a desire to gain market share; they sometimes bring substantial resources to the industry which exert pressure on prices, costs and the required rate of investment (Rossouw *et al.*, 2003; Porter, 2008). In addition, existing firms within an industry often try to reduce the threat of new entrants to the marketplace by erecting barriers to entry (Amrollahi & Akhgar, 2013).

3.7.2 Bargaining power of suppliers

The bargaining power of suppliers refers to the ability of suppliers to force up the prices of the inputs of firms in the industry (Hellriegel, Jackson, Slocum, Staude, Amos, Klopper, Louw & Oosthuizen 2004). Lee, Kim and Park (2011) point out that the bargaining power of suppliers refers to the ability of suppliers to raise prices or decrease the quality of inputs. The bargaining power of suppliers tends to be higher when the suppliers are concentrated or when they contribute to the larger component of the products that are bought by customers. Thus, suppliers can bargain for higher prices and thus reduce the profitability of the SMEs (Jain, 1977).

3.7.3 Competitive rivalry within the industry

Dhlomo (2017) elucidates that the degree of rivalry measures the degree of competition between existing firms and the higher the degree of rivalry, the more difficult it is for existing firms to generate profits. The last of Porter's competitive forces is the extent of rivalry among established companies within an industry (Amrollahi & Akhgar, 2013). Competitive rivals are firms with similar products and services which are aimed at the same customer group (Louw & Venter, 2010). If this rivalry is weak, companies have an opportunity to raise prices and earn greater profits (Godfrey & Qiang, 2000).

3.7.4 Bargaining power of customers

According to Hove and Masocha (2014), the bargaining power of buyers refers to the ability of buyers/customers to force down the prices of the firms' products and services. Malcolm and Martin (2003, p. 98) point out that "when the SME market is dominated by a small number of customers or where the customers constitute a large proportion of the SMEs' services, competition intensifies due to the high bargaining power of customers". In addition, Pamulu (2010) points out that this power of buyers or customers depends on a number of characteristics of the market situation and on the relative importance of purchases to the industry compared with its overall business.

3.7.5 Threat of substitutes

The fifth force is the "Threats of Substitution", where substitutes of products and services can limit the potential returns of an industry by placing a ceiling on the prices firms in the industry can profitably charge (Pamulu, 2010). A substitute is, according to the Oxford Dictionary (2015a), "A person or thing acting or serving in place of another". For example, for the manufacturing firm producing manual screwdrivers, the advent of electrical, automated screwdrivers is a serious direct substitute (Axelsson, Kron, Larsson, Nydén, Näkne & Sörenson, 2015). In addition, Porter (2011) points out that substitute products also pose a threat to the sustainability and profitability of a business. This type of threat occurs when customers have a range of alternatives that may be like a product, or an opposite substitute that may offer similar benefits (Hlatshwayo, 2015). Therefore, it is imperative for businesses to develop products that are distinctively positioned and have favourable perceptions by the target market to increase the level of loyalty that customers possess towards a particular product (Hlatshwayo, 2015; Porter, 2011).

3.8 Chapter summery

This chapter covered a literature review on the underlying theories and models, which are the resource advantage theory of competition, natural resource-based view theory, resource-based view model, the balanced scorecard theory, the stakeholder theory, as well as Porter's five forces model. It is imperative to note that the theoretical literature assisted in elucidating the theories that were used in grounding the study. The next chapter is centred on the empirical literature which explains the variables and their wide-ranging relations towards the study.

4 CHAPTER FOUR: LITERATURE REVIEW: EMPIRICAL LITERATURE

4.1 Introduction

The preceding chapter provided the theoretical framework of the study. This current research chapter presents the empirical literature of the study and it observes all the pertinent collected works found on the topic of the research. A literature review is a text of a scholarly paper, which includes the current knowledge, including substantive findings, as well as theoretical and methodological contributions to a particular topic (Lamb, 2014). In addition, a literature review is not an annotated bibliography in which a brief summary of numerous articles is reviewed, but a summary of what has been read well beyond a mere summarised professional literature; it focuses on a specific topic of interest and contains a critical analysis of the relationship among different works, relating the research to the study at hand (Mongan-Rallis, 2014). Therefore, deducing from the aforementioned elucidation, it can be noted that a literature review outlines what has been found and not found on the subject matter, aims to discourse gaps in the prevailing work and presents a review of the literature related to the purpose of the study. The following section discusses the empirical literature of the research constructs under study. Divided into sections, this chapter covers a literature review on the historical overview of green marketing, green marketing, green marketing practices, green packaging, green advertising, green product innovation and green process innovation, competitive advantage and business performance.

4.2 Historical overview of green marketing

Green marketing has had a rather varied history, fluctuating between sanguinity and disillusionment (Synodinos, 2014; Leonidou & Leonidou, 2011; Peattie & Crane, 2005). In addition, Leonidou and Leonidou (2011, p. 69) point out that "although there is some evidence of environmental concern pre-twentieth-century, the first real wave of consumer environmental concern and resultant marketing interest in environmentalism only occurred in the late 1960s". The seminal works of Kotler and Levy (1969) introduced the idea of marketing extending its scope beyond being merely a business activity to taking a more active role in pursuing activities that will be advantageous to society as a whole. Furthermore, "green marketing term was first discussed in a seminar on Ecological Marketing, organized by American Marketing Association (AMA) in 1975 and took its place in the literature" (Tiwari 2012, p.33).

Kataja (2014, p. 2) contends that "one of the first books published was *"Ecological Marketing"* by Hennidon and Kinnear in 1976". The decade of the late 1980s marked the first stage of green marketing, when the concept of "green marketing" was newly introduced and discussed in the industry (Solvalier, 2010). The term green marketing came into prominence in the late 1980s, as well as early 1990s, and the first wave of green marketing occurred in the 1980s (Tiwari, 2012). The tangible milestone for the first wave of green marketing came in the form of published books, both of which were called *Green Marketing* (Tiwari, 2012). They were by Ken Pattie (1992) in the United Kingdom and by Jacquelyn Ottman (1993) in the United States of America. According to Peattie (2001), the evolution of green marketing has three phases and these phases are explained as follows:

First phase was termed as "Ecological" green marketing, and during this period, all marketing activities were concerned to help environmental problems and provide remedies for environmental problems.

Second phase was "Environmental" green marketing, and the focus shifted to clean technology that involved designing of innovative new products, which take care of pollution and waste issues.

Third phase was "Sustainable" green marketing. It came into prominence in the late 1990s and early 2000, and was concerned with developing good quality products which can meet consumers' needs by focusing on the quality, performance, pricing and convenience in an environment-friendly way.

Table 4.1 represents the most vital characteristics within each decade of green marketing evolution during the past thirty years.

Table 4.1: The most important activities in green marketing history

Stage	Decade	The most important activities in green marketing history
1st stage	1980s	Introduction of ecological products; ecological was equivalent to green products; green consumption was very low
2nd stage	Early 1990s	High concern about green issues; still low consumption of green products; companies involve themselves in using less raw material, wasting less; corporate efforts in recycling, energy efficiency, corporate responsibility
3rd Stage	Late 1990s	Changes in production processes, technology and resourcing; sustainability marketing; Total quality management involves environmental issues
4th Stage	2000s	Green products and services making a comeback; Eco-friendliness /going-green become more and more popular between companies and consumers; the term of 'sustainable green marketing' is introduced

Source: Adopted from Solvalier (2010, p. 9).

4.3 Green marketing defined

The progressive development of marketing has seen various definitions of green marketing arise (Dahlstrom, 2011). According to Saini (2014), green marketing is a business practice that considers the consumer concerns about promoting preservation and conservation of natural resources. Green marketing is the way firms can advertise their products and at the same time, inform the consumers that they are working in an environmentally friendly way (Chen & Chang, 2012). Green marketing encompasses all marketing activities, such as research and development, product design, packaging and advertising, that are necessary to develop and sustain consumers' eco-friendly attitudes and behaviours, in a way that sustains the natural environment (Sarumathi 2014; Selvakumar & Pandi 2011). Green marketing also represents a set of strategies associated with the production, pricing, promotion and distribution of offerings that are designed to satisfy the demand of consumers and societal well-being (Kung *et al.*, 2012). According to Polonsky (2011, p. 1311), "the ultimate objective of green marketing is to promote integrated exchange processes that strike a balance between business, society and the natural environment". Green marketing is also considered as a tool for monitoring, seeking and fulfilling consumer needs and desires in the context of environmental responsibility (Akehurst *et al.*, 2012). Marketing products which are environmentally safe; developing and marketing products to minimise environmental hazards; produce, promote, and package products in a manner befitting so as to protect the environment are some characteristics of green marketing, as the term is understood in the present business world context (Arseculeratne & Yazdanifard, 2013).

Dangelico and Vocalelli (2017, p. 1267) defined green marketing as “the process of planning, implementing and controlling the development, pricing, promotion, and distribution of products in a manner that satisfies the following three criteria: (1) customer needs are met, (2) organizational goals are attained, and (3) the process is compatible with eco-systems”. Troup (2010, p. 1) views green marketing as “the use of various marketing activities that encourage the purchase of environmentally preferable products, as well as encourage a change in lifestyles”. Furthermore, Synodinos, (2013) uses the term green marketing in reference to marketing activities that attempt to impede the negative social environmental effects of existing products and production systems, and promote less harmful products or services.

It can be reasoned from the foregoing discussion that green marketing mirrors the goals of conventional marketing, which are to facilitate exchanges with the intention of satisfying consumer needs profitably. The point of difference is that green marketing attempts to satisfy consumer needs with minimum detrimental impact on the natural environment (Singh & Pandey 2012). Precisely, green marketing needs to be understood as a comprehensive phenomenon aimed at balancing consumption, production and environmental sustainability (Chen & Chai 2010). Moreover, “as increasing competition drives companies to become a greener company, and green marketing concept based on green environmental responsibility has become a strategy for companies” (Aytekin & Çelik, 2017, p. 1099).

4.4 Green marketing practices

Miryala and Mennakanti (2016) explain that in the present scenario, there is an immense need to develop the products and services that not only satisfy customer needs or wants, but also contributes in safeguarding the environment. The solution for this is to follow green marketing practices (Miryala & Mennakanti, 2016). Environmental or green marketing practices as a result of compulsion due to legislative pressures and pressures of environmental groups have changed to genuine efforts to behave in an eco-responsible manner and improve sustainable marketing plans (Sen, 2014). In addition, Nadaf and Nadaf (2014) are of the view that many global players in diverse businesses are successfully implementing green marketing practices. Oburu (2010) elucidates that green marketing practices focus on environmental sustainability, where sustainability involves using resources at a rate that allows them to be replenished to ensure their long-term survival. Sing and Pandey (2012) elucidate that the concept of green marketing practices involves several features as this term is understood nowadays, including marketing eco-friendly and safe products; manufacture, product promotion, and goods packaging harmonious with the environment and minimising the hazard to the environment. Kimani (2015, p. 2) argues that "green marketing practices implies cooperation between suppliers and sellers, partners as well as rivals, in order to achieve environmentally sustainable development throughout the entire value chain, while at the same time, it internally calls for the cooperation of all business functions in finding the best possible solutions for two major guiding principles: profit and long-term, positive contributions to the environment society and the natural surroundings".

Green Marketing practices entail a serial of organisation functions, including environmentally friendly products and logistics, sustainable promotion and pricing and green consumption (Zhanglan, 2016). In addition, green marketing practices include eco-labelling, product returns programmes, reverse logistics, pollution control, sponsorship of environmental ventures, environmental management systems, reduction of raw materials used in product design, and adherence to green procurement policies (Oburu, 2010). Green marketing practices also entail construction of a bridge to link the business and customer (Ko, Hwang, & Kim, 2013). In addition, Siddique, Hayat, Akbar and Cheema (2013, p. 23) posit that "green marketing practices are shaped by the involvement of the marketers as well as the customer". However, Mishra and Sharma (2010) argue that both the green marketer and green consumer are responsible to eliminate harmful practices to develop successful green marketing strategy.

In addition, Eltebrandt (2010, p. 2) mentions that "green marketing practices offers opportunity to engage people and promote green life styles". Fuentes (2015) clarifies that green marketing practices are green only in the sense that they include different green products and messages. Sahay, Stough, Sohal and Goyal (2006) assert that green marketing practices must direct customer needs towards ecologically safe products and practices through technological innovations. Miryala and Mennakanti (2016) stress that the green marketing practices prove to be healthy, save time, money, and also reduce waste. Amegbe, Owino, and Nuwasiima, (2017) suggest that organisations that engage in green marketing practices may be able to benefit the firm in multiple ways. For instance, firms that have a green orientation are likely to achieve greater financial gains and market share, high levels of employee commitment, increased firm performance and increased capabilities (Amegbe, Owino & Nuwasiima, 2017). This was also supported previously by scholars such as Luo and Bhattacharya (2006), who stated that green marketing leads to increased customer satisfaction, greater firm value and can reduce the undesirable risk, and Lash and Wellington (2007) who affirmed that organisations attain benefit from green practices through cost savings.

Moreover, in a study conducted by Ogunmokun, Tripolitano, and Rose (2012) revealed that those organisations with high levels of green marketing practices outperformed organisations with low levels of green marketing practices in terms of after tax return on sales; business's total sales growth, overall business's performance, competitive position or advantage and market shares. Furthermore, Eneizan, Wahab and Bustaman (2015) indicate the advantages of pursuing green initiatives, such as larger financial gains and market share, high levels of employee commitment, and competitive advantage.

4.5 Green packaging

According to Isa and Yao (2013), packaging plays an important role in preserving, protecting and marketing products during their storage, transport and use. The packaging of a product can serve as the first step in minimising the environmental impact of the product, an additional means of making the product more environmentally friendly and as an important branding tool to help consumers differentiate the product as being an eco-brand (Synodinos 2014). According to Adebanjo (2000), powerful marketers seek greater demand on packaging in order to satisfy consumers' needs. Quoquab, Thurasamy and Mohammad (2017) point out that packing is costing, thus the producers, the consumers and the activists search for cost-efficiently, environmentally friendly and sustainable packaging focus on functionality, cost-effectiveness and support of long term human and ecological health. Therefore, the combination of green and packaging would be an interesting topic for marketers who are targeting a green segment of the market (Isa & Yao, 2013). In addition, Rao and Bhargav (2016) say that consumers are increasingly demanding green packaging. Green packaging which is the explicit phenomenon in most instances, has to do with suitable packaging that reduces environmental damage (Sambu, 2014). Green packaging is also known as sustainable packaging (Kumar, Agarwal & Singh, 2017). It is the development and use of packaging which results in improved sustainability of products (Kumar, Agarwal & Singh, 2017). Green packaging means that the containers are not affecting future generations and must not go to waste and reduce the use of underground resources, respect human needs in terms of pay, and working conditions (Quoquab, Thurasamy & Mohammad, 2017).

According to Mohamed (2016), green packaging is the use of manufacturing methods and materials for packaging of goods that has a low impact on the environment and energy consumption. Green packaging is not only related to the reduction of packaging; it also involves the use of sustainable, biodegradable packaging and recycled materials to reduce environmental impact and ecological footprint (Mohamed, 2016). According to Khan, Hussain and Ajmal (2016, p. 94) “green packing involves reducing the size, shape and weight of packaging and the use of environmentally friendly materials”. It can be defined as a way to package products that minimises impacts to the environment (Kassaye, 2001). Carlson (2015) points out that sustainable or green packaging is packaging that is benign; it does not pollute, use up resources or harm the environment.

According to Chiellini (2008), green packaging causes less damage to the environment than other forms of packaging, it is ‘environmentally friendly’. Emmett and Sood (2010) agree that green packaging results in less damage to the environment than the traditional forms of packaging as packaging waste is one of the highest sources of environmental degradation; there are therefore big opportunities for improvement. Therefore, by switching to green packaging, organisations will allow their products to gain a public image (Khan, Hussain & Ajmal, 2016). Ho, Shalishali, Tseng and Ang (2009) identified that green packaging can reduce material useage, improve space utilisation and reduce the handling time. Likewise, Emmett and Sood (2010) offer three key benefits of green packaging which are as follows:

More public demand for the use of safe and appropriate packaging materials will benefit the environment; Increase in customer satisfaction through having clean neighbourhoods as green packaging results in less waste accumulation and easier recollection; Enhanced goodwill and perception as a socially and environmentally responsible organisation to end users.

Chiellini (2008) clarifies that there are three types of green packaging which are reusable, recyclable and biodegradable packaging. However, Hartmann and Ibáñez (2006) claim that green packaging can be in term of reuse, reduce and recycle. The other additional one R is considered as replace. So, these 4Rs are the good examples for the packaging. Figure 4.1 shows a diagrammatic illustration of green packaging process with special emphasis on the 4 Rs.

Figure 4.1: Green packaging consciousness

4.5.1 Reuse

The first R which is reused packaging is the situation where an organisation is able to cut the cost whereby they are just used the existing packaging, such as a bottle. Prendergast, *et al.* (2001) mentions that this action (reused) is gaining positive feedback from the interviewees where they like to use and reuse packaging. In fact, it is also good for the environment because there is no pollution and the business is able to avoid insufficient raw material. Chiellini (2008) points out that reusable packaging, such as glass bottles, can be cleaned and reused. The reuse of packaging can be found in reusable, collapsible shipping containers (Kroon & Vrigens, 1995).

4.5.2 Reduce

According to Rao and Bhargav (2016), reduce means decreasing the use of packaging with less material, but stronger and thinner material. It also means bringing down the packages to their optimal sizes and weight (Rao & Bhargav, 2016). A reduction of packaging material is positive for the environment, as well as the supply chain due to the reduction in transportation and storage cost (Schvaneveldt, 2003). Moreover, Sambu (2016) points out that there are a number of ways in which packaging can be reduced without compromising the primary performance of the packaging as well as reducing the total cost i.e. sell in larger unit sizes, sell refills, reduce the thickness of the packaging material, switch the packaging to a material of which less is needed, and/or use efficient design formats.

4.5.3 Recycle

Recycling is defined as the reuse of materials from returned products without affecting the product identity (Kapetanopoulou & Tagaras, 2011). Recycling practices result in improving their environmental performance by complying with environmental standards and conserving resources, and thus building their environmentally-friendly image in the market (Eltayeb, Zailani, & Ramayah 2011). Recycling of packaging is increasing day by day and according to an estimate, around 75 percent of used packaging that is made out of plastic, wood, glass or steel is used for recycling packaging (Saad & Abdullah, 2013). Where the packaging cannot be collected and reused by the company due to the nature of the transaction or of the packaging, then it should be easily recycled through the most efficient and environmentally friendly method of putting it back in use for either the same or similar products (Emmett & Sood 2010). Chiellini (2008) points out that recyclable packaging is made of materials that can be used again, usually after processing, such as glass, metal, card and paper. In addition, recycling of green packaging has become important for us and our environment both, and we should apply it to our everyday lives as we are wasting packaging at a much higher rate than ever before (Saad, & Abdullah, 2013). Rasi, Abdekhodaee and Nagarajah (2010) conducted an empirical study of environmental initiatives implementation in the Malaysian Small and Medium Enterprises' (SMEs). Rasi, Abdekhodaee and Nagarajah (2010) specified that recycling activities give SMEs additional income and most SMEs often take this opportunity to achieve both environmental performance, as well as cost saving.

4.5.4 Refill

The refillable packaging is one of environmental friendly packaging (Saad, & Abdullah, 2013). According to Darlow (2003), this type of environmental friendly packaging has been suggested for a long time as a potential way for solving wasting packaging problem. Lofthouse and Bhamra (2006) found that most of the customers prefer to use the refill packaging on convenience products because these packaging systems are cost effective and the packaging is quick and easy to use it. However, some refill packaging can make the customer feel unsatisfied with some of factors that can influence them, for example, bad quality of product in a poor quality of packaging (Lofthouse & Bhamra, 2006).

4.6 Green advertising

Companies can show environmental sensitivity by using several strategies; one of these marketing tools can be environmental or green advertising (Sheehan & Atkinson, 2016). Green advertising is related to communicating organisational commitment towards sustainability, environmental initiatives of companies and green product attributes in the market (Ghodeswa & Kumar, 2014). In addition, Green advertising is advertising which aims to convince consumers that they should purchase a particular product because it is good for the environment (Kumar, Agarwal & Singh 2017). In addition, Schmuck, Matthes, Naderer and Beaufort (2017) point out those green advertisements address the relationship between products or service and the natural environment, advocate an environmentally responsible lifestyle, and highlight a corporate environmental image or responsibility. According to Kumar and Kumar (2017, p. 71) "green advertising is an important facet of green marketing that communicates greenness in products, services, practices and processes of organisations". It refers to the appeal that includes ecological, environmental sustainability, or nature-friendly messages targeting the needs of environmentally friendly consumers (Kumar & Kumar, 2017).

Makhutla (2014, p. 16) defines green advertising as "a social marketing effort by companies to promote a product or service from a green lifestyle perspective and to improve the image of the company using environmental activities". He further explains that green advertising is a plain link between a product and an organisation's service to the environment. Jaju (2016) suggested that green advertisements contribute in translating the consumer's perceived value of green products into purchases. According to Cho (2012), green advertising is defined as any advertisement that meets one or more of the following criteria: (a) explicitly or implicitly addresses the relationship between a product or service and the ecological environment, (b) promotes an environmental lifestyle with or without highlighting a product or service, or (c) presents a corporate image of environmental responsibility. Green Advertising is advertising created to influence the homemakers to buy and use environmentally friendly products in their daily activities (Tehrani 2011). Alniacik and Yilmaz (2012) maintain that green advertising is different to advertising, generally, the most pointed difference is:

- Advertising is often abstract and gives consumers understanding about the basis of green advertising.
- Message in advertising more clearly then advertising generally to make the consumer understand about environment concerns and also give information about product life cycle, production made from environmentally friendly materials and environmental friendly logo contained in green advertising

- Messages in green advertisements intend to describe product features, prices and value for money, product availability and accessibility, and availability and accessibility of product-related information (Leonidou, Katsikeas, & Morgan, 2013). Ahuja (2015) elucidates that green advertising is considered to be a tool for sustainable and continuous economic development of a nation.

4.6.1 Intention of green advertisements

The intention of green advertisements varies from communicating simple, crisp and general environmental information about products to engaging consumers with company representatives and products (Kumar, 2017; Benoit-Moreau & Parguel, 2011). Therefore, the next sections are centred on the four categories of green advertisement intention.

4.6.1.1 Intention to communicate corporate environmental approaches

Nyilasy, Gangadharbatla, and Paladino (2014, p. 694) explained that corporations engage in green advertising for any of the following reasons: ‘‘(a) the emergence of a green consumer segment, (e.g., (b) the greening of other stakeholder groups, notably owners [and/or stockholders], and (c) the increase in responsible business development’’. Deducing from the the reasons why corporations engage in green advertising, it is clear that such strategies can be part of a firm’s much broader corporate social responsibility initiatives (Nyilasy, Gangadharbatla, & Paladino 2014). According to Wahba (2012) as well as Cox (2008), green advertising intends to present a corporate image of environmental responsibility. Ahonen, Hansen, Heikki and Karna (2001, p. 57) explicate that “some companies recognise that green marketing is an essential tool to communicate environmental advantages linked to their products and processes and are therefore attempting to ‘portray’ a green identity and/or brand image”. Consequently, green advertising is becoming common practice in today’s society, across many product categories and sectors (Grillo, Tokarczyk & Hansen, 2008). Moreover, Kumar (2017) elucidates that “advertisements with the intent to communicate corporate environmental approaches incorporate information related to environmental vision, mission, values, objectives, goals, strategic actions and policies, sustainability strategy, principles of doing business, compliance to national and international environmental guidelines, and efforts of developing sustainable culture”.

4.6.1.2 Intention to develop believability towards environmental claim

Since green advertising makes use of the environment claims, it is necessary to understand what its meaning is. Scammon and Mayer (1995, p. 33) point out that “an environmental claim is a statement by a seller regarding the impact of one or more of its brand attributes on the natural environment". Examples of general environmental claims would include terms such as "environmentally friendly" "safe for the environment," and "environmentally responsible" (Sheehan & Atkinson, 2016). Deducing from the aforementioned explanations, Kumar (2017) points out that advertisements with this intention, aim at developing a reliance on environmental information they provide. This can be explained with broadly two approaches. One is, advertisements distinctly emphasise environmental recognition and certifications awarded to companies' products and processes. The other is, advertisements mention about other sources of information that validate environmental claims. For example, advertisements tend to advise consumers to access specific web links that provide environmental information related to companies' product, processes and performance.

4.6.1.3 Intention to inform consumers

Pranee (2010) simply states that green advertising's aim is to inform clients about the environment aspects of companies' products and services. Green advertising has a positive impact on consumers' purchase intentions and builds strong trust between the two (Ahuja 2015). According to Jarin, Rahat and Kashem (2014), a firm must use green advertisement by creating green billboards, green buntings, and posters, etc. This type of advertisement creates consumer consciousness among consumers toward green products if this is developed by using some emotional appeal on environment scenarios, green colour, and green concepts in their advertisement (Jarin, Rahat & Kashem 2014).

4.6.1.4 Intention to engage consumers

"Green advertising helps to attract consumers by highlighting green features and eco- friendly products that are safe for environment as well as consumers" (Ahuja, 2015, p. 42). In addition, green advertising has a positive impact on consumers' purchase intentions and builds strong trust between the two (Ahuja, 2015). In addition, Kumar, (2017) suggests that advertisements with the intention of engaging consumers refer to building and managing company-consumer relationships. Such advertisements invite consumers for company-consumer and product-consumer interactions in many ways, such as inviting consumers to participate in company-sponsored public events (Kumar, 2017).

4.7 Green innovation

The classic definition of green innovation offered by Dangelico and Pujari (2010) is a multi-faceted process wherein three key types of environmental focus – material, energy, and pollution – are highlighted, based on their major impact on the environment at different stages of the product's physical life cycle. For Small and Medium Enterprises (SMEs), green innovation includes the development of new, more environmentally-friendly products and changing process or production method (Oxborrow & Brindle 2013). Green innovations can be categorised into green product innovation and green process innovation (Chan 2011; Rennings & Rammer, 2009). A study by Kurapatskie and Darnall (2013) revealed that companies who develop new green products and processes enjoy more benefits than companies who just modify existing products and processes. The subsequent sections are focused on comprehensive elucidations and deliberations of green product innovation and green process innovation.

4.7.1 Green product innovation

Dangelico and Pujari (2010) elucidate that green product innovation has been recognized as one of the key factors to achieve growth, environmental sustainability, and a better quality of life. Understanding green product innovation as a result of interaction between innovation and sustainability has become a strategic priority for theory and practice (Dangelico & Pujari, 2010). According to Zhu, Sarkis, and Lai (2013), in 1994, customers were willing to pay approximately 13% more for green products. Green product innovation pertains to the evaluation of a product's economic, technical and commercial feasibility (Van den Berg, Labuschagne, & Van den Berg, 2013). Green product innovation often incorporates the modification, redesign, and creation of new products that aim at green innovation, which are primarily related to technological changes in production processes (Kong, Feng, & Ye, 2016). In addition, Lin, Tan and Geng (2013, p. 103) define green product innovation as "products that reduce the negative impacts and risks to the environment, utilize less resources and prevent waste generation in the product's disposal phase". In other words, green product innovation not only protects the natural environment, but also provides environmental benefits higher than conventional products (Lin, Tan & Geng, 2013). Futhermore, green product innovation refers to the application of innovative ideas, leading to the design, manufacturing, and marketing of new products whose newness and greenness significantly outperform conventional or competing products (Alsughayir, 2017).

Huang and Wu (2010, p. 1540) as well as Santamaria, Nieto, and Miles (2012, p.145) explains that green product innovation has to do with a "product that is related to environmental innovation, including the innovation in product that are new or that offer a significant improvement on the basic characteristic, technical specification, incorporated software or any components or materials and the product that introduced are involved in energy-saving, pollution-prevention, waste recycling, no toxicity, or green product design, using less or non-polluting/ toxic materials, improving and designing environmentally friendly packaging for existing and new products, recovery of company's end-of-life products and recycling". Claudy (2011, p. 20) also mentions that "green product innovation is an iterative process, initiated by the opportunity for environmental improvement of the product's physical lifecycle via a technology-based invention, which leads to the development, production and marketing tasks striving for the commercial success of the invention". Thota and Munir (2011, p. 130) argue that "green product innovation begins during product or design development and a green company chooses materials that cause the least amount of pollution and consume the least amount of energy as well as resources". Additionally, Wahid and Lee (2011) point out that conventional product innovation does not truly focus on environmental improvement, while green product innovation's purpose is to reduce and avoid environmental burdens. Consequently, green product innovation can be conceptualised as any innovations in products which strive to protect or enhance the natural environment by conserving energy, resources and reducing or eliminating the use of toxic agents, pollution and waste (Zahari & Thurasamy, 2012; Ottman, Stafford & Hartman, 2006).

According to Shapfi (2015, p. 9) "green product innovation is a multi-faceted process wherein three key types of environmental focus materials, energy, and pollution are highlighted based on their major impact on the environment at different stages of the products physical life cycle manufacturing process, product use, and disposal". The green product innovation measurement consists of three main elements related to new product development. First, the company must choose the materials that produce the least amount of pollution, second, the company has to use the least amount of materials to manufacture products, and third, the company has to circumspectly deliberate whether the product is easy to recycle, reuse, and decompose (Guoyou, 2013). The development of green product innovation is becoming a need and an opportunity for firms to reduce the negative influences of production on the environment and to gain competitive advantage with competitors (Dangelico & Pontrandolfo, 2010). In other words, green product innovation has become the critical basic for improving large productivity by maintaining their competitive advantage and achieving larger market share (Shapfi, 2015).

According to Adialita (2014), the current trend of green product development, however, is not without obstacles and pitfalls. First, many environmental attributes, such as fuel economy and recyclability, have effects that conflict with traditional product attributes or performances, such as safety, material consistency, and convenience. Second, despite the introduction of green products as alternatives to already existing ordinary products, many customers still stay with ordinary products with low environmental quality because of cost and performance considerations or ignorance and disbelief (Adialita, 2014). Third, like most innovation activities, green product development is a task characterised by high levels of risk and uncertainty. Often the R&D investment is costly and its return is highly uncertain (Chen, 2001). However, through the efficient use of resources, low impact and risks to the environment, and waste generation prevention since their conception stage, green products offer high quality and low overall costs to the consumer and society (Albino, Balice, & Dangelico, 2009).

Besides the obstacles that are associated with green product innovation, Chiou *et al.* (2011) elucidate that innovative products which are green enhance firm profitability as products marketed under the green and innovative concept may bring in new customers and fresh revenue. Moreover, firms that engage in green product innovation are in fact environmental leaders because they can introduce environmental advances in their products and processes and be environmentally proactive (Gallagher, 2012). Deducing from the authors' explanations, it can be noted that green product innovation has to do with the introduction of a product that is new or has significantly improved characteristics that do not harm the green natural environment.

4.7.2 Green process innovation

Green process innovation is the process that is assumed to happen when it has implemented new or significantly improved production processes, new distribution methods or support activities for its goods and services and the process is related to energy-saving, pollution-prevention, waste recycling, or no toxicity, low energy consumption, recycle, reuse and remanufactured material and use of cleaner technology to make savings as well as prevent pollution (Conding, Zubir, Hashim, Lanang, & Habidin 2013). In a similar vein, green process innovation is defined as the application of innovative ideas leading to the adoption of production processes and/or management practices that create less or no negative ecological, human health, social, cultural and economic impacts (Alhadid & As'ad, 2014; Chen 2011). According to Conding, Habidin, Zubir, Hashim, and Jaya (2012), green process innovation is defined as improvements in the production process, resulting in reduced environmental impacts. According to Huang and Wu (2010) as well as Santamaria, Nieto, and Miles (2012), green process innovation refers to "the process that assumed to happen when it has implemented new or significantly improved production processes, distribution new methods or support activities for its good and services and the process is related to energy- saving, pollution- prevention, waste recycling, or no toxicity, low energy consumption, recycle, reuse and remanufacture material and use of cleaner technology to make savings and prevent pollution".

Green process innovation refers to the modification of the current operating processes and systems, aiming to produce new or significantly improved green products which can reduce environmental impact (Meeus & Edquist, 2006). According to Xie, Huo, Qi and Zhu (2016), green process innovation refers to the improvement of existing production processes or the addition of new processes to reduce environmental impact. "Green process innovation is defined as the performance of process innovation that is related to energy saving, pollution prevention, waste recycling, or reduced toxicity" (Nanath, & Pillai, 2017, p. 6). Additionally, Ziegler and Nogareda (2009), as well as Rennings and Ziegler (2004), believe the green process innovation is a special process innovation which could avoid or reduce the environmental burden. In general, the basic principles of green process innovation definition are as follows: less resources depletion; less waste; and less environmental pollution (Bi, Bao, & Feng, 2013).

Furthermore, Diwekar and Shastri (2010) contend that green process innovation does not only include traditional process engineering related issues such as process design, but also the associated ecological and social aspect of processes. According to Wahid and Lee (2011), the key characteristics for green process are that the end manufactured product contains non-hazardous substances and was processed without hazardous chemicals. Besides that, green process also uses the energy and resources during production efficiently and sensibly (Wahid & Lee, 2011). This will reduce the chances of environmental incidents and result in quality improvement and more profitable business (Kuo, 2007). Green processes innovations are also known as environmental process innovation which is an introduction of a more environmentally friendly composition of one or more firm internal processes (e.g., water recycling or fuel gas desulphurisation) in this period, irrespective of the realisation of environmental product innovations (Wahid & Lee, 2011; Zieglera & Nogaredac, 2009).

The green process innovation measurements consist of three elements. First, the manufacturing process effectively reduces the emission of hazardous substances or waste, second, the manufacturing process reduces the consumption of water, electricity, coal, and oil, and third, the manufacturing process reduces the use of raw materials (Alhadid & As'ad, 2014; Guoyou, Saixing, Chiming, Haitao, & Hailiang, 2013). Green process innovation includes measures to reduce air and water emissions, improve resource and energy efficiency, reduce water consumption, and switch from fossil fuels to clean energies (Chiou, Chan, Lettice & Chung, 2011). Green process innovation can help manufacturing industries by not only improving their environmental compliance, but also providing differentiation advantages and even improving their financial performance (Cheng, Yang, & Sheu, 2014). Ma, Hou and Xin (2017) note that green process innovation helps to solve environmental problems in the manufacturing process. It can increase resource productivity as well as energy usage efficiency and decrease pollution during production (Ma, Hou, & Xin, 2017).

4.8 Competitive advantage

Competitive advantage is a common theme in the social sciences and business literature. However, despite its prominence in both academic and practitioner fields for the past few years, the concept of competitive advantage continues to be vague (Klein 2002). The issue of ambiguity in the notion of competitive advantage can be attributed to three major factors. Firstly, competitive advantage has its orgin in unclear definitions or different meanings (Rumelt, 2003). Secondly, different research streams on competitive advantage (e.g., the activity-position view, the resource based view, the relational view) exhibit differences in their assumptions, units of analysis and strategic implications (Dyer & Singh, 1998). Thirdly, even scholars of the same research stream, -i.e. The resource based view –have changed their explanatory logics over time (Stoelhorst & Bridoux, 2007). This section first discusses the concept of competitive advantage. Then, an overview of the three major research streams of competitive advantage is presented. Lastlty, the common issues related to competitive advantage are discussed.

4.8.1 The concept of competitive advantage

According to Rahim, Fernando, and Saad (2016), the capacity of an industrial undertaking to generate a distinguishable unassailable position over its competitors through management decisions is termed as "competitive advantage". In addition, competitive advantage of a business refers to a firm's ability to earn consistent profits over rival firms in the industry by delivering a service which cannot be matched easily (Arseculeratne & Yazdanifard, 2013). Gaining competitive advantage in terms of marketing is one of the objectives, on which companies are focusing, in an attempt to change psychological and social perceptions of society (Shakeel & Khan 2011). Bulankulama, Khatibi and Herath (2014) define competitive advantage as an organisational capability to perform in one or many ways that competitors find difficult to reproduce now and in the future. Competitive advantages are company assets, attributes, or abilities that are difficult to duplicate or exceed, and provide a superior or favourable long-term position over competitors (Faulkenberry, 2012).

Competitive advantage is something to do with more competitive markets; lower barriers to entry or simply a larger number of firms may give an industry an advantage in competing with foreign rivals (Gupta, 2015). Lazenby (2015) is of the view that competitive advantage is to have something that your competitors do not have; it is the edge that an organisation has over others. In addition, Daft (2012) states that competitive advantage is what sets the organisation apart from others and provides it with a distinctive edge in the market place. Kraja and Osmani (2015) argue that a firm's competitive advantage is a function not only of the value, inimitability, and non-substitutability, of its resources and capabilities, but also of their durability and superiority. Competitive advantage is defined as "a company occupies some position where the competitors cannot copy its successful strategy and the company can gain sustainable benefits from this successful strategy" (Nanath, & Pillai, 2017:4).

Arseculeratne and Yazdanifard (2014, p.130) point out that "competitive advantage of a business refers to a firm's ability to earn consistent profits over rival firms in the industry by delivering a service which cannot be matched easily". In order to gain competitive advantage, a green marketing strategy has to address some fundamental areas of importance such as market segmentation, developing a green product, green positioning, setting green prices, application of green logistics, proper waste management, launch of green promotion, forging green partnerships and in essence, having the right green marketing mix (Arseculeratne & Yazdanifard, 2014).

Murimbika and Urban (2013) stipulate that competitive advantage can be achieved through scanning or environmental scanning. Therefore, it is vital for businesses to be capable to change a mix of company resources into capabilities that will enable the business to compete effectively and efficiently (Mat & Razak, 2013). Competitive advantage is strengthened by innovation (Mat & Razak, 2013; Adeniran & Johnston, 2012). Moreover, competitive advantage depends on identifying new and emerging opportunities in the marketplace where conventional strategic thinking based on predictable environments is no longer effective (Murimbika & Urban, 2013). In this view, business owners and managers should be super innovative and proactive in determining apt mechanisms to be used in order to remain competitive.

A high degree of planning flexibility allows an organisation to respond proactively to environmental changes, thereby allowing opportunity and exploitation in search for a sustainable competitive advantage (Murimbika & Urban, 2013). A competitive strategy provides a starting point for further improvement owing to volatilities in the marketplace (Ganapavarapu & Prathigadapa, 2015). Additionally, from a dynamic capabilities outlook, competitive advantage is attained through continuous development and reconfiguration of valuable resources (Adeniran & Johnston, 2012). Similarly, resources that are important, unique and non-substitutable make it probable for businesses to create and maintain competitive advantages (Horng & Huang, 2012; Liu et al., 2014). Given that, the environment within which the business is operating and its resources should be considered when mapping out a robust competitive strategy that will yield positive results.

4.8.2 Perspectives of competitive advantage

Similar to a variety of notions of competitive advantage, researchers examine competitive advantage from different perspectives. In this subsection, three major research streams of competitive advantage, which cover both internal and external attributes of a firm, are discussed. They are the activity-position view, the resource-based view and the relational view.

4.8.2.1 Activity-position view

According to Sheehan and Foss (2009), the activity-position view of the firm is a comprehensive strategic framework which analyses firm-level competitive advantage using activities as the unit of analysis. Yang, Nagar and Joshi (2017) argue that the firm's superior performance mostly results from its strategic choice that provides the firm a better positioning in the industry structure. In particular, Yang, Nagar and Joshi (2017) emphasise that competitive advantage resides in business activities and activity systems, rather than firm's resources. Furthermore, Sheehan and Foss (2009) advocate that it is only by breaking the firm into activities – such as receiving, manufacturing, storing, transporting, hiring, training, purchasing, and marketing – that it is possible to identify the potential sources of competitive advantage. Moreover, Yang, *et al.* (2017) explicate that the activity-position view is the classic view of competitive advantage and the researchers who brought forward this view are known to be the pioneers of the theory of competitive advantage.

4.8.2.2 Resource-based view

Kraaijenbrink, Spender and Groen (2010) are of the view that resource-based view (RBV) aspires to explain the internal sources of a firm's sustained competitive advantage (SCA). Tehseen and Ramayah (2015) advocate that the firm's Resource Based View (RBV) suggests that a firm can distinguish itself from its competitors and can create sustainable competitive advantage only if it possess valuable, rare, and inimitable resources. Its central proposition is that if a firm is to achieve a state of SCA, it must acquire and control valuable, rare, inimitable, and nonsubstitutable (VRIN) resources and capabilities, plus have the organisation (O) in place that can absorb and apply them (Barney, 2002). "The resource-based view argues that a firm's competitive advantage comes from firm-specific resources that are valuable, rare, imperfectly imitable, and non-substitutable" (Wu, 2013, p.22). Furthermore, the RBV suggests that the resources possessed by a firm are the primary determinants of its performance, and these may contribute to a sustainable competitive advantage of the firm (Akio, 2005).

4.8.2.3 Relational view

Wu, (2013, p.22) states that "the relational view addresses the importance of strategic relational resources generated from collaboration between firms, which can be the source of competitive advantage". Turkmen (2013) explains that the relational view implies that relational rents can be generated from the joint efforts of alliance partners that invest in relation-specific assets, share knowledge, combine complementary resources and use effective governance mechanisms. These activities forge an idiosyncratic relationship that is difficult to imitate for competitors, thus giving a competitive advantage (Turkmen, 2013). Furthermore, Wong, (2011) notes that the relational view of resources-based theory argues that the resources generating competitive advantage can span firm boundaries and be embedded in inter-firm relations. Hence, the sources of competitive advantages are not only from the internal resources owned by a firm itself, but also from the external resources in the relational networks (Arya & Lin, 2007).

4.8.2.4 Sources of competitive advantage

Focusing from the relational view, a few sources of competitive advantage are discussed. Hitt, Keats and Demaiie (1998) gave six ways to achieve competitive advantage. They said a firm can gain competitive advantage either by exercising strategic leadership (it is a leader by the management personnel of the firms), or by building the dynamic core competences of the firm. They can also do so by focusing and developing human capital or by making effective use of technology. The firms can also gain advantage by engaging in valuable strategies or by developing new organisational structures and culture as indicated in figure 4.2. Another important view point is given by Wen-Cheng, Chien-Hung and Ying-Chien (2011), the authors suggested three major sources of competitive advantage in their study, i.e., technology and innovation, human resources and the organisational structure of the firm. Consolidating all perspectives and wellsprings of competitive advantage, it can be expressed that if manufacturing SMEs are to utilise core competencies, for example, the green marketing practices distinguished in this investigation, they can have an upper hand in comparison to their competitors. Figure 4.2 demonstrates the different sources of competitive advantage for firms.

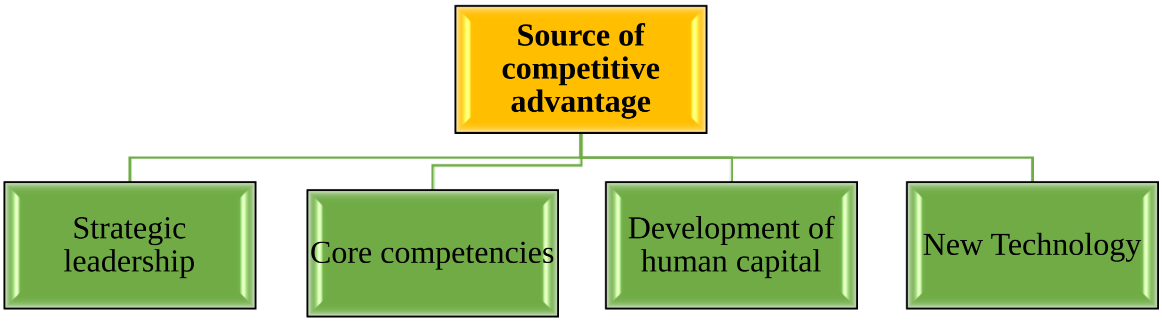


Figure 4.2: Sources of competitive advantage

Source: adapted from Wen-Cheng, Chien-Hung and Ying-Chien (2011).

4.8.3 A short examination of the three views

The three views of competitive advantage that have been mentioned have diverse key ramifications. In light of market perfection and competition environment, the activity-position view advocates that leaders should settle on suitable key decisions in the business position. On the contrary, the resource-based view centres on considering creating vital assets or capacities inside the firm. Having an indistinguishable point of view of market perfection from the resource-based view, the relational view underlines firm collaborations and key associations. From the aforementioned elucidations, the three views concentrate on competitive advantage, however they display dissimilarities in their suppositions, units of examination, and vital ramifications. Wu (2010) condenses their disparities and delineates that key ramifications among the three research views might be opposing. For example, the relational view energises imparting profitable information to key accomplices, though the asset based view has a tendency to secure significant learning inside the firm and sees implicit learning as a type of key asset. Additionally, the relational view underpins close joint efforts between the firm and its suppliers to create social points of interest or to generate relational advantages. However, according to the activity-position view, this behaviour may impede the focal firm's bargaining power.

4.9 Business performance

It is imperative to have an understanding of the meaning of business performance. Business performance is an important component in investigating organisational phenomena (Ho, Ahmad & Ramayah 2016). Uddin *et al.* (2015) indicate that business performance is important to any business firm. Liu, Ge and Wang (2014) state that business performance is the basic embodiment of enterprise management, effectiveness, and efficiency. Further, to attract satisfactory business performance is the basis for the enterprise's survival and the principal reason for the existence of the firm (Liu et al., 2014). Davood and Morteza (2012) view business performance as the ability of a firm to generate acceptable results and actions. Shehu and Mahmood (2014) define business performance in terms of the market growth, increase of market share and the industry's relative growth. Mark and Nwaiwu (2015) explain that business performance is the effort expended by a business firm in achieving its objectives of customer satisfaction, employee satisfaction, societal satisfaction, and ultimately, profitability. In addition, business performance is a measure of how a manager efficiently and effectively utilises the resources of the firm to accomplish its goals as well as satisfying all the stakeholders (Jones & George, 2009). Furthermore, O'Regan, Sims and Gallear (2008) point out that business performance can also be analysed by a business' ability to produce results in relation to set targets. Wongrassamee, Gardiner and Simmons (2003, p. 17) show that "business performance refers to how well the business satisfies the needs of employees, customers and other stakeholders, as well as its ability to achieve its planned business goals". Gibson and Cassar (2005, p. 208) put forward a comparable position by expressing that "business performance is performance about how much the set targets are accomplished".

Inferring from the above descriptions, business performance incorporates the sufficiency and capability of a business in achieving the set targets. By mulling over this, business associations need to screen their execution persistently. The need for measuring business performance is discussed in the following section.

4.9.1 Why business performance is measured

Performance measurement plays a vital role in translating an organisation's strategy into desired behaviours and results (Bourne, Neely, Mills & Platts 2003; Silvestro, 2014; Vij & Bedi, 2016). As indicated by Sandada (2012, p. 132) "performance measurement is basically a relative procedure whereby diverse parts of performance are looked at". This comparison, as indicated by Sandada (2012), offers three advantages. In the first place, it empowers an association to look at the execution of one day and age with another. Also, the business can think about the execution of one business, division or industry with another, and finally, it deliberately helps the business to analyse every single elective game-plan and their normal advantages, and after that, pick the best one.

Furthermore, Ogiogio (2005) explicates that performance quantification is paramount to discovering the degree to which targets have been accomplished at various times. In outline, as per Ogiogio (2005), performance measurement allows establishments to quantify, screen and assess performance, to characterise and set benchmarks that assistance to actualise performance change designs, to orchestrate execution following a framework, manage authoritative development and advancement, and to make accountability for results easy. Bititci, Turner, and Begemann (2000, p. 696) point out that "the component of dynamic execution estimation frameworks incorporate, ceaselessly observing the advancements and transmutes in both the inside and outer situations, going about as a survey framework to check whether the goals and needs are met and as an inner arrangement framework that conveys the overhauled targets and needs to demonstrate business performance".

Robinson, Anumba, Carrillo and Al-Ghassani (2005) see business performance measurement as critical for the survival and development of business sodalities. The authors express that performance quantification guarantees ceaseless change as the advance in objective accomplishment is always performed. The authors maintain that if there are issues, these performance measurement frameworks give systems to actualising change endeavours. From the perspectives communicated by Robinson, Anumba, Carrillo and Al-Ghassani (2005) about the performance measurement frameworks, it seems that they agree that organisations need them because this will allow them to understand and improve systems. It also distinguishes the reasons ensures that the correct cuts are made, key designs are executed and that the arrangement between the business and the needs of the market is accomplished. Cocca and Alberti (2010) considered the performance measurement practices of SMEs in Italy. The reason for the examination was to establish a structure that SMEs can utilise to evaluate their performance measurement framework with the goal that they can enhance their execution. The examination contends that the essential condition for a business sodality to perform well is having the capacity to quantify its execution viably. The premise placed by Cocca and Alberti (2010) is that a business can just oversee what it can gauge or a business gets what it measures. What it infers is that the business can take remedial action on problems by watching for advance warning of impending concerns. (Cocca & Alberti 2010:186).

Halíř (2012) elucidates that the performance of the company has been increasingly perceived as a potential for future prosperity and growth, rather than as a simple glance in the past. Wagner (2005) points out that the main task of quantifying performance is to find answers to questions how our present and future decisions and actions contribute to the future benefit. The results in Hass, Burnaby and Bierstaker's (2005) study show a variety of ways in which business performance quantification can avail the business. These benefits are that quantifying business performance allows the business to develop a strategic plan, to assess the extent to which the goals of the business are achieved, to monitor daily business operations in order to rectify any deviations from set standards, and to evaluate employee performance.

A study of the performance in Amalgamated Kingdom (UK) hospitals by Basu, Howell and Gopinath (2010) presents the results showing that performance quantification can help hospital administrators evaluate their practices, values, notions so that they can identify shortfalls and take remedial action. The study further reveals that performance quantification ascertains opportune allocation and utilisation of resources. Moreover, Tangen (2003, p.347) further states that "measuring business performance ascertains that the business adopts a long-term focus and increases efficiency in its resource allocation as well as its operations".

4.9.2 Measures of Business Performance: An Overview

Business performance (BP) is viewed as both an objective measure and a subjective measure. "Objective measures of performance are mainly economic, while a subjective measure relates to non-economic aspects of performance" (Dubihlela 2012, p.98). As indicated by Matsuno and Mentzer (2000, p. 8), "business performance should be viewed not only as economic performance (concrete absolute figures representing organisational performance) but also as non-economic performance" (customer satisfaction, customer retention, social acceptance, corporate image, and employee satisfaction). Zulkiffli (2014) distinguished the use of subjective and objective measures according to three aspects: indicators, measurement standard and scale anchors as shown in Table 4.2.

Table 4.2: Differences between Subjective and Objective Measures of Business Performance

Differentiation Aspect	Subjective Measures	Objective Measures
1. Indicators	• Focus on overall performance	• Focus on actual financial indicators
2. Measurement standard	• Key informants are asked to rate performance relative to their competitors (and/or industry)	• Key informants report absolute financial data (for example, AUD profit per employee)
3. Scale anchors	• Scales range from “very poor” to “very good”, or “much lower” to “much higher”, or “worst in industry” to “best in industry” etc	• Scales are not used

Source: Adapted from Zulkiffli (2014, p. 375).

The following sections focus on the objective and subjective business performance measures**.**

4.9.2.1 Objective business performance measures

According to Merchant and Stede (2007), objective performance assessment is based on numerical calculation of measures, which form the basis for rewarding employees using a salary system that rewards performance. In addition, Dawes, (1999) points out that an “objective” measure would be an actual percentage figure for sales growth or profitability. Objective measure will require businesses to disclose part of their financial information of which most of these organisations are not willing to provide since it is private and confidential (Gomera, 2016). This next section discusses some of the major variables that are used as part of financial or objective measures of business performance.

- **Revenue:** In order for small businesses to grow and prosper, there is generally a search for revenue and profits (Thibault, 2002). Revenues are referred to as the amount of cash received or claims established against customers, stemming from the provision of goods or services by the firm (Thibault, 2002). The income that is generated when an organisation sells a commodity or provides a service to its consumers is known as revenue (Nelson, 2015; Gomera, 2016). Others go further to mention that revenue is the total sum of money a firm receives within a given period made up of sales, discounts and deductions of returned commodities (Gomera, 2016; Longenecker, Petty, Palich & Loy, 2013; Sinha, 2012). Businesses strive to generate an excess of revenues over expenses in order to operate at a surplus. Therefore, if a business is capable of increasing its revenues while maintaining its current levels of expenses then it will accrue a greater surplus. Thus, as illustrated by the following equation:

Revenue (R) = Price (P) X number of units sold (N)

- **Net income:** Alvi and Ikram (2015) assert that net income or total income are obtained after deducting all the costs incurred during the performance of the business which includes amortisation, depreciation, salaries, wages, rents, taxes, interest, and other expenses. Furthermore, net income is used to measure the earning per share of the company with the help of the number of the shares issues by the company (Alvi & Ikram, 2015). The amount of net income is obtained when the organisation has adjusted the revenue amount for costs or expenses (Rich, Jones, Heitger, Mowen & Hansen, 2011). The cost of operations, the wear and tear of equipment (depreciation), taxes and interests are among some of the expenses that are adjusted for (Gibson, 2010). The amount of net income is also found in the income profit and loss statement of the organisation (Damodaran, 2012). The figure is very important since it is a measure of how profitable an organisation has been over a given period of time (Longenecker *et al.,* 2013). The equation bellow illustrates how net income is calculated:

Net Income (NI) = Revenue (R) – Combined cost of operating an organisation (CCOO)
Where CCOO = {cost of operation (CO) + depreciation (D) + taxes (T) +interests (I)}

- **Cash flow:** According to Ajupov, Kurilova and Kovalenko (2015, p. 711) cash flow can be treated as a "distribution in time sequence of income (inflow) and expenditures (outflow) generated during the time horizon of the operations or other object in a certain scale," and the anti-crisis financial management can be considered a management strategy aimed at preventing or overcoming the adverse financial and economic activity of the enterprise through the use of the complex phenomena of administrative decisions, the development and implementation of a special program,e that has tactical and strategic plans, allowing to eliminate the time and trouble to maintain their position in the market. Cash flow is said to be positive when the amount available at the close of the trading period is higher than that was available at the opening (Sinha, 2012). The opposite of this would mean that the cash flow is negative, thus an organisation using more cash than it would have received. The rate of cash flow is increased by many business activities which include; increasing the rate of sales, reduction in cost and expenses, price increments of organisation's good or services, borrowing (acquiring a loan) and sale of asset (Rich *et al.,* 2011).

However, the level of an organisation's cash flow is not a good measure of performance and more so having high levels of cash flow do not mean high profits (Sinha, 2012).

- **Return on equity:** Return on equity (ROE) has been defined and conceptualised differently by various authors and researchers. Nyirenda, Ngwakwe and Ambe (2013:243) define return on equity as "the amount of net income returned as a percentage of shareholders' equity." Alvi and Ikram (2015) are of the view that return of equity measures the profitability of a company with respect to the amount or number of shares invested in a company by a shareholder. It is further stated that ROE‘measures a firm's profitability by revealing how much profit a firm generates with the money invested by shareholders (Nyirenda, Ngwakwe & Ambe, 2013). Additionally, Teitelbaum, McDonald, and Brown (1996) defined return on equity as profits divided by the shareholders' equity and stated that it is a useful tool for investors to measure managerial performance in the firms. Vigario (2005, p. 237) stated that "the return on equity shows how much of the profit generated by the company belongs to the shareholders". He further alluded to the fact that shareholders are always expectant of increases in this measure as it has a direct impact on their investments. In addition, Alvi and Ikram (2015) point out that return on equity can be used by the investors internally to evaluate the performance of the management or to investigate the return on shareholders' investment. It does not only measure the profitability on one share but it also measures the efficiency and effectiveness of the management (Alvi & Ikram, 2015). Return on equity is calculated using the formula:

Return on equity (ROE) = Net Income / owners or shareholders' equity

- **Return on assets:** According to Mukwarami, Nyirenda and Fakoya (2017, p. 141), return on assets (ROA) "represents the profitability of the firm with respect to the total set of resources, or assets, under its control". Additionally, Ongore and Kusa (2013) explicate that return on assets expresses the company's ability to generate profit as a consequence of the productive use of resources and effective management. Furthermore, ROA (as an accounting ratio) has been used as a proxy to firm performance in many studies, such as Waddock and Graves (1997); Hull and Rothenberg (2008:785); Mishra and Suar (2010); Ahamed, Almsafir and Al-Smadi (2014); Dewi, Sudarma, Djumahir and Ganis (2014); Ofori, Nyuur and S-Darko (2014); and Mukwarami, Nyirenda and Fakoya (2017). Another significant aspect about ROA is its link with the firm’s historical performance (Orlitzky, Schmidt & Rynes. 2003). The justification for using ROA in many studies is that it is not affected by the differential degree of leverage present in firms and it is positively correlated to market price (Mukwarami, Nyirenda & Fakoya, 2017). The formula to calculate return on assets is:

Return on assets (ROA) = Net Income (NI) / Total assets (TA)

- **Return on invested capital (ROIC):** The return on capital or invested capital in a business attempts to measure the return earned on capital invested in an investment (Damodaran, 2007). According to Baldwin (2017), return on invested capital (ROIC) is a financial measure of the profitability of a firm or business unit and if it is greater than the business's cost of capital, then reinvestment of earnings increases shareholder value. The ROIC also determines a maximum self-sustaining growth rate for the business in the absence of outside funding (Baldwin, 2017). Furthermore, Bragg (2012) also points out that return on invested capital is a calculation used to examine the efficiency of organisations in distributing the capital it has to profit generating investments. The ratio shows how well the money in an organisation is being used to generate more income (Sinha, 2012). There are various ways for calculating the return on invested capital; one of this way is as follows:

Return on invested capital (ROIC) = [Net Income (NI) – dividends (D)] / Total capital (TC)

Note: dividends are the total amount of income that is set to be paid to shareholders as returns on their investment. Hence, dividends are, in most cases, excluded in the calculation of the ROIC in SMEs.

- **Debt to equity ratio**: Ross, Westerfield and Randolph (2003, p. 80) noted that “debt to equity ratio is a proxy for estimating the level of leverage of a company”. According to Sari and Hutagaol (2009), a company with a high debt to equity ratio may provide higher returns to its shareholders, in line with the risk that is faced by the company compared to other companies with lower debt to equity ratio. According to Werner and Jones (2004, p. 480) “debt to equity ratio shows a proportional relationship between debt and equity”. A lower debt to equity ratio means that total debt is relatively lower compared to total equity (Sari & Hutagaol, 2009). Dividing the total liabilities by the total equity would give the debt to equity ratio. All the components of the debt to equity ratio are found in the balance sheet, hence the ratio is considered to be the balance sheet ratio (Ledgerwood, 2014). The formula shows the calculation:

Debt to equity ratio (DER) = Total Liabilities (TL) / Total Equity (TE)

Long–Term Debt to equity ratio

Damodaran (2012) is of the view that the LongTerm Debt to equity ratio (LTDER) is similar to the debt to equity ratio, the difference only comes in that in the LTDER, the calculations of debt are centralised on long term debt. Rich *et al.* (2011) points out that long term debt is made up of loans and other financial commitments that last for more than one year. Furthermore, Gibson (2010) points out that the long-term debt for a business establishment is comprised of an obtained funding or leasing commitments that are expected to be paid off in a greater than single year's period.

Additionally, long term debt consists of things such as mortgages on corporate buildings and / or land, bank loans, and the biggest item of them all, bonds issued to fixed income investors from whom the corporation raises money in exchange for the promise to return those funds in the future, while paying interest in the meantime (Bragg, 2012; Nelson, 2015). The LTDER is found by dividing the total long-term debt of an organisation by net book value of the organisation's equity (Sinha, 2012). Ledgerwood (2014) also points out that when the ratio is very high that mean that the organisation has high leverage and is thought to be riskier as well. Financing organisations are hesitant to provide financing to organisations with high debt (Longenecker *et al.*, 2013). The formula shows the calculation:

Long-Term Debt to Equity Ratio (LTDER) = Long-Term Debt (LTD) / Total Equity (TE).

4.9.2.2 Subjective business performance measures

The term "subjective" is used to mean that the company's performance score is derived using a scale with anchors such as "very poor" to "very good," or "much lower" to "much higher" compared to competitors (Dawes, 1999). Additionally, Luotonen and Hasselström (2009) assert that subjective performance measurements are based on judgment. Instead of relying on numerical calculations, one evaluates if the results reflect good or bad performance (Luotonen & Hasselström, 2009). The subjective measures are based on the managers' and/or owner's understanding or judgement of organisational performance (Aracioglu, Zalluhoglu, & Candemir 2013; Sandada; Pooe & Manilall 2014; Gomera, 2016). Appendix D shows the instrument which was used for this research and the non-financial or subjective measure is found on section G. The next section discusses some of the major variables that are used as part of subjective measures of business performance.

- **Market performance:** Kariuki (2011, p. 11) points out that "market performance refers to economic results, for example, product suitability in relation to consumer preferences". According to Jayapal and Omar (2017), market performance can be defined as the performance of a firm which can be measured through sales revenue, market share, profitability, competitive advantage, customer satisfaction and loyalty. In addition, Kasemsap (2015:102) argues that "market performance is the behavior of a valuable asset in the marketplace". In addition, Jayapal and Omar (2017) assert that the major focus of SMEs is to improve their market performance which depends on the capability and ability of the SMEs' market orientation. Thus, firms have come up with various strategies in order to improve their market performance. For instance, Robinson (2014, p. 342) notes that "a business that increases its market orientation will increase its performance".

- **Supplier performance:** Wu, Choi and Rungtusanatham (2010, p. 115) define supplier performance as "how well a supplier supplies the required products to the buyer as reflected through operational outcomes such as quality, delivery, responsiveness, cost and technical support". Furthermore, Huang, Yen and Liu (2014, p. 64) posit that "a firm's effort to adequately integrate its supply chain activities has a massive impact on their supplier performance". In addition, supplier performance has been described as a major predictor of reseller satisfaction (Pooe, Mafini, & Loury-Okoumba, 2015; Yilmaz, Sezen & Kabadayi 2004). Thus, well-performing suppliers represent a key factor that businesses should strive to develop and maintain in their long-term sustainability and profit goals (Pooe, Mafini, & Loury-Okoumba, 2015; Sanchez-Rodriguez, Hemsworth & Martinez-Lorente 2005:289). Krause, Handfield and Tyler (2007, p. 528) further suggest that "a supplier performing at optimal level is crucial in enabling the buying firm to reach its performance outcomes in terms of serving its customers more efficiently". A well-performing supplier is likely to remain in the supply chain and grow its relationship with the buying firms – something to which all SMEs should aspire (Pooe *et al.,* 2015).

- **Process performance:** According to Kasse (2008, p. 353) "process performance is a measure of the actual process results achieved when a project follows its defined processes drived from the organisation's set standard processes". Castañeda-Méndez (2012, p. 68) affirms that "process performance is the percent good for a specified period". "It tells you how often you meet customer requirements because a process is supposed to repetitively do the same thing and get the same results" (Castañeda-Méndez 2012, p. 68). In addition, Brocke and Rosemann (2014) argue that process performance refers to classical measures such as time, budget and process efficiency. To achieve these, organisations apply managerial practices that are known from process management, such as process automation and process optimisation (Brocke & Rosemann, 2014).
- **People performance:** Toppo and Prusty (2012) take note that associations are run and directed by people. "It is through people that objectives are set and additionally goals are acknowledged and the execution of an association is in this manner subordinate upon the whole of execution of its people (Toppo & Prusty, 2012, p. 1). Also, Biswajeet (2009) clarifies that the achievement of an association will thus rely upon its capacity to gauge precisely the execution of its people and utilise it equitably to improve them as an essential asset. In the present focused condition, associations need to guarantee performance of their representatives constantly (Prasad 2005). The performance of an individual can be characterised as the record of results created as determined employment capacities or exercises amid a predefined era (Bernardin 2007). The term performance alludes to an arrangement of result created during a specific time and does not allude to the qualities, individual attributes, or abilities of the employee. The assessment of the employee's performance reveals the commitment of a person to the association's goals. "People do not learn unless they are given criticism on the consequences of their activities altogether for remedial moves to make put" (Toppo & Prusty, 2012, p. 1).
- **Customer-relationship performance:** According to Chang, Fang and Cho (2013), the measurement of customer-relationship performance stresses the evaluation of the relationship between firms and customers, which presents customer attitudes toward a given firm. Ramani and Kumar (2008) identified the measure of customer-

relationship performance in terms of three indicators: customer satisfaction, customer ownership, and positive word of mouth. In their study entitled "*The impact of customer relationship marketing on the firm performance: a Spanish case*" Camarero, Gutiérrez and San (2005) point out that the process of developing customer-firm relationships starts when the firm invests in activities directed towards attracting customers and positioning on the market. However, a greater effort is needed in order to turn these customers into loyal ones. Hence, both attraction and loyalty programmes are necessary in the process of creating customers-firm relationships that are valuable both to customers and the firm. (Camarero, Gutiérrez & San, 2005). Ocloo and Tsetse (2013) also advocated that a retained customer will show resistance to the lure of competitors.

4.9.3 The use of subjective business performance measures in the present study

For the purpose of this study, subjective measures of business performance were used in measuring SMEs' business performance, owing to the fact that most SMEs owners are not willing to disclose their financial information (Brownhilder, 2016). In addition to that, another issue in researching small firms is the difficulty in interpreting some objective performance data (Zulkiffli & Perera, 2011).

For example, performance may be considered as "poor" if the data shows losses or low profit. Such misinterpretation can occur if, for example, firms have many commitments to research and development (R&D), including product and market development for future growth (Zulkiffli & Perera, 2011). These misinterpretations may be due to variations in profitability data and may lead to the comparison of objective measures among small firms in different industries (Zulkiffli & Perera, 2011). To avoid these issues, the researcher utilised subjective measures and focused on firms within the same sector (manufacturing). The reason to utilise subjective measures was also since "non-financial elements, presents a clearer and wider perception and dimension of performance" (Ismail, Rose, Abdullah & Uli, 2010:157).

4.10 Chapter summary

This chapter started with an introduction; it provided an historical overview of green marketing, defining green makerting and unfolding green marketing practices. This was followed by a discussion of the empirical literature underlying the theoretical constructs of the study, such as green packaging, green advertising, green product innovation, green process innovation, competitive advantage and business performance. In the next chapter, the conceptual model and hypotheses development is presented.

5 CHAPTER 5: CONCEPTUAL MODEL AND HYPOTHESIS DEVELOPMENT

5.1 Introduction

Before this chapter proceeds to a discussion of the conceptual framework, a brief recapitulation of the previous chapter helps to identify the theoratical issues covered so far. The empirical literature presented in chapter four, was centred on a discussion of the variables under investigation, such as green packaging, green advertising, green product innovation, green process innovation, competitive advantage and business performance. The fifth chapter of this thesis focuses on the study's empirical objectives, which are the relationships between the variables within the conceptual research model.

In other words, this chapter synthesises all the constructs reviewed so far into a broad conceptual model and develops hypotheses to be tested later during the data analysis. Each hypothesis within the conceptual model is reflected in the following paragraphs, in the same order as the hypotheses. The goal of this chapter is to study the proposed relationships in the conceptual model in depth. It asks the following questions: Why is the relationship important for this study? What information has other research found on the relationship, and in what context (i.e. what previous work is done on the relationship between the variables)? And finally, what does the proposed relationship imply for this study?

5.2 Conceptual model

Burns and Grove (2010) note that a conceptual model broadly explains phenomena of interest, expresses assumptions and reflects a philosophical stance. Nevertheless, a conceptual model describes the relationship between variables investigated in the study (Gunzler & Morris, 2015; Sekaran & Bougie 2011). In addition, Sumaedi, Bakti, Astrini, Rakhmawati, Widianti and Yarmen (2014) concur that the conceptual model is a model that describes the cause-effect relationship (causal orientation) between variables to explain a problem. Sekaran and Bougie (2016) add that a schematic diagram of the conceptual model helps the reader to visualise the theorized relationships between the variables in the model and thus to obtain a quick idea about how one thinks that the management problem cart be solved.

In this study, the conceptual model suggests that green packaging, green advertising, green product innovation and green process innovation are the independent or predictor variables. According to Flannelly, Flannelly and Jankowski (2014), the term predictor refers to a variable that can predict another variable i.e., the magnitude of the predictor (independent variable) can predict the magnitude of another variable (dependent variable). Kleinbaum, Kupper, Nizam and Rosenberg, (2014) agree that an independent or predictor variable refers to a variable that determines the values of dependent variables. In addition, the conceptual model reveals that competitive advantage is the mediating variable.

Flannelly, Flannelly, and Jankowski (2014) used the term mediating variable to refer to a variable or set of variables in a chain of causation in which the mediating variable is the causal link between the independent and dependent variable of interest. The aim of mediating variables is to uncover causal pathways between variables that are often overlooked in the assessments of non-linear models (Pearl, 2011).

Moreover, the dependent or outcome variable for the current study model is business performance. A dependent or outcome variable is the variable under investigation and is depicted by the letter γ. It is always the predicted or the estimated variable (Russell & Purcell 2009; Lind *et al.*, 2008; Sapford & Jupp, 2006). Based on a synthesis of the converging literature related to the research variables, a conceptual model was proposed to guide the empirical study. The conceptual model for this study can be illustrated with a diagrammatic representation of the relationships between all the constructs and their order of influence as shown in figure 5.1.

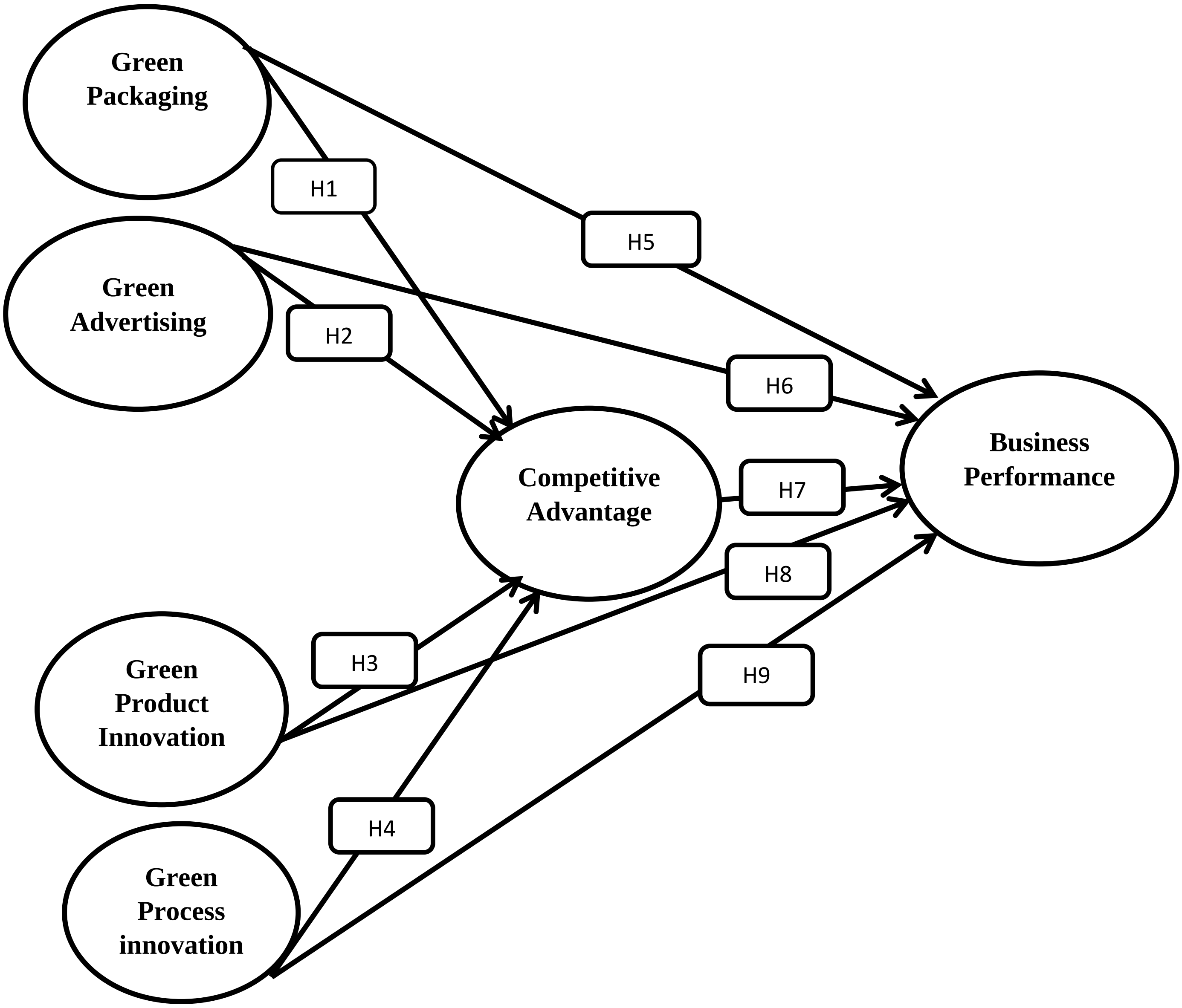


Figure 5.1: Conceptual model

5.3 Hypothesis development

According to Smith, Densmore and Lener (2016), a hypothesis is an imaginative preconception of a factual relationship. In similar vein, Murthy and Bhojanna (2009) note that the hypothesis is a statement that specifies, "How two or more variables are related?" In addition, Pomerantz, (2016, p. 116) asserts that "hypothesis development involves a clarification of how depend variables "depend" on the independent variables". Furthermore, Matthews and Kostelis (2011) explain that based on past research, a researcher will be able to develop a research hypothesis as to what will happen. Lammers and Badia (2004) stress the fact that a hypothesis should derive logically from previous findings or the predictions of a theory. The hypothesised relationships between the research variables are discussed hereafter.

5.3.1 Green packaging and competitive advantage

5.3.1.1 Importance of the hypothesised relationship

The first hypothesis, which tested the relationship between green packaging and competitive advantage is an important determinant in manufacturing and research relating to SMEs. Therefore, It is essential to clarify the relationship between green packaging and competitive advantage. Nevertheless, there is a deficiency with regard to literature about these two constructs. Closely related studies, for instance, those conducted by Mariadoss, Tansuhaj and Mouri (2011), as well as Synodinos (2014), revealed that packaging is the starting point for any organisation attempting to increase its sustainable marketing effort. Therefore, marketers have begun incorporating recycled packaging materials into the product production process in a way that reduces production costs without hampering the core product attributes or product performance (Mariadoss, Tansuhaj & Mouri 2011; Peattie, 2001). Thus, such actions help appease environmentally concerned consumers and may contribute towards creating a competitive advantage, which, in turn, makes organisations more willing to change their packaging inputs and processes (Synodinos, 2014). Packaging is one of the key components that can provide a competitive advantage in the marketplace for many consumer products (Barber 2010). In addition, Rundh (2009) confirms that packaging and packaging design can contribute to competitive advantage for marketing a consumer product. Drawing from the aforementioned explanations, it can be noted that SMEs that invest in green packaing will have a competitive advantage. The next section is focused on providing the empirical evidence that supports the hypothesised statement.

5.3.1.2 Empirical evidence supporting the hypothesised statement

Green packaging is considered as one of the contributing factors of competitive advantage. According to van den Elzen (2016, p. 5) "using green or sustainable packaging is more and more becoming a requirement for companies to compete and the companies that do so report a more positive brand image and reputation, cost savings and better environmental footprints amongst other benefits". Recyclable and biodegradable packaging, ecologically safe products are all part of green marketing which also leads to sustainable competitive advantage (Bhatti 2016). In his study entitled, "*Could green-marketing be a sustainable competitive advantage for retailers within South Africa?"* Allen (2008:1) stressed that "for products that require large amounts of packaging, green-packaging is a source of competitive advantage". Sambu (2016:174) also notes that *"*green-packaging is a source of competitive advantage". A study conducted by Gajanan (2015) which focused on sustainable marketing practices for gaining competitive advantage, revealed that ecological packaging assists a business in achieving competitive advantage. Mwaura, Letting, Ithinji and Orwa (2016) conducted a study which aimed at determining the effect of green distribution practices on the competitiveness of food manufacturing firms in Kenya. Their findings revealed thar green packaging as one of the green distribution practices that positively and significantly influences the competitiveness of Kenya's food manufacturing firms. Nikitaeva (2012) conducted a study which focused on gaining a competitive advantage through green packaging. In the literature review, Nikitaeva (2012) argued that green packaging should not be considered only as a tool of gaining a competitive advantage and satisfying the needs of customers, but also as a tool to help to reduce production expenses. For example, recycling may lead to outstanding savings of raw materials and energy, while successful packaging reduction can significantly reduce total costs (Nikitaeva 2012). Additionally, Jarin (2014) also discovered ecological or green packaging as one of the practices of ecological marketing which creates scope for attaining competitive advantage over other competitors. Anderson and Rowley (2017) conducted a study entitled "*The mediating role of competitive advantage between green packaging and the retention of consumers: empirical evidence from SMEs in Port of Spain, Trinidad and Tobago".* The empirical results of their study reviewed that green packaging has a positive and a significant impact on competitive advantage. In addition of the empirical results, Anderson and Rowley (2017) emphasised that small business enterprises that are embracing sustainability fully and promoting their capability to produce green packages for their products will gain competitive advantage since green packaging will create even further differentiation from larger or more traditional competitors. Deducing from the foregoing discussion, this study therefore, proposes the following hypothesis:

H1: Green packaging has a positive impact on competitive advantage

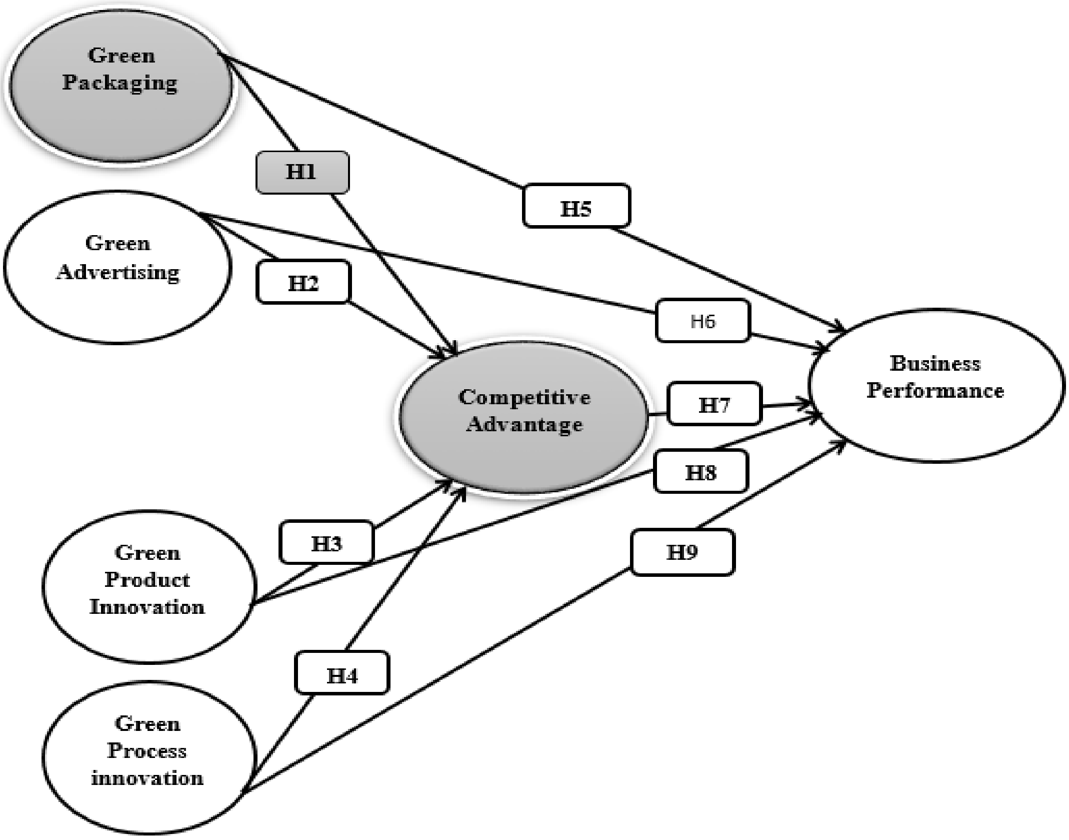


Figure 5.2: Green packaging positively impacts competitive advantage

5.3.2 Green advertising and competitive advantage

5.3.2.1 Importance of the hypothesised relationship

Secondly, the relationship between green advertising and competitive advantage outlines the significance of investigating in green communication in an attempt to create a competitive advantage. Therefore, the importance of the connection between green advertising and competitive advantage is worth investigating. Haytko and Matulich (2008) have suggested that green advertising started during the 1970s as a result of the recession, caused by high oil prices and the need to deal with environmental problems. Companies trying to follow this green trend began to design and develop environmentally friendly products to achieve competitive advantage based on this differentiating factor and started seeking new ways to reach the public (Sheehan & Atkinson, 2016; Phau & Ong 2007). Moreover, Yan and Yazdanifard (2014) assert that green advertising is a useful technique of green marketing that is used by firms to increase competitive advantage and stand a chance of gaining the satisfaction. Therefore, deducing from the aforementioned explications, it is imperative to incorporate the relationship between green advertising and competitive advantage in the present study.

5.3.2.2 Empirical evidence supporting the hypothesised statement

It is essential to clarify the nexus between green advertising and competitive advantage. Acoording to De Vlieger, Hudders and Verleye (2013), companies are constantly trying to distinguish from competitors and hope to attract environmentally involved consumers by promoting green products and integrating environmental claims into their advertising campaigns. In addition, Sheehan and Atkinson (2016, p. 124) agree that "companies can show environmental sensitivity by using several strategies; one of these marketing tools can be environmental or green advertising". Haytko and Matulich (2008) have suggested that green advertising started during the 1970s as a result of the recession, caused by high oil prices and the need to deal with environmental problems. Companies trying to follow this trend began to design and develop environmentally friendly products to achieve a competitive advantage based on this differentiating factor and started seeking new ways to reach the public (Sheehan & Atkinson, 2016; Phau & Ong 2007).

In today's post-modern era, apart from adopting and adapting the "green strategies", firms rationally inculcate sound and credible environmental claims into advertising messages and communication, in order to differentiate from competitors and to possibly gain a competitive advantage (Sabir, Safdar, Khurshid & Hafeez, 2014). Synodinos (2013, p. 30) as well as Synodinos, Bevan-Dye and De Klerk (2013, p. 19) elucidate that "green advertising can be used as an effective tool in an organization's overall environmental marketing strategy and this, ultimately, translates into a competitive advantage". However, to achieve green advertising benefits, organisations must win over the trust of both consumers and stakeholders (Synodinos, 2013).

In addition, Jarin (2014) conducted a study which aimed at investigating ecological marketing practices for creating competitive advantage. Jarin (2014) revealed that eco-advertising or green advertising as an ecological marketing practice creates scope for attaining competitive advantage within an organisation. Furthermore, Leonidou, Leonidou, Palihawadana and Hultman (2011, p. 25) point out that "green advertising should be regarded as an indispensable part of the firm's overall environmental marketing strategy that can help it gain sustainable competitive advantage".

H2: Green advertising has a positive impact on competitive advantage

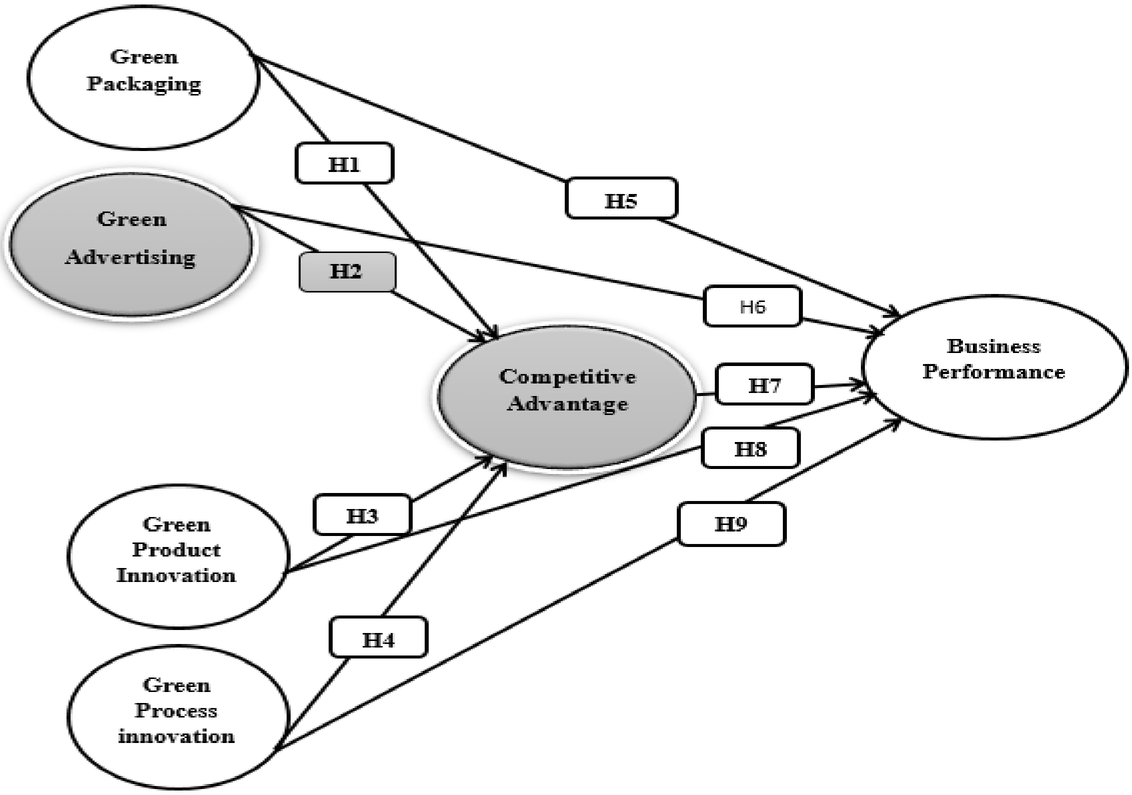


Figure 5.3: Green advertising positively impacts competitive advantage

5.3.3 Green product innovation and competitive advantage

5.3.3.1 Importance of the hypothesised relationship

In today's highly competitive environment the goal of each organisation is to defeat competition and win new customers (Hana, 2013). According to Lin, Tan and Geng (2013), nowadays product innovation has become a significant means of firms' survival and a weapon to sustain market competitive advantage. Green product innovation helps the firm to gain competitive advantage by differentiating their products from competitors that do not practice green product innovation (Wahid & Lee, 2011). In addition, Lin, Tan and Geng (2013) also advocated that green product innovation can serve as a means for firms to gain sustainable development and achieve their business targets. Firms which use environmental applications to differentiate their products from others gain a competitive capability, according to Reinhardt (1998), and Sen, Bohidar, Shrivas, Sharma and Modi (2015) found that green product innovations are positively associated with competitive advantage of firms.

The more common findings of the relationship between green product innovation and competitive advantage are discussed first.

5.3.3.2 Empirical evidence supporting the hypothesised statement

It is essential to note the important impact that green product innovation has on competitive advantage. Chen (2011) investigated the influence of corporate environmental ethics on competitive advantage with the mediation role of green innovation. The results from Chen's (2011) study revealed that green product innovation is positively associated with competitive advantage and Taiwanese manufacturing companies should increase their green product innovation to enhance their competitive advantage. Furthermore, Ar (2012) argued that firms that focus on product innovation as a priority can achieve competitive advantage over competitors and firms that use environmental applications to differentiate their products from others to gain a competitive capability. Guziana's (2011) study suggested environmental aspects of products as bases for corporate greening and identified three main motivations for the companies within the environmental technology sector. According to its empirical results, competitive advantage is one of these motivations.

Moreover, Chen, Lai and Wen (2006) conducted a study which focused on the positive effect of green intellectual capital on competitive advantages of firms. The results of their study revealed that green product innovations are positively associated with competitive advantage of firms. Van den Berg, Labuschagne, and Van den Berg (2013) investigated the effect of greening the supplier and innovation on environmental performance and competitive advantage. The research found that green product innovation had a significant relation to environmental performance and competitive advantage. Thus, green product innovation creates a competitive advantage for a company and simultaneously addresses environmental aspects. Sen, Bohidar, Shrivas, Sharma and Modi (2015) elucidates that engaging in green product innovation actively has positive influence upon corporate competitive capability. Firms which use environmental applications to differentiate their products from others gain a competitive capability, according to Reinhardt (1998) and Chen *et al*. (2006) found that green product innovations are positively associated with competitive advantage of firms.

Therefore, inferring from the literature and the empirical evidence above, it is hypothesised that:

H3: ***Green product innovation has a positive impact on competitive advantage***

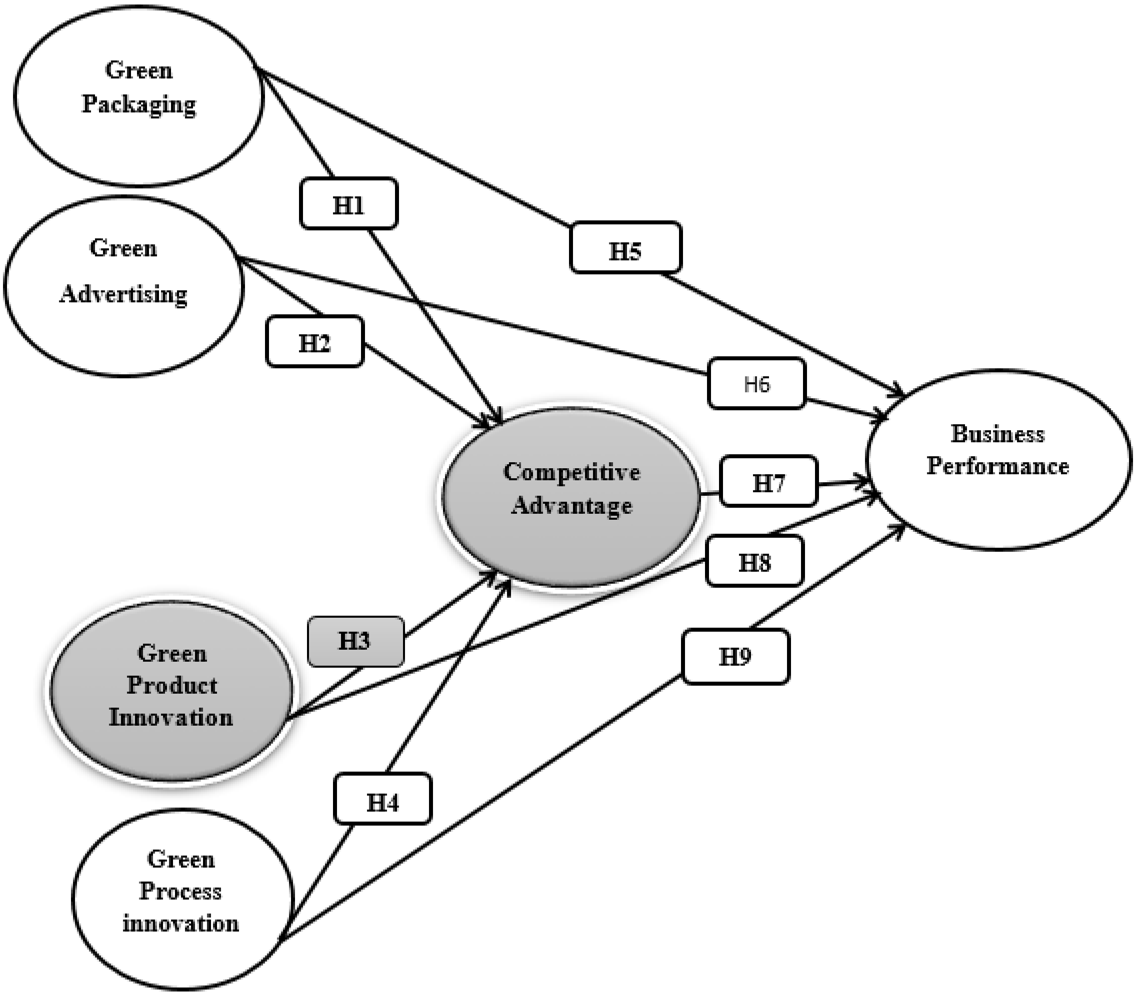


Figure 5.4: Green product innovation positively impacts competitive advantage

5.3.4 Green process innovation and competitive advantage

5.3.4.1 Importance of the hypothesised relationship

It is vital to explicate the importance of the relationship between green process innovation and competitive advantage. According to Küçükoğlu and Pınar (2015), green process innovation explains changes in environmental performance and competitive advantage. Any green difference of a company's basic processes not only reduces the company's environmental effects, but also moves the company to a better position among its competitors (Küçükoğlu & Pınar, 2015). In addition, Chen, Lai and Wen (2006) found that the performances of green process innovation were positively correlated to the corporate competitive advantage. Therefore, the result meant that the investment in green process innovation was helpful to the businesses (Chen, Lai & Wen 2006). Moreover**,** firms' quest to develop innovative green products and to seek revenues from them motivates the firms to develop specific competencies (Nidumolu, Nidumolu, Prahalad & Rangaswami, 2009)**.** Inferring from the aforementioned clarifications, it can be noted that an SME that invests in green process innovation will ultimately give the firm a competitive edge. Hence the subsequent section concentrates on the empirical evidence supporting the hypothesised statement.

5.3.4.2 Empirical evidence supporting the hypothesised statement

Prior studies have found that process innovations contribute to a firm's competitive advantages (Chiou *et al.*, 2011). Innovative processes which are green confer cost advantage on a firm over its competitors (Wong 2012). Arenhardt, Battistella, and Grohmann (2016) investigated the influence of the green innovation in the search for competitive advantage of enterprises of the electrical and electronic sectors within Brazil. Their results showed that the level of adoption of innovative green practices among the participating companies is high and that the relationship between green processes and the achievement of competitive advantage is significant. Wahid and Lee (2011) found that green process innovation has a positive impact on corporate competitive advantages. The main reason for this is that with greener process, waste could be reduced and recycled as well as energy is used in a more efficient way (Wahid & Lee, 2011). Chen (2008) conducted a study which focused on the driver of green innovation and green image - green core competence. From the literature review, Chen (2008) elucidated that green process innovation can enhance the performance of environmental management and help businesses develop new market opportunities to increase competitive advantage. Xie, Huo, Qi and Zhu (2016) point out that those manufacturing industries that adopt green process innovation can gain early mover advantages, develop a green image, and acquire more currency votes. In their study entitled "*The influence of the green innovation in the search of competitive advantage of enterprises of the electrical and electronic Brazilian sectors*", Arenhardt, Battistella, and Grohmann (2016) found that green process innovation positively affects the search for competitive advantage of companies in the electrical and electronic sectors in Brazil, in a moderate way. It was also found that green process innovations are more significant to achieve competitive advantage than the innovations of green products (Arenhardt, Battistella, & Grohmann, 2016). Küçükoğlu and Pınar (2015) also conducted a study that aimed at determining the positive influences of green innovation on company performance. Results of this study state that green process innovation had a significant effect on a company's environmental performance and competitive advantage.

In addition, Chen (2008) elucidates that companies can adopt green process innovation to enhance resource productivity by means of material saving, energy decreasing, waste recycling, and resource reducing. However, Orsato (2006) and Berrone (2009) argue that green process innovation can not only prevent costly pollution, but also reduce resource expense and overall cost. Companies can continue to undertake green process innovation to raise their manufacturing efficiency and productivity such that they can obtain low cost advantage (Chang, 2011; Chen 2008). A company can adopt green process innovation to satisfy its stakeholders (Chang, 2011; Chen 2008). Thus, companies can enhance its competitive advantage through green process innovation (Chen, Lai & Wen, 2006). Thus, drawing from the above-mentioned discussion, it is therefore hypothesised that:

H4: Green process innovation has a positive impact on competitive advantage

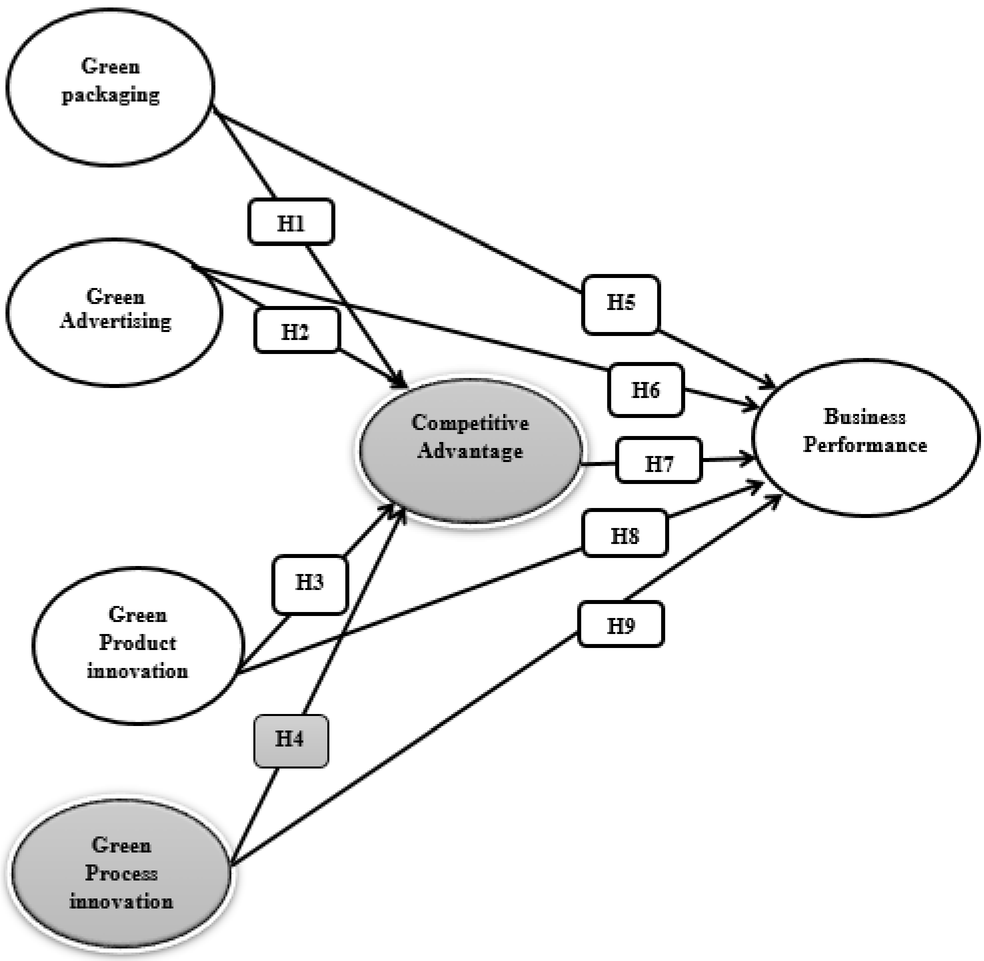


Figure 5.5: Green process innovation positively impacts competitive advantage

5.3.5 Green packaging and business performance

5.3.5.1 Importance of the hypothesised relationship

It is essential to elucidate the significance of the association between green packaging and business performance. Mwaura, Letting, Ithinji and Orwa (2016) emphasised that green packaging, such as the use of green packaging materials and bio-degradable packaging materials leads to an increase in sales, quality and delivery of goods as well as reducing the transport costs which increase the profit margins. In similar vien, Gajanan (2015) also points out that eco-packaging aid in the environmental challenges faced by businesses in optimising the use of energy, resources, cost reduction and waste minimisation. Surmising from the aforementioned explanations, it can be stated that an SME that invests in green packaging will eventually improve the business performance. Hence, the following section concentrates on the empirical evidence supporting the hypothesised statement.

5.3.5.2 Empirical evidence supporting the hypothesised statement

Sambu (2016) conducted a study which aimed to determine the effect of green packaging on firm performance in manufacturing in Nairobi County, Kenya. The results indicated that green packaging is a key determinant of business performance in the manufacturing firms of Kenya (Sambu, 2016). In similar vein, Mogeni and Kiarie (2016) conducted a study which aimed to explore the effect of green logistics practices on performance of supply chains in multinational organisations. Responsive packaging, which is similar to green packaging, was found to be strongly and positively correlated with the performance of supply chains of multinational organisations in Kenya. Diab, AL-Bourini and Abu-Rumman (2015) conducted a study which supports the positive relationship between green packaging and business performance. The study confirmed that there is a positive impact of eco-packaging on organisational performance.

Zailani, Shaharudin, Govindasamy, Ismail and Mahdzar (2015) examined the nexus between sustainable packaging and the performance of manufacturing firms in the state of Penang, Malaysia. The study provides extra evidence to previous literature that sustainable packaging or green packaging has a positive effect on business performance. Zailani, Shaharudin, Govindasamy, Ismail and Mahdzar (2015) concluded that green or sustainable packaging can bring benefits to the firm’s operational, as well as economic, social and environmental advantages. Green packaging can assist firms in the optimisation of the resources, material and waste to achieve the triple bottom line (economic, social and environmental) of the firm's sustainability objectives. Thus, manufacturing firms need to consider giving due diligence to the eco-efficiency practices as a means to increase the adoption of sustainable packaging in order to achieve higher performance (Zailani, *et. al.* 2015). Rao and Bhargav (2016) conducted a study on green packaging with special reference to Dell Inc. The authors found out that companies that have adopted green packaging saw a drop in their shipment damage from 12% to 1% which increases customer satisfaction and shipping savings (Rao & Bhargav 2016). In the same accord, Baack, Harris and Baack (2013, p. 237) point out that "focusing on sustainable packaging not only helps the environment but also can improve consumer perceptions and lead to increased sales". This clearly shows an improvement in business performance for those firms which incorporate the use of green packaging.

In addition, among the studies which support the positive relationship between green packaging and business performance is the one conducted by Kumar, Kumar and Sandip (2017) which focused on "green initiatives for business sustainability and value creation". The study provides extra evidence to previous literature that green packaging can help companies to improve their performance (Kumar, Kumar, & Sandip, 2017; Green, Zelbst, Meacham & Bhadauria, 2012). The study provides extra evidence to previous literature that innovative marketing has a positive effect on business performance

H5: Green packaging has a positive impact on business performance

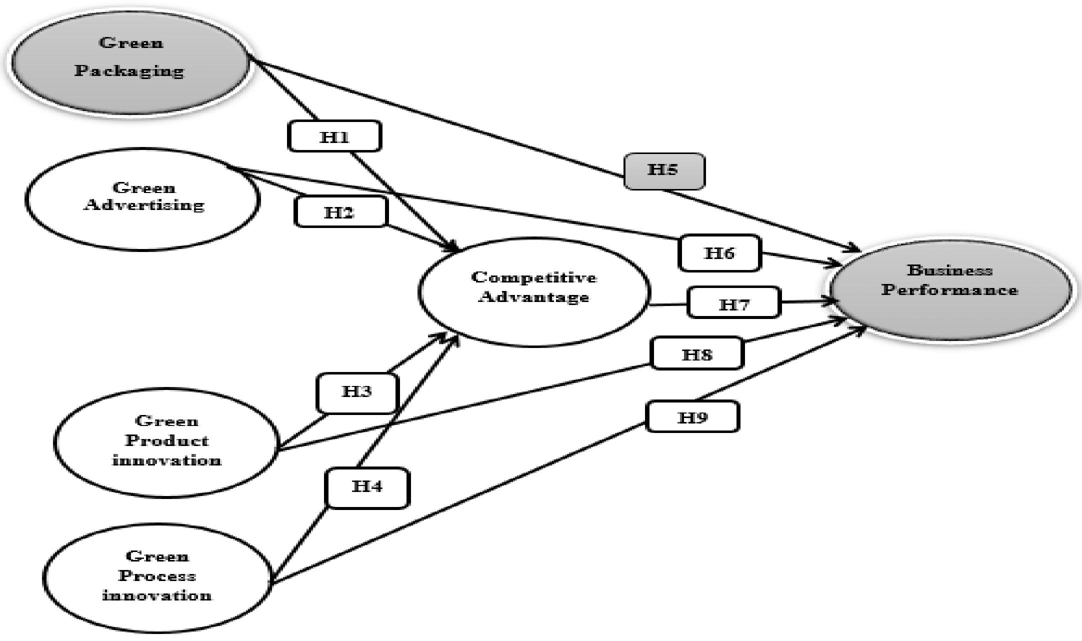


Figure 5.6: Green packaging positively impacts business performance

5.3.6 Green advertising and business performance

5.3.6.1 Importance of the hypothesised relationship

It is vital to elucidate the importance of the association between green advertising and business performance. Joshi and Hanssens (2010) point out that broadly speaking, advertising influences business performance by virtue of its ability to influence sales and profitability of the business. Siong (2010) conducted a study to investigate advertising effects on firm performance in Malaysian consumer products sector and the results of the linear regression showed that there was a positive relationship between the advertising variable and it is statistically significant with firm performance. According to De Vlieger, Hudders and Verleye (2013), claiming environmental soundness in advertising is a logical step in the light of corporate social performance, or the extent to which a company takes multiple stakeholders (instead of only the company's interests) into account. Surmising from the aforementioned descriptions, it can be pointed out that an SME that invests in green advertising will eventually improve the business performance. Hence, the following section concentrates on the empirical evidence supporting the hypothesised statement.

5.3.6.2 Empirical evidence supporting the hypothesised statement

Nyilasy, Gangadharbatla and Paladino (2014) are of the view that green advertising is not the only factor that influences consumer attitudes when it comes to the environment: firm performance (or perceptions of performance) itself is reasonably expected to play at least an equal role. Bhat, Darzi and Parrey (2014) conducted a study that gives a basic conceptual framework of green marketing as a driver to sustainable development. Bhat, Darzi and Parrey (2014) suggested that companies need to identify a unique segment of the market (niche market) which is enriched by green consumerism and then should target this segment, using the green marketing tools, such as green or eco-advertisements in order to achieve sustainable business performance. In their study entitled, *"Evaluating the green advertising practices of international firms",* Leonidou, Leonidou, Palihawadana and Hultman (2011, p. 25) revealed that "green advertising should be regarded as an indispensable part of the firm's overall environmental marketing strategy that can help the firm to achieve superior performance". Therefore, in order for manufacturing SMEs to improve their business performance, it is imperative for them to resort to green advertising. Ghodeswa and Kumar (2014) explain that green advertising is aimed at conveying direct usefulness and advantage provided to the consumers by green products compared to the conventional ones. Nyilasy, Gangadharbatla and Paladino (2013) suggest that green advertising is conducive to good business results. It exhibits environmental commitment of companies which enables them to compete in the market (Rolland & Bazzoni, 2009; D'Souza, 2005).

H6: Green advertising has a positive impact on business performance

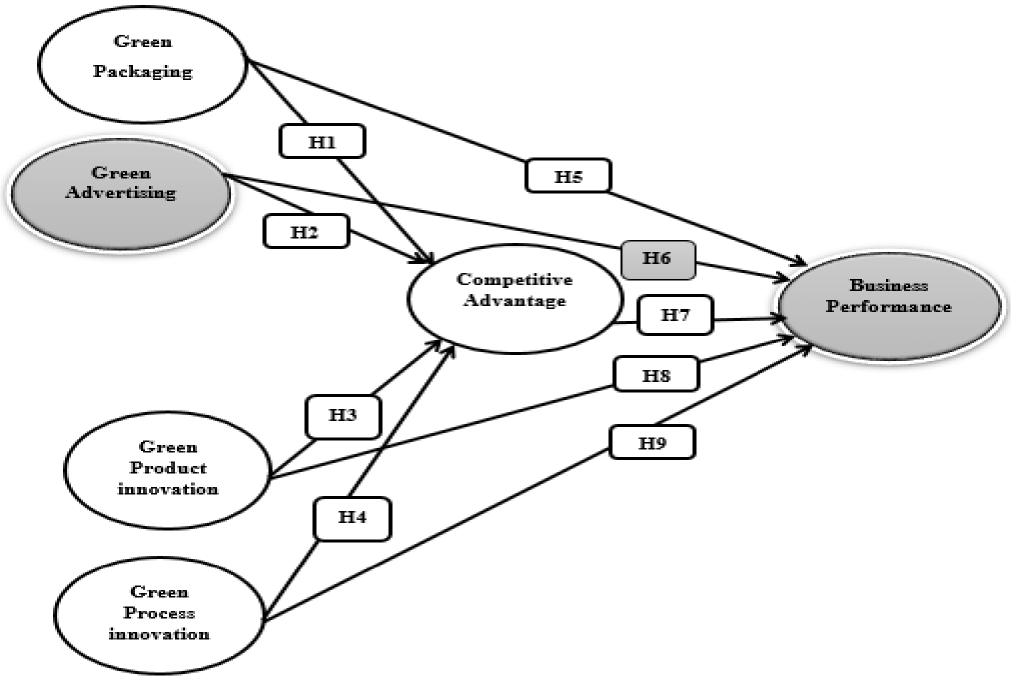


Figure 5.7: Green advertising positively impacts business performance

5.3.7 Competitive advantage and business performance

5.3.7.1 Importance of the hypothesised relationship

Majeed (2011) is of the view that competitive advantage and business performance are two special terms with an actually complex association. However, Porter (1985) argues that competitive advantage and performance constructs are often used interchangeably and a causal relationship leads the former to the latter (Newbert, 2008; Powell, 2001). Furthermore, Tuan and Yoshi (2010) contend that the assumption that competitive advantage improves performance should not imply that the latter will be totally determined by the former because many other factors also influence performance. This being said, competitive advantage is obviously a significant element for performance (Tuan & Yoshi 2010). In addition, in almost all organisations there is a good association between the company's competitive advantage and its performance (Majeed, 2011). Competitive advantage is one of the sources to the corporate sustainability performance of the company (Sihite, 2018). In addition, Neely (2005) illustrated a significant relationship between competitive advantage and the organisational-based performance of organisations, when organisational-based performance was measured by the emphasis on efficient organisational internal processes, customer satisfaction, employee development and job satisfaction. Wijetunge (2016) determined the relationship between competitive advantage and the business performance in service providing SMEs in Sri Lanka, and found out that the higher the competitive advantage, the better the business performance of service providing SMEs. The next section is centred on the empirical evidence supporting the hypothesised statement.

5.3.7.2 Empirical evidence supporting the hypothesised statement

In almost all organisations, there is a good association between the company's competitive advantage and its performance (Majeed 2011). In addition, Mohebi and Farzollahzade (2014) conducted a study which focused on improving competitive advantage and business performance of SMEs by creating entrepreneurial social competence. The results of the study revealed that competitive advantage has a positive effect on the SME's business performance. Ismail, Rose, Abdullah and Uli (2010) investigated the relationship between organisational competitive advantage and performance. The results of their study showed a significant relationship between competitive advantage and performance. In addition, Ismail, Rose, Abdullah and Uli (2010) emphasised that competitive advantage is regarded as part of the foundation for high level performance. Agha, Alrubaiee and Jamhour (2012) investigated the effect of core competence on competitive advantage and organisational performance. The findings indicated that competitive advantage has a strong and positive impact on organisational performance.

Gaya et al. (2013, p. 2051) state that "the resource-based view links superior business performance to the ownership and control of unique competitive resources that create a source of sustainable competitive advantage for businesses". Nonetheless, Neto *et al.* (2015. p. 2203) mention that "to obtain enhanced competitive advantage and remain in business, a set of actions are needed to explore opportunities, adjust and adapt production processes and products to customers' needs resulting in a better business performance". Likewise, Amankwaa and Anku-Tsede (2015) highlight that businesses treating employees as core assets and productive resources, and not as an expense, tend to gain a competitive advantage in their operating industry. Thus, competitive advantage can be realised through the effective use of human capital which, as a result of higher productivity, might yield higher business performance. Further, resources that are valuable, uncommon, incomparable and non-substitutable enable businesses to develop and maintain competitive advantages and increase business performance (Horng & Huang, 2012). In the same way, a business enjoying sustainable competitive advantage records a consistent superior business performance (Gaya *et al.*, 2013). Therefore, resources can be tailored and fashioned in ways that will promote competitiveness and finally result in better business performance. Mirzahassan and Imani (2013) posit that already developed literature has established the positive effect of competitive advantage on business performance due to the fact that a business can outperform its rivals through competitive advantage. Further, Ribeiro *et al.* (2014) describe competitive advantage as the case in which a business has a profit rate higher than its sector or industry average. Over and above that, competitive advantage is the business' capability to create more economic value and return than the marginal competitor in a market (Ribeiro *et al.*, 2014). In this regard, businesses should utilise their resources in a manner that will generate profitable returns, both for the company and other stakeholders. Deducing from the aforementioned discussion and the empirical evidence, it could be posited that:

H7: Competitive advantage has a positive impact on business performance

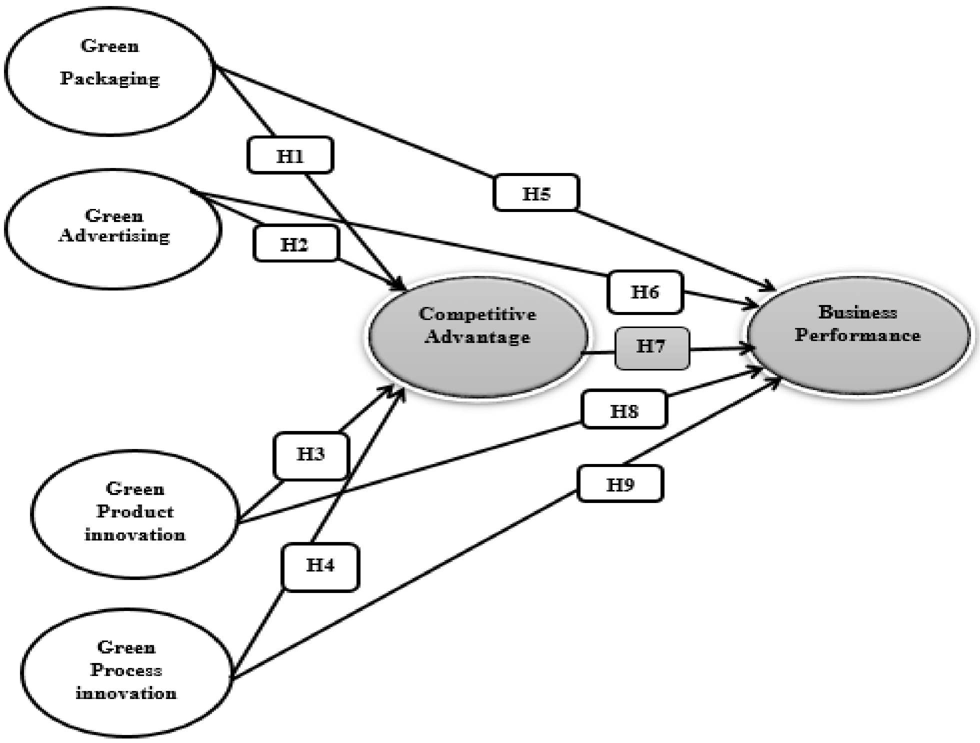


Figure 5.8: Competitive advantage positively impacts business performance

5.3.8 Green product innovation and business performance

5.3.8.1 Importance of the hypothesised relationship

The reasoning behind the proposed relationship between green product innovation and firm performance is based on several factors. Porter and Van der Linde (1995) elucidate that green product innovation encourages the efficient use of raw materials, resulting in lower costs for raw materials and may lead firms to find new ways of converting waste into saleable products that provide additional revenues. Furthermore, it should result in enhanced cash flow and consequently, enhanced business performance because reputation is in itself a source of market advantage (Eiadat, Kelly, Roche, & Eyadat, 2008). Businesses can increase resource productivity through green product innovation to make up the environmental costs (Chen *et al.,* 2006). Concluding from the aforementioned descriptions, it can be mentioned that an SME that invests in green product innovation will eventually improve the business performance. Hence the following section concentrates on the empirical evidence supporting the hypothesised statement.

5.3.8.2 Empirical evidence supporting the hypothesised statement

In a study conducted by Shapfi (2015) to assess the influence of green product innovation toward business performance on any selected industry, the results indicated that green product innovation had influence the business performance. Alhadid and As'ad (2014) conducted a study which aimed at determining the impact of green innovation on organisational performance and based on the findings of statistical analysis, green product innovation had a positive impact on organisational performance. In addition, Lin, Tan and Geng (2013) conducted a study which examined how market demand affects green product innovation, and firm performance in the context of the Vietnamese motorcycle industry. The empirical findings showed that green product innovation is also positively correlated to firm performance.

Ar (2012) investigated the impact of green product innovation on firm performance among Turkish manufacturer firms and found that green product innovation significantly positively affects firm performance. Alsughayir (2017) conducted a study aimed at investigating the impact of green product innovation on firms' performance of Saudi Chemical Industrial Firms and the results showed that green product innovation has a statistically significant impact on firms' performance. Meanwhile, Ilker (2012) studied the gap between green product innovations and firm performance and firms' ability to enhance their competitive capability under the moderating effect of managerial environmental concern in this relationship. Ilker (2012) constructed a model to link the aforementioned constructs, and data was collected through a questionnaire-based survey across 140 Turkish manufacturing firms from various sectors, which were then analysed using structural equation modelling. That study showed that green product innovation generally has a positive effect on firm performance. This result demonstrated the strongest and most significant influence of green product innovation on firm performance and competitive capability, with a strong effect of moderates (Ilker 2012). Drawing from the foregoing discussion, this study therefore, proposes the following hypothesis:

H8: Green product innovation has a positive impact on business performance

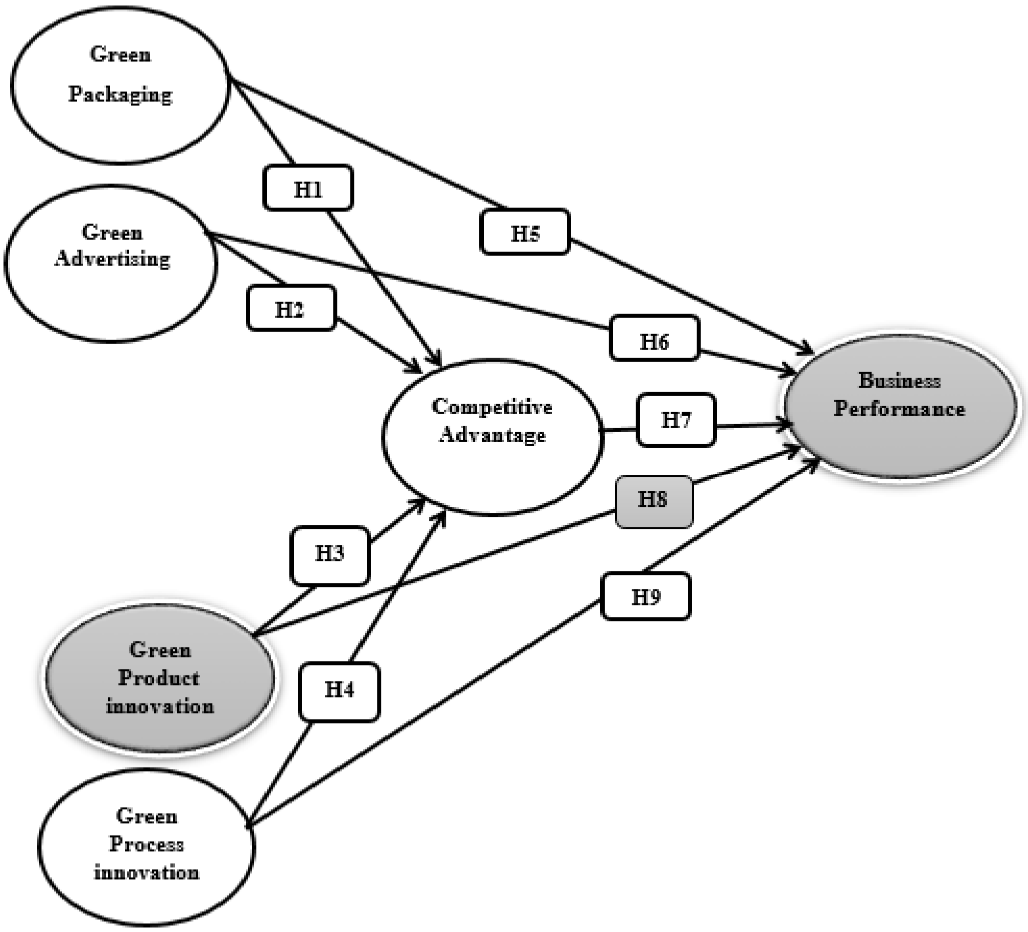


Figure 5.9: Green product innovation positively impacts business performance

5.3.9 Green process innovation and business performance

5.3.9.1 Importance of the hypothesised relationship

It is essential to elucidate the importance of the association between green process innovation and business performance. Firms can reduce their costs through green process innovation **(**Ma, Hou, & Xin, 2017). Porter and Van der Linde (1995, p. 132) emphasise that "pioneering green process innovations enables firms to mobilize their strategic and organizational resources more efficiently". Horbach and Rennings (2013) show that green process innovation leads to job creation, particularly for green process innovations that lead to material and energy saving. Therefore, since green process innovation involves considerable investment and commitment, it is important to examine the subsequent implications on business performance (Nishitani *et al*., 2012). Hence, the following section concentrates on the empirical evidence supporting the hypothesised statement.

5.3.9.2 Empirical evidence supporting the hypothesised statement

In their study entitled, "*the link among innovation drivers, green innovation and business performance: empirical evidence from a developing economy*", Singh, Chakraborty and Roy's (2016) research findings strongly validated that green process innovation has a significant impact on business performance of manufacturing micro, small and medium enterprises (MSME). Among the studies which support the positive relationship between green process innovation and business performance is the one conducted by Quoquab, Thurasamy and Mohammad (2017). The study provides extra evidence to support previous literature that green process innovation of businesses has a positive impact on performance (Quoquab, Thurasamy & Mohammad 2017).

Cheng, Yang and Sheu (2014) conducted a study which focused on the link between eco-innovation and business performance within Taiwanese industry and found that business performance (measured by ROI, market share, profitability, and sales) can be enhanced by eco-process innovation. Thus, the greater the firm's eco-process innovation, the greater its business performance (Cheng, Yang & Sheu 2014). In addition, Alhadid and As'ad (2014) investigated the impact of green innovation on organisational performance and found that green process innovation has a significant and a positive impact on organisational performance. de Oliveira Brasil, de Abreu, da Silva Filho and Leocádio (2016) investigated the relationship between process eco-innovation (green process innovation) and business performance and found that there is a positive relationship between process eco-innovation and business performance. Zahari and Ramaya (2017) examined the nexus between green innovation and firm performance in view of the ecological modernisation perspective and found that the adoption of green process innovation positively affects the firm economic performance.

H9: Green process Innovation has a positive impact on business performance

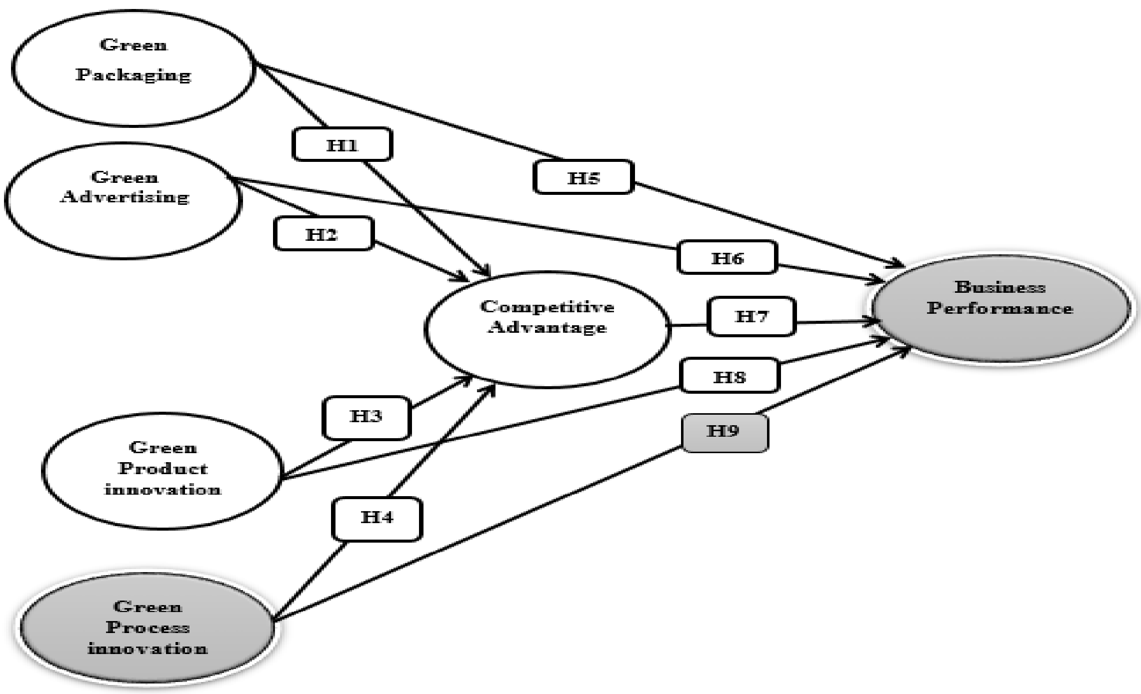


Figure 5.10: Green prcess innovation positively impacts business performance

5.3.10 Competitive advantage as a variable mediating the relationship between green packaging, green advertising, green product innovation, green process innovation, and business performance

5.3.10.1 Importance of the hypothesised relationship

It is important to clarify the importance of the competitive advantage as a variable mediating the relationship between green packaging, green advertising, green product innovation, green process innovation, and business performance. As noted by Jahanshahi *et al.* (2015), small businesses, in order to survive the ever-changing and dynamic market place of today, have to create and sustain. According to Liao *et al*. (2015, p. 469), “competitive advantage could be temporarily constrained, reflecting a firm’s short-term market performance from time to time”. Further, in order to measure competitive advantage effectively, research generally focused on short-term outcome measures and was usually based upon examination of cross-sectional data showing a single point in time; this could result in both a firm growth and market relative strength featured at least in part in the measurement of business performance, including measures of competitive advantage that generally included growth in sales and firm productivity (Liao *et al.*, 2015*)*. Inferring from the aforemention discriptions, it is clear that competive advantage is a variable which is of great importance to a business, such as an SME. Hence, the following section concentrates on the empirical evidence supporting the hypothesised statement.

5.3.10.2 Empirical evidence supporting the hypothesised statements

It is imperative to provide empirical evidence that shows competitive advantage as a mediating variable between green packaing, green advertising, green product innovation, green process innovation and business performance. It is important to note that there are deficiencies in empirical studies that are centred on competitive advantage as a mediating variable. However, there are closely related studies such as the one conducted by Luo and Zhao (2004) which emphasises that competitive advantage can mediate the corporate link to improve business performance. In a different research, Camison and Villar-Lopez (2010) place competitive advantage as a mediating role in explaining the international experience of small and medium sized enterprises (SME) towards performance improvement. In the same year, Vazquez, *et al.* (2010) explains market orientation and innovation as a variable mediated by competitive strategy to improve company performance. Then, Santos-Vijande, *et al*. (2012) mention that organisational learning and strategic flexibility can improve business performance being mediated by competitive advantage. The latest research that explains the mediation role done by competitive advantage is also researched by Pratistha (2016). He describes that the competitive advantage variable can play the role as mediation variable from strategic control, business environment, and orientation strategy to improve business performance in companies that are users of Indonesian space technology. Based on the above explanation, it can be concluded that competitive advantage can play the role of mediating variable towards business performance.

According to Newbert (2008), whose argument used Barney (1991), and Castanias and Helfat (2001), as its foundation, a firm must identify and implement resource-based strategies to create economic value. Newbert (2008) also suggested that to produce a product or service with more benefits (for example, in the form of unique features and/or lower cost than are associated with the products or services of its competitors), a firm must exploit a combination of valuable resource and capabilities greater than that of its competitors. It is hypothesised that no matter what processes of resources and capabilities are, they only indirectly affect performance. In other words, to generate benefits from its resource-capability combination, a firm must first obtain a competitive advantage deriving from its exploitation (Newbert, 2008). Anwar (2018) examined the importance of business model innovation in SME performance and the mediating role of competitive advantage. The results indicate that BMI has a significant positive impact on competitive advantage and SME performance. Competitive advantage partially mediated the relationship between BMI and SME performance.

Based on this premise, the mediating impact of competitive advantage still needs further clarification as there is still limited empirical research in the literature. It is expected that competitive advantage can be a mechanism through which green packaging, green advertisings, green product innovation and green process innovation can positively impact business performance. This is one of the important empirical contributions of this study because it offers a more nuanced explanation on how these green marketing practices would impact business performance. Due to limited availability of clear empirically demonstrated findings, it is considered appropriate to propose the following hypotheses:

H10: Competitive advantage positively mediates the relationship between green packaging and business performance

H11: Competitive advantage positively mediates the relationship green advertising and business performance

H12: Competitive advantage positively mediates the relationship green product innovation and business performance

H13: Competitive advantage positively mediates the relationship green process innovation and business performance

5.4 Chapter summary

Chapter 5 provided the conceptualised model for the research study that constituted this thesis. Furthermore, the research hypotheses for the research study were developed. The aim of this chapter was to present the framework forming the basis of this study, as well as to formulate and develop the proposed hypotheses, while supporting them with existing literature. Firstly, the importance of the proposed relationships was highlighted, this was then followed by the hypothesised relationships which were developed and further substantiated by providing literature that highlighted the existence. Moreover, the research model was depicted and the hypothesised relationships indicated. The following chapter elaborates on the research design and methodology, and on the study's data analysis method. In the section that follows a diagrammatic representation of the present chapter is provided.

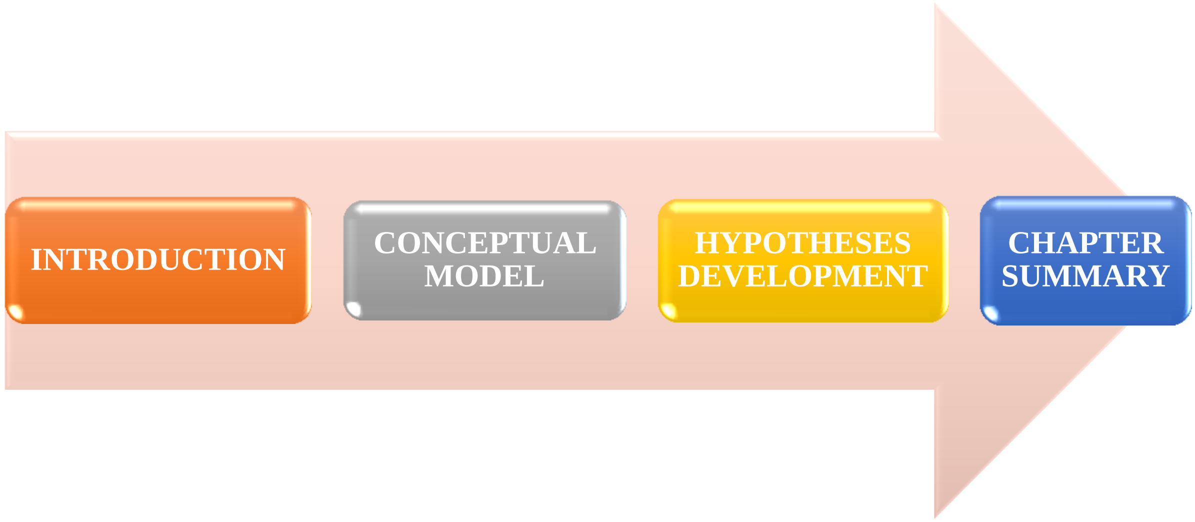


Figure 5.11: Diagrammatic Illustration of Chapter 4

6 CHAPTER 6: RESEARCH METHODOLOGY AND DESIGN

6.1 Introduction

The preceding chapter presented the conceptual framework of the research, and identified theoretical relationships between the constructs that helped to formulate the hypotheses for the study. The central focus of this chapter is to outline the research's philosophical foundation and to discuss the methodology used to collect the data and test the relationships proposed in the conceptual model. The chapter ends with a description and discussion of the techniques and procedures used for the purpose of the present study. Research methodology represents the procedures of research methods followed by the researcher (Krippendorf 2004). Traditionally, research has been seen as the creation of true, objective knowledge, following a scientific method. In turn, this is presented as data and facts; it is possible to acquire a reasonably adequate basis for empirically grounded conclusions in a specific discipline when using the right methodology (Alvesson & Sköldberg 2009). Research methodologies directly impact the validity and generalisation of a study (McGrath & Brinberg, 1983), and in turn, play a vital role in the knowledge development of international business (Yang, Wang & Su, 2006:601).

Comprehending and using a relevant methodology in the present study is essential in order to identify the proper unit of analysis and employ compatible methods that will provide the intended results. A research design typically includes:

- How data is to be acquired (sampling design)
- What instruments are employed (measurement items, source and measurement scale)
- How the instruments are utilised (data collection method) and
- The intended means for analysing data collected (data analysis procedure and statistical approach).

6.2 Philosophical foundations and research paradigms

The notion of a philosophy pertains to the value judgment, norms, standards, frames of reference, perspectives, ideologies, myths, theories and approved procedures that govern the thinking and actions of individuals (McMillan & Schumacher, 2006). Somekh and Lewin (2005) explain that the concept of philosophies may describe the thinking patterns of people regarding specific situations. According to Newby (2014, p. 35) “every research development commences with a selection of a suitable research philosophy for a research activity”. Mora, Gelman, Steenkamp and Raisinghani (2012) opined that a research philosophy offers an overarching standard within which researchers operationalise their research study. ‘Research philosophy’ is an overarching term that relates to the development of knowledge and the nature of knowledge (Saunders, Saunders, Lewis & Thornhill 2011, p. 107). According to Myers *et al.* (2009, p. 36) “a researcher’s philosophical stance encompasses the underlying assumptions about reality and knowledge, which influence beliefs about what is considered valid and legitimate or justifiable research”. The research philosophy adopted by the researcher comprehends important assumptions about the way in which the researcher frequently views the world and practical deliberations. These philosophical worldviews are addressed through research paradigms.

According to Stoppani (2011), a paradigm is a singular case that is secluded from its context only insofar as, by demonstrating its own singularity, it makes understandable a new ensemble, whose similarity it on its own, constitutes. Conceptually, a research paradigm refers to a set of philosophical assumptions and beliefs that directs the research (Jonker & Pennink 2010). A research paradigm is a viewpoint about research held by a community of researchers that is founded on a set of shared assumptions, concepts, values, and practices (Saurombe 2014). In addition, a research paradigm is defined by Guba and Lincoln (1998. p. 200) as a “set of beliefs that define the nature of the world, the individual’s place in it and the possible relationships to that world and its parts”. Collis and Hussey (2013, p. 10) concur that “a research paradigm is a framework that guides how research should be conducted, based on people’s philosophies and their assumptions about the world and nature of knowledge”. In empirical studies, research paradigms are instrumental in guiding the researcher in the selection of the research design, research methodology and research instruments (Easterly-Smith *et al.*, 2002; Ponterotto, 2005). The essential beliefs of research paradigms are outlined in Table 6.1.

Table 6.1: Fundamental Beliefs of Research Paradigms

	Research Paradigms			
Fundamental Beliefs	**Positivism (Naïve realism)**	**Post-positivism (Critical Realism)**	**Interpretivism (Constructivism)**	**Pragmatism**
Ontology: *the researcher's view of the nature of reality or being*	External, objective and independent of social actors	Objective. Exists independently of human thoughts and beliefs or knowledge of their existence	Socially constructed, subjective, may change, multiple	External, multiple, view chosen to best achieve an answer to the research question
Axiology: *the researcher's view of the role of values in research*	Research is undertaken in a value-free way, the researcher is independent of the data and maintains an objective stance	Research is value laden; the researcher is biased by world views, cultural experiences and upbringing	Research is value bound, the researcher is part of what is being researched	Values play a large role in interpreting the results, the researcher adopting both objective and subjective points of view
Research Methodology:	Quantitative	Quantitative or qualitative	Qualitative	Quantitative and Qualitative (mixed or multi-method design)
Data collection techniques most often used	Highly structured, large samples, measurement, quantitative, but can use qualitative	Methods chosen must fit the subject matter, quantitative or qualitative	Small samples, in-depth investigations, qualitative	Mixed or multiple method designs, quantitative and qualitative

Source: (Wahyuni, 2012; Saunders et al., 2009).

As presented in Table 6.1, the research philosophy is commonly divided into four paradigms: positivism, post-positivism, interpretivism, and pragmatism (Wahyuni, 2012).

6.2.1 Positivism

Positivism has been generally regarded as a dominant paradigm (Sefotho 2015). In addition, the positivist paradigm is a concept that calls for the use or application of scientific methodologies to investigate social problems, issues or phenomena (Zou, Sunindijo &

Dainty, 2014). Creswell (2013) defines positivism as a scientific method of conducting research which mainly requires factual scientific elements to determine the causal effect of specific problems. According to Grochal-Brejdak (2015, p. 52), "knowledge of positivism is a statistically generalised conclusion referring to the population", based on the outcomes of the statistical evaluation of the data. In addition, Steinert (2014) elucidates that in the positivist paradigm, research questions are usually framed in quantifiable and measurable terms. In addition, positivist research studies are contingent on the assumption that there are *a priori* casual relationships between variables, and that these can be used to explain phenomena (Swanson & Chermack 2013). Furthermore, unlike the interpretivist philosophy, which aims to discover theories, the positivist approach strives to confirm theories (Swanson & Chermack 2013).

6.2.2 Post-positivism

During the 20th century, post-positivism emerged from positivism; it has similar ontological and epistemological beliefs as positivism; however, it differs in several ways (Scotland 2012). The aim of the post-positivist paradigm is to generate objective knowledge through the use of a credible research process that enhances the accuracy, validity, reliability and generalisability of research findings (Schulze & Kamper, 2014). Post-positivism claims that post-positivistic knowledge is more certain and objective than knowledge which originated from other paradigms (Scotland 2012). Post-positivism upholds the tenets of phenomenalism and perceives knowledge as objective and accurate only if it is subjected to objective scrutiny (Bryman & Bell 2011). The post-positivist is supported by the quantitative research methodology that is premised on the view that knowledge is constructed through objective measurement of relationships among variables in a given study (Glesne & Peshkin 1992). Thus, under the post-positivist paradigm, knowledge is constructed based on quantified numeric data that are subjected to detailed statistical analysis (McMillan & Schumacher 2012). According to Harrison, Birks, Franklin and Mills (2017), the goal of a post-positivist researcher is to use science as a way to apprehend the nature of reality while understanding that all measurement is imperfect. Therefore, emphasis is placed on using multiple methods with triangulation to circumvent errors and understand what is happening in reality as close as possible to the "truth" (Lincoln *et al.*, 2011).

6.2.3 Interpretivism

According to Miller and Salkind (2002), the interpretivist research philosophy is taken from the perspective of human behaviour and from the researcher's own standpoint that focuses on the significance of individuals who are connected to concrete understanding of phenomena. Williamson, Bursteinm and McKemmish (2002) are of the view that interpretivist researchers do not test hypotheses though they might create working proposals that are positioned from the standpoint of the contributors or participants in the study. Cooper and Schindler (2006) posited that researchers who apply a qualitative research paradigm or interpretivist philosophy frequently use small sample sizes and succumb to subjective data as part of their research development. In an interpretivist approach, Grochal-Brejdak (2015) posits that knowledge is an outcome of subjective understanding of the reality whilst the reality is complicated and relative. Furthermore, a scientist has no easy access to the reality, thus the procurement of knowledge of that reality emanates from accurate application of interpretive research procedures (Grochal-Brejdak, 2015). Data is collected through the utilisation of qualitative, non-structured methods and not to foretell, but rather to explain (Grochal-Brejdak, 2015). Aditionally, Malsch and Salterio (2016, p. 3) indicate that the "interpretivist researcher believes that social reality is constantly emergent and subjectively created". On the other hand, Hepworth, Grunewald, and Walton (2014) suggest that interpretivist explanations normally follow a continuum in terms of access to and belief in an objective, knowable reality and entail epistemologies such as critical realism, cognitive constructionism and social constructionism. Creswell (2009) clarifies that interpretive methodology is directed at understanding phenomena from an individual's perspective, investigating interaction among individuals as well as the historical and cultural contexts which people inhabit. Examples of methodology include: case studies (in-depth study of events or processes over a prolonged period), phenomenology (the study of direct experience without allowing the interference of existing preconceptions), hermeneutics (deriving hidden meaning from language), and ethnography (the study of cultural groups over a prolonged period) (Scotland, 2012).

6.2.4 Pragmatism

According to Feilzer (2010), pragmatism as a research paradigm emerges as accepting both singular and multiple realities in the world, setting itself towards solving practical problems in the real world. Wahyni (2012, p. 70) is of the view that "the pragmatic paradigm is grounded on the notion that the nature of reality is multi-faceted and externally generated and that the best research approach is the one that answers the research questions of the study". Pragmatism is outcome-oriented and interested in determining the meaning of things

(Johnson & Onwuegbuzie, 2006) or focusing on the product of the research (Biesta, 2010). The pragmatic paradigm views knowledge as socially constructed, based on the lived realities of research objects (Schulze & Kamper 2014). The logic behind this paradigm is that it employs both the inductive and deductive approaches to find explanations for a phenomenon under study (Creswell 2009). Shannon-Baker (2016, p.322) explains that "pragmatism is based on the belief that theories can be both contextual and generalisable by analysing them for ''transferability'' to another situation". Therefore, the pragmatic researcher is similarly able to maintain both subjectivity in their own reflections on research and objectivity in data collection and analysis (Shannon-Baker, 2016). Ormrod (2006, p. 892) identified that "the core idea of pragmatism is that beliefs are guides to actions emphasising the practical, common-sense, scientific approach embedded in pragmatism". Moreover, Sefotho (2015, p. 28) succinctly explains that "central to pragmatism is the practical nature of being, reality or phenomenon and through pragmatism; researchers become aware and are receptive of the ideas of others".

6.2.4.1 Justification for this Study: Positivism

The present study follows a positivist paradigm, as it seeks to find a relationship between constructs stated for this study and also makes use of objective measurement instruments for the data collection and analysis procedures. The fundamental idea of positivism is to classify problems, state a hypothesis, verify the hypothesis, and summarise the data in order to provide generalisable, law-like conclusions (Sunyansanoa, 2013). This study used a positivist research paradigm because it is the leading methodology used for investigative studies in social sciences and management (Mukhopadhyay & Gupta, 2014; Reksoatmodjo, Utomo, Hartono & Djunaedi, 2012; Davoudi, 2012). Moreover, "evidence is understood as synonymous with facts, and credible evidence is interpreted as quantitative, measurable and capable of establishing clear cause-and-effect relations through scientific methods" (e.g. Davoudi, 2012, p. 36). In this light, it was more appropriate and meaningful to use the positivist paradigm than the other research paradigms (post-positivism, interpretivism, and pragmatism). Furthermore, the objectives of the research made it appropriate to use this method. It should also be noted that the current study derives from the positivist philosophy, which, as stressed by Mouton (2011), places prominence on testing for causality and the scientific formulation of hypotheses. This is also in line with Scotland (2012) who agrees that positivist methodology is directed at explaining relationships and positivists attempt to identify causes which influence outcomes. Therefore, this study is aimed at testing the relationships between the dependent and independent variables, with the aim to determine causal relationships among the variables. These aspects make positivism applicable.

Table 6.2: Summary of Classification Research Paradigm of the study – Positivism

Positivist component	Definition	Relative to this Study
Ontology	Nature of reality, people Objectivism	Target population/respondents
Epistemology	Natural science model, social reality	Finding truth
Axiology	Fundamental values, consciousness	Value-free
Research approach	Principal orientation to the role of theory in relation to research.	Deductive approach and testing of theory
Research strategy	Type of involvement with respondents	Quantitative research
Methodology	Verification of hypotheses	Questionnaire survey
Methods	Individual techniques for data collection	A structured interview, face-to-face

Source: Adapted from Sunyansanoa (2013)

6.3 Research logic

It is important to adopt the right research logic since it influences the research design as well as the research strategy (Easterby-Smith, Thorpe & Jackson, 2008). After choosing a suitable research philosophy, it is important that the researcher decides how theory will be involved in the research project. Dlodlo (2017, p. 122) elucidates that "research logic pertains to the formal processes, which guide the reasoning behind the choice of methods to follow when conducting research". The researcher then either follows a deductive approach which entails theory testing or an inductive approach where theory is developed; this depends on the logic of the research (Creswell, 2014). Figure 6.1 depicts the deductive logic.

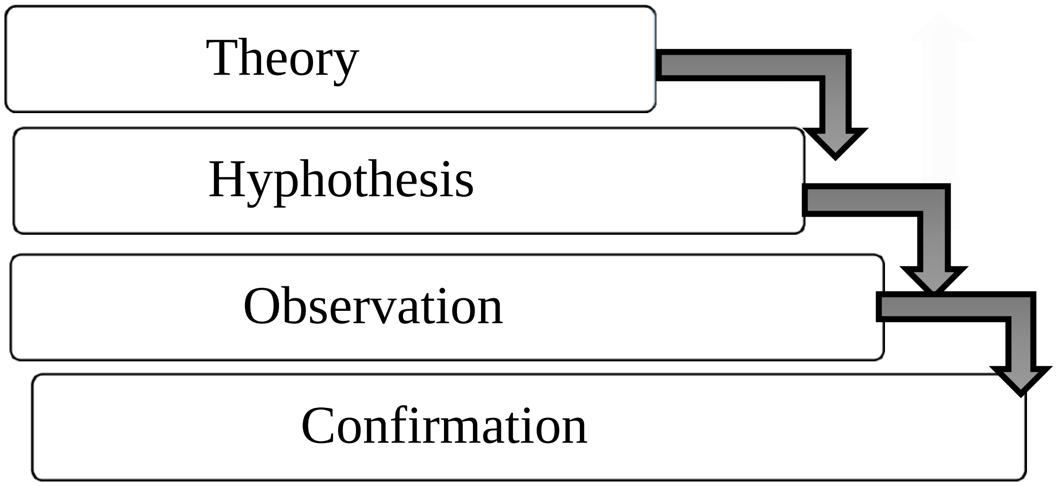


Figure 6.1: Deductive research logic

Source: Adapted from Babbie (2011, p.43)

Deductive research refers to the testing of concepts and patterns known from theory using new empirical data, while possibly refining, improving or extending it (Collis & Hussey, 2013; Bhattacherjee, 2012). Thus, deductive logic requires the formulation of theory and specification of hypotheses (Dlodlo, 2017). According to Hall, Griffiths and McKenna (2013), positivist researchers use deductive reasoning to generate hypotheses that emphasise rational, objective and logical thinking. The deduction logic emphasises scientific principles, involving moving from theory to data, to explaining causal relationships between variables and is highly structured (Saunders *et al.*, 2009). Furthermore, Babbie (2011) points out that deductive research logic involves deriving expectations and statements for possible empirical testing. Thereafter, a period of data collection follows, after which the empirical data is used to either confirm or refute the hypotheses (Dlodlo, 2017). According to Babbie (2011, p. 46) "research that applies inductive reasoning spans from constructing knowledge by making specific observations of reality, thereby developing consistent patterns". The inductive research logic is depicted in Figure 6.2

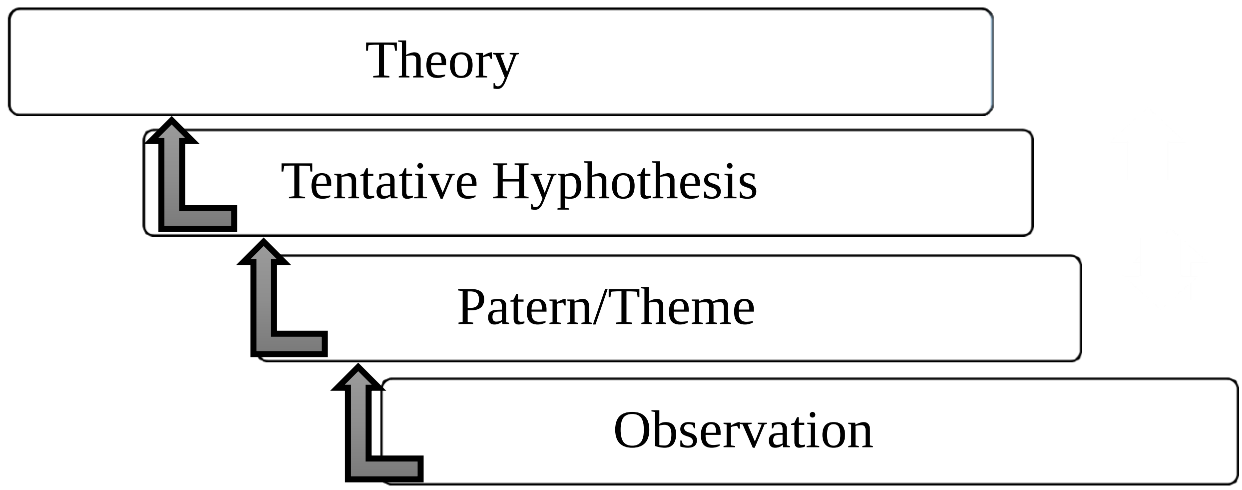


Figure 6.2: Inductive research logic

Source: Adapted from Babbie (2011, p. 43)

The induction approach emphasises gaining an understanding of the meanings humans attach to events, it offers the possibility to examine a link between specific variables without prior knowledge about the way individuals interpret their social surroundings (Saunders et al., 2009). Zikmund *et al.* (2013) attest that inductive reasoning involves the stipulation of theoretical propositions based on observation of particular facts. Gray (2013) is of the view that inductive research begins with empirical observations of reality and then builds more abstract concepts and propositions by way of explaining existing thematic relationships among the observed objects. In addition, Gray, (2013, p. 17) points out that "although the inductive logic is germane to exploratory research approaches, which often attempt to establish new knowledge and develop formal theories, deductive reasoning is analogous to descriptive studies that are constructed from well-established theory and move towards hypothesis testing".

6.3.1 Research logic adopted for this Study

In this study, the deductive reasoning approach is thus used in this study since the purpose is to use existing theories and investigate a research gap. The study began with a literature review, the theoretical framework and hypotheses based on the extant research and available theory. A deductive approach is thus used in this study. The deductive approach is related to positivism and can be adjusted to the natural sciences (Saunders *et al.*, 2009). The researcher intends to move from theory to quantitative analysis and needs to explain causal relationships between variables; deductive reasoning approach is therefore applicable for this study.

6.4 Research strategy

There are five different kinds of research strategies. When considering these different strategies, the researcher must use the one which fits the purpose of the research. The research strategy needs to enable the researcher to meet the research objectives as well as answer the research question; besides the research questions and objectives, the choice of the research strategy depends on factors like existing knowledge, the amount of time and other resources available, as well as the researcher's own philosophical underpinnings (Saunders *et al.*, 2009). Research strategy provides overall direction of the research including the process by which the research is conducted (Wedawatta, Ingirige & Amaratunga, 2011). According to Bryman (2016), research strategy refers to a general orientation to the conduct of social research. Common research strategies include experiment, survey, case study, action research, grounded theory, ethnography and archival research (Saunders *et al*., 2009). The selection of a particular strategy heavily relies on the objectives of study, research questions employed, the degree of accessible information, available resources, as well as the philosophical foundation. Table 6.3 presents features of different research strategy.

Table 6.3: Features of the different research strategies

Strategy	Characteristics
Survey	A popular and common strategy; mainly in deductive approach; suitable for research questions of whom, what, where, how much, how many; research purpose: exploratory, descriptive tools; questionnaire, quantitative data or structured interview, structured observation; time-consuming work and narrow scope of data - limited questions.
Case study	An empirical investigation of a particular contemporary phenomenon with multiple sources of evidence; boundaries between phenomenon and its context are not clearly evident; for research questions of: why, what, how; research purpose: exploratory and explanatory and triangulation of data: qualitative and quantitative.
Grounded theory	A typical inductive approach; theory developing and building process. To predict and explain behaviour; research purpose: exploratory; data collection: without a theoretical framework; theory is developed from data and data analysis: constant reference to data to develop and test theory.
Experiment	Define a theoretical hypothesis; Selection of samples of individuals from the population; random allocation of samples to different experimental conditions: the experimental vs. control group; introduction of intervention to one more of the variables; measurement on a small number of dependent variables and control of all other variables.
Action research	Concerned with the resolution of organisational issues; with involvement of practitioners in the research; researcher is part of the organisation and interactive nature of the process
Ethnography	A typical inductive approach: describe and explain the social world; researcher needs to immerse himself/herself in the social world as completely as possible and research process needs to be flexible and responsive to changes

Source: Saunders *et al.* (2007, p. 136-143)

In the framework of a deductive approach, the survey strategy is often used among scholars and in business as it allows researchers to collect quantitative data (Saunders *et al.,* 2009; Lamb, Hair, McDaniel, Boshoff & Terblanche, 2008). Survey research strategy is the most suitable data collection method for consumer opinions and behaviours of a large number of people (Easterby-Smith *et al.*, 2008). Furthermore, it offers the possibility for data to be standardised, allowing for easy comparison. This method allows for the collection of quantitative data that can then be analysed using descriptive and inferential statistics. Survey strategy allows the generation of findings that are representative of the whole population at a lower cost than collecting data for the whole population. When conducting a survey, it is important to ensure that the sample is representative and to conduct a pilot test to make sure the respondents understand the questions as intended. Despite the time spent to analyse the results, once the data is collected, the researcher becomes independent, which is critical in order to stay within the anticipated time frame (Saunders *et al*., 2009). Surveys are mostly used when using a quantitative research approach with a descriptive research and with a cross-sectional design. Previous researchers extensively used the survey approach to explore branding in different contexts (Alnawas & Altarifi, 2016; Tsai, 2014). It also has the ability to measure latent constructs, that is, variables that cannot be directly observed or quantified. Finally, it allows for investigation of problems in realistic settings and allows access to a wide range of participants, thus increasing the likelihood of generalising the results.

6.4.1 Research strategy adopted for this study

In this study, the researcher decided to adopt the survey strategy due to the large population of the research study, as the survey strategy offers a basis to collect data from a sizable population using minimal staff and limited financial resources. According to Check and Schutt (2012, p. 160) survey research is defined as "the collection of information from a sample of individuals through their responses to questions." The survey research is able to gain a large number of respondents by interviewing them with the same questions (Neuman, 2006). Another advantage of the survey research for this study is that the collection of the data is structured, as it uses either structured observation or structured interview techniques (Ponto, 2015). Due to the fact that data collected using a survey strategy can be used to suggest possible reasons for particular relationships between variables and to produce models of these relationships, the survey method was the most suitable for this study, as the study relies on hypotheses testing. The next sections describe the design of the research, which was used to ensure that the study made use of sound procedures and methods of enquiry.

6.5 Research design

Sekaran and Bougie (2013, p. 95) define a research design “as the blueprint for the collection, measurement and analysis of data, based on the research question of the study”. A research design can be defined as “a blue print, strategy, plan and structure of how the researcher intends to conduct his study” (Mounton 2011, p. 55). In addition, research design refers “to the overall strategy that one chooses to integrate the different components of the study in a coherent and logical way, thereby, ensuring one will effectively address the research problem; it constitutes the blueprint for the collection, measurement and analysis of data” (Ernest, Matthew & Samuel, 2015, p. 22). On the contrary, Malhotra (2010. p. 102) points out that “a research design is a master plan for directing a research study and may be categorised as being exploratory or conclusive, which is sub-divided further into descriptive or causal research". Therefore, it can be pointed out that a research design is an initial plan for conducting a research as well as a structure that can assist the researcher to obtain the intended results.

6.5.1 Types of research designs

A study's research design offers the structure for undertaking a research project. Malhotra (2010, p. 103) succinctly explicated that "there are three major research designs, namely exploratory research, which primarily involves qualitative data, and causal research and descriptive research, both of which primarily involve quantitative data". These designs are illustrated in Figure 6.3.

Uses	Types	Instrument
Exploratory research	• Formulate problem more precisely. • Develop hypothesis • Establish priorities for research • Eliminate impractical ideas • Clarify concepts	• Literature search • Experience survey • Analysis of select cases • Focus groups • Interviews • Project tests • Ethnographies
Descriptive research	• Describe segment characteristics. • Estimate proportion of people who behave in a certain way. • Make specific predictions.	• Longitudinal studies • True panel • Omnibus panel • Sample survey
Causal research	• Provide evidence regarding causal relationships by means of time order in which variables occur. • Elimination of other explanations. • Concomitant variations	• Field experiment • Laboratory experiment

Figure 6.3: Different research designs

Source: Churchill and Iacobucci (2005, p. 76)

6.5.2 Exploratory research

Welman, Kruger and Mitchell (2005, p. 23) explain that "the primary purpose of exploratory research designs is to establish whether a phenomenon exists and to identify important information about that phenomenon". In addition, Churchill and Iacobucci (2010, p. 61) point out that "exploratory research designs are useful for breaking down broad and vague research questions into more precise sub-questions with a view to increase familiarity and understanding of a problem". Exploratory research is conducted for a problem that has not been clearly defined. It often occurs before we know enough to make conceptual distinctions or posit an explanatory relationship (Ndovela, 2016).

6.5.3 Descriptive research

Descriptive research is meant to make available explanations of occurrences or characteristics regarding a subject of a population and estimates of the proportions of a population that have characteristics and discovery of associations among different variables (Babbie, Mouton, Vorster & Prozesky, 2010). Descriptive research designs are concerned with describing the characteristics of certain groups as well as making specific predictions about relationships between variables (Zikmund, Babin, & Griffin., 2013; Churchill & Brown, 2007; Cooper & Schindler, 2006).

6.5.4 Causal research

The purpose of causal research is to explain the cause and effect of given stimuli or factors on another variable (Malhotra, 2010). Churchill and Iacobucci (2010), as well as Zikmund *et al.* (2013), further point out that causal or explanatory research designs provide evidence of concomitant variation, which relates to the extent to which two or more variables occur together or vary together, systematically as predicted by the hypotheses. According to Ndovela (2016, p. 54) "causal research is conducted in order to identify the extent and nature of cause-and-effect relationships". Causal research can be conducted in order to assess impacts of specific changes on existing norms, various processes (Ndovela, 2016). Moreover, Bem, Utts and Johnson (2011) elucidate that experiments are the most popular primary data collection methods in studies with causal research design. For the purpose of this study, descriptive and causal research designs were utilised to determine the impact of green marketing practices on competitive advantage and business performance among manufacturing small and medium enterprises in South Africa.

6.6 Qualitative and quantitative research approaches

Vijayalakshmi and Sivapragasam (2008) are of the view that two approaches can be followed when conducting research, namely qualitative and quantitative research. Walia (2015) explains that qualitative research is any kind of research that produces findings not arrived at by means of statistical procedures or other means of quantification. Moreover, Johnson (2015) states that qualitative methods are usually applied to generate insight and theory in an inductive way through different non-statistical approaches. Likewise, Guercini (2014) posits that qualitative research uses an inductive approach and an essentially different role of the researcher and interpretation of findings. In similar vein, the basis of qualitative research is inductive reasoning wherein a researcher moves from specific to general to end up with general conclusions or theories (Jirojwong, Johnson & Welch, 2011; Burns & Grove, 2009). Furthermore, Hoffman and Bennett (2013) describe it as being based on people's experiences and it is not oversimplified and subsumed into a number or statistic. Also, a qualitative study provides a "thick" description of the phenomenon under study (Borrego, Douglas & Amelink, 2009) by providing a detailed understanding of the relationships between research objects and their natural settings (Mello & Flint 2009).

On the other hand, Hamer and Collinson (2014) are of the view that the quantitative research attempts to establish statistically significant relationships, addresses questions by measuring and describing, is based on objective measurements and observation, is concerned with correlations and causations. Itanyi, Ewurun and Ukpere (2012) defined quantitative research as a system of analysing data that are in a form of numbers and the testing of hypotheses a researcher is determined to investigate. In addition, Polit and Hungler (2013) point out that this approach is based on the use of numbers and uses surveys and other numeric data and is a means for testing objective theories by examining the relationships among variables. Furthermore, Sedmak and Longhurst (2010, p.81) point out that "quantitative research utilizes statistical methods to analyse data and interpret data from the positivist research standpoint". It enables the researcher to understand the data and take a broad view of the findings from the sample to the entire population (Dlodlo & Dhurup, 2010). Data analysis in quantitative research is deductive, meaning that it entails testing hypotheses using numerical data and statistical tests (Ary, Jacobs, Sorensen, & Walker, 2013). Moreover, the major advantage of quantitative methods emanates from the objectivity of research findings and the ability to generalise research findings to the entire population (Wiid & Diggines 2011). Table 6.4 shows the differences between these two research approaches.

Table 6.4: Difference between qualitative and quantitative research approaches

QUALITATIVE VS QUANTITATIVE		
FACTORS/CHARACTERISTICS	**QUALITATIVE RESEARCH**	**QUANTITATIVE RESEARCH**
Types of questions	Probing	Limited probing
Sample size	Small	Large
Amount of information from each respondent	Substantial	Varies
Requirements for administration	Interviewer with special skills	Interviewer with fewer skills
Type of analysis	Subjective, interpretive	Statistical summation
Hardware	Tape recorders, projection devices, video recorders, pictures, discussion guides.	Questionnaires, computers, printouts
Degree of replicability	Low	High
Researcher training	Psychology, sociology, social psychology, consumer behaviour, marketing research	Statistics, decision models, decision support system, Computer programming, marketing research
Type of research	Exploratory	Descriptive or Causal

Source: McDaniel and Gates (2004, p. 67).

The researcher opted for a quantitative research approach because it enhances the accuracy of results through statistics analysis (Berndt & Petzer 2011) and avoids the elements of subjectivity associated with the qualitative approach (Du Plessis & Rosseau 2007). In addition, this research adopted the quantitative research approach since it is "objective, the researcher is independent of research, value free and unbiased, structured and accurate and reliable through reliability and validity testing, and also used to recommend a final course of action" (Park & Park, 2016, p. 3-4). Additionally, Marzooqi (2015), as well as Barnham (2015), explain that quantitative research is often easier to investigate compared to qualitative analysis because it uncovers correlations and regressions between two variables and it provides concrete, factual data. Moreover, the approach permits one to survey the causal relationships with the variables used in the study. The following section outlines the sampling strategy followed for collecting the required data.

6.7 Sampling design procedure

According to Salkind (2012, p. 95) "the sampling process includes a description of the target population, the sample frame, the sample method and the sample size". However, Tustin, Ligthelm, Martins and van Wyk (2005, p. 337) describes that "even though sampling forms an integral part of the research design, it is treated as a separate multi-step stage in the research process". The selection of the sample is guided by the sample design procedure (Wegner, 2000), and the sampling process or procedure draws conclusions about a population based on the observation of a portion of that population (Zikmund & Babin, 2013). Specific steps, as recommended by Malhotra (2010) were followed in developing the sampling procedure for the empirical study as indicated in Figure 6.4.

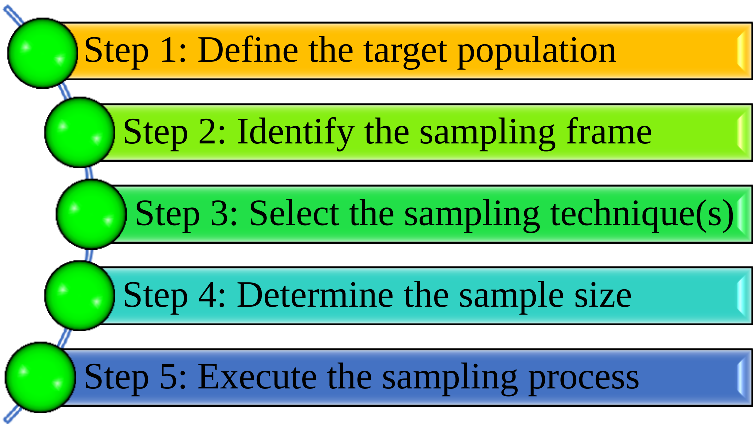


Figure 6.4: The steps in the sampling process

Source: Malhotra (2010, p. 372)

6.7.1 Target population

According to Sekeran and Bougie (2013, p. 245) "sampling begins by defining the target population precisely". Researchers often collect information from a portion of the population and then make inferences about the universe, based on the information that has been provided by sample elements (Malhotra, 2010). A target population may be perceived as a well-defined group of elements that have certain characteristics which are of relevance to the study (Charmaz, 2006). Similarly, Neuman (2006) points out that a target population is defined as those elements of the population considered for actual inclusion in a particular study or it may be viewed as a subset of the population, in which a researcher is interested. The target population for this study comprised small and medium business organisations classified as SMEs operating within the manufacturing sector. Precisely, the target population was defined as managers of SMEs and heads of marketing departments within manufacturing SMEs located in the Gauteng Region of South Africa during 2017, when the data was collected.

6.7.2 The sample frame

Malhotra (2010) elucidates that a sampling frame constitutes a database for obtaining elements of the target population. However, Bryman *et al.* (2014, p. 170) contends that "sampling frame consists of all units in the population from which a sample is chosen". A good sample frame is one that accurately represents the views of the target population on the subject under study (Muposhi, 2015). Some common sources of sample frames are lists of registered voters, customer lists and maps (Churchill & Iacobucci, 2010). The sampling frame for the study consisted of manufacturing SMEs operating within the Gauteng region. A list of 1945 manufacturing small and medium enterprises in Gauteng was obtained from the Small Enterprise Development Agency (SEDA), a centre of excellence for small enterprise development in South Africa. Respondents that were included in the survey were provided with questionnaires which they had to complete. The next section discusses the sampling technique used in this study.

6.7.3 Sampling method

According to Welman, Kruger and Mitchell (2005) in quantitative research, it is usually impractical and uneconomical to involve all the members of the population due to large population size; hence, sampling is effected. Thus, sampling is the process of selecting units of analysis from the population with the aim to make fair generalisation of the results back to the population from which they were chosen (McDaniel & Gates 2004). Thus, a sample is a sub-set that is representative of the population (Welman, Kruger & Mitchell, 2005). The choice of sampling method is determined by factors such as the nature of the research problem, research objective, budget constraints, time, and so forth (McDaniel & Gates 2008). Zeeman (2013, p. 48) "defines the sampling method or the selection thereof as the way the sample units are selected". Sekaran and Bougie (2009) elucidate that sampling methods are divided into two broad categories, which are probability and non-probability sampling. Probability and non-probability sampling methods are classified into sub-groups, as presented in Table 6.5.

Figure 6.5: Types of probability and non-probability sampling techniques

PROBABILITY SAMPLING TECHNIQUES	DESCRIPTION
Simple random sampling	Each element of the population has an equal and known chance of being selected as part of the sample
Stratified random sampling	The population is divided into subgroups of mutual characteristics and a simple random sample is chosen from each sub-group
Cluster sampling	The population is divided into subgroups of mutual characteristics and a simple random sample is chosen from subgroups. Often associated with area sampling
Systematic sampling	Random selection of a digit (n) and then selection of sample element at every n the interval depending on population size and the required sample size
NON-PROBABILITY SAMPLING TECHNIQUES	DESCRIPTION
Convenience sampling	Any process when researcher selects sample elements quick and easy
Judgement sampling	The sample depends on the experience, skill, knowledge and insight from one choosing the sample to provide accurate information
Quota sampling	The population is divided and assigned appropriate quotas based on prior knowledge and understanding of characteristics. Quota categories usually involve age, gender and occupation.

Source: Weideman (2014, p. 84)

Sampling methods can be divided into two broad categories: non-probability and probability sampling. Saunders, Lewis and Thornhill (2009) define non-probability sampling as the process where the likelihood of selection of each sampling unit is unknown while probability sampling is a technique of drawing a sample in which each sampling unit has a well-known, non-zero probability of being incorporated in the sample. According to Babbie (2012), a non-probability sampling technique refers to a collection of sampling approaches which have distinguishing characteristics that subjective judgement can play a role in selecting the sample. Non-probability sampling technique is described as elements that are within the population and do not have a guaranteed chance or probability of being included or selected for the research (Engel & Schutt 2010). Non-probability sampling relies on the discretion of the researcher and furthermore, the degree of sampling error cannot be determined (Tustin, Ligthelm, Martins, & Van Wyk 2010).

On the other hand, "in probability sampling, each constituent of the population has an equal and independent chance of being selected for the sample, and is not influenced by any personal preferences or considerations" (Mohabier, 2016, p. 45). According to Wilson (2010, p. 194), "probability sampling is a sampling technique in which every item in the population has an equal and known chance of being selected and included in the sample". Statistically, probability sampling allows the researcher to exhibit the sample's representativeness, an explicit statement as to how much variation is introduced, and identification of possible bias (Rea & Parker, 2014). In addition, Kumar, Aaker and Day (2002, p. 306) point out that "probability sampling allows the researcher to statistically demonstrate the representativeness of a sample, an explicit statement as to how much variation is introduced, and identification of possible biases". Thus, based on this reason, probability sampling is considered appropriate for this survey-based study. This study, however, only employed the simple random probability sampling technique. Alvi (2016) points out that in this type of sampling each and every element of the population has an equal chance of being selected in the sample. In addition, simple random sampling lists all members of the population and subjects are selected from that list in a random manner (Cohen, Manion, & Morrison, 2007). A simple random sample of size n is the most well-known and widely applied probability sampling method in which every set of n elements has the same probability of being selected as the sample (Lohr, 2010). This sampling technique provides the following benefits: there is no possibility of sampling bias and the sample is a good representative of the population (Alvi, 2016).

6.7.4 Sample size

Kumar (2014) and Gupta (2011, p. 116) posit that "the number of subjects in a study is called the sample size, and refers to the elements to be included in a research study". Sample size determination is a sophisticated matter because it is highly dependent on many factors such as, *inter alia*, the type of sample, the homogeneity of the population, the time, the money and the personnel available for the study (Surujlal, 2004). Generally, larger samples result in more precise and robust statistical findings, while smaller samples result in less precise and unreliable findings (Sikhwari, 2015). The determination of the final sample size involves judgment, especially where probability sampling is employed, and calculation where random sampling is used by the researcher findings (Sikhwari, 2015). Therefore, since the simple random sampling technique was used in this study, the sample size was then calculated using the Raosoft sample size calculator. The estimated population of 1945 was used, with the margin error of 5%, confidence interval of 95% and response distribution of 50 %, whereby a sample size was 321 manufacturing SMEs was determined.

This Raosoft calculation was based on this formula:

x	=	$Z({}^{c}/_{100})^{2}r(100-r)$
n	=	${}^{N x}/_{((N-1)E^{2} + x)}$
E	=	$\mathrm{Sqrt}[{}^{(N - n)x}/_{n(N-1)}]$

Source: Zulwayo (2013, p. 21)

Where N was the population size, r was the fraction of respondents, Z(c/l00) the critical value for the confidence level c, response distribution of 50% which was the conservative assumption in the general population to obtain larger sample size. According to Sekaran and Bougie (2009), researchers universally agree that larger samples provide much more stable parameter estimates. Nevertheless, there is no agreement as to what constitutes an adequately large sample size. According to Choto, Tengeh and Iwu (2014), a sample size larger than 30 and less than 500 is appropriate for most research studies. Hair *et al*. (1995) suggested that sample sizes should be 100 or greater. However, in their guide to sample sizes, Comrey and Lee (2013) categorised 100 as poor, 200 as fair, 300 as good, 500 as very good, and 1000 or more as excellent. The final sample size of 321 was used in this study as it is classified as good sample size by Comrey and Lee (2013). More prominently, the sample size of 321 respondents improved all the goodness of fit indices as advocated for by Hair *et al.* (2006). The next section focuses on the data collection procedures.

6.8 Data collection

"Data collection refers to the precise and systematic gathering of opinions and views that have the potential of addressing the research problem" (Murthy & Bhojanna 2010, p. 241). Data collection comprises utilising field workers or interviewers to gather the data although market research firms can also be used to conduct the fieldwork (Lamb *et al.*, 2013). A survey method of collecting data was ideal for this study since a quantitative approach is utilised. McDaniel and Gates (2007, p. 73) explain that "survey methods are used when the researcher wants to acquire information about the participants, including their opinions, attitudes and behavior". Likewise, Blumberg *et al*. (2008, p. 278) brings up that the survey method is the most favoured technique for essential information gathering because of this technique being easy to oversee, analyse, code and interpret. The survey method is intended to extract responses from a large pre-selected group of respondents (Baines & Page 2011, p. 134) and can be administered through different methods such as personal interviews, mail surveys, telephone surveys and online interviews (Malhotra & Birks 2007). For information accumulation, the investigation utilised a structured questionnaire comprising a list of questions to which respondents replied. The utilisation of the questionnaire during the survey aimed at producing essential data valuable for enhancing response rate during the survey. The questionnaire and its components are discussed in the sections that follow.

6.8.1 Questionnaire design

Webb (2000, p. 197) explicated that "the initial consideration when designing the questionnaire are the type of information required, the nature of respondents who are to be surveyed, the type of method by which the survey is to be administered and the questionnaire must fully answer all the data requirements that has been stipulated in the research objectives". Questionnaire design induces the process of translating the broad objectives of the survey into questions that can obtain the required information (Morisky, Ang & Krousel-wood, 2008). Furthermore, Miller and Read (1998) clarify that a good questionnaire should meet research objectives, obtain valid and reliable data from the respondents, facilitate the interviewing task and subsequent data processing and achieve and maintain the involvement of respondents (Webb, 2000). A questionnaire was chosen as a measuring instrument as it is simple to administer and reduces the variability in the results that may be caused by differences in other types of interviews (Malhotra & Birks 2010). Moreover, as suggested by Burns and Bush (2006), the questionnaire enabled the researcher to achieve the following functions:

- It helped to translate the research objectives into specific questions
- It enabled standardised questions and response categories so that every participant responded to identical stimuli

- By its wording, questions, flow and appearance, it fostered co-operation and kept respondents motivated throughout the interviews
- Questionnaires served as a permanent record of the research
- The questionnaire helped speed up the process of data analysis
- The questionnaire contained the information on which reliability assessments were made, and they could be used in follow-up validation of respondents' participation in the survey.

6.8.2 The questionnaire layout and questions format

According to Wilson and MacLean (2011, p. 264) "a questionnaire layout should be logical, well organised, user-friendly, consistent, without spelling mistakes and appealing to the target sample". Matthews and Ross (2010, p. 212) clarified that "the order in which questions are presented in a questionnaire must be logical to the participants whereby the initial question asked should lead to the next line of questions, serving to introduce the next set of questions on a different subject". A well-planned questionnaire layout is more likely to increase the response rate (Bryman & Bell, 2011). Hence, the active participation of participants in a study, suggests an effective questionnaire (Zikmund *et al.,* 2012).

Therefore, when deciding on the development of a questionnaire, a researcher can choose one of three options; either to formulate a completely new set of questionnaire scale items or to adopt an existing scale (Saunders *et al.,* 2009). The third option was selected in this work, and pertains to adapting and modifying variables that were used in previous studies based on their sound psychometric properties. According to Saunders et al. (2009), the adaptation of scale items enables researchers to save time and further make reliability comparisons by operationalising variables that have been tested in previous research, empirically. Hence, the subsequent sections entail the study's phenomena of interest, that is, the variables under scrutiny. All questions in the questionnaire were answered on a 5-point Likert scale. The demographic items can be found in Appendix 1A, and the questions including their scales in Appendix 1B.

6.8.2.1 Green packaging

For the measurement of green packaging, a five-item scale was adapted from Sambu (2016) and Kong, Harun, Sulong and Lily (2014). The measurement was modified to fit the setting of the current study. A five-point Likert scale was employed on statements that related to green packaging. It was anchored from 1=strongly disagree, 2= disagree, 3= moderately agree, 4= agree and 5= strongly agree. The following items were used to measure green packaging.

Table 6.5: Green packaging measurement items (Adapted)

Green packaging-Statements
The packaging of our products is non-biodegradable
The packaging of our products is reusable
We package most of our products in recycle materials
We substitute our unfriendly packaging materials with friendly materials
Our products have no excessive packaging

6.8.2.2 Green advertising

For the measurement of green advertising, a six-item scale was adapted from Ghodeswa and Kumar (2014). The measurement was modified to fit the setting of the current study. A five-point Likert scale was employed on statements that related to green advertising. It was anchored from 1=strongly disagree, 2= disagree, 3= moderately agree, 4= agree and 5= strongly agree. The following items were used to measure green advertising.

Table 6.6: Green advertising measurement items (Adapted)

Green advertising-Statements
Our messages on sustainability focus on environmental impact of the products
Our messages on sustainability focus on environmental benefits of the products
Our messages on sustainability intend to encourage environmentally responsible behaviour among consumers
Our messages on sustainability focus on company's values regarding impact on environment
Our messages on sustainability focus on company's mission regarding impact on environment
We make environmental claims based on life expectancy of products (e.g. raw material production, manufacturing,)

6.8.2.3 Green product innovation

Green product innovation instrument consisted of seven question items that elicited the information on green product innovation. The questions were adapted and modified from Cheng, Yang, and Sheu (2014). A five-point Likert scale was employed on statements that related to green product innovation. It was anchored from 1=strongly disagree, 2= disagree, 3= moderately agree, 4= agree and 5= strongly agree. The following items were used to measure green product innovation.

Table 6.7: Green product innovation measurement items (Adapted)

Green product innovation-Statements
Our firm often places emphasis on developing new green-products through new technologies to simplify their package.
Our firm often places emphasis on developing new green-products through new technologies to simplify their construction.
Our firm often places emphasis on developing new green-products through new technologies to easily recycle their components.
Our firm often places emphasis on developing new green-products through new technologies to easily decompose their materials.
Our firm often places emphasis on developing new green-products through new technologies to use natural materials.
Our firm often places emphasis on developing new green-products through new technologies to reduce damage from waste as much as possible.
Our firm often places emphasis on developing new green-products through new technologies to use as little energy as possible.

6.8.2.4 Green process innovation

Green process innovation instrument consisted of four question items that illustrated the information on green process innovation. The questions were adapted and modified from Kawai, Strange and Zucchella (2016). A five-point Likert scale was employed on statements that related to green process innovation. It was anchored from 1=strongly disagree, 2= disagree, 3= moderately agree, 4= agree and 5= strongly agree. The following items were used to measure green process innovation.

Table 6.8: Green process innovation items (Adapted)

Green process innovation-Statements
The manufacturing process of the business effectively reduces the emission of hazardous substances or waste.

The manufacturing process of the business recycles waste and emission that allow them to be treated and re-used.
The manufacturing process of the business reduces the consumption of water, electricity, coal, or oil.
The manufacturing process of the business reduces the use of raw materials.

6.8.2.5 Competitive advantage

For the measurement of competitive advantage, an eleven-item scale was adapted from Mtshali's (2017) scale. The measurement was modified to fit the setting of the current study. A five-point Likert scale was employed on statements that related to competitive advantage. It was anchored from 1=strongly disagree, 2= disagree, 3= moderately agree, 4= agree and 5= strongly agree. The following items were used to measure competitive advantage.

Table 6.9: Competitive advantage items (Adapted)

Competitive advantage -Statements
Our products are difficult for competitors to copy
Our response to competitive moves in the market place is good
Our ability to track changes in customer needs and wants is good
We are quick to respond to customer complaints
Our collection of strategic information about customers and competitors for use with strategic planning is good
Our speed of disseminating information in-house about competitors is good
Our analysis of customer satisfactions with the products is good
We make effort for products changes to overcome customer dissatisfaction with existing products
Our products have a significant advantage over those of our competitors.
Our product designs are unique
We are quick to respond in meeting changes to customer needs and wants

6.8.2.6 Business Performance

Business Performance was measured using 16 item-scale adapted from Zulkiffli and Perera (2011). The measurement was modified to fit the setting of the current study. A five-point Likert scale was employed on statements that related to business performance. It was anchored from 1=strongly disagree, 2= disagree, 3= moderately agree, 4= agree and 5=

strongly agree. Listed below are statements describing the business performance of a firm. These statements are divided into five sections: Market, Suppliers, Process, People and Customer Relationships measures. Respondents were expected to indicate their level of agreement with regard to their firm's actual current conditions of business performance relative to their major industry competitors.

Table 6.10: Business performance measurement items (Adapted)

Business performance -Statements
Market Performance
0ur market-share growth is the best in the industry
Our sales turnover is the best in the industry
Supplier Performance
We provide the best supplier product quality in the industry
We provide the best Suppler communication in the industry
We provide the best Supplier delivery performance in the industry
Process Performance
We provide the best work in process (WIP) inventory in the industry*
*We have the best order-fulfilment lead time** in the industry*
We have the best product-quality development in the industry
People performance
We have the best performance-appraisal results in the industry
We have the best skill level of employees in the industry
We have the best departmental communication in the industry
Customer-Relationship Performance
Our resolution of customer complaints is the best in the industry
Our customer loyalty/retention is the best in the industry
Our quality reputation and award achievement is the best in the industry
Our product returns rate is the best in the industry
Our speed of order handling and processing is the best in the industry

***Work-in-Process (WIP)** relates to the products or components that are no longer raw material, but have yet to become finished products.

****Lead time** is the time between placement and receipt of an order.

6.9 Pre-testing the questionnaire

According to Hilton (2017), pretesting is a method of checking that questions work as intended and are understood by those individuals who are likely to respond to them. Matsheke (2015, p. 56) advocates that “pretesting comprises a series of activities designed to evaluate a survey instrument’s capacity to collect the desired data, the capabilities of the selected method of data collection, and the overall adequacy of the field procedures before data collection starts”. Moreover, Masitenyane (2010, p. 74) asserts that “pre-testing is a systematic checking of a questionnaire which is central to planning a good survey”. Kumar, Talib and Ramayah (2013) asserted that the purpose of pre-testing a questionnaire is to ensure whether a) the wording of the questions is correct, b) the sequence of questions is correct, c) the respondents have clearly understood all the questions, d) additional questions are needed or some questions should be eliminated, and, e) the instructions are clear and adequate. Mafini (2014, p. 155) is of the view that “a chance exists that some of the questions in the questionnaire may cause problems”. Therefore, “there is a need for pretesting in order to eliminate these problems” (Jasper, 2010, p. 104). The researcher conducted a pre-test of the questionnaire to identify and correct deficiencies and to ensure that the questionnaire communicated the information correctly and clearly to the respondents. Furthermore, respondents were requested to comment on or indicate any difficulty or any ambiguity that they encountered in reviewing the questionnaire. During this stage, feedback was obtained and some items were modified and refined, based on the feedback received before commencement of the final study.

6.10 Pilot study

Memon, Ting, Ramayah, Chuah and Cheah (2017) explained that a pilot study is a small-scaled version or trial run—a key step to ensuring a full-fledged study will be carried out successfully. Arain, Campbell, Cooper and Lancaster (2010) refer to a pilot study as a version of the main study that is run in miniature to test whether the components of the main study can all work together. Calitz (2009, p. 256) asserts that “a pilot study is a mini-version of a full-scale study or a trial run done in preparation of the complete study”. In addition, Arnold, Burns, Adhikari, Kho, Meade and Cook (2009) note that a concise definition is that a pilot study is a “small study for helping to design a further confirmatory study”. Moreover, an exceptionally helpful discourse of exactly what is a pilot study has been given by Arain, Campbell, Cooper and Lancaster (2010). Such sorts of study may have different purposes, for example, testing study methodology, the validity of tools, estimation of the recruitment rate, and estimation of parameters such as the variance of the outcome variable to calculate sample size, etc. (Arain, Campbell, Cooper & Lancaster, 2010). The objective of the pilot study was to assess the feasibility of conducting the study, the appropriateness of the questionnaire and the adequacy of the research methodology (Babbie & Mouton 2010; Delport & Roestenburg 2011). Following the example of Synodinos, Bevan-Dye, and De-Klerk (2013), the pilot study was conducted by administering the questionnaire to 50 respondents from the target population.

6.11 DATA PREPARATION

According to Cooper and Schindler (2011, p. 490) "the data preparation process is the first step when analysing data in completed questionnaires". Malhotra (2010, p. 452) points out that "the data preparation stage of the research process entails the editing, coding, capturing and cleaning of the gathered data". A discussion of these aspects is explained briefly hereafter.

6.11.1 Data editing

Zikmund and Babin (2013, p. 369) maintain that "editing consists of checking completed questionnaires for omissions, incomplete or otherwise unusable responses, illegibility and obvious inconsistencies". The purpose of the editing process is to increase the accuracy and precision of the collected data by identifying unclear, incomplete, inconsistent or ambiguous responses (Malhotra, 2010); that is, to enforce some minimum quality standards on the raw data (Churchill, Brown, & Suter, 2010). In this study, the minimum quality standards imposed included discarding questionnaires where more than 10 percent of the responses were missing, as well as those with ambiguous responses (for example, two or more responses to questions that required a single response).

6.11.2 Data coding

Coding is the process of grouping and assigning numeric codes to the various responses to a question (McDaniel & Gates, 2005). According to Churchill and Brown (2007), coding is regarded as the technical procedure by which raw data are transformed in symbols and it involves specifying the alternative categories or classes into which the responses are to be placed and assigning code numbers to the class. Furthermore, Cooper and Schindler (2006) pointed out that coding encompasses assigning numbers or other symbols to answers so that the responses can be grouped into a limited number of classifications. Moreover, Zikmund and Babin (2010, p. 353) are of the view that “the coding process facilitates computer or hand tabulation and if computer analysis is to be used, the data are entered into the computer (using their codes) and verified”. For this study, a code book was prepared in order to successfully enter the information from the research questionnaire into the format that SPSS could understand. In this process, the researcher defined and labelled each of the research variables such as SMEs demographic profile, green packaging, green advertising, green product innovation, green process innovation, competitive advantage, business performance and assigned identification numbers to each of the possible responses. Table 6.11 shows the example of a code book for this study.

Table 6.11: Example of a code book

Variable	SPSS variable name	Coding instructions
Identification number	**ID**	**Number assigned to each survey**
1. Please indicate your gender	A1	1= Male 2=Female 3= Prefer not to say
2. Is this a family business?	A4	1 = Yes 2 = No
Green packaging Green advertising Green product innovation Green process innovation Competitive advantage Business Performance	GP GA GPDI GPRI CA BP	1= strongly disagree 2 = disagree 3 = moderately agree 4 = agree 5 = strongly agree.

6.11.3 Data capturing

Malhotra (2010, p. 459) is of the view that “data capturing is a method of transferring coded information from the questionnaires or coding sheet directly into the computer by keypunching”. In this study, the researcher, using the Microsoft Excel program, performed data capturing whereby data was entered directly from the questionnaires with the use of a personal computer and then fed the results into a Microsoft Excel spread sheet. The captured data was then imported into SPSS and AMOS for data analysis purposes.

6.11.4 Data cleaning

Fourie (2015, p.85) states that "the cleaning process consists of dealing with values that fall outside of a scale code and data that was left out". Data cleaning was done by making use of wild code checks to detect codes that are not defined for a particular variable, including extreme cases for responses to a variable that is far from ordinary. For example, a six used instead of a five on the Likert scale, may have been entered on MS Excel.

6.12 Data analysis

Vosloo (2014, p. 355) describe data analysis as "the process of bringing order, structure and meaning to the mass of collected data". "It is described as messy, ambiguous and time-consuming, but also as a creative and fascinating process" (Vosloo, 2014, p. 355). Broadly speaking - while it does not proceed in linear fashion -it is the activity of making sense of, interpreting and theorising data that signifies a search for general statements among categories of data (Schwandt, 2007). Therefore, one could infer that data analysis requires some sort or form of logic applied to research. In this study, a Microsoft Excel spread sheet was used to enter all the data and to make inferences of the data obtained, the Statistical Packages for Social Sciences (SPSS) version 25 and the Analysis of Movement Structures (AMOS) statistical package version 25 was used to run the statistical analyses. Additionally, these statistical packages were used for testing and confirming relationships among hypothesised variables. It is important to mention that the selection of data analysis techniques in this study was guided by the data analysis techniques used in the past researches in the area of green marketing and small business management.

6.12.1 Descriptive statistics

According to Wilson (2010, p. 213) "descriptive statistics describe and summarise data, while inferential statistics are used to make inferences in relation to a wider population". Descriptive statistics are techniques that help to state the characteristics or appearance of sample data (Zikmund, Babin, Carr & Griffin, 2013). In addition, O'Leary (2010, p. 237) also agrees that "the main goal of using descriptive statistics is to describe and summarise the characteristics of a sample". Therefore, this study makes use of descriptive statistics to analyse the composition and normality of the data. Dubihlela (2012) enumerates such statistics as measures of location (mean, median and mode) and dispersion of variability (variance, standard deviation, range and quartile deviation). Some of these measures were used to gain an overall understanding of the raw data and to enable the data to be presented using tables and figures. The various measures of distribution are described in the next section.

6.12.1.1 Measures of central location

According to Manikandan (2011, p. 214), central location or central tendency is defined as "the statistical measure that identifies a single value as representative of an entire distribution." According to Lesuthu, (2013, p. 59) "the measures of central location can be referred to as a general location of scores indexed by some value around which distribution tends to centre; it is usually called the average". In statistics, averages are specified in terms of mode, median and mean (Lesuthu, 2013). In this study, the mean or arithmetic was employed as the measurement of location. This statistical measure is explained as follows:

Arithmetic mean: Mean is the common measure of central tendency, which is considered to be the average value of the data set (Hair et al., 2013; Sekaran & Bougie, 2013). According to Jankowski and Flannelly (2015), the mean takes into account all the information available in the data; the number of observations and the value of each observation. In doing so, the mean provides a different kind of measure of the centre of a distribution of scores, which gives it a privileged place in research (Jankowski & Flannelly, 2015). It is very useful for many types of statistical analyses, including comparisons of groups at one or more points in time (Jankowski & Flannelly 2015). Moreover, Manikandan (2011) notes that the arithmetic mean (or, simply, "mean") is nothing but the average and it is computed by adding all the values in the data set divided by the number of observations in it. The following formula is presented to calculate the arithmetic mean value:

$$\bar{x} = \frac{\boldsymbol{total\ of\ all\ values}}{\boldsymbol{the\ number\ of\ values}}$$

This process can also be expressed in the following formula, as given by Remler and Van Ryzin (2011, p. 251):

$$= \frac{1}{n}\sum_{i=1}^{n} xi$$

Where:

xi = Individual observations
n = Sample size
$\bar{x}$ = Sample mean
$\sum$ = summation symbol meaning add up

6.12.1.2 Dispersion of variability

Burns and Bush (2010, p. 466) state that "measures of variability or dispersion are used to determine the extent to which the data are widely distributed or the differences between the variables in a data set". In this study, the standard deviation was used as the measure of dispersion.

Standard deviation: The standard deviation, denoted as SD, is the most widely used measure. Standard deviation is a measure of variability, or spread, which provides an index of dispersion in the data set and is the square root of variance (Hair et al., 2013; Sekaran & Bougie, 2013). Rodrigues, de-Lima and Barbosa (2017) clarify that standard deviation is one of the most commonly used statistical measures to demonstrate data variability. The standard deviation is the square root of the calculated variance on a variable (Churchill, Brown, & Suter 2010). In addition, Zikmund and Babin (2013, p. 343) present a basic definition by stating that "the standard deviation is the square root of the variance for a distribution". The standard deviation tells us the dispersion of individual observations about the mean (Barde & Barde, 2012). In other words, it characterises typical distance of an observation from distribution centre or middle value and if observations are more dispersed, then there will be more variability (Barde & Barde, 2012). Thus, a low SD signifies less variability while high SD indicates more spread out data (Barde & Barde, 2012). McDaniel and Gates (2007, p. 464) present the following formula to determine the standard deviation:

S = $\sqrt{s^2}$

Where:

s^2 = Variance

6.12.1.3 Frequency distribution

According to McMillan (2000), frequency distribution is the most fundamental approach to organising a set of data. In similar vein, Manikandan (2011) asserts that frequency distribution presents a picture of how the individual observations are distributed in the measurement scale. Furthermore, a frequency distribution takes a disorganised set of scores and places them in order from highest to lowest, grouping together all individuals who have the same score (Gravetter & Wallnau, 2007). In addition, Gravetter and Wallnau (2007) point out that if the highest score is X=10, for example, the frequency distribution groups together all the 10s, then all the 9s, then the 8s, and so on. Thus, a frequency distribution allows the researcher to see "at a glance" the entire set of scores. It shows whether the scores are generally high or low, whether they are concentrated in one area or spread out across the entire scale, and generally provides an organised picture of the data (Gravetter & Wallnau, 2007). These were useful in characterising the sample and understanding the data composition, as presented in Chapter 7.

6.12.1.4 Use of graphs and charts

Shao (2002, p. 566) explains that "charts can take several graphic forms such as line charts, pie charts, bar charts and histograms, which are utilised to display research findings". The researcher employed some graphs and charts, rather than relying solely on frequency distribution to display the research findings, such as line charts, pie charts, histograms and bar charts. These charts are best suited when dealing with normal or ordinal variables (Tustin Ligthelm, Martins & Van Wyk, 2005). According to Bavdekar (2015), graphs help readers see, understand and remember the data better. While on the other hand, Hair, Bush and Ortinau (2003, p. 530) point out that "charts are an effective visual aid to enhance the communication process and add clarity".

6.13 Reliability

Reliability refers to the extent to which the data collection techniques or analysis procedures yields consistent findings (Dusick, 2011; Saunders, Lewis & Thornhill, 2009). Reliability of a measuring instrument is the extent to which the instrument yields consistent results when the construct being measured has not changed (Leedy & Ormrod 2014). "Reliability indicates the internal consistency of a measuring instrument" (Babin & Zikmund, 2016, p. 280). Furthermore, Rubin and Babbie (2011) point out that reliability is a matter of whether a particular technique, applied repeatedly to the same object, would yield the same result each time. (Hammond & Wellington, 2013). Moreover, Hammond and Wellington (2013) elucidate that the main purpose of reliability is to provide consistent results and minimise errors and bias. There are various general forms or classes of reliability estimates and these are summarised in Table 6.12.

Table 6.12: Forms of reliability and how they are administered

Test-retest reliability	An approach of assessing reliability in which respondents are administered identical sets of scale items at two different times under as nearly equivalent conditions as possible
Alternatives forms reliability	An approach for assessing reliability that requires two equivalent forms of the scale to be constructed and then the same respondents are measured at two different times
Internal consistency reliability	An approach for assessing the internal consistency of the set of items when several items are summated in order to form a total score of the scale: *Split-half reliability*: a form of internal consistency reliability in which the items constituting the scale are divided into two halves and the resulting half scores are correlated. *Cronbach's alpha*: a measure of internal consistency reliability that is the average of all possible split-half coefficients resulting from different splitting of the scale items. *Inter-rater reliability*: measures *homogeneity,* which involves administering the same form to the same people by two or more interviewers so as to establish the extent of consensus on use of the instrument

Source: Garson (2007)

Reliability measures employed in the study were examined by computation of three different methods, namely Cronbach's alpha reliability test, the composite reliability (CR) test and the average value extracted (AVE) tests. These research measures are discussed and described hereafter:

6.13.1 Cronbach's alpha reliability test

According to Memon, Ting, Ramayah, Chuah and Cheah (2017), Cronbach alpha (α) is calculated to check the internal consistency reliability of the measures. According to Dunn, Baguley and Brunsden (2014), the coefficient alpha is the most commonly used measure of reliability, and certainly of internal consistency reliability reported in psychological research. The Cronbach's alpha was developed by Lee Cronbach in 1951 to offer a measure of the internal consistency of a test or scale, and is expressed as a number between 0 and 1 (Tavakol

& Dennick, 2011). In this study, Cronbach alpha testing was adopted as the measure of internal consistency for the measurement scale and was used with a co-efficient value of 0.7 as a cut-off point (Nunnally 1978). An important property of the co-efficient alpha is that its value tends to increase with an increase in the number of scale items (Bryman & Bell 2011). A large alpha value indicates a high reliability. Scores close to zero indicate that the reliability of the instrument is low (Malhotra 2010). The Cronbach alpha values are reported in Table 7.1 of Chapter 7.

6.13.2 Composite reliability (CR) test

CR coefficient is another measure of internal reliability and is reported in Section 7.5 to 7.6 of Chapter 7. According to Mkhatshwa (2015, p. 33) "CR provides a robust measure of reliability by taking into account the contribution of each latent factor to each item and each item's error". In addition, Starkweather (2012, p. 4) points out that "CR provides a robust measure of reliability by taking into account the contribution of each latent factor to each item and each item's error". Interpreted the same as Cronbrah alpha, Malhotra (2010, p. 733) suggests that "the minimum accepted CR values should be 0.70". The CR estimates reported in Table X of Chapter 7 were calculated using the formula, whereby CR is calculated as the square of the summation of the factor loadings divided by the sum of the square of the summation of the factor loadings and the summation of error variances (Bewick, Cheek & Ball 200). The formula is illustrated in the following manner:

$$\mathbf{CR\eta = (\Sigma\lambda yi)^2 / [(\Sigma\lambda yi)^2 + (\Sigma\varepsilon i)]}$$

Where:

$CR\eta$ = Composite reliability

$(\Sigma\lambda yi)^2$ = Square the sum of the factor loadings $(\Sigma\varepsilon i)$ = Sum of error variances.

6.13.3 Average value extracted (AVE) test

Average variance extracted (AVE) is the third reliability test which was reported in Section X of Chapter 7. Malhotra (2010) defines AVE as the variance in the indicators or observed variables that are explained by the latent construct. A value of 0.40 or higher indicates a satisfactory measure (Anderson & Gerbing 1988). It is calculated as the summation of the squared factor loadings divided by the sum of the summation of the squared factor loadings and summation of error variances (Bewick, Cheek & Ball 2004). The formula below was applied when examining AVE.

$$\mathbf{V\eta = \Sigma\lambda yi2 / (\Sigma\lambda yi2+\Sigma\varepsilon i)}$$

AVE = summation of the squared of factor loadings / {(summation of the squared of factor loadings) + (summation of error variances)}

Validity and reliability are suitable measures for assessing the appropriateness of any measuring instrument (Malhotra 2010). Therefore, for this study to be beneficial, it was also necessary to prove the validity of the measuring instrument.

6.14 Validity

Cooper and Schindler (2014) define validity as the central measure of quality of the measuring instruments in research, which determines the degree to which a questionnaire was able to measure what it was intended to measure. In addition, Kapondoro, Iwu and Twum-Darko (2015, p. 7) argue that validity has to do with "how well a measurement instrument measures what it is intended to measure". Uysal and Madenoğlu (2015, p. 39) define validity as "the quality of research results that leads one to expect them as true". In this study, the scale was tested for convergent and discriminant validity as follows:

6.14.1 Convergent validity

"Convergent validity is the extent to which items that are indicators of a specific construct converge or share a high proportion of variance in common" (Hair *et al.*, 2010, p. 710). Convergent validity is used as an indication that the instruments used for a particular construct are "at least moderately correlated among themselves" whereby poor convergent validity may imply that there is a need for the model to utilise more constructs (Dean, Fahsing, Gottschalk & Solli-Saether, 2008, p.170). According to Sarstedt, Ringle, Smith, Reams and Hair (2014), convergent validity measures the degree to which a construct comes together in its indicators by explaining the items' variance. In addition, Campell and Fiske (1959) say that convergent validity describes the extent to which each item in a construct variable correlates to the construct variable to affirm that it is measuring the same variable as other items in that variable. "This can be established by generating itemto-total correlations in

SPSS to measure how each item is attributable to the construct variable, as well as by examining the factor loadings generated by the CFA model" (Pamacheche, 2015, p. 60).

6.14.2 Discriminant validity

According to Hair et al. (2017), discriminant validity refers to items measuring different concepts. In addition, Golafshani (2003, p. 598) explained that "discriminant validity determines whether a scale does or does not adequately differentiate itself between groups that should or should not differ based on theoretical reasons or previous research". In addition, Cooper and Schindler (2008, p. 289) point out that "discriminant validity is also a subcategory of construct validity and it tests whether concepts or measurements that are supposed to be unrelated are in fact unrelated". Discriminative is important for determining the degree to which the constructs are discriminant or distinguishable from one another and are not measuring the same variable (Lucas, et al., 1996; Zait & Bertea, 2011). This is done by generating an inter-construct correlation matrix in SPSS and computing average variance extracted (AVE) estimates for each construct (Pamacheche, 2015).

6.15 Structural equation modelling (SEM)

According to Levi-Jakšić (2012), structural equation modelling (SEM) involves causal analysis whereby a model is evaluated against patterns of relationships among the collected data. In addition, Wothke (2010, p. 6) notes that "structural equation modeling (SEM) is a statistical technique that combines elements of traditional multivariate models, such as regression analysis, factor analysis and simultaneous equation modeling". Byme (2013, p. 3) defines SEM as "a statistical methodology that takes a confirmatory (i.e. hypothesis – testing) approach to the analysis of structural theory (causal processes that generate observations on multiple variables) bearing on some phenomenon". In addition, Structural Equation Modelling (SEM) is a statistical methodology that takes a confirmatory approach to analysis of structural theory (Byrne 2001:28; Hair *et al*. 2010:18; Nusair & Hua 2010).

Qureshi and Kang (2014, p.1) describe SEM as "a multivariate, statistical technique largely employed for studying relationships between latent variables (or constructs) and observed variables that constitute a model". It is recognised as being similar to regression analysis but more predominant in that it assesses the causal relationships among constructs while concurrently accounting for measurement error (He, Gai, Wu & Wan 2012; Sarstedt, Ringle, Smith, Reams & Hair 2014). SEM is fundamentally a framework that involves concurrently solving systems of linear equations and includes procedures such as regression, factor analysis and path analysis (Beran & Violato 2010; Stein, Morris & Nock 2012). SEM uses several types of models to predict relationships among observed variables, with the basic goal of providing a quantitative test of a theoretical model hypothesised by the researcher. Gunzler, Chen, Wu and Zhang (2013, p. 390) in support, add that SEM employs a "conceptual model, path diagram and system of linked regression-style equations to estimate complex and dynamic relationships within a web of observed and unobserved variables".

Furthermore, Schumacker and Lomax (2004) and Blunch (2008) noted that the goal of SEM analysis is to determine the extent to which the theoretical model is supported by sample data. Scholars have advocated many advantages of SEM. Additionaly; SEM helps to explain the patterns of covariances found amongst the observed variables in terms of the relationships hypothesised by both the measurement and structural models (Mahembe, Engelbrecht, & De Kock, 2013). For instance, Sung-Hoea, Gyeong-Seokb, Seong-Sikc, Yung-Sungd and Seung-Neoe (2018, p. 46) assert that "SEM has the advantage of verifying the causal relationship between observed variables and latent variables or between each latent variable as the most suitable analytical technique to verify the causal relationship set by the researcher". Additionlly, Sarstedt Ringle, Smith, Reams and Hair (2014, p. 106) are of the view that "SEM has the ability to 'tackle' research questions related to intricate causal relationships between unobserved variables with empirical data". In addition, Iriondo, Albert and Escudero (2003) explained that SEM provides support for examining and validating hypotheses of causal relationships due not only to its ability to model measurement error, but also to its ability to do away with bias and distortion. SEM possesses a gradual characteristic that allows it to produce separate and individually different coefficients (Jenatabadi & Ismail 2014). Furthermore, SEM permits researchers to model mediator constructs and to examine the entire system of indicators, therefore enabling the establishment of rational models that need simultaneous assessment (Kline & Klammer, 2001). Moreover, Dhanaraj, Lyles, Steensma and Tihanyi (2004, p. 442) assert that "SEM is an efficient and most favourable method for evaluating and examining the relationships among mediator constructs". Aliyua, Abubakarb, Yakasaic and Garba (2018) point out that Structural Equation Modelling (SEM) is fundamentally concerned with the treatment of both issues concerning measurement and the structural/hypothesised models. Thus, detail assessment of the measurement model is provided below.

6.15.1 Measurement model

Reisinger and Mavondo (2007, p. 43) describe the measurement model as a "theoretical model that reveals the structural relationships among latent variables (in essence the independent and dependent) and their observed variables; along with the arcs that directly link them as well as the error terms for their observed variables." Its main purpose is to provide the overall fit of the factor model, which shows the undimensionality of the measurement items (Reisinger & Mavondo 2007). However, Maria and Yusniza (2016) mentioned that the purpose of the measurement model is to evaluate the reliability and validity of variables. According to Mhlophe (2015), a measurement model is viewed as a sub-model in SEM that: (i) states the indicators for every single variable, and (ii) determines the reliability of each variable for approximating the causal relationships. However, Aliyua, Abubakarb, Yakasaic and Garba (2018) argue that the measurement model ensures that the model specification is valid and reliable. The measurement model can be performed either as an exploratory factor analysis or confirmatory factor analysis. "Exploratory factor analysis seeks to determine and develop the likely factor structure (new measures) for studies where there is a dearth of literature and previous measures for the latent variables investigated" (Cramer 2006, p. 28). On the other hand, confirmatory factor analysis is a technique that confirms that the existent measurement items load themselves into latent variables, which depends on how the researcher links the measurement items to the latent variables (Lei & Wu 2007). This study applies the confirmatory factor analysis as the measurement model since previous measures of the latent variables (green packaging, green advertising, green product innovation, green process innovation, competitive advantage and business performance). The next section focuses on confirmatory factor analysis.

6.15.2 Confirmatory factor analysis

As part of SEM, CFA was used to objectively evaluate and develop estimable variables that specified a series of associations, suggesting how "measured variables" epitomised the latent construct. CFA is a measurement model used for assessing the relationships between a set of manifest and latent variables (Teo & Khine, 2009). In addition, Suhr (2006) defines confirmatory factor analysis (CFA) as a statistical technique used to verify the factor structure of a set of observed variables. Confirmatory factor analysis is theory driven and thus the planning of the analysis is determined by the theoretical relationships between both the observed and unobserved variables (Schreiber, Stage, King, Nora & Barlow, 2006). CFA allows the researcher to place useful constraints on the CFA model along with assisting in testing hypotheses related to a specific factor structure (Albright & Park, 2009). Additionally, CFA is known as the 'covariance structure' and provides various goodness-of-fit or model fit measures that are utilised to evaluate the model (Albright & Park, 2009). In CFA, the full measurement model is specified *a priori* as an effort to achieve a much stronger test of the measurement theory underlying a measure (Williams, Vandenberg & Edwards, 2009). As such, CFA is generally considered more appropriate for theory testing than EFA (Hair *et al.*, 2010).

This study performed a confirmatory factor analysis to establish the factor model fit; in other words, to test if the sample data fits or supports the hypothesised research factor model. It is recommended that various model fit criteria be used in combination to assess model fit as global fit measures (Kline, 2005). Following, Schumacker and Lomax (2010), Kline (2005), Cheung and Rensvold (2002), this study performed a confirmatory factor analysis to establish the factor model fit; in other words, to test if the sample data fits or supports the hypothesised research factor model. Using Amos 25, the model fit indices tested in CFA to assess the factor model fit include: the Chi-square/degrees of freedom, Goodness of Fit Index (GFI), Augmented Goodness of Fit Index (AGFI), Normed Fit Index (NFI), Incremental Fit Index (IFI), Tucker-Lewis Index (TLI), Composite Fit Index (CFI), and Root mean square error of approximation (RMSEA). All these model fit indices are discussed as follows:

6.15.3 Chi-square (x^2/df)

In AMOS, statistical value of CMIN/df is shown. The chi-square "assesses the magnitude of discrepancy between the sample and fitted covariance matrices" (Hu & Bentler 1998, p. 426). The chi-square assesses model fit by comparing the difference between the model's inferred covariances and the observed sample covariances (Bagozzi & Yi 1998). According to Kline (2005), to reduce the sensitivity of chi-square to sample size, the chisquare value is divided by the degrees of freedom (CMIN/df), which generally results in a lower value called the normed chi-square. However, the criteria for CMIN/DF acceptance still varies across researchers ranging from 2.0 to 3.0 which have been recommended correct for the influence of sample size (Schumacker & Lomax 2010; Hooper et al. 2008; Byren 2013). For this study, the (CMIN/df) was used as one of the indices, as shown in Table 7.25 of Chapter 7.

6.15.4 Goodness-of-fit Index (GFI)

According to Cheung and Rensvold (2002), a model is considered suitable if the covariance structure implied by the model is similar to the covariance structure of the sample data, as indicated by an acceptable value of goodness-of-fit index (GFI). The Goodness-of-Fit statistic (GFI) was created by Jöreskog and Sorbom as an alternative to the Chi-Square test and calculates the proportion of variance that is accounted for by the estimated population covariance (Hooper, Coughlan & Mullen, 2008; Tabachnick & Fidell, 2007). In addition, the GFI measures the difference between the covariance matrix of the sample and that of the measurement model (McQuitty 2004). GFI measures the proportion of variance that is accounted for by the estimated population covariance (Hu & Bentler 1999).

GFI shows how the model closely replicates the observed covariance matrix (Hooper, Coughlan, & Mullen 2008). In addition, Schumacker and Lomax (2012) explain that the goodness-of-fit index (GFI) is based on the ratio of the sum of the squared differences between the observed and reproduced matrices to the observed variances, thus allowing for scale. Furtheremore, Schumacker and Lomax (2012) explained that the GFI measures the amount of variance and covariance in S that is predicted by the reproduced matrix, ∑. For instance, if the GFI = 0.97, the 97% of the S matrix (sample covariance matrix) is predicted by the reproduced matrix ∑. The GFI index can be computed for maximum likelihood (ML), generalised least squares (GLS), and unweighted least squares (ULS). According to Schumacker and Lomax (2012), the basic formula of calculating the GFI is as follows:

$$GFI = 1 – [X^2_{\text{model}} \sqrt{X^2_{\text{null}}}]$$

(Note: X^2_{null} is the Chi-Square for Indedence Model value on the computer out put)

The GFI statistics range from zero to one, but theoretically can yield meaningless negative values. A large sample size increases the GFI value. However, GFI cut-off point for an acceptable model should be equal to or greater than 0.90 (Tabachnick & Fidell 2007; Miles & Shevlin 1998).

6.15.5 The Normed Fit Index (NFI)

The incremental fit indices are employed to complement the chi-square test (Bentler 1990). One of the incremental fit indices is the Normed Fit Index (NFI). The Normed-fit index (NFI) was developed by Bentler and Bonnett (1980) to assess the model by comparing the $x2$ value of the model to the $x2$ of the null model. The null or independent model is the worst-case scenario as it specifies that all measured variables are uncorrelated (Hooper, Coughlan & Mullen, (2008). Values for this statistic range between 0 and 1 with Bentler and Bonnet (1980) recommending values greater than 0.90 indicating a good fit. Hu and Bentler (1998) also agree that although values for NFI range between 0 and 1, the cut-off point of NFI should be ≥ .90. The formula for the normed fit index, NFI, is as follows (Bentler & Bonett, 1980):

$$NFI = 1 - \frac{\hat{F}}{\hat{F}_i}$$

Where $\hat{F}_i$ is the estimated minimum value of the fit function for the independence model. Yuan (2005) also points out that the fomula for NFI can be written as follows:

$$NFI = 1 - \frac{T_A}{T_i}$$

where T_i is the T-statistics for the independence model.

6.15.6 Tucker Lewis index (TLI)

According to Cangur and Ercan (2015), the Tucker-Lewis Index (TLI) is an incremental fit index. Non-Normed Fit Index (NNFI) which is also known as TLI, was developed against the disadvantage of Normed Fit Index regarding being affected by sample size (Cangur & Ercan, 2015). TLI is calculated as given below (Cangur & Ercan 2015; Schermelleh-Engel & Moosbrugger, 2003; Ding, Velicer, & Harlow, 1995; Gerbing & Anderson, 1992).

$$TLI = \frac{\left(\chi_i^2 / \nu_i\right) - \left(\chi_t^2 / \nu_t\right)}{\left(\chi_i^2 / \nu_i\right) - 1} = \frac{\left(\mathrm{F}_i / \nu_i\right) - \left(\mathrm{F}_t / \nu_t\right)}{\left(\mathrm{F}_i / \nu_i\right) - \left(1 / (n-1)\right)}$$

Here 2 χ_i belongs to the independence model whereas 2 χ_t belongs to the target model (Cangur & Ercan, 2015). In addition, v_i and v_t are the number of degrees of freedom for the independence and target models respectively, in relation to the chi-square test statistics (Cangur & Ercan, 2015). F is the value of appropriate minimum fit function, and n indicates sample size. The bigger TLI value indicated better fit for the model (Cangur & Ercan, 2015). The recommended value that must be met, must be above 0.9 (Hooper, Coughlan & Mullen, 2008; Chinomona, 2011). The key advantage of this fit index is the fact that it is not affected significantly from sample size (Schermelleh-Engel & Moosbrugger, 2003; Ding *et al*., 1995; Gerbing & Anderson, 1992).

6.15.7 The Comparative fit index (CFI)

The CFI assumes that all latent variables are uncorrelated and compares the sample covariance matrix of the measurement model to that of a null model by taking into account the non-centrality and distribution values of model parameters (Schumacker & Lomax 2004). Cangur and Ercan (2015) revealed that CFI is calculated by the following equation.

$$CFI = 1 - \frac{max\left[\left(\chi_t^2 - v_t\right),\ 0\right]}{max\left[\left(\chi_t^2 - v_t\right), \left(\chi_i^2 - v_i\right),\ 0\right]}$$

Here max indicates the maximum value of the values given in brackets. 2 χi and 2 χt are test statistics of the independence model and the target model respectively (Cangur & Ercan, 2015). v_i and v_t are the degrees of freedom of the independence model and the target model in relation to chi-square test statistics respectively (Schermelleh-Engel & Moosbrugger, 2003; Ding *et al.*, 1995; Gerbing & Anderson, 1992). According to Cangur and Ercan (2015), the CFI produces values between 0–1 and high values are the indicators of good fit. The CFI values between 0.0 and 1.0 with a value of CFI ≥ 0.90 is generally accepted as an indication of good model fit (Bagozzi 2010; Hu & Bentler 1998). The main advantage of CFI is that it is the index least affected by sample size (Bentler 1990).

6.15.8 The incremental fit index (IFI)

The incremental fit index (IFI) was developed by Bollen (1989) to address the issue of parsimony and sample size, which were known to be associated with the NFI. As such, its computation is basically the same as the NFI, except that degrees of freedom are taken into account. By convention, IFI should be equal to or greater than 0.90 to accept the model. IFI can also be greater than 1 under certain circumstances (Ian & Lowther 2010). The results of IFI are reported in Chapter 7 (Table 7.25).

6.15.9 Root mean square of approximation (RMSEA)

Root mean square error of approximation (RMSEA) fit index is used for evaluating covariance structure models (Steiger & Lind 1980). RMSEA is regarded as "one of the most informative fit indices" (Diamantopoulos & Siguaw 2000, p. 85). The RMSEA provides information about 'badness of fit', with lower RMSEA values indicating good model fit (Taasoobshirazi, & Wang, 2016; Kline, 2010). The RMSEA describes the extent to which the model fits with the covariance matrix of the sample data (Hooper *et al.*, 2008). In contrast with other fit indices, RMSEA is based on the analysis of residuals, with lower values implying the fit between the model and the data (Fadlelmula 2011). One of the greatest advantages of the RMSEA is that it is not substantially affected by the variation in sample size (Sharma, Mukherjee, Kumar & Dillion 2005). In addition, McQuitty (2004, p. 176) notes that "the RMSEA allows for a broader interpretation of the degree of model fit than the chi-square test, because it recognises the influence of sample size when estimating model fit". Cangur and Ercan, (2015) elucidates that this absolute fit index is estimated as follows:

$$RMSEA = \sqrt{max\left\{\left(\frac{F\left(\mathbf{S},\mathbf{\Sigma}\left(\hat{\boldsymbol{\theta}}\right)\right)}{v} - \frac{1}{n-1}\right),\ 0\right\}}$$

Here **F(S,∑(Ө))** indicates the fit function is minimised whereas *max* points to the maximum value of the values given in brackets (Cangur & Ercan, 2015). While *l* is the number of known parameters and *t* is the number of independent parameters, $v = l - t$ *indicates* the value of the degrees of freedom and *n* indicates the sample size (Schermelleh-Engel & Moosbrugger, 2003). Observe in the equation that RMSEA produces a better quality of estimation when the sample size is large compared to smaller sample sizes. When the sample size is large, the term $[1/(n - 1)]$ gets closer to zero asymptotically (Rigdon, 1996). The RMSEA also takes the model complexity into account as it reflects the degree of freedom as well. A RMSEA value smaller than 0.05 can be said to indicate a convergence fit to the analysed data of the model while it indicates a fit close to good when it produces a value between 0.05 and 0.08. The minimum threshold of 0.06 is acceptable (Hu & Bentler 1999) while 0.08 is the recommended upper limit (Steiger 2007). In similar vein, Nusair and Hua (2010, p. 316) established that "by convention, there is a good model fit if RMSEA is less than or equal to 0.05 and an adequate fit if RMSEA is less than or equal to 0.08". Table 6.13 summarises the model of fit and acceptable fit level.

Table 6.13: Model of fit an acceptable fit level

Fit indices	Acceptable threshold
Chi-square (CMIN/DF)	**Tabled chi-square smaller or equal to 3**
Normed fit index (NFI)	**Value equal to or greater than 0.90**
Increment fit index (IFI)	**Values greater than 0.09**

Normal-fit-index *(NFI)*	**Values greater than 0.09**
Tucker-Lewis index (TLI)	**Values greater than 0.09**
Comparative fit index (CFI)	**Values greater than 0.09**
Goodness-of-fit index (GFI)	**Values greater than 0.09**
Root mean square error of approximation (RMSEA)	**Less than 0.08 with confidence interval <0.05**

Source: Baggozi and Yi (2012:15)

Deducing from all the aforementioned model fit indices, it is imperative to note that model fit indices are discussed in detail in Chapter 7 (under Confirmatory Factor Analysis Model Fit/Acceptability section). The Confirmatory factor analysis leads to the performance of a path analysis which is discussed in the next section.

6.16 Structural model

In this study, after a careful assessment of the measurement model, the next step was to examine the structural model for this study. Aliyua, Abubakarb, Yakasaic and Garba (2018) viewed the structural model as a model that expresses the associations in the hypothesised model. A structural model is a theoretical model that indicates structural relationships among the latent or unobserved variables (both dependent and independent) and their observed variables (measurement items); along with the direct arcs linking them as well as the error terms for the observed variables (Reisinger & Mavondo 2007, p. 43). According to Hair *et al.* (2017), the structural model is used to explain the relationship between the constructs. Maria and Yusniza (2016) mentioned that the purpose of the structural model is to test the hypotheses. According to Wentzel (2012), the structural model in SEM is essentially a path analysis, which is a statistical technique used to examine causal relationships between two or more variables. It is based upon a linear equation system and was first developed by Sewall Wright in the 1930s for use in phylogenetic studies (Wentzel, 2012). The linear connections between the unobserved variables reflect the proposed research hypotheses. In this study, there are nine linear connections between the six variables and these are shown in Table 6.14.

Table 6.14: Theorised Variable Paths

Hypothesis	Theorised variable paths
H1	Green packaging → competitive advantage
H2	Green advertising → competitive advantage
H3	Green product innovation → competitive advantage
H4	Green process innovation → competitive advantage
H5	Green packaging → business performance
H6	Green advertising → business performance
H7	Competitive advantage → business performance
H8	Green product innovation → business performance
H9	Green process Innovation → business performance

The structural model combines the measurement model and path model. This means that the structural model provides both the overall model fit of the factor model and tests the research hypothesis. The path analysis is discussed in the next section.

6.16.1 Path analysis

According to Stage, Carter and Nora (2004), path analysis, first developed in the 1920s, is a method for examining causal patterns among a set of variables. Researchers use path analysis most frequently to analyse data relative to a prespecified causal model (Stage, Carter & Nora, 2004). A path model or analysis describes the linear dependency or causal relationships between the unobserved variables (Reisinger & Mavondo 2007). Kline (2005), in addition, asserts that path analysis involves the specification of a model by researchers in an attempt to explain the reasons for the correlations between variables X and Y. In path analysis, the structural relationships are the research hypotheses that reveal the directional influences or causal relationships among multiple variables (Lei & Wu, 2007). Path modelling describes the relationships between observed or measured variables and theoretical constructs (Roche, Duffield & White, 2011) and tests the structural paths of the conceptualised research model (Anderson *et al.*, 1988). This SEM procedure was carried out in order to demonstrate and test the theoretical underpinnings of the study and the significance of the relationships between model constructs (Jenatabadi & Ismail, 2014). The study's structural model was evaluated by examining the p-values as well as standardised regression coefficients (Matzler & Renzl, 2006). Wu (2010) mentions that in conducting path modelling, a particular responsibility is to explain standardised regression coefficients, as well as predictive ability.

6.17 Testing for mediation

Ramayah, Lee and In (2011) are of the view that a mediation test is conducted to discover if a mediator construct can significantly carry the ability of an independent variable to a dependent variable. Similarly, a mediation test determines the indirect effect of the independent variable on the dependent variable through a mediator variable (Gorondutse & Hilman, 2016). According to Preacher and Hayes (2004), researchers often conduct mediation analysis to indirectly assess the effect of a proposed cause on some outcome through a proposed mediator. The utility of mediation analysis stems from its ability to go beyond the merely descriptive to a more functional understanding of the relationships among variables (Preacher & Hayes, 2004).

The conceptual model of this study comprises four independent variables, green packaging, green advertising, green product innovation and green process innovation; one mediating variable, competitive advantage (CA), and one dependent variable, business performance (BP). Bao, Bao and Sheng (2011) adopted Baron and Kenny's (1986) suggested procedure, which consists of four main steps. The first step is to determine the significance of the relationship between the independent and the dependent variables, without the mediator. Figure 6.5 reveals step 1 in Baron and Kenny's approach for testing mediation.

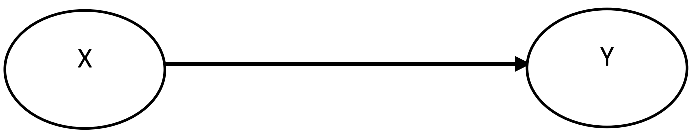


Figure 6.6: Step 1 in Baron and Kenny approach

Source: Baron and Kenny (1986)

The second step comprises determining the relationship between the independent variable and the mediator. Figure 6.6 shows step 2 in Baron and Kenny's approach for testing mediation.

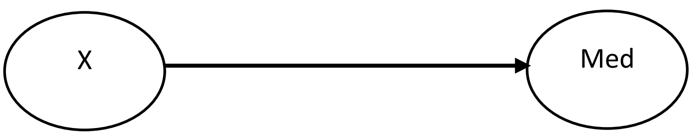


Figure 6.7: Figure 6.6: Step 2 in Baron and Kenny approach

Source: Baron and Kenny (1986)

The third step is centred on testing if the mediator has a significant unique effect on the dependent variable. Figure 6.7 displays step 3 in Baron and Kenny’s approach for testing mediation.

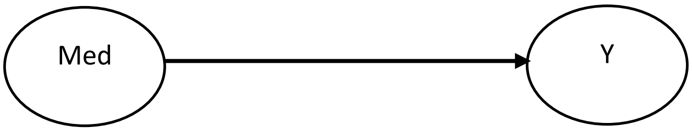


Figure 6.8: Step 3 in Baron and Kenny approach

Source: Baron and Kenny (1986)

The final step is to calculate the full model and identify if the previous significant relationship between the independent and dependent variable is zero (i.e. full mediation) or reduced (i.e. partial mediation) (Bao, Bao & Sheng, 2011). Figure 6.8 presents step 4 in Baron and Kenny’s approach for testing mediation.

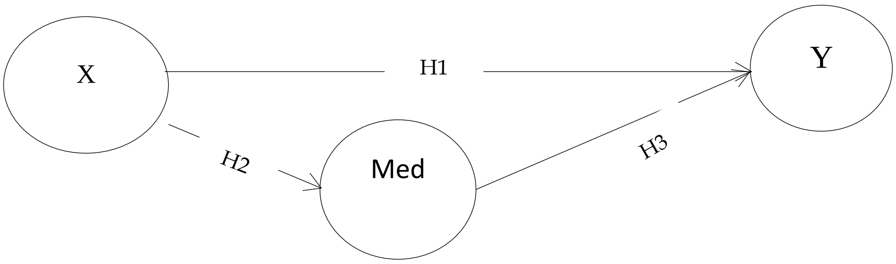


Figure 6.9: Step 4 in Baron and Kenny approach

Source: Baron and Kenny (1986)

Although Baron and Kenny’s approach shows the traditional testing steps for mediation, Preacher and Hayes (2004, p. 2008) have criticised the "causal procedure" of Baron and Kenny (1986) by introducing a new method called "bootstrapping the indirect effect". This current testing procedure for mediation is said to be perfectly suited for PLS-SEM which is a common technique to test structural models using the component-based approach (Albers, 2010; Henseler *et al.*, 2009). Furthermore, this study utilised Partial Least Squares (PLS-SEM) technique, to test the mediating effect of the mediator of this study, namely competitive advantage. PLS path analysis allows evaluating mediation models and tests mediation hypotheses, using the bootstrapping method (Hernández-Perlines, Moreno-García & Yáñez-Araque, 2016; Hayes, Preacher & Myers 2011).

Bootstrapping, a nonparametric resampling procedure, has been recognised as one of the more rigorous and powerful methods for testing the mediating effect (Hayes, 2009; Shrout & Bolger, 2002; Zhao *et al*., 2010). The application of bootstrapping for mediation analysis has recently been advocated by Hair, Hult, Tomas, Ringle and Sarstedt (2013) who noted that when testing mediating effects, researchers should rather follow Preacher and Hayes (2004:223; 2008) and bootstrap the sampling distribution of the indirect effect, which works for simple and multiple mediator models". It is important to note that the bootstrapping procedure was used when conducting an estimation of indirect effect ab, standard error and both indirect effects interval at 95% confidence interval.

Moreover, it should be noted that in this study, there are four specific indirect effects between the six variables and these are shown in Table 6.16. More of the results of the mediation effect of competitive advantage are shown in chapter 7 in section 7.11.

Table 6.15: Mediation theorised variable paths

Hypothesis	Theorised variable paths
H10	Green packaging -> Competitive advantage -> Business performance
H11	Green advertising -> Competitive advantage -> Business performance
H12	Green product innovation -> Competitive advantage -> Business performance
H13	Green process innovation -> Competitive advantage -> Business performance

6.18 Ethical consideration

According to Mason (2007), research desires to be carried out with honesty to safeguard the researcher and the participants. Ansah (2016) is of the view that ethical consideration was the protection of the respondents' rights, getting informed consent and the institutional assessment procedure of the ethical authorisation. The current study was governed by the University of the Witwatersrand's condition that necessitates studies concerning human participation to apply for human research ethics committee's approval before a study could be carried out. The study was approved by the University of the Witwatersrand, Johannesburg human subjects (non-medical) ethics committee and ethics permission was obtained - clearance number is: H17/06/26 (see Appendix A).

6.19 Chapter Summary

The chapter has presented a broad description of the research design and methodology employed in the study. It started with research philosophies or the research paradigm; after which the discussion of the methodology was placed into headings, such as the sampling design which consists of: the target population, sampling frame, sample size and sampling method which were all discussed. The statistical technique used was structural equation modelling (SEM) - where partial least squares software was used to assess both validity and reliability while the confirmatory factor analysis (CFA) and the path modelling were also done with Amos. The account on how thresholds were met, coupled with their ultimate interpretations of the data was all systematically explained. The description of how the university's ethics was adhered to was also presented. In the next chapter, the results of the study are presented.

7 CHAPTER 7: DATA ANALSIS AND PRESENTATION OF RESULTS

7.1 Introduction

The preceding chapter covered the research design and methodology of the study. A detailed description of the sample selection and composition, questionnaire development, as well as data collection and statistical analysis was provided. The current chapter reports on the analysis and presentation of the empirical findings of the study's pilot and main survey. This chapter provides the statistical analysis and results obtained from the data collected on how green packaging, green advertising, green product innovation, green process innovation impacts competitive advantage and business performance. An overview is given of the descriptive statistics, an analysis of the reliability and validity of the measurement instruments is made, an overview of the model fit is provided, and a path modeling analysis is conducted and presented. Moreover, mediation analysis was conducted, to determine the mediation impact of competitive advantage.

7.2 Results of the pilot test

The questionnaire was piloted on a sample of 50 manufacturing SME managers. In assessing the reliability of the measuring instrument, coefficient alpha was first computed for the annotated key scales of the questionnaires. The results obtained gave a satisfactory indication of reliability. The Cronbach alpha reliability for Section B was 0.913, 0.921for Section C, 0.955 for Section D, 0.906 for Section E, 0.800 for Section F, and 0.897 for Section G respectively, therefore, reflecting reliability values above the accepted benchmark of 0.70, which, according to Pallant (2010), is regarded as satisfactory. The results are reported in Table 7.1.

Table 7.1: Results of the pilot study

Construct	Cronbach's Alpha	Cronbach's Alpha based on standardized items	No. of Items
Section B (green packaging)	0.910	0.913	5
Section C (green advertising)	0.926	0.921	6
Section D (green product innovation)	0.955	0.955	7
Section E (green process innovation)	0.904	0.906	4
Section F (competitive advantage)	0.784	0.800	11
Section G (business performance)	0.896	0.897	16

Source: Own research

7.3 Main survey results

After checking for missing values and outliers, a total number of 304 questionnaires were completed out of the initial sample of 321. Hence, this resulted in a response rate of 94.7 per cent. Of these, 18 were unusable, as several items were not answered on the questionnaire. Respondents are more likely to return a questionnaire if they perceive that the study is important and warrants their co-operation.

7.3.1 Biographical information of the sample

Demographic data indicates socio-economic descriptors of the participants involved in the survey, which is referred to as the classification of information (Malhotra, 2010). The information obtained is presented by means of pie charts. Section A of the questionnaire relates to the demographic information of the total sample, which refers to the participants' gender, age, level of education, whether it is a family business or not, number of employees (full-time) within the business, age of business (years) and the location of the business. Each of these characteristics is discussed in the following subsections.

Demographic Profile summary

Table 7.2 provides a summary of the full demographic statistics results, the frequencies and percentages achieved are presented to support the results that will be elaborated further in the sections that follow.

Table 7.2: Sample demographic Characteristics

Gender	Frequency	Percentage
Male	187	61.5%
Female	99	32.6%
Prefer not to say	18	5.9%
Total	**304**	**100%**
Age distribution of the respondents	**Frequency**	**Percentage**
18 to 30 years	37	12.2%
31 to 39 years	97	31.9%
40 to 49 years	56	18.4%
50 to 59 years	96	31.6%
60 years and above	18	5.9%
Total	**304**	**100%**
Level of Education	**Frequency**	**Percentage**
No formal education	57	18.8%
Basic Education	36	11.8%
Diploma	119	39.1%
Degree	92	30.3%
Total	**304**	**100%**
Family business	**Frequency**	**Percentage**
Yes	109	35.9%
No	195	64.1%
Total	**304**	**100%**
Number of employees (full-time)	**Frequency**	**Percentage**
Less than 10 employees	7	2.3%
Between 10 and 50 employees	131	43.1%
Between 50 and 100 employees	76	25.0%
Between 100 and 200 employees	90	29.6%
Total	**304**	**100%**
Age of business (years)	**Frequency**	**Percentage**
1 to 3 years	9	3.0%
4 to 6 years	120	39.5%
7 to 10 years	16	5.3%
11-20years	159	52.3%
Total	**304**	**100%**
The location of the business	**Frequency**	**Percentage**
CBD	79	26.0%
Industrial	225	74.0%
Total	**304**	**100%**

Source: Summarised SPSS output

The descriptive analysis in Table 7.2 presents the demographic information regarding the enterprises that were surveyed in this study. These demographic results apply to and support all the variables surveyed in this study. Note that the frequency represents the number of participants (enterprises) who took part in the study; each section shows the numbers that add up to the required total sample of 304 and the percentage numbers that add up to a total of 100 per cent.

In the section that follows, the seven aspects of the demographic section that were included in the questionnaire are dealt with separately and the achieved results are discussed. The information collected begins with gender, age distribution of the respondents, level of education, family business, the number of employees, the age of the business and the location of the business. The individual categories of the demographic profile of respondents are interrogated separately and in detail in sections 7.4.1 to section 7.4.7.

7.4.1 Gender

Figure 7.1 presented the classification of information related to the participants' gender. The largest portion of the sample indicated that there were male 61.5 percent (n=187); followed by those who revealed that there were female 32.6 percent (n=99). Moreover, the remainder of the respondents 3.2 percent (n=12) preferred not to mention their gender.

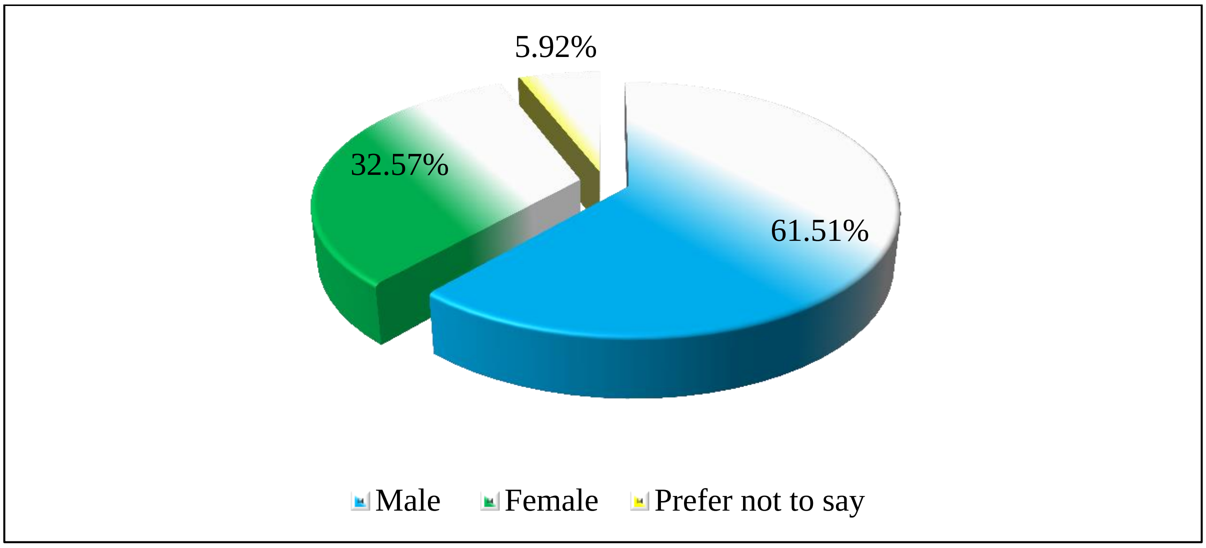


Figure 7.1: Gender

Table 7.3: Gender

Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	187	61.5	61.5	61.5
	Female	99	32.6	32.6	94.1
	Prefer not to say	18	5.9	5.9	100.0
	Total	304	100.0	100.0	

7.3.2 Age distribution of the respondents

The majority of the participants indicated that 31.9 percent (n=97) of the respondents were between 31 to 39 years of age, closely followed by 31.6 percent (n=96) who indicated being 50 to 59 years of age, then followed by 18.4 percent (n=56) who were between 40 to 49 years of age. For the remaining respondents 12.2 percent (n=37) indicated that they were between 18 to 30 years of age. Lastly, the remainder of the respondents 5.9 percent (n=18) revealed that they were 60 years and above. The age distribution of the sample is illustrated in Figure 7.2.

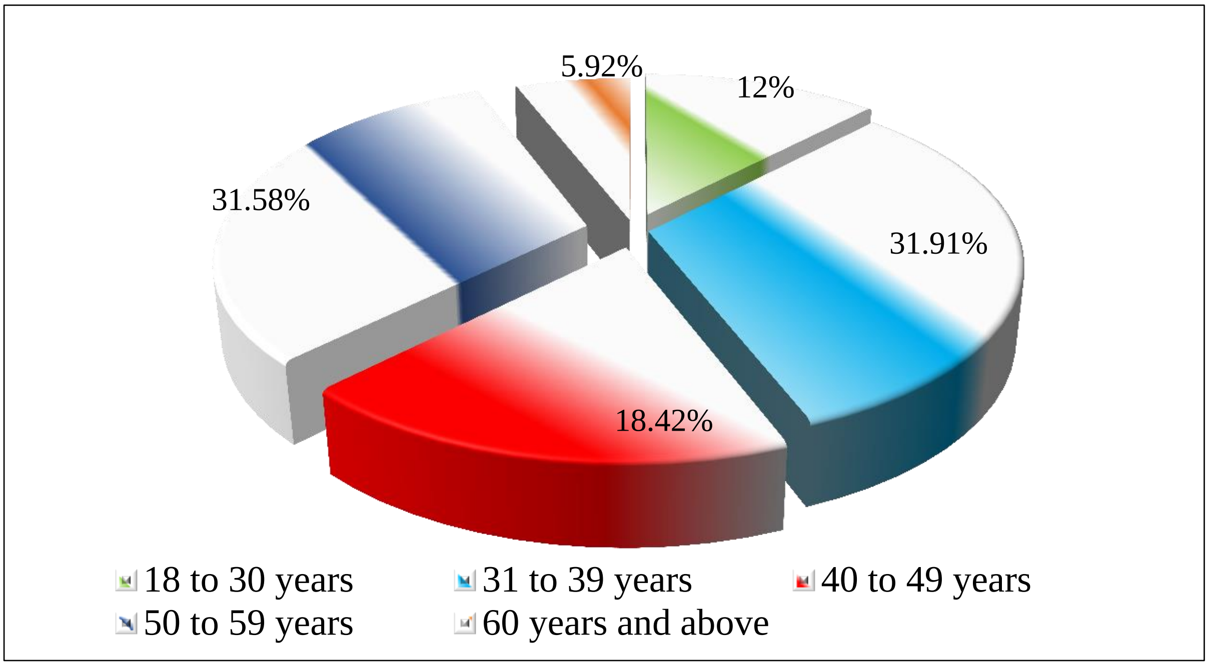


Figure 7.2: Age distribution of the respondents

Table 7.4: Age distribution of the respondents

Age distribution of the respondents					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18 to 30 years	37	12.2	12.2	12.2
	31 to 39 years	97	31.9	31.9	44.1
	40 to 49 years	56	18.4	18.4	62.5
	50 to 59 years	96	31.6	31.6	94.1
	60 years and above	18	5.9	5.9	100.0
	Total	304	100.0	100.0	

7.3.3 Level of education

In terms of the level of education of the respondents, the majority of the respondents, 39.1 per cent (n=119), indicated that they were holders of a diploma qualification. This was then followed by 30.3 per cent (n=92) of the respondents who indicated that they have degrees. In addition, 18.8 per cent (n=57) of the respondents revealed that they have got no formal education. This was then followed by 11.8 per cent (n=36) who indicated that they have only obtained some basic education. The level of education of the respondents is graphically depicted in Figure 7.3.

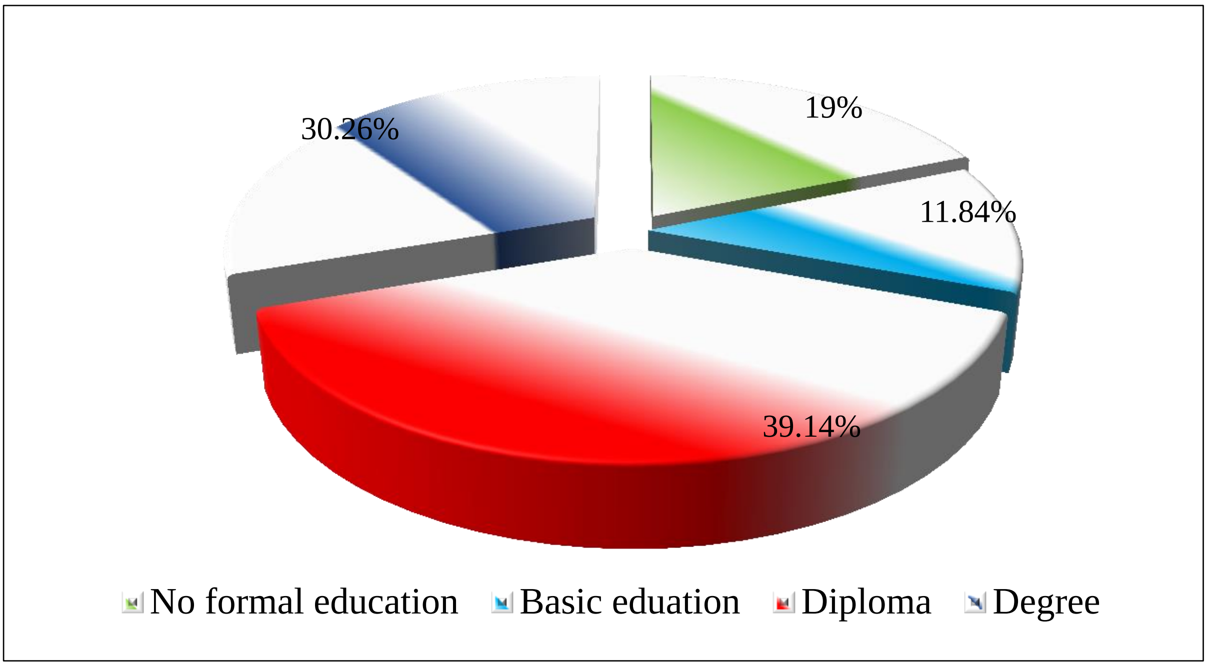


Figure 7.3: Level of education

Table 7.5: Level of education

Level of education					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No formal education	57	18.8	18.8	18.8
	Basic Education	36	11.8	11.8	30.6
	Diploma	119	39.1	39.1	69.7
	Degree	92	30.3	30.3	100.0
	Total	304	100.0	100.0	

7.3.4 Family business

The respondents had an opportunituy to point out whether their manufacturing SME business is a family business or not (see Figure 7.2). The majority of the respondents, 64 percent (n=195), indicated that their business was not a family business. However, the remainder of the respondents, 36 percent (n=109), revealed that their business was a family business.

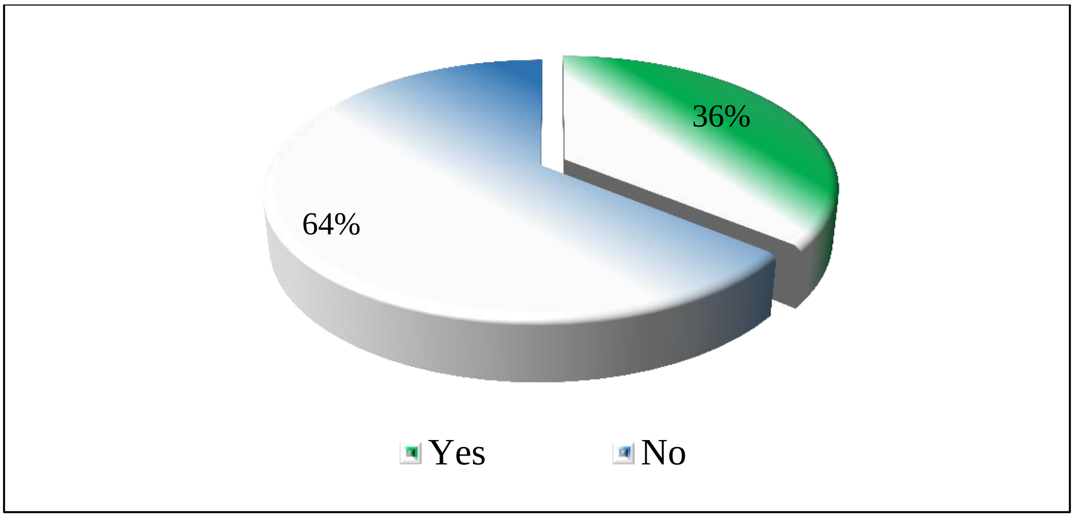


Figure 7.4: Family business

Table 7.6: family business

Family business					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	109	35.9	35.9	35.9
	No	195	64.1	64.1	100.0
	Total	304	100.0	100.0	

7.3.5 Number of employees (full-time)

The employment figures for this specific sample profile (Figure 7.5) indicate that the majority of the SME businesses employ fewer than 50 employees per business entity, with 43.1 per cent (n=131) of the surveyed employees in the category of 10 to 50 employees and 29.6 per cent in the category of 100 to 200 employess. In addition, 25 per cent (n=76) of the respondents were in the category of 50 to 100 employees. The remainder of the respondents, 2.3 per cent (n=7), revealed that there were in the category of fewer than 10 employees. These findings coincide with with the works of Moodley (2002, p. 37) who asserts that "SMEs are important, because, although recruiting less per entity, their potentialfor job creation is in numbers".

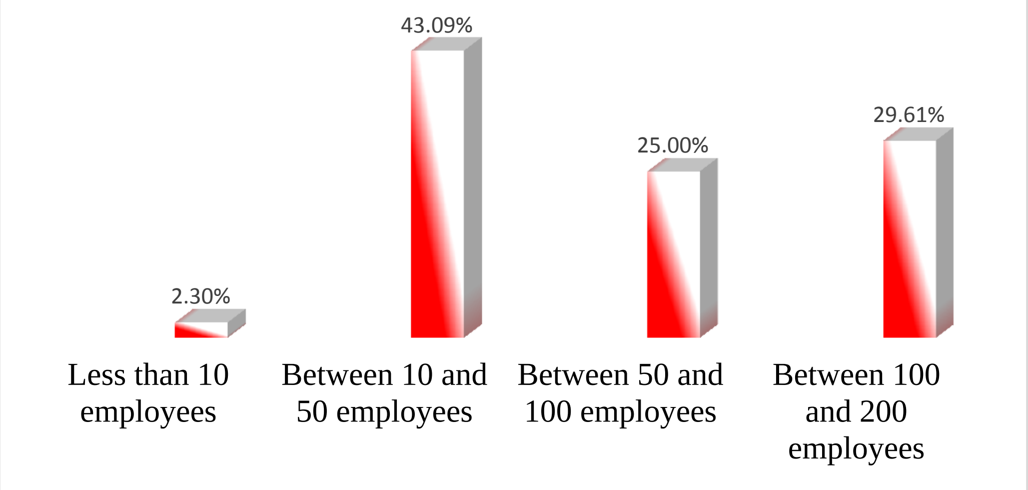


Figure 7.5: Number of employees (full-time)

Table 7.7: Number of employees (full-time)

Number of employees (full-time)					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 10 employees	7	2.3	2.3	2.3
	Between 10 and 50 employees	131	43.1	43.1	45.4
	Between 50 and 100 employees	76	25.0	25.0	70.4
	Between 100 and 200 employees	90	29.6	29.6	100.0
	Total	304	100.0	100.0	

7.3.6 Age of business (years)

Figure 7.6 reveals the age of the manufacturing SME businesses in terms of years. Of these business operations, 52.3 per cent (n=159) had been in existence for 11-20 years, 39.5 per cent (n=120) had been in operation for 4–6 years, 5.3 per cent (n=16) had been in operation for 7–10 years, while the remainder, 3 percent (n=9), were emerging enterprises that had operated for less than three years.

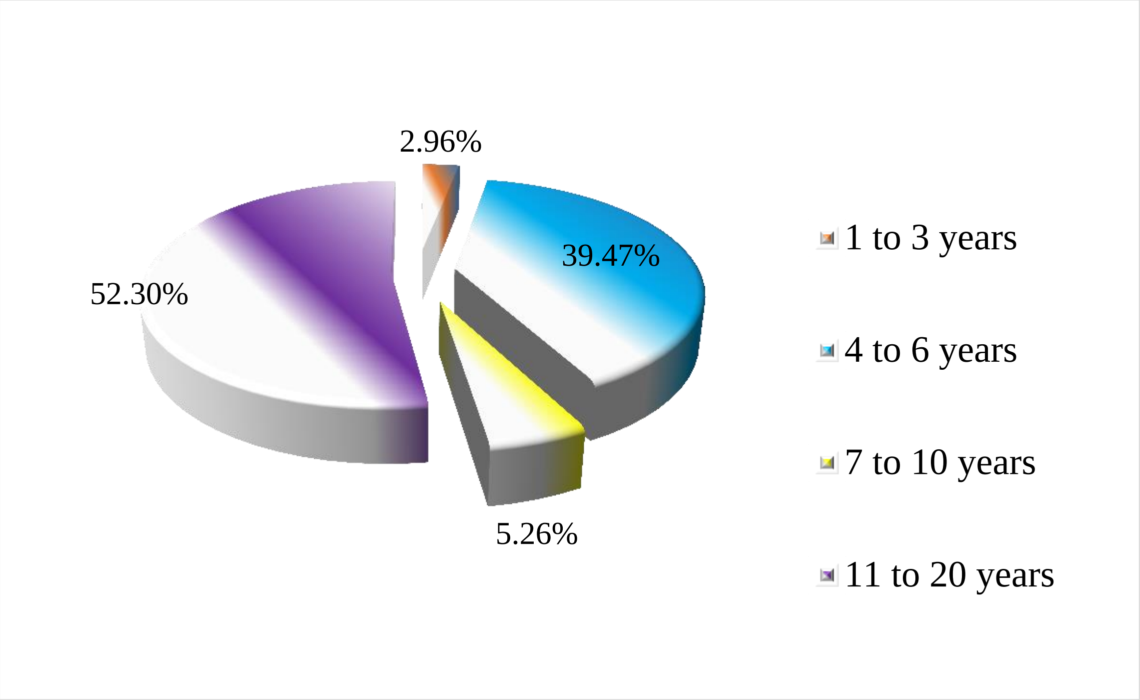


Figure 7.6: Age of business (years)

Table 7.8: Age of business (years)

Age of business (years)						
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 to 3 years	9	3.0	3.0	3.0
	4 to 6 years	120	39.5	39.5	42.4
	7 to 10 years	16	5.3	5.3	47.7
	11-20years	159	52.3	52.3	100.0
	Total	304	100.0	100.0	

7.3.7 The location of the business

Figure 7.7 provides the profile of the surveyed SMEs in terms of their location. The majority of the respondents, 26 per cent (n=79), expressed that their business is local which are the industrial areas of the Gauteng Province of South Africa. The remainer of the respondents, 74 per cent (n=225), indicated that there are located within the various CBD areas of the Gauteng province of South Africa.

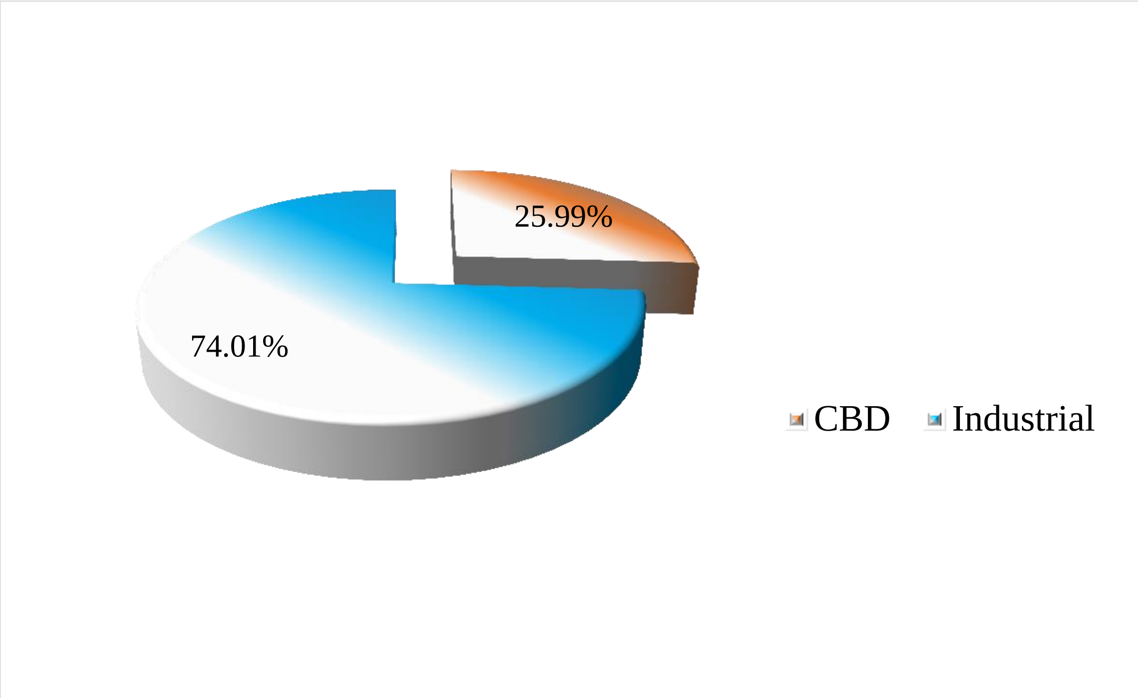


Figure 7.7: The location of the business

Table 7.9: The location of the business

The location of the business					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	CBD	79	26.0	26.0	26.0
	Industrial	225	74.0	74.0	100.0
	Total	304	100.0	100.0	

7.4 Descriptive statistics

The analysis proceeded to determine the level of respondents' agreement or disagreement for each construct. Tables 7.3, 7.4, 7.5; 7.6, and 7.7 report on the basic descriptive statistics comprising the means and standard deviations of the predetermined constructs. Mean values were computed as the measures of central tendency for this study. All the tables presented below, reveal that the mean value for all the items ranges between three and four, indicating that the majority of the respondents had either a neutral standpoint ('3' on the Likert scale) or they agreed ('4' on the Likert scale) with the statements provided. Standard deviation values were computed to measure the variance of responses on each variable. As posited by Hair *et al.* (2007), the relationship between the mean and the standard deviation is that a small estimated standard deviation (SD) denotes that respondents' responses were consistent and that the response distributions lay close to the mean. Conversely, a large standard deviation indicates that the responses are varying, making the response distribution values fall away from the mean of the distribution (Slove, 2001). Moreover, the standard deviation value "should be less than 1 but it is recommended to at least include a value of less than 2 to ensure that there is no issue of outliers" (Drost; 2011, p. 87).

Table 7.10: Descriptive statistical analysis (Section B –Green packaging)

Item	Valid N	Mean	Minimum	Maximum	Std. Deviation
GP1	304	3.56	1	5	1.010
GP2	304	3.65	1	5	1.086
GP3	304	4.09	1	5	1.024
GP4	304	3.75	1	5	0.986
GP5	304	3.92	1	5	1.039

Green packaging, which constituted Section B of the questionnaire, had the highest mean score of 4.09 (Item GP3) and the lowest mean score was 3.56 (Item GP1) giving a range of 0.53. Precisely, the lowest mean 3.56 (Item GP1) indicated that the packaging of their products is non-biodegradable, while results from Section B of the questionnaire highlighted the fact that the highest mean score was 4.09 (Item GP3). Most of the respondents admitted that their products are in recyclable materials. Table 7.10 reveals that the green packaging scale had the highest standard deviation value reported at 1.086 (Item GP2) and the lowest standard deviation value was 0.986 (Item GP4). This information indicates that the data points are clustered around the mean. The SD values are below two (2), hence an indication that there is no presence of outliers.

Table 7.11: Descriptive statistical analysis (Section C –Green advertising)

Item	Valid N	Mean	Minimum	Maximum	Std. Deviation
GA1	304	3.52	1	5	1.152
GA2	304	3.77	1	5	1.002
GA3	304	3.72	1	5	1.042
GA4	304	3.73	1	5	1.044
GA5	304	3.80	1	5	1.033
GA6	304	3.84	1	5	1.054

Green advertising, which constituted Section C of the questionnaire, had the highest mean score of 3.84 (Item GA6) and the lowest mean score was 3.52 (Item GA1) giving a range of 0.32. Precisely, the lowest mean 3.52 (Item GA1) indicated that the respondents agreed that they provide messages on sustainability which focus on the environmental impact of the products, while results from Section C of the questionnaire highlighted the fact that the highest mean score was 3.84 (Item GA6). Most of the respondents admitted that they make environmental claims based on the life expectancy of the products (e.g. raw material production, manufacturing). Table 7.11 reveals that the green advertising scale had the highest standard deviation value reported at 1.152 (Item GA1) and the lowest standard deviation value was 1.002 (Item GA2). This information indicates that the data points are clustered around the mean. The SD values are below two (2), hence an indication that there are no issues of outliers.

Table 7.12: Descriptive statistical analysis (Section D – Green product innovation)

Item	Valid N	Mean	Minimum	Maximum	Std. Deviation
GPI1	304	3.56	1	5	1.088
GPI2	304	3.55	1	5	1.089
GPI3	304	3.64	1	5	1.017
GPI4	304	3.49	1	5	0.985
GPI5	304	3.35	1	5	1.035
GPI6	304	3.41	1	5	1.148
GPI7	304	3.93	1	5	1.002

Green product innovation, which constituted Section D of the questionnaire, had the highest mean score of 3.93 (Item GPI7) and the lowest mean score was 3.35 (Item GPI5) giving a range of 0.58. Precisely, the lowest mean 3.35 (Item GPI5) showed that the respondents agreed that their firms often place emphasis on developing new green-products through new technologies to use natural materials, while results from Section D of the questionnaire highlighted the fact that the highest mean score was 3.93 (Item GPI7). Most of the respondents admitted that their firms often place emphasis on developing new green-products through new technologies to use as little energy as possible. Table 7.12 reveals that the green product innovation scale had the highest standard deviation value reported at 1.148 (Item GPI6) and the lowest standard deviation value was 0.985 (Item GPI4). This information indicates that the data points are clustered around the mean. The SD values are below two (2), hence an indication that there is no presence of outliers.

Table 7.13: Descriptive statistical analysis (Section E –Green process innovation)

Item	Valid N	Mean	Minimum	Maximum	Std. Deviation
GPRI1	304	3.63	1	5	1.136
GPRI2	304	3.69	1	5	1.097
GPRI3	304	3.70	1	5	1.075
GPRI4	304	3.67	1	5	1.119

Green process innovation, which constituted Section E of the questionnaire, had the highest mean score of 3.70 (Item GPRI3) and the lowest mean score was 3.63 (Item GPRI1) giving a range of 0.07. Precisely, the lowest mean 3.63 (Item GPRI1) showed that the respondents agreed that the manufacturing process of their businesses effectively reduces the emission of hazardous substances or waste; while results from Section E of the questionnaire highlighted the fact that the highest mean score was 3.70 (Item GPRI3). Most of the respondents admitted that the manufacturing process of their businesses reduces the consumption of water, electricity, coal, or oil. Table 7.13 reveals that the green process innovation scale had the highest standard deviation value reported at 1.136 (Item GPRI1) and the lowest standard deviation value was 1.075 (Item GPRI3). This information indicates that the data points are clustered around the mean. The SD values are below two (2), hence an indication that there is no presence of outliers.

Table 7.14: Descriptive statistical analysis (Section F-Competitive advantage)

Item	Valid N	Mean	Minimum	Maximum	Std. Deviation
CA1	304	3.76	1	5	1.040
CA2	304	3.62	1	5	1.065
CA3	304	3.78	1	5	1.102
CA4	304	4.02	1	5	.953
CA5	304	4.10	1	5	.884
CA6	304	3.84	1	5	1.038
CA7	304	4.07	1	5	.884
CA8	304	4.29	1	5	.850
CA9	304	4.33	1	5	.798
CA10	304	4.05	1	5	.819
CA11	304	3.93	1	5	.909

Competitive advantage, which constituted Section F of the questionnaire, had the highest mean score of 4.33 (Item CA9) and the lowest mean score was 3.62 (Item CA2) giving a range of 0.71. Precisely, the lowest mean 3.62 (Item CA2) showed that the respondents agreed that their response to competitive moves in the market place is good, while results from Section F of the questionnaire highlighted the fact that the highest mean score was 4.33 (Item CA9). Most of the respondents admitted that their products have a significant advantage over those of their competitors. Table 7.14 reveals that the competitive advantage scale had the highest standard deviation value reported at 1.102 (Item CA3) and the lowest standard deviation value was 0.798 (Item CA9). This information indicates that the data points are clustered around the mean. The SD values are below two (2), hence an indication that there are no issues of outliers.

Table 7.15: Descriptive statistical analysis (Section G –Business performance)

Item	Valid N	Mean	Minimum	Maximum	Std. Deviation
BP1	304	3.65	1	5	1.006
BP2	304	3.93	1	5	.959
BP3	304	4.09	1	5	.915
BP4	304	4.01	1	5	.921
BP5	304	4.19	1	5	.820
BP6	304	4.02	1	5	.966

BP7	304	4.23	1	5	.915
BP8	304	3.96	1	5	1.006
BP9	304	3.90	1	5	.995
BP10	304	3.86	1	5	.973
BP11	304	3.92	1	5	1.042
BP12	304	4.10	1	5	.956
BP13	304	3.79	1	5	1.170
BP14	304	3.60	1	5	1.268
BP15	304	3.72	1	5	1.148
BP16	304	3.86	1	5	1.041

Moreover, business performance, which constituted Section G of the questionnaire, had the highest mean score of 4.23 (Item BP7) and the lowest mean score was 3.60 (Item BP14) giving a range of 0.63. Precisely, the lowest mean 3.60 (Item BP14) showed that the respondents agreed that they have the best order-fulfilment lead time in the industry, while results from Section G of the questionnaire highlighted the fact that the highest mean score was 4.23 (Item BP7). Most of the respondents admitted that their quality reputation and award achievement is the best in the industry. Table 7.15 reveals that the business performanc scale had the highest standard deviation value reported at 1.268 (Item BP14) and the lowest standard deviation value was 0.820 (Item BP5). This information indicates that the data points are clustered around the mean. The SD values are below two (2), hence an indication that there is no presence of outliers.

7.5 Research Study Measure of Reliability and Validity

The measurement model is instrumental in measuring reliability, validity and model of fit. Subsequent to demographic analysis of the collected data, it is essential to appraise the reliability and validity of the measuring scales to ensure valid data analyses. The following section presents internal reliability assessment for the six constructs that constitute this research, green packaging, green advertising, green product innovation, green process innovation, competitive advantage, and business performance.

7.5.1 Internal consistency of reliability analysis: Green packaging

The results of the scale reliability test for the construct green packaging is shown in table 7.8. Item GP5 was deleted due to the fact that the item to total correlation value was 0.5. The Item-total statistics analysed through SPSS are required to be above 0.5 to assess convergent validity (Morar, Venter & Chuchu, 2015). As shown in table 7.8, item to total values ranged from 0.536 to 0.690 and therefore, were above the threshold of 0.5. Furthermore, in terms of the Cronbach's Alpha coefficient, Hair *et al*. (2009) and Kipkebut (2010) mentioned that values in the range 0.6 and 0.7 are considered reliable. It is evident that the Cronbach's alpha value for the construct GP which is 0.806 is above the recommended threshold of 0.7, confirming reliability of the measurements of items used in the study. According to literature, composite reliabilty values that are acceptable are normally between zero and one (<-1) (Ramayah *et al*., 2011). An index that is greater than 0.7 represents sufficient internal consistency of the construct (Nunnaly, 1978; Hair et al., 2009). Composite reliability (CR) and average variance extracted (AVE) for each construct were computed using the formula proposed by Fornell and Lacker (1981).

Formulae:

$$\mathbf{CR\eta = (\Sigma\lambda yi)^2 / [(\Sigma\lambda yi)^2 + (\Sigma\varepsilon i)]}$$

Where:

$CR\eta$ = Composite reliability

$(\Sigma\lambda yi)^2$ = Square the sum of the factor loadings $(\Sigma\varepsilon i)$ = Sum of error variances.

$$\mathbf{V\eta = \Sigma\lambda yi2 / (\Sigma\lambda yi2+\Sigma\varepsilon i)}$$

Where:

AVE = summation of the squared of factor loadings / {(summation of the squared of factor loadings) + (summation of error variances)}

The results of composite reliability for GP are shown in Table 7.8. The result yielded a CR index of 0.83. The exhibited CR level exceeded the estimated criteria of greater than 0.70, which is recommended as adequate for internal consistency of the constructs (Nunnally 1978; Holland, 1999). The results of the average variance extracted for GP are also shown in Table 7.8. The AVE for GP is 0.56, which is above 0.4, thus acceptable (Fraering & Minor 2006). As seen in Table 7.16, the extrapolated shared correlation values were converted to highest shared variance by squaring the shared correlation and the highest shared values were then compared with AVE to see which one was the greatest. Table 7.16 shows that all the AVE value is 0.56 which is above the HSV value of 0.32 for the research construct, thereby confirming the existence of discriminant validity. Factor loadings (standardised regression weights) of individual items on the construct GP are shown in Table 7.16. The individual item loading are all above the recommended 0.5, ranging from 0.585 to 0.688 (Anderson & Gerbing, 1988); the results of the factor loadings imply that all items converged well on the construct they were supposed to measure and hence, confirmed the existence of convergent validity.

Table 7.16: Accuracy statistics analysis: Green packaging

Research construct		Cronbach's Test		Factor loading	C.R	AVE	Highest Shared Variance
		Item-Total	α Value				
GP	GP1	0.690	0.806	0.850	0.83	0.56	0.32
	GP2	0.676		0.828			
	GP3	0.536		0.585			
	GP4	0.672		0.688			

7.5.2 Internal consistency of reliability analysis: Green advertising

The results of the scale reliability tests shown in table 7.9 indicate item–to-total values ranging from 0.521 to 0.593 and therefore these values were above the threshold of 0.5 (refer to Table 7.9), thus accepted, according to the literature (Morar, Venter & Chuchu, 2015). Item–to-total correlation values are required to be above 0.5 to ensure that there is convergent validity and in the instance that certain item–to-total correlation values are below this threshold, they should be removed. Due to the below acceptable threshold factor loading scores of two tems, they were removed and did not take part in the statistical analysis process to ensure the study remains valid. These items were namely: GA1 and GA2. These items had item–to-total correlation values of 0.470, and 0.483 which are evidently below 0.5 and therefore should not be analysed further to ensure statistical accuracy and significance throughout the data analysis and interpretation procedure as well as to ensure that there is convergent validity. The construct's Cronbach's alpha coefficient index 0.787, exceeded the recommmended threshold of 0.7 as recommended by Du Plessis (2010); Bagozzi and Yi (1988); Nunnally and Bernstein (1994), therefore these statistics confirm that the measures used in this study are reliable.

Following the analysis of the Cronbach's alpha coefficient, factor loadings (standardised regression weights) of individual items on the construct GA are shown in Table 7.9. The individual item loading are all above the recommended 0.5, ranging from 0.572 to 0.770 (Anderson & Gerbing, 1988); the results of the factor loadings imply that all items converged well on the construct they were supposed to measure and hence, confirmed the existence of convergent validity. Internal consistency was also used to evaluate the composite reliability (CR) index of the construct. Using the formulae presented in the previous section, the composite reliability was calculated and tabulated in Table 7.17. The results in Table 7.17 indicate the CR index for GA is 0.76, thereby exceeding the estimate criteria used in literature. The construct GA had an Average Extracted Variance of 0.44 which is above the threshold recommended in literature and therefore provides evidence for an acceptable level of research scale reliability (Fraering & Minor, 2006; Hair *et al.,* 2009). Additionally, Table 7.17 shows that all the AVE values are 0.44 which is above the HSV value of 0.30 for the entire research construct, thereby confirming the existence of discriminant validity.

Table 7.17: Accuracy statistics analysis: Green advertising

Research construct		Cronbach's Test		Factor Loadings	C.R	AVE	Highest Shared Variance
		Item-Total	α Value				
GA	GA3	0.580	0.787	0.572	0.76	0.44	0.30
	GA4	0.593		0.676			
	GA5	0.573		0.770			
	GA6	0.521		0.614			

7.5.3 Internal consistency of reliability analysis: Green Product innovation

The results of the scale reliability tests shown in table 7.18 indicate item–to-total values ranging from 0.556 to 0.578 and therefore these values were above the threshold of 0.5 (refer to Table 7.10), thus accepted, according to the literature (Morar, Venter & Chuchu, 2015). Item–to-total correlation values are required to be above 0.5 to ensure that there is convergent validity and in the instance that certain item–to-total correlation values are below this threshold, they should be removed. Due to the below acceptable threshold factor loading scores of two items, they were removed and did not take part in the statistical analysis process to ensure the study remains valid. These items were explicitly: GPI1 and GPI2. These items had item–to-total correlation values of 0.462, and 0.467 which are evidently below 0.5 and therefore should not be analysed further to ensure statistical accuracy and significance throughout the data analysis and interpretation procedure as well as to ensure that there is convergent validity. The construct's Cronbach's alpha coefficient index 0.798 exceeded the recommmended threshold of 0.7, as recommended by Du Plessis (2010); Bagozzi and Yi

(1988); Nunnally and Bernstein (1994), therefore these statistics confirm that the measures used in this study are reliable.

Following the analysis of the Cronbach's alpha coefficient, factor loadings (standardised regression weights) of individual items on the construct GPI are shown in Table 7.17. The individual item loading are all above the recommended 0.5, ranging from 0.588 to 0.731 (Anderson & Gerbing, 1988); the results of the factor loadings imply that all items converged well on the construct they were supposed to measure and hence, confirmed the existence of convergent validity. It should be notes that item GPI4 was deleted as it had a factor load of 0.498, meaning the item did not measure at least 50% of what it is supposed to measure, in this case green product innovation. Internal consistency was also used to evaluate the composite reliability (CR) index of the green product innovation construct. Using the formulae presented in the previous section, the composite reliability was calculated and tabulated in Table 7.18. The results in Table 7.18 indicate the CR index for GPI is 0.74, thereby exceeding the estimate criteria used in literature. The construct GPI had an Average Extracted Variance of 0.42 which is above the threshold recommended in literature and therefore provides evidence for an acceptable level of research scale reliability (Fraering & Minor, 2006; Hair *et al*., 2009). Additionally, Table 7.18 also shows that all the AVE value is 0.42 which is above the HSV value of 0.10 for the entire green product innovation construct, thereby confirming the existence of discriminant validity. The results of scale reliability test for the construct GPI is shown in Table 7.18.

Table 7.18: Accuracy statistics analysis: Green product innovation

Research construct		**Cronbach's Test**		**Factor loadings**	**C.R**	**AVE**	**Highest Shared Variance**
		Item-Total	**α Value**				
GPI	**GPI3**	0.557	0.798	0.588	0.74	0.42	0.10
	GPI5	0.556		0.616			
	GPI6	0.578		0.651			
	GPI7	0.557		0.731			

7.5.4 Internal consistency of reliability analysis: Green process innovation

The results of the scale reliability tests shown in table 7.11 indicate item–to-total values ranging from 0.565 to 0.630 and therefore these values were above the threshold of 0.5 (refer to Table 7.19), thus accepted, according to the literature (Morar, Venter & Chuchu, 2015). Item–to-total correlation values are required to be above 0.5 to ensure that there is convergent validity and in the instance that certain item–to-total correlation values are below this threshold, they should be removed. Due to the below acceptable threshold factor loading scores of one item, the item was removed and did not take part in the statistical analysis process to ensure the study remains valid. This item is: GPRI4. The item had item–to-total correlation values of 0.466 which are evidently below 0.5 and therefore should not be analysed further to ensure statistical accuracy and significance throughout the data analysis and interpretation procedure as well as to ensure that there is convergent validity. The construct's Cronbach's alpha value of 0.763 exceeded the recommmended threshold of 0.7 as recommended by Du Plessis (2010); Bagozzi and Yi (1988); Nunnally and Bernstein (1994), therefore these statistics confirm that the measures used in this study are reliable.

Following the analysis of the Cronbach's alpha coefficient, the individual loadings are all above the recommended 0.5 (Anderson & Gerbin, 1988) indicating acceptable individual item reliabilities as more than 50% of each item's variance is shared with the construct. The composite reliability for the construct GPRI was 0.76 which is above the recommended value of 0.7 suggested by Holland (1999), thus indicating acceptable internal consistency and reliability of the respective measures. The average variance extracted AVE was 0.52, exceeding the recommended threshold of 0.4, hence providing evidence of acceptable levels of research scale reliability (Fraering & Minor, 2006). Additionally, Table 7.19 also shows that all the AVE values are 0.42 which is above the HSV value of 0.10 for the entire green process innovation construct, thereby confirming the existence of discriminant validity. The results of scale reliability test for the construct GPRI is shown in Table 7.19.

Table 7.19: Accuracy statistics analysis: Green process innovation

Research construct		Cronbach's Test		Factor Loading	C.R	AVE	Highest Shared Variance
		Item-Total	α Value				
GPRI	**GPRI1**	0.565	0.763	0.696	0.76	0.52	0.11
	GPRI2	0.585		0.727			
	GPRI3	0.630		0.739			

7.5.5 Internal consistency of reliability analysis: Competitive advantage

The results of the scale reliability tests shown in table 7.12 indicate item–to-total values ranging from 0.523 to 0.693 and therefore these values were above the threshold of 0.5 (refer to Table 7.12), thus accepted, according to the literature (Morar, Venter & Chuchu, 2015). Item–to-total correlation values are required to be above 0.5 to ensure that there is convergent validity and in the instance that certain item–to-total correlation values are below this threshold, they should be removed. Due to the below acceptable threshold factor loading scores of four items, they were removed and did not take part in the statistical analysis process to ensure the study remains valid. These items were: CA1, CA2, CA3 and CA11. These items had item–to-total correlation values of 0.377, 0.390, 0.380 and 0.427 which are evidently below 0.5 and therefore should not be analysed further to ensure statistical accuracy and significance throughout the data analysis and interpretation procedure as well as to ensure that there is convergent validity. The construct's Cronbach's alpha value of 0.846 exceeded the recommmended threshold of 0.7 as recommended by Du Plessis (2010); Bagozzi and Yi (1988); Nunnally and Bernstein (1994), therefore these statistics confirm that the measures used in this study are reliable.

Following the analysis of the Cronbach's alpha coefficient, factor loadings (standardised regression weights) of individual items on the construct CA are shown in Table 7.12. The individual item loading are all above the recommended 0.5, ranging from 0.603 to 0.711 (Anderson & Gerbing, 1988); the results of the factor loadings imply that all items converged well on the construct they were supposed to measure and hence, confirmed the existence of convergent validity. It is noted that item CA4 was deleted as it had a factor load of 0.482 meaning the item did not measure at least 50% of what it is supposed to measure, in this case competitive advantage. Internal consistency was also used to evaluate the composite reliability (CR) index of the competitive advantage construct. Using the formulae presented in the previous section, the composite reliability was calculated and tabulated in Table 7.20. The results in Table 7.20 indicate the CR index for CA is 0.86, thereby exceeding the estimate criteria used in literature. The construct CA had an Average Extracted Variance of 0.52 which is above the threshold recommended in literature and therefore provides evidence for an acceptable level of research scale reliability (Fraering & Minor, 2006; Hair et al., 2009). Additionally, Table 7.20 also shows that all the AVE value is 0.52 which is above the HSV value of 0.02 for the competitive advantage construct, thereby confirming the existence of discriminant validity. The results of scale reliability test for the construct CA is shown in Table 7.20.

Table 7.20: Accuracy statistic analysis: Competitive advantage

Research construct		Cronbach's Test		Factor Loadings	C.R	AVE	Highest Shared Variance
		Item-Total	α Value				
CA	**CA5**	0.523	0.846	0.619	0.86	0.52	0.02
	CA6	0.627		0.693			
	CA7	0.571		0.886			
	CA8	0.693		0.711			
	CA9	0.590		0.763			
	CA10	0.646		0.603			

7.5.6 Internal consistency of reliability analysis: Business performance

Corrected item-total correlation for each item varied between 0.560 and 0.776 which means each item is internally consistent with all other items. However, Item–to-total correlation values are required to be above 0.5 to ensure that there is convergent validity and in the instance that certain item–to-total correlation values are below this threshold, they should be removed. Due to the below acceptable threshold factor loading scores of seven items, they were removed and did not take part in the statistical analysis process to ensure the study remains valid. These items were: BP1, BP2, BP3, BP4, BP5, BP6, and BP16. These items had item–to-total correlation values of 0.199, 0.293, 0.487, 0.345, 0.435 0.357 and 0.359 which are evidently below 0.5 and therefore should not be analysed further to ensure statistical accuracy and significance throughout the data analysis and interpretation procedure as well as to ensure that there is convergent validity. Cronbach's coefficient alpha and composite reliability (C.R.) indexes were 0.856 and 0.88 respectively, therefore have good internal consistency. A higher level of Cronbach's coefficient alpha demonstrated a higher reliability of the scale.

The Cronbach's alpha coefficients and composite reliability (C.R.) values exceeded the estimate criteria used by prior literature. Factor loadings (standardised regression weights) of individual items on the construct BP are shown in Table 7.21. The individual item loading are all above the recommended 0.5, ranging from 0.572 to 0.770 (Anderson & Gerbing, 1988); the results of the factor loadings imply that all items converged well on the construct they were supposed to measure and hence, confirmed the existence of convergent validity. Additionally, the average variance extracted (AVE) value was 0.44, thus providing evidence for acceptable levels of research scale reliability. Moreover, Table 7.21 also shows that all the

AVE value is 0.44 which is above the HSV value of 0.11 for the competitive advantage construct, thereby confirming the existence of discriminant validity. The results of scale reliability test for the construct BP is shown in Table 7.21.

Table 7.21: Accuracy statistic analysis: busineness performance

Research construct		Cronbach's Test		Factor Loadings	C.R	AVE	Highest Shared Variance
		Item-Total	α Value				
BP	**BP7**	0.540	0.856	0.560	0.88	0.44	0.11
	BP8	0.571		0.647			
	BP9	0.581		0.627			
	BP10	0.530		0.523			
	BP11	0.546		0.634			
	BP12	0.623		0.720			
	BP13	0.662		0.776			
	BP14	0.589		0.719			
	BP15	0.598		0.748			

7.6 Summary accuracy statistics for the model

The statistical measures of accuracy tests shown in Table 7.22 specify the different measures that were used to assess the reliability and validity of the constructs for the study.

Table 7.22: Accuracy statistics analysis for the model

Research Construct		Cronbach's Test		Factor Loading	CR	AVE	Highest shared variance
		Item-Total	α Value				
GP	GP1	0.690	0.806	0.850	0.83	0.56	0.32
	GP2	0.676		0.828			
	GP3	0.536		0.585			
	GP4	0.672		0.688			
GA	GA3	0.580	0.787	0.572	0.76	0.44	0.30
	GA4	0.593		0.676			
	GA5	0.573		0.770			
	GA6	0.521		0.614			
GPI	GPI3	0.557	0.798	0.588	0.74	0.42	0.10
	GPI5	0.556		0.616			
	GPI6	0.578		0.651			
	GPI7	0.557		0.731			
GPRI	GPRI1	0.565	0.763	0.696	0.76	0.52	0.11
	GPRI2	0.585		0.727			
	GPRI3	0.630		0.739			
CA	CA5	0.523	0.846	0.619	0.86	0.52	0.02
	CA6	0.627		0.693			
	CA7	0.571		0.886			

	CA8	0.693		0.711			
	CA9	0.590		0.763			
	CA10	0.646		0.603			
BP	BP7	0.540	0.856	0.560	0.88	0.44	0.11
	BP8	0.571		0.647			
	BP9	0.581		0.627			
	BP10	0.530		0.523			
	BP11	0.546		0.634			
	BP12	0.623		0.720			
	BP13	0.662		0.776			
	BP14	0.589		0.719			
	BP15	0.598		0.748			

Note: GP=green packaging; GA=Green advertising; GPI=Green product innovation; GPRI= Green process innovation; CA=Competitive advantage; BP=Business performance.
C.R= Composite Reliablity
A.V.E= Average Variance Extracted
* Scores: *1= Srongly Disagree; 2= Disagree; 3=Neutral; 4=Agree; 5 Strongly Agree*
Significance level <0.05; ** significance level <0.01; *** significance level <0.001

Construct reliability of the research measures was examined by the computation of three different methods, namely Cronbach's alpha reliability test (Cronbach α), the composite reliability test (CR) and the average value extracted (AVE) tests.

7.6.1 Cronbach's coefficient alpha test

The Cronbach's coefficient alpha was used to assess the internal consistency of each construct employed in the study. The closer the co-efficient is to 1.00, the greater is the internal consistency of the items in the scale (Malhotra 2010). All alpha values ranged from 0.763 to 0.856; they exceeded the recommended threshold of 7.0 suggesting that all the items in the scale tap into the same underlying constructs (Hair *et al*., 2010). In addition, the item-total correlation value lies between 0.521 and 0.693, which is above the cut-off point of 0.5 as recommended by Anderson and Gerbing (1988). The higher inter-item correlations reveal convergence among the measured items.

7.6.2 Composite reliability (CR)

The results of composite reliability are shown in Table 7.22. The results yielded CR indexes between 0.74 and 0.88. The exhibited CR level exceeded the estimated criteria of greater than 0.70, which is recommended as adequate for internal consistency of the constructs (Nunnally 1978; Chin 1988), thus finding satisfactory support for the scales composite reliability.

7.6.3 Average variance extracted (AVE)

The AVE estimates in Table 7.22 reflected that the overall amount of variance in the indicators was accounted for by the latent construct (Neuman, 2006). All AVE values were above 0.4, thus acceptable (Fraering & Minor 2006). AVE values indicated indexes between 0.42 and 0.56. These results provided evidence for acceptable levels of research scale reliability.

7.7 Validity analysis

To examine the validity of the latent constructs and corresponding measurements, convergent validity and discriminant validity were used in this section.

7.7.1 Convergent validity

Item loadings for each corresponding research construct were above the recommended value of 0.5 (Aldalaigan & Buttle 2002). As shown in Table 7.22, the item loadings ranged between 0.523 and 0.886, this means that the instruments loaded well on their respective constructs. The results also indicate an acceptable individual item convergent validity as more than 50 percent of each item's variance was shared with a respective construct. The results imply that all items converged well on the construct they were supposed to measure and hence, confirmed the existence of convergent validity

7.7.2 Discriminant validity: Correlation between constructs

One of the methods used to check the discriminant validity of the research constructs is the evaluation of whether the correlations among latent constructs were less than 1.0. As indicated in Table 7.23, the inter-correlation values for all paired latent variables are less than 1.0, therefore indicating the existence of discriminant validity. Respectively, the variables did not present any problems of multicollinearity, such as a high correlation value greater than 0.89 (Brown & Cudeck, 1993). All correlations were below 0.8 and were therefore in conformity with the recommended threshold, hence indicating discriminant validity (Fraering & Minor, 2006). The study also used AVE as an alternative method to check discriminant validity related to the correlation matrix (Nunnally & Bernstein, 1994).

Table 7.23: Inter-construct correlation matrix

Correlations						
Research Construct	GP	GA	GPI	GPRI	CA	BP
GP	1.000					
GA	.568**	1.000				
GPI	.435**	.547**	1.000			
GPRI	.320**	.346**	.317**	1.000		
CA	.180**	.085	-.022	.010	1.000	
BP	.324**	.260**	.300**	.328**	.128*	1.000
**. Correlation is significant at the 0.01 level (2-tailed).						
*. Correlation is significant at the 0.05 level (2-tailed).						

Note: GP=green packaging; GA=Green advertising; GPI=Green product innovation; GPRI= Green process innovation; CA=Competitive advantage; BP=Business performance.

The inter-construct correlations ranged between -0.022 (showing signs of discriminant validity) and 568** (indicating a fair level of convergent validity). Based on the inter-construct correlation matrix, discriminant validity existed as a result of highly dissimilar constructs.

7.7.3 Average Variance Extracted (AVE) and Shared Variance (SV)

Discriminant validity was also established by checking if the AVE was greater than the highest shared variance value (SV) (Nusair & Hua, 2010). It is ideal if the Average Variance Extracted (AVE) is greater than 0.4 for the construct to be considered reliable (Fraering & Minor, 2006). Table 7.24 shows the AVE as well as the highest shared variance for all the constructs.

Table 7.24: Construct AVE and HSV

Construct	AVE	Highest shared variance
GP	0.56	0.32
GA	0.44	0.30
GPI	0.42	0.10
GPRI	0.52	0.11
CA	0.52	0.02
BP	0.44	0.11

Table 7.24 shows that all the AVE values (0.56, 0.44, 0.42, 0.52, 0.52 and 0.44) are above the SV values (0.32, 0.30, 0.10, 0.11, 0.02, and 0.11) respectively for all the research constructs, thereby confirming the existence of discriminant validity.

7.8 STRUCTURAL EQUATION MODELLING

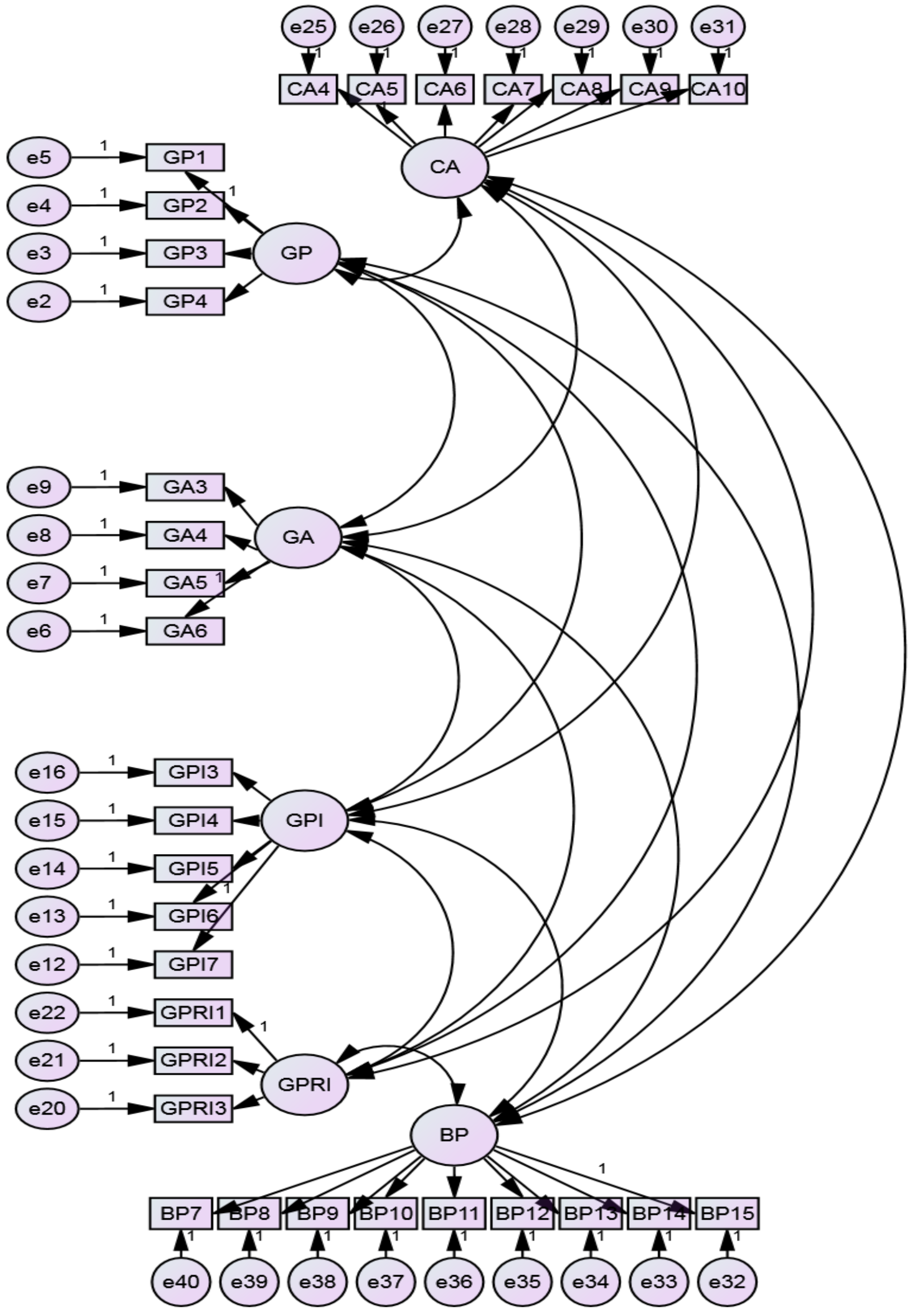
The current study employed structural equation modelling (SEM) for the purpose of analysing data. Structural Equation modelling is a multivariate statistical framework that is used for modelling complex relationships between directly and indirectly observed variables (Stein, Morris & Nock, 2012). SEM is regarded as a comprehensive technique and has become a favoured technique for researchers across disciplines (Byrne, 2012; Ngo & O'Cass, 2012). As observed by Marsh *et al*. (2012), the traditional multivariate study methods are not capable of evaluating or correcting measurement error while SEM is capable of correcting these errors prior to analysing data integrating endogenous and exogenous variables. SEM employs a two-step process for its analysis - the confirmatory factor analysis and the path modelling or the structural modelling (Yuan *et al*., 2010).

7.8.1 Conceptual model fit assessment

According to the two-step procedure (Anderson & Gerbing, 1998), prior to testing hypotheses, confirmatory factor analysis (CFA) was performed essentially to develop and specify the measurement model (Hair *et al.,* 2010) and examine scale accuracy (including reliability, convergent validity and discriminant validity) of the multiple item construct measures using AMOS 25. Initial specification search led to the deletion of some of the items in the construct scales in order to provide acceptable fit and consequential scale accuracy. Testing for model fit is conducted to determine whether the conceptual model fits the collected data.

Figure 7.8, is a diagrammatic representation of the CFA model. Latent variables are signified by the circular or oval shape while observed variables are represented by the rectangular shapes. Adjacent to the observed variables are measurement errors, which are represented by circular shapes as well. The bi-directional arrows connote the relationship between latent variables. Once the measurement model has been specified, its validity needs to be determined, which depends on establishing acceptable levels of goodness-of-fit. Goodness-of-fit specifies how well the particular model replicates the observed covariance matrix amid the indicator items (Hair *et al*., 2010). The model is depicted in Figure 7.8 and the goodness-of-fit results are shown in Table 7.25.

Figure 7.8: CFA Model/Overall Measurement Model



GP: Green packaging; GA: Green advertising; GPI: Green product innovation; GPRI; Green process innovation; CA: Competitive advantage; BP: Business performance

- **Conceptual model fit assessments**

CFA was implemented to determine measures of accuracy of the measurement instruments for the respective construct using AMOS Version 25.0. Table 7.25 indicates the results pertaining to the conceptual model fit assessment which are discussed hereafter.

Table 7.25: Model fit results (CFA)

Model Fit criteria	CMIN	(DF)	Chisquare ($\chi2$ /DF)	(GFI)	(IFI)	(TLI)	(CFI)	RMSEA
Indicator value	548.674	385	1.425	0.902	0.963	0.951	0.962	0.037

The results in Table 7.25 show the acceptable goodness-of-fit of the model as mentioned in Section 6.14.2 of Chapter 6. In light of the aforementioned results, it could be suggested that all the indicators are meeting the acceptable thresholds of equal or greater than 0.9 for GFI, IFI, TLI, CFI and equal or less than 0.08 for RMSEA. All these measures confirm a robust and acceptable model fit (Schreiber, Stage, King, Nora & Barlow 2006).

7.8.2 Structural Equation Modelling Analysis (SEM)

Since the acceptable confirmatory factor analysis measurement model fit was secured, the study proceeded to the next stages of the analysis of the SEM model fit and the structural model path analysis.

7.8.2.1 SEM model fit analysis

The measurement of model fit of this study was done using the following indices: chi-square value over degree of freedom, NFI, IFI, TLI, CFI, and RMSEA as specified in Table 6.14 of chapter 6. Table 7.26 reports the structural equation model fit results

Table 7.26: SEM model fit indexes

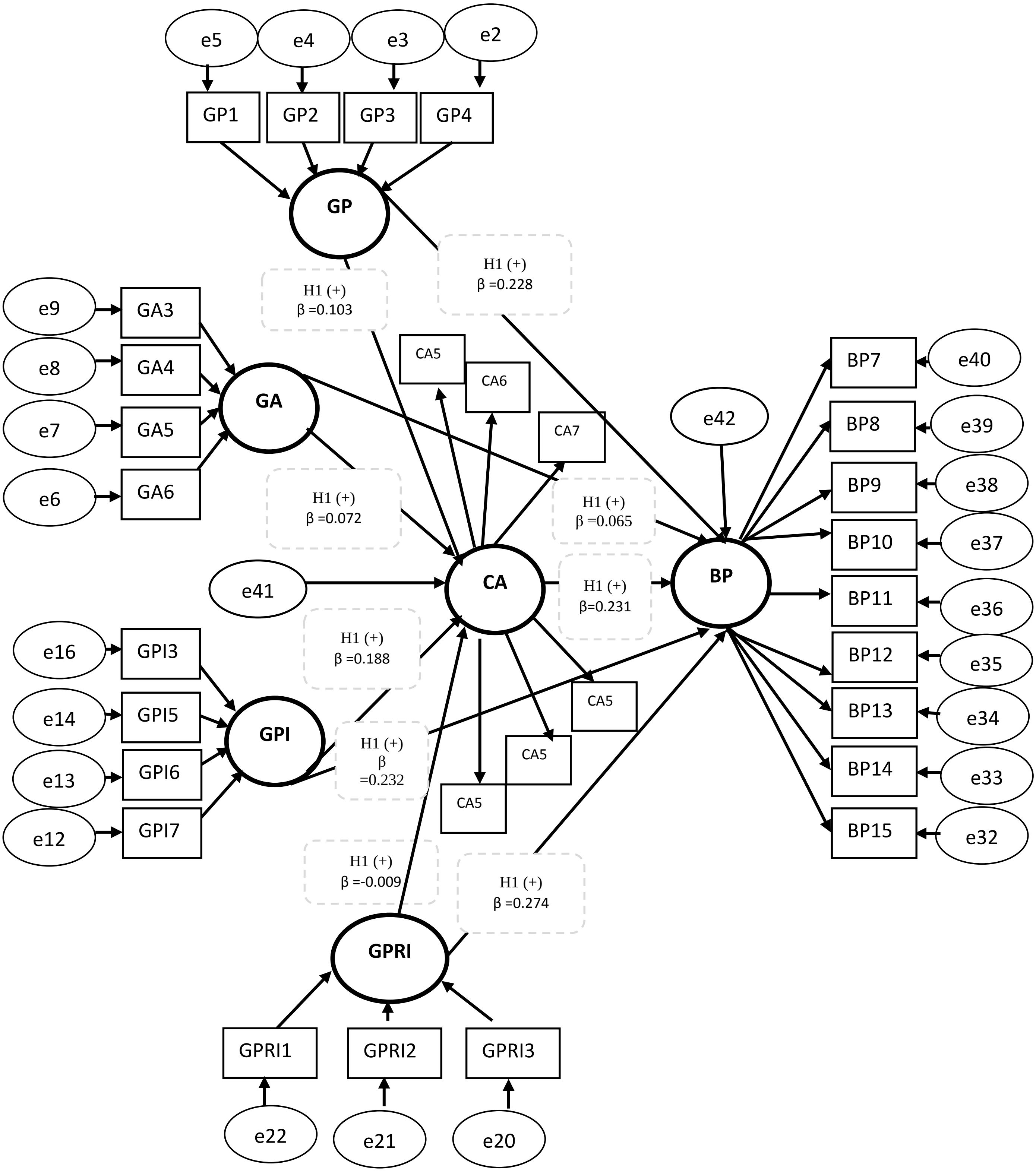
Fit Indices	Acceptable threshold	Study test results	Decision
Chi-square (CMIN/DF)	Tabled chi-square smaller or equal to 3	1.688	Accepted
Increment fit index (IFI)	Values greater than 0.90	0.946	Accepted
Tucker-Lewis index (TLI)	Values greater than 0.90	0.925	Accepted
Comparative fit index (CFI)	Values greater than 0.90	0.944	Accepted
Root mean square error of approximation (RMSEA)	Less than 0.08	0.048	Accepted

In light of the results shown in Table 4.12, it could be suggested that all the indicators are meeting the acceptable thresholds of equal to or greater than 0.9 for NFI, IFI, TLI, CFI and equal to or less than 0.08 for RMSEA (Benteler, 1990; Browne & Cudeck, 1993; Marsh, Hau & Wen, 2004). Therefore, it could be concluded that the data confirms and fits acceptability of the model.

7.8.2.2 The structural model path analysis

The structural model path analysis involves the estimation of presumed causal relations among observed variables (Garson 2008). In SEM, relationships between variables are referred to as path coefficients and are depicted by single-headed arrows. The path diagram for the model structure is reflected in Figure 7.9. Much like the CFA model, the circle or oval shapes represent the latent variables while measurement items are represented by rectangles. Adjacent to measurement items in circular shapes are measurement errors and the uni-directional arrows between latent variables are used to convey the causal relations.

Figure 7.9: SEM path model structure



Note: Research structure model fit

χ^2/df =1.688; IFI=0.946; TLI=0.925; CFI=0.944; RMSEA=0.048

Source: Calculated from research results (2018).

Table 7.27: Hypothesised Relationships and Resulting Outcomes

Path / proposed hypothesis relationship	Hypothesis	Estimate	P - Value	Decision rejected/supported
Green packaging (GA) ↓ Competitive advantage (CA)	$\mathbf{H_1}(+)$	0.103	0.113	Supported, however, not significant
Green advertising (GA) ↓ Competitive advantage (CA)	$\mathbf{H_2}(+)$	0.072	0.270	Supported, however, not significant
Green product innovation (GPI) ↓ Competitive advantage (CA)	$\mathbf{H_3}(+)$	0.188	0.010	Supported, however, not significant
Green process innovation (GPRI) ↓ Competitive advantage (CA)	$\mathbf{H_4}(+)$	-0.009	0.895	Not supported and Insignificant
Green packaing (GP) ↓ Business performance (BP)	$\mathbf{H_5}(+)$	0.228	***	Supported and Significant
Green advertising (GA) ↓ Business performance (BP)	$\mathbf{H_6}(+)$	0.065	0.298	Supported, however, not significant
Competitive advantage (CA) ↓ Business performance (BP)	$\mathbf{H_7}(+)$	0.231	***	Supported and Significant
Green product innovation (GPI) ↓ Business performance (BP)	$\mathbf{H_8}(+)$	0.232	***	Supported and Significant
Green process innovation (GPRI) ↓ Business performance (BP)	$\mathbf{H_9}(+)$	0.274	***	Supported and Significant

** Significance level <0.05; ** significance level <0.01; *** significance level <0.001*

7.9 Hypotheses testing

These results affirmed the adequacy of the model and the model fit statistics show that the proposed conceptual model converged well. This section provides results of the preliminary formulated hypotheses developed out of the research hypotheses and objectives as specified in Chapter 1. The study's hypotheses were tested to evaluate the relationships between latent variables. Table 7.27 represents the results elicited following the hypotheses test. They are presented hereafter.

7.9.1 Green packaging and competitive advantage

The first hypothesis (H1) stated that green packaging has a positive impact on competitive advantage. As a result of the survey, it emerged that green packaging positively impacts competitive advantage, but has an insignificant influence on competitive advantage as indicated by the path coefficient value of 0.103 and the p-value of 0.113. Therefore, the result signals that the hypothesis is supported; however, the significance level is weak.

7.9.2 Green advertising and competitive advantage

With reference to the second hypothesis (H2), the study hypothesised that green advertising has a positive impact on competitive advantage. As a result of the survey, it emerged that green advertising positively impacts competitive advantage, but has an insignificant influence on competitive advantage as indicated by the path coefficient value of 0.072 and the p-value of 0.270. On the basis of the findings, H2 is supported, but is not significant.

7.9.3 Green product innovation and competitive advantage

The third hypothesis (H3) in the study stated that green product innovation has a positive impact on competitive advantage. As a result of the survey, it emerged that green product innovation positively impacts competitive advantage, but has an insignificant influence on competitive advantage as indicated by the path coefficient value of 0.188 and the p-value of 0.010. Therefore, the result signals that the hypothesis is supported; however, the significance level is weak.

7.9.4 Green process innovation and competitive advantage

The third hypothesis (H4) in the study stated that green process innovation has a positive impact on competitive advantage. The results indicate that there was rather a negative impact as indicated by the path coefficient value of -0.009 and the hypothesis was also statistically insignificant as indicated by the p-value of 0.895. H4 is therefore not supported and insignificant.

7.9.5 Green packaing and business performance

The fifth hypothesis (H5) stated that green packaging has a positive impact on business performance. The relationship between green packing and business performance was assessed and the finding revealed that there was a positive relationship between them, which then supported the stated hypothesis. It means that the green packaing has a positive and stronger impact on business performance. The strength of the relationship is reflected by the path coefficient value of 0.228 at <0.001 showing a strong relationship. Based on the results, it is clear that H5 is supported and is significant.

7.9.6 Green advertising and business performance

With reference to the sixth hypothesis (H6), the study hypothesised that green advertising has a positive impact on business performance. As a result of the survey, it emerged that green advertising positively impacts business performance, but has an insignificant influence on business performance as indicated by the path coefficient value of 0.065 and the p-value of 0.298. On the basis of the findings, H2 is supported, but is not significant.

7.9.7 Competitive advantage and business performance

The seventh hypothesis (H7) in the study stated competitive advantage has a positive impact on business performance. The relationship between competitive advantage and business performance was assessed and the finding revealed that there was a positive relationship between them, which then supported the stated hypothesis. It means that the competitive advantage has a positive and stronger impact on business performance. The strength of the relationship is reflected by the path coefficient value of 0.231 at <0.001 showing a strong relationship. Based on the results, it is clear that H5 is supported and is significant.

7.9.8 Green product innovation and business performance

The eighth hypothesis (H8) in the study stated green product innovation has a positive impact on business performance. The relationship between green product innovation and business performance was assessed and the finding revealed that there was a positive relationship between them, which then supported the stated hypothesis. It means that the green product innovation has a positive and stronger impact on business performance. The strength of the relationship is reflected by the path coefficient value of 0.232 at <0.001 showing a strong relationship. Based on the results, this then provides support for H8.

7.9.9 Green process innovation and business performance

With reference to the ninth hypothesis (H9), the study hypothesised that green process innovation has a positive impact on business performance. The relationship between green process innovation and business performance was assessed and the finding revealed that there was a positive relationship between them, which then supported the stated hypothesis. It means that the green process innovation has a positive and stronger impact on business performance. The strength of the relationship is reflected by the path coefficient value of 0.274 at <0.001 showing a strong relationship. Based on the results, it is clear that H9 is supported and is significant.

7.10 Testing for Mediation Effect among Variables Using Smart Pls 3

The research conceptual framework utilised as part of this study made use of one mediating variable that mediated the relationship between four predictor variables and one outcome variable. This mediator variable is referred to as “competitive advatange”. The following section presents the results for the mediation effect to determine whether the mediating variable positively or negatively mediates the relationship between the independent variables and dependent variables. Thus, was generated throught the ‘consistent PLS algorithm’ using Smart PLS3.

Table 7.28: Path coefficient values of mediation effect

	Specific Indirect Effects
Green packaging -> Competitive advantage -> Business performance	0.132
Green advertising -> Competitive advantage -> Business performance	0.026
Green product innovation -> Competitive advantage -> Business performance	0.295
Green process innovation -> Competitive advantage -> Business performance	0.182

Table 7.28 above highlights that the relationship between the independent variable ‘green packaging’ and dependent variable ‘business performance’, mediated by ‘competitive advantage’ produced a positive path coefficient value of 0.132. Therefore, the mediating variable ‘competitive advantage’ in this instance positively mediates the relationship between

green packaging and business performance. As a result, it can be confirmed tha competitive advantage mediates the relationship between green packaging and business performance. Deducing from the above, H10 is supported.

Furtheremore, table 7.28 indicates the relationship between the ‘green advertising’ and ‘business performance’, mediated by ‘competitive advantage’ produced a positive path coefficient value of 0.026. Therefore, the mediating variable ‘competitive advantage’ in this instance positively mediates the connection between green advertising and business performance. As a result, it can be confirmed tha competitive advantage mediates the connection between green advertising and business performance. Drawing from the above, H11 is supported.

In addition, table 7.28 indicates the relationship between the ‘green product innovation’ and ‘business performance’, mediated by ‘competitive advantage’ also produced a positive path coefficient value of 0.295. Therefore, the mediating variable ‘competitive advantage’ in this case positively mediates the association between green product innovation and business performance. As a result, it can be confirmed that competitive advantage mediates the association between green product innovation and business performance. Inferring from the above, H11 is supported.

Lastly, table 7.28 above specifies that ‘green process innovation’ and ‘business performance’, mediated by ‘competitive advantage’ has a path coefficient value of 0.182. This value is positive and hence, it may be confirmed that competitive advantage does mediate the relationship between green process innovation (predictor) and business performance (outcome). Thus, H13 is supported.

7.10.1 Significance of the mediation effect

By means of the ‘consistent PLS bootstrapping’ the T-statistics and P-values were generated to determine whether the mediating variable significantly mediates the relationship between the independent predictor variables (green packaging, green advertising green product innovation and green process innovation) and the dependent outcome variable (business performance). The required thresholds, for both T-statistics and P-values, to indicate a significant relationship are: T-value must be equal to or greater than 1.96 and P-value less than 0.05 (Gye-Soo, 2016). Both T-value and P-value thresholds are required to meet simultaneously to show define significance of the proposed relationships. Table 7.29 illustrates the T-statistics and P-values of the mediated relationships.

Table 7.29: T-statistics and P values of mediator relationships

	T Statistics (|O/STDEV|)	P Values
Green packaging -> Competitive advantage -> Business performance	1.973	0.015
Green advertising -> Competitive advantage -> Business performance	0.717	0.136
Green product innovation -> Competitive advantage -> Business performance	4.283	0.000
Green process innovation -> Competitive advantage -> Business performance	2.904	0.004

According to the results presented in table 7.29, it can be pointed out that competitive advantage significantly mediates the relationship between green packaging and business performance. This is shown by the t-value of 1.973 which is above the required threshold of 1.96 as well as the p-value of 0.015 which is less than the required threshold of 0.05.

In addition, deducing from Table 7.29 above, it is evident that competitive advantage does not significantly mediate the relationship between green advertising and business performance. This is shown by the t value of 0.717 (required to be greater that 1.96) as well as the P-value of 0.136 (required to be less than 0.05) which both do not meet the required thresholds.

On the contraryy, table 7.29 shows that competitive advantage does significantly mediate the relationship between green product innovation and business performance with t-statistics ar 4.283 and a p-value of 0.000. Both values meet the required thresholds of t=or >1.96 and p <0.05 and hence this relationship between green product innovation and business performance is significantly mediated by competitive advanatage.

Table 7.29 further demonstrates that green process innovation and business performance as mediatiated by competitive advantage, occupies a t-value of 2.904 at a p value of 0.004. The t-value meets the required threshold of being above 1.96 and the p value which is supposed to be less than 0.05. Hence for the purpose of this study, it can be concluded that competitive advantage does mediate the relationship between green process innovation and business performance. Figure 7.10 is a diagrammatic illustration of the structural model used to generate the mediation results. In addition, Table 7.30 shows the hypothesised relationships and resulting outcomes of the mediation effect.

Figure 7.10: Structural model diagram used to test for mediation

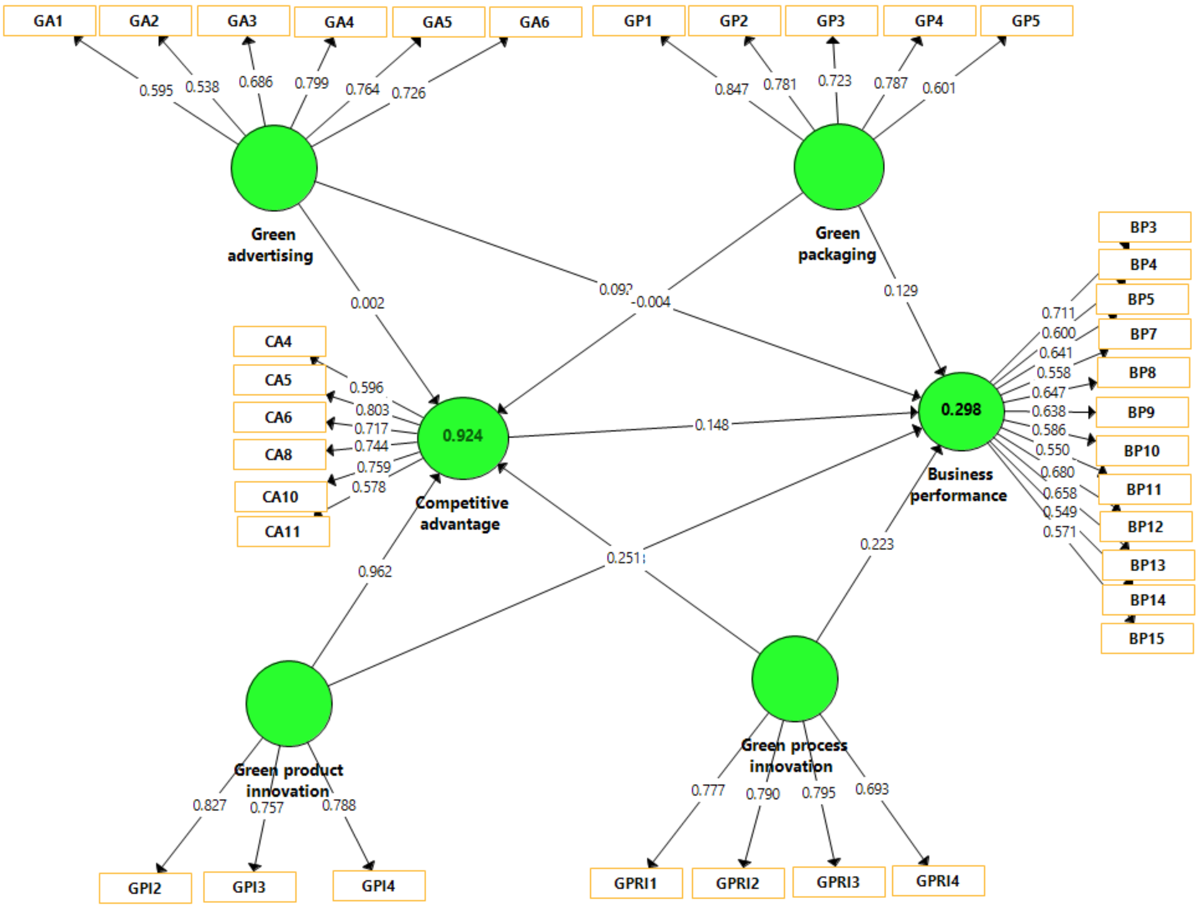


Table 7.30: Hypothesised Relationships and Resulting Outcomes of the mediation effect

Hypothesised relationship	Hypothesis	Path Coefficient (specific indirect effects)	T-Statistic	Outcome
Green packaging -> Competitive advantage -> Business performance	H10(+)	0.132	1.973	Supported and Significant
Green advertising -> Competitive advantage -> Business performance	H11(+)	0.026	0.717	Supported, however, not significant
Green process innovation -> Competitive advantage -> Business performance	H12(+)	0.295	4.283	Supported and Significant
Green product innovation -> Competitive advantage -> Business performance	H13(+)	0.182	2.904	Supported and Significant

7.11 Summary of the chapter

The chapter started with the description of the demographic profile of the respondents, descriptive statistics of the individual variables was discussed with their respective mean and standard deviation values. The measurement instrument of the confirmatory factor analysis (CFA) through reliability and validity of the study was presented. The test for the reliability comprised the Cronbach alpha, the composite reliability, as well as the average variance extracted. The validity was assessed through the convergent and discriminant validity. The determination of the model fit was then evaluated for confirmation through the application of thresholds and indices to conclude that the collected data fit the model. It was then followed with the structural model fit testing, using the various indices to determine the model fit for the structural analysis. The determination of the structural model fit was followed with a summary of the first nine hypothesised relationships − subject to how they were stated or how they were represented in the study's conceptual model. Specifically, eight out of the nine hypotheses stated supported the study while one rejected the stated hypotheses. At their respective significant levels, four of the relationships were significant while five were not.

Furtheremore, hypothesis ten, eleven, twelve and thirteen were also supported as the mediation results indicated that competitive advantage positively and significantly mediates the relationship between green packaging and business performance, green product innovation and business performance and green process innovation and business performance. It was also found out that, althougth competitive advantage positively mediated the relationship between competitive advantage and business performance, it does not significantly mediate the relationship between green advertising and business performance. The next chapter discusses the findings of the results obtained in this chapter.

8 CHAPTER 8: DISCUSSION OF EMPIRICAL FINDINGS

8.1 Introduction

The previous chapter presented the empiral results that were gathered from the analysis of the data collected from selected SMEs in the Gauteng Province of South Africa. This chapter synthesises the findings from the field research and data analysis to engage in a critical discussion of the results of the study. The chapter discusses the findings of each hypothesised relationship. All the proposed hypotheses are discussed, based on the findings obtained from the hypothesis testing. The results obtained in this study are compared with other findings from empirical prior research and they are also discussed in line with existing literature.

8.2 Discussion of findings from the conceptual model

In the following section is the discussion of results that arose from testing the research's formulated hypotheses. The main findings are presented in Table 8.1, as shown by the hypotheses.

Table 8.1: Results of the hypothesised relationships

Hypothesis		**Results**
H1	*Green packaging has a positive impact on competitive advantage*	Supported
H2	*Green advertising has a positive impact on competitive advantage*	Supported
H3	*Green product innovation has a positive impact on competitive advantage*	Supported
H4	*Green process innovation has a positive impact on competitive advantage*	Not supported
H5	*Green packaging has a positive impact on business performance*	Supported
H6	*Green advertising has a positive impact on business performance*	Supported
H7	*Competitive advantage has a positive impact on business performance*	Supported
H8	*Green product innovation has a positive impact on business performance*	Supported
H9	*Green process innovation has a positive impact on business performance*	Supported
H10	*Competitive advantage positively mediates the relationship between green packaging and business performance*	Supported
H11	*Competitive advantage positively mediates the relationship green advertising and business performance*	Supported
H12	*Competitive advantage positively mediates the relationship green product innovation and business performance*	Supported
H13	*Competitive advantage positively mediates the relationship green process innovation and business performance*	Supported

Basing on the results in Table 8.1, the findings for each of the tested hypotheses are discussed.

8.2.1 Green packaging and competitive advantage

The association between green packaging and competitive advantage was found to be positive. The results of this study are also consistent with the empirical evidence from Mwaura, Letting, Ithinji and Orwa (2016), who determined the effect of green distribution practices on the competitiveness of food manufacturing firms in Kenya. Their findings revealed thar green packaging as one of the green distribution practices positively and significantly influences the competitiveness of Kenya's food manufacturing firms. The findings obtained in this study are in line with literature, where Nikitaeva (2012) contended that green packaging should not be considered only as a tool of gaining a competitive advantage and satisfying the needs of customers, but also as a tool to help reduce production expenses.

8.2.2 Green advertising and competitive advantage

The testing of the relationship between green advertising and competitive advantage revealed a positive relationship. These findings are in line with studies by Jarin (2014) who conducted a study which aimed at investigating ecological marketing practices for creating competitive advantage. Jarin (2014) revealed that eco-advertising or green advertising as an ecological marketing practice creates scope for attaining competitive advantage within an organisation. The findings obtained in this study are in line with literature, where Synodinos (2013) as well as Synodinos, Bevan-Dye and De Klerk (2013:19) clarify that "green advertising can be used as an effective tool in an organizations overall environmental marketing strategy and this, ultimately, translates into a competitive advantage".

8.2.3 Green product innovation and competitive advantage

The statistical analysis exposed that green product innovation has a positive impact on competitive advantage. This finding has ample support from previous empirical research studies such as that conducted by Chen, Lai and Wen (2006) who conducted a study which focused on the positive effect of green intellectual capital on competitive advantages of firms. The results of their study revealed that green product innovations are positively associated with the competitive advantage of firms. The result obtained from testing this hypothesis is also in agreement with a survey conducted by Van den Berg, Labuschagne, and Van den Berg (2013) who investigated the effect of greening the supplier and innovation on environmental performance and competitive advantage. The research found out that green product innovation had a significant relation to environmental performance and competitive advantage.

8.2.4 Green process innovation and competitive advantage

The association between green process innovation and competitive advantage was found to be negative, meaning that the outcome of this study reinforces a negative association between green process innovation and competitive advantage. Alsughayir (2017) postulates that this could be due to the fact that the utilisation of green process innovation is still relatively new for chemical industrial firms and green innovation investments in general are long term investments which in time, will have more effect on firms' competitive advantage. Also, firms dealing with green process innovation normally start taking baby steps, easing their way to green process innovation gradually to avoid any shocks and major changes to their operation (Alsughayir, 2017). It is also imperative to note that the results of this study contradict the findings of Küçükoğlu and Pınar (2015) who found that green process innovation had a positive and a significant effect on a company's competitive advantage. Moreover, the results obtained in this study are in line with literature, for instance, Wahid and Lee (2011) assert that a firm's implementation of green process innovation is positively related to its corporate competitive advantage.

8.2.5 Green packaging and business performance

Empirical evidence was also found in this research which confirmed that there is a positive association between green packaging and business performance. This finding substantiates the fact that green packaging does impact the business performance of a manufacting SME. This further extends the findings of previous studies conducted by Sambu (2016) whose results indicated that green packaging is a key determinant of business performance in the manufacturing firms of Kenya. Furthermore, the result obtained from testing this hypothesis is also coherent with a survey conducted by Diab, AL-Bourini and Abu-Rumman (2015) which supports a positive relationship between green packaging and business performance. The study confirmed that there is a positive impact of eco-packaging on organisational performance. Moreover, findings obtained from this study are in line with literature where Zailani, *et al*. (2015) emphasise that manufacturing firms need to consider giving due diligence on the eco-efficiency practices as a means of increasing the adoption of sustainable packaging in order to achieve higher performance.

8.2.6 Green advertising and business performance

The findings of this study authenticate the existence of a positive connection between green advertising and performance. The results obtained in the current study are not without empirical support. Bhat, Darzi and Parrey (2014) conducted a study that gives a basic conceptual framework of green marketing as a driver to sustainable development. Bhat, Darzi and Parrey (2014) suggested that companies need to identify a unique segment of the market (niche market) which is enriched by green consumerism and then should target this segment using green marketing tools, such as green or eco-advertisements in order to achieve sustainable business performance. The results obtained in this study are in accord with literature; Nyilasy, Gangadharbatla and Paladino (2013) suggest that green advertising is conducive to good business results. In addition, Rolland and Bazzoni (2009), as well as D'Souza, (2005) point out that green advertising exhibits environmental commitment of companies which enables them to compete in the market.

8.2.7 Competitive advantage and business performance

Deducing from the presentation of the results, it was found out that competitive advantage provides a positive impact on business performance. The results of this study are consistent with the empirical evidence from Mohebi and Farzollahzade (2014) who conducted a study which focused on improving competitive advantage and business performance of SMEs by creating entrepreneurial social competence. The results of the study revealed that competitive advantage has a positive effect on the SME's business performance. Furtheremore, the results obtained in this study are in line with literature, where Gaya *et al.* (2013:2051) state that "the resource-based view links superior business performance to the ownership and control of unique competitive resources that create a source of sustainable competitive advantage for businesses". Moreover, the results of this study are also consistent with the empirical evidence from Ismail, Rose, Abdullah and Uli (2010), which found a positive, as well as a significant relationship, between competitive advantage and performance.

8.2.8 Green product innovation and business performance

Deducing from the findings presented in chapter 7, it was found that green product innovation has a positive impact on business performance. The results coincide with the works of Shapfi (2015) who assessed the influence of green product innovation toward business performance in any selected industry; Shapfi's study results indicated that green product innovation had influence on the business performance. In addition, these are in line with Alhadid and As'ad (2014) who conducted a study which aimed at determining the impact of green innovation on organisational performance and based on the findings of statistical analysis, green product innovation had a positive impact on organisational performance. Furthermore, the results are also in accord with the works of Alsighayir (2017) who investigated the impact of green product innovation on firms' performance. Alsighayir's results showed that that green product innovation has a statistically significant impact on firms' performance. Furthermore, the findings obtained in this study coincide with the works of Ilker (2012) who studied the gap between green product innovation and firm performance. Ilker constructed a model to link the aforementioned constructs, and data collected through a questionnaire-based survey across 140 Turkish manufacturing firms from various sectors, which were then analysed using structural equation modelling. That study showed that green product innovation generally has a positive effect on firm performance. The result obtained from testing this hypothesis is also coherent with a survey conducted by Cainelli *et al*. (2015) which claims that green product innovation activities have a positive impact on performance. Furthermore, a study done by Chuang and Yang (2014) concluded that green product innovation is considered as one of the key factors for improving firms' environmental, social and financial outcomes. Moreover, when firms have commitments to environmental management with active green innovation, it can enhance the overall productivity and performance (Chen *et al*., 2011).

8.2.9 Green process innovation and business performance

Drawing from the presentation of the results, it was found that green process innovation produces a positive impact on business performance. The results obtained in this study are in accord with a study conducted by Alhadid and As'ad (2014) who investigated the impact of green innovation on organisational performance and found that green process innovation has a significant and positive impact on the organisational performance. In a similar vein, Oliveira Brasil, de Abreu, da Silva Filho and Leocádio (2016) investigated the relationship between process eco-innovation (green process innovation) and business performance and found that there is a positive relationship between process eco-innovation and business performance. Moreover, the results obtained are also consistant with the works of Zahari and Ramaya (2017) who examined the nexus between green innovation and firm performance in view of an ecological modernisation perspective and found that the adoption of green process innovation positively affects the firm's economic performance.

8.2.10 Green packaging, competitive advantage and business performance

In this study, competitive advantage was incorporated as a possible mediating variable between green packaging and business performance. A positive and a significant mediation effect of competitive advantage were also found on the relationship between green packaging and business performance. The findings illustrate the importance of competitive advantage as a conduit in enhancing the relationship between green packaging and the business performance of manufacturing SMEs. This links well with the resource based view (RBT) of the firm which postulates that resources within the firm are associated with the firm's competitive advantage (Barney, 1991). Competitive advantage is not dependent on natural resources, technology or economies of scale, but on the valuable, rare and hard to imitate resources that reside within the firm. The ability of the firm to develop and utilize these resources can equip it with the needed tools to most effectively direct the firm. In conclusion, this study has suggested that green packaing and competitive advantage play a fundamental role in enhancing business performance. As noted by Jahanshahi *et al*. (2015) that in order for small business to survive the ever-changing and dynamic market place of today, they must create and sustain competitive advantage, as by doing so, they can dramatically improve their economic value. The results of this study do not reject the assumption that competitive advantage does mediate the link between green packaging and business performance. In fact, all the tests indicate that some mediation does actually exist. The results are in agreement with literature, for instance, a study conducted by Gajanan (2015) which focused on sustainable marketing practices for gaining competitive advantage, revealed that ecological packaging assists a business in achieving competitive advantage.

8.2.11 Green advertising, competitive advantage and business performance

Deducing from the findings presented in chapter 7, it was found that competitive advantage positively mediates the relationship between green advertising and business performance. One should mention though that empirical evidence as well as literature supporting this mediation effect is still in its infancy hence this study fills the gap and adds to the existing body of knowledge about this mediating relationship. As advertising is part of a firms' market orientation, a closely related study is the one conducted by Vazquez, *et al*. (2010) which points out market orientation as a variable mediated by competitive advantage to improve company performance.

8.2.12 Green product innovation, competitive advantage and business performance

The inspection of the relationship between green product innovation and business performance being mediated by competitive advantage exposed a positive relationship. Interestingly, the result shows that green product innovation affects business performance through competitive advantage. In other words, the relationship has good magnitude and is significant due to the mediation role of competitive advantage. In summary, based on the present study's results, the influence of green product innovation on business performance is better understood through the mediational role of competitive advantage. Hence, that is why H12 was supported. In this case, the result demonstrates that SMEs' ability to attract, retain more customers and deal with competition, lead to improvements in product innovations, and consequently to achieving higher business performance. This seems to indicate that business performance depends on green product innovation when firms have a competitive edge. It is however vital to indicate that there are paucities in literature supporting this mediation effect, hence this was worth the interrogation, as this study fills this lacuna and adds to the existing body of knowledge about this mediating relationship. A close related study is the one conducted by Anwar (2018) which examined the importance of business innovation in SME performance and the mediating role of competitive advantage. Competitive advantage partially mediated the relationship between business innovation and SME performance.

8.2.13 Green process innovation, competitive advantage and business performance

The inspection of the relationship between green process innovation and business performance being mediated by competitive advantage exposed a positive relationship. It is however, vital to indicate that there are gaps in literature supporting this mediation effect, hence this was worth the interrogation as this study fills this lacuna and adds to the existing body of knowledge about this mediating relationship. A closely related study is the one conducted by Rodriquez-Gutierrez et al. (2015) which found that innovativeness became a subject of great interest within small business academic literature and was often associated with achieving and maintaining competitive advantage and business performance.

8.3 Chapter summary

The current chapter discussed analyses and interpretation of the data, giving empirically derived observations in each case. Nevertheless, it is necessary to give a more detailed discussion of what can be concluded from the findings of the study as well as any implications and connotations associated with the findings discussed in the current chapter. This is discussed in the following chapter (chapter 9), which presents the conclusions; recommendations; limitations and implications for further research and suggestions for future research direction.

9 CHAPTER 9: CONCLUSION, RECOMMENDATIONS AND FUTURE RESEARCH SUGGESTIONS

9.1 Introduction

The previous chapter provided the analysis, discussions and interpretations of the empirical findings. This chapter reviews the research undertaken in this thesis and attempts to tie the threads together to present a conclusion to the thesis. It revisits all key stages in this study to present a summery of the overall research and the chapter provides a general overview of the study by placing the theoretical and empirical objectives into context. The purpose of the study was to determine the impact of green marketing practices on competitive advantage and business performance among manufacturing small and medium enterprises (SMEs) in South Africa. Arising from the theory and the empirical study, recommendations are made for SME managers. It concludes with the benefits, limitations and implications for future research.

9.2 Overview of the Study

In order to draw the relevant recommendations and conclusion on this study, it is important to have an overview of the nine chapters that were covered in the study Chapter one introduced the study and provided a brief overview of the study background. Chapter two covered the context, while chapter three covered theoretical grounding for the study. Chapter four focused on empirical literature related to the study. In chapter five, the conceptual model and a set of critical hypotheses for the study were formulated for further emipirical examination. In Chapter six, the research methodology employed in the study was discussed. In Chapter seven, the statistical analysis and survey results obtained from the data collected were presented. Chapter eight discussed research findings in view of the extant literature. Chapter nine concludes the study.

9.3 THE EVALUATION OF THE OBJECTIVES OF THE STUDY

All research objectives had to be addressed based on the generated data from the study to ensure that the intended purposes of the study were achieved. The theoretical and empirical objectives are revisited in the next section in order to demonstrate the attainment of the objectives within the framework of the study.

9.3.1 Primary objective

The purpose of this study was to determine the impact of green marketing practices on competitive advantage and business performance among manufacturing small and medium enterprises (SMEs) in South Africa. Each of the objectives as identified in Chapter 1 is stated, after which the research results are summarised.

9.3.2 Theoretical objectives

The theoretical objectives as set out in Chapter 1 under Section 1.3.1, are outlined and reviewed. For SME managers and researchers to make informed decisions and derive value from this study, all research objectives were addressed based on the data generated from the survey in order to ensure that the initial purposes of the study were achieved.

9.3.2.1 To review the literature on resource advantage theory of competition

To achieve the first objective, the resource advantage theory of competitionwas reviewed in Section 3.1 of chapter 3. This theory argued that the value of a resource to a firm is seen in terms of its potential to yield competitive advantage. A combination of academic journal articles, textbooks and other literature sources were useful to the researcher when merging information on this theory.

9.3.2.2 To review the literature on natural resource-based view theory

This objective was achieved under Section 3.2 of Chapter 3, where the natural resource-based view theory was reviewed. It was proposed that the natural resource-based view of the firm is a new theory, based upon the firm's relationship to the natural environment. It is composed of three interrelated strategies -- pollution prevention, product stewardship, and sustainable development.

9.3.2.3 To review the literature on resource-based view model

In the accomplishment of theoretical objective 3, an extensive literature review was undertaken to comprehensively understand a managerial framework used to determine the strategic resources with the potential to deliver comparative advantage to a firm. This was achieved by reviewing the resource-based view model. A combination of academic journal articles, textbooks and other literature sources were useful to the researcher when merging information on the resource-based view model in Section 3.3 of chapter 3.

9.3.2.4 To review the literature on the balanced scorecard theory

This objective was achieved under Section 3.4 of Chapter 3 where the balanced scorecard theory was reviewed. It was found that a balanced scorecard theory is a performance theory used in management to identify and improve various internal functions of a business and their resulting external outcomes.

9.3.2.5 To review the literature on the stakeholder theory

In the achievement of theoretical objective 5, an extensive literature review was undertaken to comprehensively understand the stakeholder theory. It was found that the Stakeholder theory states that the purpose of a business is to create value for stakeholders, not just shareholders. The stakeholder theory has a very tight connection with social responsibilities, which means that the corporations' social value is concerned and it focuses on promoting the potential of all participants. A combination of academic journal articles, textbooks and other literature sources were useful to the researcher when merging information on the resource-based view model in Section 3.5 of chapter 3.

9.3.2.6 To review the literature on Porter's five forces model

In the achievement of theoretical objective 6, an extensive literature review was undertaken to comprehensively understand the framework that is a tool for analysing competition of a business. This was achieved by reviewing Porter's five forces model. A combination of academic journal articles, textbooks and other literature sources were useful to the researcher when merging information on the resource-based view model in Section 3.6 of chapter 3.

9.3.2.7 To review the literature on green packaging

This objective was covered under Section 4.4 of Chapter 4. The section explained the concept of green packing and it also focused on the green packaging process with special emphasis to the 4 Rs (reuse, reduce, recycle and refill).

9.3.2.8 To review the literature on green advertising

This theoretical objective was dealt with under Section 4.5 of Chapter 4. The section explained what is meant by green advertising and it also focused on the intention of green advertising.

9.3.2.9 To review the literature green product innovation

This theoretical objective was dealt with under Section 4.6.1 of Chapter 4. The section explained what is meant by green product innovation.

9.3.2.10 To review the literature on green process innovation

This theoretical objective was dealt with under Section 4.6.2 of Chapter 4. The section explained what is meant by green process innovation.

9.3.2.11 To review the literature on competitive advantage

This theoretical objective was dealt with under Section 4.7 of Chapter 4. The section explained what is meant by competitive advantage and it also focused on the concept of competitive advantage, perspectives of competitive advantage and sources of competitive advantage.

9.3.2.12 To review the literature on business performance

This theoretical objective was dealt with under Section 4.8 of Chapter 4. The section explained what is meant by business performance and it also focused on why business performance is measured and the objective as well as the subjective measures of business performance.

9.3.3 Empirical objectives

The empirical objectives, as set out in Chapter 1 Section 1.3.2 of this study, are revisited in the next section.

9.3.3.1 To determine the impact of green packaging on competitive advantage

The first empirical objective set out in Chapter 1 was to determine whether green packaging positively impacts competitive advantage. SEM was used to determine whether green packaging positively impacts competitive advanatage (refer to Table 7.19). The results of the structural equation model analysis revealed that green packaging positively impacts competitive advantage, but has an insignificant impact on competive advantage as indicated by a P-Value of 0.113.

9.3.3.2 To ascertain impact of green advertising on competitive advantage

The second empirical objective set out in Chapter 1 was to determine whether green advertising positively impacts competitive advantage. SEM was used to determine whether green advertising positively impacts competitive advanatage (refer to Table 7.19). The results of rge structural equation model analysis revealed that green advertising positively impacts competitive advantage but has an insignificant impact on competitive advantage as indicated by a path coefficient value of 0.072 and a P-Value of 0.270.

9.3.3.3 To assess the impact of green product innovation on competitive advantage

The second empirical objective set out in Chapter 1 was to determine whether green product innovation positively impacts competitive advantage. SEM was used to determine whether green product innovation positively impacts competitive advanatage (refer to Table 7.19). The results of the structural equation model analysis revealed that green product innovation positively impacts competitive advantage but has an insignificant impact on competitive advantage as indicated by a path coefficient value of 0.188 and a P-Value of 0.010.

9.3.3.4 To determine the impact of green process innovation on competitive advantage

The fourth empirical objective formulated in Chapter 1 was to ascertain whether the green process innovation positively impacts competitive advantage. As with the fourth empirical objective, the relationship was also confirmed using SEM (refer to Table 7.19). Results of the structural equation model analysis revealed that green process innovation has a negative and insignificant impact on competitive advantage. The empirical findings confirmed the existence of an insignificant P value of (-0.009) and a negative (path coefficient of 0.895) linear relationship between green process innovation and and competitive advanatge. This therefore means that the hypothesis is insignificant and not supported.

9.3.3.5 To examine the impact of green packaging on business performance

The fifth empirical objective formulated in Chapter 1 was to ascertain whether the green packaging positively impacts business performance. As with the fifth empirical objective, the relationship was also confirmed using SEM (refer to Table 7.19). Results of the structural equation model analysis revealed that green packaging has a significant positive influence on business performance. The empirical findings confirmed the existence of a significant (*** -

p-value less than 0.001) and positive (path coefficient of 0.228) linear relationship between green packing and business performance. This therefore means that the hypothesis is significant and supported.

9.3.3.6 To assess the impact of green advertising on business performance

The second empirical objective set out in Chapter 1 was to determine whether green advertising positively impacts business performance. SEM was used to determine whether green advertising positively impacts business performance (refer to Table 7.19). The results of the structural equation model analysis revealed that green advertising positively impacts business performance but has an insignificant impact on business performance as indicated by a path coefficient value of 0.065 and a P-Value of 0.298.

9.3.3.7 To determine the impact of competitive advantage on business performance

The seventh empirical objective formulated in Chapter 1 was to ascertain whether the competitive advantage positively impacts business performance. As with the seventh empirical objective, the relationship was also confirmed using SEM (refer to Table 7.19). The results of the structural equation model analysis revealed that competitive advantage has a significant positive influence on business performance. The empirical findings confirmed the existence of a significant (*** - p-value less than 0.001) and positive (path coefficient of 0.231) linear elationship between competitive advantage and business performance. This therefore means that the hypothesis is significant and supported.

9.3.3.8 To examine the impact of green product innovation on business performance

The eighth empirical objective formulated in Chapter 1 was to ascertain whether green product innovation positively impacts business performance. As with the eighth empirical objective, the relationship was also confirmed using SEM (refer to Table 7.19). The results of the structural equation model analysis revealed that green product innovation has a significant positive impact business performance. The empirical findings confirmed the existence of a significant (*** - p-value less than 0.001) and positive (path coefficient of 0.32) linear relationship between green product innovation and business performance. This therefore means that the hypothesis is significant and supported.

9.3.3.9 To ascertain impact of green process innovation on business performance

The ninth empirical objective formulated in Chapter 1 was to ascertain whether green process innovation positively impacts business performance. As with the eighth empirical objective, the relationship was also confirmed using SEM (refer to Table 7.19). The results of the structural equation model analysis revealed that green process innovation has a significant positive impact business performance. The empirical findings confirmed the existence of a significant (*** - p-value less than 0.001) and positive (path coefficient of 0.274) linear relationship between green process innovation and business performance. This therefore means that the hypothesis is significant and supported.

9.3.3.10 To examine the mediating impact of competitive advantage on the relationship between green packaging and business performance

The tenth empirical objective formulated in Chapter 1 was to ascertain whether competitive advantage positively mediates the the relationship between green packaging and business performance. As with the nineth empirical objective, the relationship was confirmed using the consistant PLS bootrapping technique of the partial least squares structural equation modelling (PLS-SEM) (refer to table 7.22). The mediation analysis results revealed that competitive advantage positively and significantly mediates the relationship between green packaging and business performance. The empirical findings confirmed the existence of positive (path coefficient of 0.132) and a significant t-statistic value of 1.973. This therefore means that the hypothesis is significant and supported.

9.3.3.11 To assess the mediating impact of competitive advantage on the relationship between green advertising and business performance

The eleventh empirical objective formulated in Chapter 1 was to ascertain whether competitive advantage positively mediates the the relationship between green advertising and business performance. As with the thirteenth empirical objective, the relationship was confirmed using the consistant PLS bootrapping technique of the partial least squares structural equation modelling (PLS-SEM) (refer to table 7.22). The mediation analysis results revealed that competitive advantage positively and significantly mediates the relationship between green advertising and business performance. The empirical findings confirmed the existence of positive (path coefficient of 0.026) and an insignificant t-statistic value of 0.717. This therefore means that the hypothesis is supported, however its significance level is week.

9.3.3.12 To determine the mediating impact of competitive advantage on the relationship between green product innovation and business performance

The twelfth empirical objective formulated in Chapter 1 was to ascertain whether competitive advantage positively mediates the relationship between green product innovation and business performance. As with the thirteenth empirical objective, the relationship was confirmed using of the consistant PLS bootrapping technique of the partial least squares structural equation modelling (PLS-SEM) (refer to table 7.22). The mediation analysis results revealed that competitive advantage positively and significantly mediates the relationship between green product innovation and business performance. The empirical findings confirmed the existence of positive (path coefficient of 0.295) and a significant t-statistic value of 4.283. This therefore means that the hypothesis is significant and supported.

9.3.3.13 To ascertain the mediating impact of competitive advantage on the relationship between green process innovation and business performance

The thirteenth empirical objective formulated in Chapter 1 was to ascertain whether competitive advantage positively mediates the relationship between green process innovation and business performance. As with the twelfth empirical objective, the relationship was confirmed using the consistant PLS bootrapping technique of the partial least squares structural equation modelling (PLS-SEM) (refer to table 7.22). The mediation analysis results revealed that competitive advantage positively and significantly mediates the relationship between green process innovation and business performance. The empirical findings confirmed the existence of positive (path coefficient of 0.182) and a significant t-statistic value of 2.904. This therefore means that the hypothesis is significant and supported.

9.4 Implications of the study

The following section discusses the implications of the study, based on the results which which were obtained in chapter 7.

9.4.1 Implications based on green packaging and competitive advantage

It was found in this study that green packaging positively influenced competitive advantage. The implication of the results to the practice is that green packaging is a worthwhile strategy to which the management should be committed in order to gain competitive advantage in a competitive industry with a changing dynamic marketing environment. The findings will therefore assist the marketing managers to convince the senior management and business owners on green marketing issues to be implemented, specifically, green packaging.

9.4.2 Implications based on green advertising and competitive advantage

It was also discovered in this study that green packaging positively impacts competitive advantage. The implication of the results to the practice is that they suggest the existence of beneficial as well as detrimental effects of green advertising in publicising information related to organisational efforts on environmental protection. Specifically, this study shows the substantive value of green advertising when manufacturing SMEs implement green marketing practices. Marketing managers may therefore consider the pursuit of green advertising to publicise their environmental commitment and efforts. Ultimately, this will give an SME a competitive advantage in comparison to those that do not practice green advertising.

9.4.3 Implications based on green product innovation and competitive advantage

The research results confirmed that the relationship between green product innovation and competitive advantage was positive. The results implied that in a highly competitive market, obviously implementing green product innovation is necessary in order to differentiate a firm's product and to achieve competitive advantage. However, the findings of this study suggest that firms should first understand consumers' requirements, and then align green product innovation initiatives with consumers' values. In today's green conscious market, consumers will consider purchasing products that are les harmful to the environment. Consumers also want products to be produced in the most environmentally friendly ways. Thus, the success of a manufacturing SME's green product innovation is dependent on its appreciation of market demand as well as sustainable business operations.

9.4.4 Implications based on green process innovation and competitive advantage

The research results confirmed that the relationship between green process innovation and competitive advantage was negative and not significant. This implies that green process innovation has no impact on the competitive advantage. This might be due to the fact that it takes a lot of time amd money to invest in green process innovation, especially taking into account that small and medium enterprises function at a small scale with insufficient financial resources able to take on a pioneer role in the practice of green process innovation.

9.4.5 Implications based on green packaging and business performance

The empirical study revealed that green packing has a positive and a significant impact on business performance. The implication of the results to the practice is that manufacturing SMEs need to be encouraged to practice green packaging since it has a positive significant impact on business performance. The results imply that manufurering SMEs need to invest in the development of green packaging which will enable packaging of lightweight, recyclable, re-usable, biodegradable materials, and to prevent the use of non-ecological materials. Policy implications also exist when taking into consideration the nexus that exists between green packaging and business performance. To develop the green packaging, the government can adopt legislation prohibiting certain packaging materials' use, establishing a storage refund system, drawing up the recycling or reuse laws, giving a discount or punishment in tax, limiting over-packaging, founding sundry research institutions to evaluate packing materials, as well as legislation to promote the development of new packaging materials.

9.4.6 Implications based on green advertising and business performance

The research findings confirmed that the relationship between green advertising and business performance was positive. This implied that SMEs need to invest more in green advertising. Doing so will be beneficial for SME manufacturers to acquire environmental reputation and subsequently, to improve business performance. However, green advertising is detrimental to the business performance of SME manufacturers that are already renowned for their environmental protection. Managers need to be mindful of the counterproductive effect of green advertising on business performance when their firms are considered environmentally reputable.

9.4.7 Implications based on competitive advantage and business performance

The results showed that competitive advantage had a positive and significant impact on business performance, as previously suggested in the proposed hypothesis linking these two variables. This, implies that the higher competitiveness, the higher the business performance. In addition, the obtained results implied that SMEs managers need to look ahead to the competencies that will enhance the business performance. Such competencies can be making use of practices such as green packaging, green advertising, green product innovation and green process innovation. Hence, SME managers should invest in green marketing practices to attain competitive avantage. Having a competitive advantage would mean that an enterpreise is recognised as a company that either delivers better quality products than the competition, or offers support and services at a greater value than the competition. The enterprise will become recognised in the marketplace as being the best and consumers will be interested in hearing about the enterprise's new products because they recognise the entrerprise as an industry leader.

9.4.8 Implications based on green product innovation and business performance

The findings proved that green product innovation had a positive and a significant impact on business performance, as previously suggested in the proposed hypothesis linking these two variables. These findings may have important implications for managers and policy makers to promote firm performance activities by means of environmental innovation measures. For instance, the evidence shows that it is important to recognise that a change in a regulatory policy may affect green product innovation, which in turn, may result in business performance. Similarly, any regulatory policy change intended to promote green product innovation should be evaluated to competition. So, many programmes should be implemented for integrating environment and innovation policies as part of strategic decisions and also green innovation policy should be aligned with other innovation-related policies. Besides, managers should have more focus on environmental issues which provide incentives for innovation.

9.4.9 Implications based on green process innovation and business performance

It was also discovered that green process innovation had a positive and significant impact on business performance, as previously suggested in the proposed hypothesis linking these two variables. With respect to the public policy, there are many important implications in these findings. Regulation plays a key role in green process innovation. Although South Africa has established relatively perfect environmental policies, green process innovators cannot be compensated in a short time due to the lack of strict policy enforcement and the lack of incentives of other market tools. Strict pollution control standards are necessary, and strict enforcement measures are also needed. Besides pollution charges, other flexible environmental policy instruments, such as tradable permits, government procurement, and other market-based instruments, are necessary.

9.4.10 Implications based on green packaging, competitive advantage and business performance

It was also discovered that competitive advantage positively mediates the relationship between green packaging and business performance. So, it is expected that competitive advantage will act as a catalyst in the relationship between green packaging and business performance. From a managerial standpoint, these findings imply that marketing managers within manufacturing SMEs, if they are aiming to utilise green packaging to impove business performance, may now realise the importance of competitive advantage as an influencial factor that they can consider first to ultimately enhance the business performance of a manucturing SME.

9.4.11 Implications based on green advertising, competitive advantage and business performance

The results showed that competitive advantage positively and significantly mediates the relationship between green advertising and business performance. From a managerial standpoint, these findings imply that marketing managers within manufacturing SMEs if they are aiming to utilise green advertising to improve the business performance, may now realise the importance of competitive advantage as an influencial factor that they can consider first to ultimately enhance the business performance of a manucturing SME.

9.4.12 Implications based on green product innovation, competitive advantage and business performance

The research findings confirmed that competitive advantage positively and significantly mediates the relationship between green product innovation and business performance. From a managerial standpoint, these findings imply that marketing managers within manufacturing SMEs if they are aiming to utilise green product innovation to improve the business performance, may now realise the importance of competitive advantage as an influencial factor that they can consider first to ultimately enhance the business performance of a manucturing SME.

9.4.13 Implications based on green process innovation, competitive advantage and business performance

Moreover, the empirical study revealed that competitive advantage positively and significantly mediates the relationship between green process innovation and business performance. In other words, green process innovation has a significant effect on Business Performance through competitive advantage From a managerial standpoint, these findings imply that marketing managers within manufacturing SMEs, if they are aiming to utilise green process innovation to improve the business performance, may now realise the importance of competitive advantage as an influencial factor that they can consider first to ultimately enhance the business performance of a manucturing SME.

9.5 RECOMMENDATIONS

The alarming results of this study cannot be overlooked and may be availed as opportunities for manufacturing SMEs. Therefore, based on the analysis of the literature, and more specifically, in the light of the findings of the empirical research, the following recommendations are offered:

- From the management perspective, SME owners and managers need to look into green innovation opportunities in their product development and process improvement phases. SME managers should also be aware of investment in green product and process innovations in order to promote sustainability and resulting in environmental gains, such as pollution reduction, cleaner production, energy conservation, leading to benefits for mankind.
- As the study results show that competitive advantage does mediate the green packaging and business performance relation, SMEs need to devise strategies and approaches that will incorporate competitive factors, business performance goals and action plans as well as a green packaging feature since green packaging can give businesses a competitive advantage on the market. Green packaging as a green marking practice, demonstrates compassion and awareness, which can be a persuasive factor in helping customers choose between the enterprise and the competititor of the enterprise. In addition, SMEs who invest in green packaging also stand to save money in the form of shipping costs, material costs, and reduced waste. Hence, the enterprise may reap better profits with the offering green packaged products.
- New or improved products and services help businesses gain a competitive advantage over others. Customers are always looking for better products and services to satisfy

their ever-changing needs and preferences. Hence, small businesses should have a thorough understanding of their market and competition in order to develop true value for their customers.

- Deduction from the theoretical framework of this study, it is prescribed that keeping in mind the end goal to for the manufacturing SMEs to develop in scale and productivity and furthermore to contend positively, they have to grasp Michael Porter's generic strategies of competitive advantage. Nevertheless, they need to be selecting and mix those that can work hand in hand. The focus strategy should be applied by most SMEs but also diversification of products, market and customers is key in marketing given the ever-changing market niche and trend. The SMEs further need adopt with the changes in government policy, technology, customer needs and requirements, market trends and forces to amicably apply the green marketing practices and compete fairly.
- SME owners and managers should try to be more innovative when running and managing their businesses. It is generally known that if a business is not performing well, there are more chances that it will fail. This belief is a reality as many studies, including those reviewed in this study, confirm it. It is therefore, recommended that for small businesses to realise improved business performance, they need to be engaged in green packaging, green advertising, green product innovation and green process innovation.
- Manufacturing SMEs in the nation ought to be urged to have clear ecological or green marketing practices and grasp environmental reporting to the buyers. This will empower the different SMEs to be more engaged in sustainability.
- With expanding rivalry in the present worldwide market, the different manufacturing SMEs inside South Africa need to look to the cutting-edge key approaches to pick up an upper hand. Green marketing rehearses are new inventive administrative strategies that can be utilized as a key weapon to pick up competitiveness and to promote a firm’s s environmental and business performance at the same time.

9.6 CONTRIBUTIONS OF THE STUDY

The study's contribution was structured into four categories: the societal contribution, the theoretical contribution, the the practical or managerial contribution, as well as the contribution to policy.

9.6.1 The societal contribution

Since the present study is centred on green marketing it makes a significant contribution to the societal needs of South Africa. As society becomes more concerned with the natural environment, businesses have begun to modify their behavior to address society's “new" concerns. Hence, the concept of green marketing can address the environmental degradation issues and society's concerns for sustainable development. In addition, marketing green products can have a constructive influence on society since it promotes and considers the reduction of pollution in business trades.

9.6.2 The Theoretical Contribution

The study’s results have significant theoretical contribution towards the knowledge base that currently exists in the field of green marketing, competitive advantage as well as SMEs business performance. The researchers and academic community would use this study as a yardstick for further studies. The students and academicians will use this study as a reference point and try to improve on the areas that are not covered by the researcher in the future within this field of green marketing, competitive advantage and SMEs business performance. Moreover, it is anticipated that the findings will be of value to future researchers and scholars who may use this study to conduct further studies. This study aims to provide practical implications thereof.

9.6.3 Practical or managerial contribution

The findings of this study have significant practical contributions for managers. Precisely, the contribution of the results to the practice is that green marketing is a worthwhile strategy to which the management should be committed to gain competitive advantage, as well as to improve business performance in a competitive industry with a changing dynamic marketing environment. In addition, this study will also help SMEs owners and marketing managers of SMEs operating within the manufacturing sector to identify the necessary green marketing practices that will give them a competitive advantage, as well as enhance their business performance. Explicitly, manufacturing SMEs that develop new and improved products and services with environment inputs in mind, give themselves access to new markets, increase their profit sustainability, and enjoy a competitive advantage over the companies that are not concerned about the environment.

9.6.4 The contribution to policy

The results of this study also have major policy contributions for the government. First, the study recommends that the government of South Africa should set aside funds to enhance green marketing practices' regulations and implementations in both private and public sectors. A green marketing approach could be used to help the country address environmental problems. Mainstreaming green marketing in private and public SME operations has the potential to add value in the pursuit of sustainable development in the area of clean and sustainable environment, a goal that is also captured within the social pillar of South Africa's Vision. The government should encourage the companies to implement green marketing practices effectively and efficiently.

9.7 LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

The study was subjected to several limitations, despite producing meaningful results. Some of these limitations were used to discover opportunities for research in future. The most obvious one is that the study population was restricted to SME managers within the Gauteng Province of South Africa, one region in South Africa. This limits the possibility to generalise the results to include SME managers in South Africa. In addition, extending the research to other regions in South Africa would be a valuable future research direction. Precisely, if data collection is expanded to include other SME managers in other provinces of South Africa, for insance Eastern Cape or Limpopo, the research findings might be more insightful.

This study could be used by other business management and marketing scholars as a point of departure for future research on green marketing practices in South Africa. Furthermore, the findings of this study are restricted to the manufacturing sector, which is only one sector. Therefore, this presents an impetus for researchers to extend their future studies into other sectors of the economy. It is suggested for better future research on the impact of green marketing practices and competitive advantage on the business performance of manufacturing SMEs, to measure business performance by using objective measures. In addition, future studies can introduce appropriate moderation or mediation variables between green marketing practices and business performance relationships.

Additionally, it would be necessary for future researchers to have a comparative analysis in this regard among other SMEs from different sectors, for instance, comparing the manufacturing sector to the retail sector. This may help to understand further the differences in how SMEs handle the green marketing practices in their respective sectors. Another limitation concerns the use of a single method of data collection. This study employed a quantitative research approach. Future researchers may benefit from exploratory qualitative approaches as well, especially is the area of SMEs in the South African context , which remain under researched and not well understood. Such explorations may yield interesting insights that may eventually also lead to a better understanding of additional specific mediators and moderators. Future research my also triangulate and enrich this work via ethnographies and case studies within organisations and experiments where customer reactions to green practices could be assessed in the face of competing brand alternatives. Concepts such as perceived ethnically or concern for the future maybe conjectured as potential mediators, and variations in norms sorrounding practices in different industries might save is potential moderators. Lastly, it should be noted that the aforementioned limitations do not necessarily negate the contributions of this study, but open up avenues for future research.

REFERENCES

Abor, J. & Quartey, P. (2010). Issues in SME development in Ghana and South Africa. *International Research Journal of Finance and Economics*. 39(6),215-228.

Adebanjo, D. (2000). Identifying problems in forecasting consumer demand in the fastmoving consumer goods sector. *Benchmarking: An International Journal*, 7(3), 223-230.

Adeyemi, O. (2009). A Modern Approach to Marketing Management. *The International Journal of Marketing Studies*, 2(2), 2-14.

Adialita, (2014). *The Influence of Green Innovation of Japanese Electronic Industries on Competitive Advantage with Particular Reference to Japanese Home Appliance Industry*. Master of Business and Administration research report. Ritsumeikan Asia Pacific University.

Adiprabowo, A. (2014). *The Comparative Advantage Theory of Competition - Journal Critique.* Final Paper. Faculty of Economics International Undergraduate Program Management. Universitas Indonesia.

Afọlayan, F.S (2004). *Culture and Customs of South Africa*, Johannesburg: Greenwood Publishing Group.

Ahamed, W.S.W., Almsafir, M.K. & Al-Smadi, A.W. (2014). Does corporate social responsibility lead to improvement in firm financial performance? Evidence from Malaysia. *International Journal of Economics and Finance*, 6(3), 126-138

Ahonen, V., Hansen, E., Heikki, J. & Karna, J. (2001). Green advertising: greenwash or a true reflection of marketing strategies? *Greener Management International*, 33(1), 59–70.

Ahuja, K. (2015). A study of green advertising and its impact on consumer purchase intention, *International Journal of Applied Research*, 1(7), 39-43.

Ajmal, F. (2017). *Factors Influencing Electronic Commerce Adoption In Malaysian Small And Medium Sized Enterprises (SMES).* The degree of Doctorate of Philosophy Thesis, University Of Malaya, Kuala Lumpur.

Ajupov, A. A., Kurilova, A. A., & Kovalenko, O. G. (2015). Financial Recovery Organization on the Basis of Cash Flow Management. *Mediterranean Journal of Social Sciences*, *6*(3), 710-713.

Akio, T. (2005). The Critical Assessment of the Resource-Based View of Strategic Management. *Ritsumeikan international affairs*, *3*, 125-150.

Akkucuk, U. (2015). *Handbook of research on waste management techniques for sustainability*. Hershey, PA: IGI Global.

Akram, A., Merunka, D., & Shakaib Akram, M. (2011). Perceived brand globalness in emerging markets and the moderating role of consumer ethnocentrism. *International Journal of Emerging Markets,* 6(4), 291-303.

Albers, S. (2010). PLS and success factor studies in marketing. In *Handbook of Partial least squares* (pp. 409-425). Berlin: Springer.

Albino, V., Balice, A., & Dangelico, R. M. (2009). Environmental strategies and green product development: an overview on sustainability-driven companies. *Business Strategy and the Environment*, 18, 83-96.

Alhadid, A. Y., & As'ad, H. (2014). The Impact of green innovation on organizational performance, environmental management behavior as a moderate variable: An analytical study on Nuqul group in Jordan. *International Journal of Business and Management*, *9*(7), 51-58.

Aliyua, M.S., Abubakarb, M.S., Yakasaic, A.M & Garba, A. (2018). Modelling Nigerian Public Universities Performance through Total Quality Management. *Journal of Applied Structural Equation Modeling*, 2(1), 59-73.

Alniacik & Yilmaz, (2012). The effectiveness of green advertising: influences of claim specificity, product's environmental relevance and consumers' pro-environmental orientation, *Economic Interferences,* 16(31), 207-222.

Alsughayir, A. (2017). Does Green Product Innovation Affect Performance of Saudi Chemical Industrial Firms? *American Journal of Business and Management*, *6*(1), 16-25.

Alvi M.H. (2016). *A Manual for Selecting Sampling Techniques in Research*. University of Karachi, Iqra University.

Alvi, M., & Ikram, M. (2015). *Impact of Total Assets and Net Income on Return on Equity of Small Medium Enterprises of Pakistan*. Pakistan Institute of Learning and Living, Iqra University, Institute of Clinical Psychology, 1-7.

Amado, C.A.F., Santos, S.P., & Marques, P.M. (2012). Integrating the data envelopment analysis and the balanced scorecard approaches for enhanced performance assessment. *Omega*, *40*, 390–403.

Amaechi, K. M., & Crane, A. (2006). Stakeholder engagement: A mechanism for sustainable aviation. *Corporate Social Responsibility and Environmental Management*, 13, 245-260.

Amankwaa, A. & Anku-Tsede, O. (2015). The moderating effect of alternative job opportunity on the transactional leadership-turnover intention nexus: Evidence from the Ghanaian banking industry. *African Journal of Business Management*, 9(4), 553-561.

Amegbe, H., Owino, J. O., & Nuwasiima, A. (2017). Green Marketing Orientation (GMO) and Performance of SMEs in Ghana. *Journal of Marketing Development and Competitiveness*, 11(1), 99-109.

Amrollahi, A., & Akhgar, B. (2013). Analyzing Open Source Business with Porter's Five Forces. *International Journal of Computer Theory and Engineering*, *5*(1), 162-165.

Anderson, J.C. & Gerbing, D.W. (1988). Structural equation modelling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103, 411-423.

Anderson, K. S., & Birrer, G. E. (2011). Creating a sustainable competitive advantage: a resource-based analysis of the Gonzaga University men's basketball program. *Journal of Sports Administration and Supervision, 3*(1). 1-14.

Android, J. S. Waddock, B. Husted & Sutherland, S R. (2002). *Unfolding Stakeholder Thinking.* Sheffield: Greenleaf Publishing.

Ansah, M.O. (2016). *The Influence of Culture, Market Environment and e-Marketing adoption on Business Performance of Multinational Companies in Ghana: Marketing Managers' Perspective,* Doctor of Philosophy thesis in Marketing, University of the Witwatersrand, Johannesburg.

Ar, I. M. (2012). The impact of green product innovation on firm performance and competitive capability: the moderating role of managerial environmental concern. *Procedia-Social and Behavioral Sciences, 62*, 854-864.

Anwar, M. (2018). Business Model Innovation And Smes Performance—Does Competitive Advantage Mediate? *International Journal of Innovation Managemen,* 22(4), 45-59.

Aracioglu, B, Zalluhoglu, A.E, & Candemir, C. (2013). Measuring and Evaluating Performance within the Strategic Management Perspective: A Study on Performance Measurement of Seafood Company. *Procedia - Social and Behavioural Sciences*, 99, 1026 – 1034.

Arain, M., Campbell, M. J., Cooper, C. L., & Lancaster, G. A. (2010). What is a pilot or feasibility study? A review of current practice and editorial policy. *BMC medical research methodology*, *10*(1), 67-87.

Arbor, J. & Quartey, P. (2010). Issues in SME Development in Ghana and South Africa. *International Research Journal of Finance and Economics*, (39), 218.

Arenhardt, D.L., Battistella, L.F & Grohmann, M.Z (2016). The influence of the green innovation in the search of competitive advantage of enterprises of the electrical and electronic Brazilian sectors", *International Journal of Innovation Management*, 20(1), 1-20.

Arnold, D. M., Burns, K. E., Adhikari, N. K., Kho, M. E., Meade, M. O., & Cook, D. J. (2009). The design and interpretation of pilot trials in clinical research in critical care. *Critical care medicine*, *37*(1), S69-S74.

Arseculeratne, D., & Yazdanifard, R. (2013). How green marketing can create a sustainable competitive advantage for a business. *International business research, 7*(1), 130 -137.

Ary, D., Jacobs, L. C., Sorensen, C., & Walker, D. A. (2013). *Introduction to Research in Education* (9th ed.). Belmont, CA: Cengage Learning.

Arya, B. & Lin, Z. (2007). Understanding collaboration outcomes from an extended resource-based view perspective: the roles of organizational characteristics, partner attributes, and network structures. *Journal of Management*, 33(5), 697-732.

Asosheh, A., Nalchigar, S., & Jamporazmey, M. (2010). Information technology project evaluation: An integrated data envelopment analysis and balanced scorecard approach. *Expert Systems with Applications*, *37*, 5931–5938.

Auka, D.O. (2014). Porter's generic competitive strategies and customer satisfaction in commercial banks in Kenya. *Eurasian Business & Marketing Research Journal*, 1(1), 1- 31.

Axelsson, M., Kron, D., Larsson, W., Nydén, V., Näkne, N & Sörenson, H. (2015). *The equity-based Crowdfunding Platforms Competitive situation in an emerging industry and impact on the Swedish capital market.* Bachelor's Programme in Industrial Engineering and Management, Chalmers University of Technology, Gothenburg.

Ayandibu, A.O. & Houghton, J., (2017). The role of Small and Medium Scale Enterprise in local economic development (LED), *Journal of Business and Retail Management Research (JBRMR)*, 11(2), 133-139.

Aytekin, P & Çelik, B (2017). Envıronmentalıst approach and attıtudes towards green advertısıng. *International Journal of Business Management and Economic Research*, 8(6), 1099-1108.

Ayuso, S., Rodrıguez, M. A., & Ricart, J. E. (2006). Responsible competitiveness at the micro level of the firm: Using stakeholder dialogue as a source for new ideas: a dynamic capability underlying sustainable innovation. *Corporate Governance,* 6 (4), 475-490

Aziz, N. N. A., & Samad, S. (2016). Innovation and Competitive Advantage: Moderating Affects of Firm Age in Foods Manufacturing SMEs in Malaysia. *Procedia Economics and Finance*, 35, 256-266.

Azmi, I. A.G. (2017). Muslim Women Entrepreneurs Motivation in SMEs: A Quantitative Study in Asia Pacific Countries. *Asian Economic and Financial Review*, *7*(1), 27-42.

Baack, D.W., Harris, E.G & Baack, D. (2013). *International Marketing*. Volume 3 of Legends in marketing: V. Kumar, V. Kumar series editor, Jagdish N. She. Thousand Oaks, CA:SAGE.

Babbie, E. & Mouton, J. (2010). *The Practice of Social Research*. 10th ed. Cape Town: Oxford University Southern Africa.

Babbie, E. (2012). *The Practice of Social Research*, 13th ed. Belmont, CA: Cengage Learning.

Babbie, E., Mouton, J., Vorster, P & Prozesky, B. (2010). *The practice of social research*. Cape Town: Oxford University Press Southern Africa.

Babin, B.J. & Zikmund, W. (2016). *Exploring marketing research*, 11th ed.. Boston, MA.: Cengage, Boston.

Bagozzi, R.P. & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of Academy of Marketing Sciences*, 16(1):74-94.

Bagozzi, R.P. (2010). Structural equation models are modelling tools with many ambiguities: Comments acknowledging the need for caution and humility in their use. *Journal of Consumer Psychology*, 20(2), 208–214.

Baldwin, C.Y. (2017). Return on Invested Capital (ROIC)." In *The Palgrave Encyclopedia of Strategic Management*. Continuously updated edition, edited by Mie Augier and David J. Teece. Palgrave Macmillan, 2017. Electronic. (Pre-published, October 2013.)

Bao, Y., Bao, Y., & Sheng, S. (2011). Motivating purchase of private brands: Effects of store image, product signatureness, and quality variation. *Journal of Business Research*, 64(2), 220226.

Barde, M. P., & Barde, P. J. (2012). What to use to express the variability of data: Standard deviation or standard error of mean? *Perspectives in clinical research*, *3*(3), 113-116.

Barnes, J. (2009). On the brink? Skills demand and supply issues in the South African automotive components industry. *Human Sciences Research Council*, 24-45. Available at: http://www.hsrcpress.ac.za [accessed 2017-3-25].

Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1): 99-120.

Barney, J. B. & Hesterly, W. S. (2010). *Strategic Management and Competitive Advantage Concepts*. Upper Saddle River, NJ: Pearson Prentice Hall.

Barney, J. B. (2002). *Gaining and sustaining competitive advantage*. Upper Saddle River, NJ: Prentice Hall.

Barroso, A., & Giarratana, M. S. (2013). Product proliferation strategies and firm performance: The moderating role of product space complexity. *Strategic Management Journal*, *34*(12), 1435-1452.

Bashar, S.E. (2012). Challenges and remedies of manufacturing enterprises in developing countries: Jordan as a case study. *Journal of Manufacturing Technology Management*, 23(3), 328-350.

Basu, A., Howell, R. & Gopinath, D. (2010). Clinical performance indicators: intolerance for variety. *International Journal of Health Care Quality Assurance*, 23(4): 436-449.

Batool, S & Iqbal, R (2016). Impact of Green Advertising on Consumer Purchase Behavior, *International Interdisciplinary Journal of Scholarly Research (IIJSR),* 2(1), 16-22.

Baumann-Pauly, D., Wickert, C., Spence, L. J., & Scherer, A. G. (2013). Organizing corporate social responsibility in small and large firms: Size matters. *Journal of Business Ethics*, 115, 693-705.

Bavdekar, S. B. (2015). Using Tables and Graphs for Reporting Data. *Journal of the Association of Physicians of India*, *63*, 59.

Beck, R. B. (2013). *The History of South Africa*. Johannesburg: ABC-CLIO.

Begemann, F. (2006). Co-Branding as a brand strategy. An analysis from the resource-based view. Munich, GRIN Verlag

Bem, D.J., Utts, J. & Johnson, W.O. (2011). Must psychologists change the way they analyze their data? *Journal of Personality and Social Psychology*, 101(4), 716–719.

Benoit-Moreau, F. & Parguel, B. (2011). Building brand equity with environmental communication: an empirical investigation in France, *Euro-Med Journal of Business,* 6(1), 100-116.

Bentler, P. M. & Bonnet, D. C. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin*, 88(3):588-606.

Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin*, 107(2):238-246.

Bentler, P.M., & Bonnett, D.G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin*, 88(3):588-606.

Beran, T.N. & Violato, C. (2010). Structural equation modelling in medical research: A primer. *BMC Research Notes*, 3:267-280.

Bernardin, J. (2007). *Human Resource Management* New Delhi: Tata McGraw-Hill.

Berrone, P. (2009). Green keys to unlock competitive advantage. *ISIE Insight*, 2, 50–57.

Berrone, P., Cruz, C., Gomez-Mejia, L. R., & Larraza-Kintana, M. (2010). Socioemotional wealth and corporate responses to institutional pressures: Do family-controlled firms pollute less? *Administrative Science Quarterly*, 55, 82-113.

Berti, S., Germani, M., Mandorli, F., & Otto, H. E. (2001). Design of product families: An example within a small and medium-sized enterprise. *WDK Publications*, 507-514.

Bhat, S.A., Darzi, M.A & Parrey, S.H. (2014). Green Marketing: A Driver for Green Brand Equity and Sustainable Development, *International Journal of Humanities & Social Studies*, 2(12), 131-133.

Bhatti, K.K (2016). Green Marketing: Savior for the Consumers, Businesses and the World, *International Journal of Emerging Research in Management & Technology*, 5(6), 70-76.

BI, K., Bao, Q., & Feng, D. (2013). Effect analysis of informatization level to green process innovation in manufacturing enterprises. *Journal of Theoretical & Applied Information Technology*, *47*(2), 774-779.

Biesta, G. (2010). Pragmatism and the philosophical foundations of mixed methods research. In A. Tashakkori & C. Teddlie (Eds.), *Sage handbook of mixed methods in social & behavioral research* (2nd ed., pp. 95-118). Thousand Oaks, CA: Sage.

Bititci, U.S., Turner, T. & Begemann, C. (2000). Dynamics of performance measurement systems. *International Journal of Operations and Production Management*, 20(6), 692-704.

Blunch, N.J. (2008). *Introduction to Structural Equation Modeling using SPSS and AMOS*. Singapore: McGraw-Hill.

Bollen, K.A. (1989). *Structural Equations with Latent Variables*. New York: John Wiley.

Bontis, N., Booker, L. D., & Serenko, A. (2007). The mediating effect of organizational reputation on customer loyalty and service recommendation in the banking industry. *Management decision*, *45*(9), 1426-1445.

Borrego, M., Douglas, E.P. & Amelink, C.T. (2009). Quantitative, qualitative and mixed research methods in engineering education. *Journal of Engineering Education*, 98(1):53-66.

Bourne, M., Neely, A., Mills, J. & Platts, K. (2003). Implementing performance measurement systems: a literature review, *International Journal of Business Performance Management*, 5(1), 1-24.

Bragg, S, M. (2012) *Business Ratios and Formulas: A Comprehensive Guide*. 3rd ed. Hoboken, New Jersey: John Wiley and Sons, Inc.

Bras, B., Realff, M., & Carmichael, C. (2004). *Integrated Environment and Economic Performance Assessment for Strategic Planning and Policy Analysis in Paper Manufacturing*. CPBIS project – B-4: 5-7, final project report to CPBIS.

Brocke, J. V., & Rosemann, M. (2014). *Handbook on Business Process Management 2: Strategic Alignment, Governance, People and Culture*. Berlin: Springer.

Bryman, A. & Bell, E. (2011). *Business Research Methods*. 3rd ed. New York: Oxford University Press.

Burns, N & Grove, SK. (2009). *The practice of nursing research: appraisal, synthesis, and generation of evidence*. 6th edition. United States of America: Elsevier/Saunders.

Burns, N., & Grove, S. K. (2010). *Understanding Nursing Research-eBook: Building an Evidence-Based Practice.* Lisse: Elsevier Health Sciences.

Butler, A. (2017). *Contemporary South Africa*. Berlin: Springer.

Byrne, B.M. (2001). *Structural Equation Modeling with AMOS. Basic concepts, Applications and Programming. Multivariate applications series*. New Jersey: University Press.

Byrne, B.M. (2013). *Structural equation modelling with AMOS: basic concepts, application and programming.* 2nd ed. New York: Routledge: Taylor and Francis Group.

Caga, S.M. (2012). *Barriers faced by SMMEs in accessing finance*. Master's in Business Administration, Nelson Mandela Metropolitan University. Port Elizabeth.

Cainelli, G., De Marchi, V., & Grandinetti, R. (2015). Does the development of environmental innovation require different resources? Evidence from Spanish manufacturing firms. *Journal of Cleaner Production*, 94, 211-220

Calitz, M.G. (2009). *A cultural sensitive therapeutic approach to enhance emotional intelligence in primary school children* (Doctoral dissertation). University of South Africa, Pretoria.

Camarero I.C., Gutiérrez C.J., & San M.G.S., (2005). The impact of customer relationship marketing on the firm performance: a Spanish case. *Journal of Services Marketing*, *19*(4), 234-244.

Camison, Cesar, & Villar-Lopez, Ana. (2010). Effect of SMEs' international experience on foreign intensity and economic performance: The mediating role of internationally exploitable assets and competitive strategy. *Journal of Small Business Management*, pp 116-151.

Campell, D. T. & Fiske, D. W., (1959). Convergent and discriminant validation by the multitraitmultimethod matrix. *Psychological Bulletin*, 56, 81-105.

Canepari, B. (2017). *Environmental performance management in multinational corporations*. Masters dissertation, Department of Business and Management, Libera Università Internazionale degli Studi Sociali, Rome, Italy.

Cangur, S., & Ercan, I. (2015). Comparison of model fit indices used in structural equation modeling under multivariate normality. *Journal of Modern Applied Statistical Methods*, *14*(1), 152-167.

Cant, M.C. (2017). Arranging events for entrepreneurs: waste of money or value of money, *Journal of Business and Retail Management Research*, 11(4), 76-89.

Cardeal, N., & Antonio, N.S. (2012). Valuable, rare, inimitable resources and organization (VRIO) resources or valuable, rare, inimitable resources (VRI) capabilities: What leads to competitive advantage? *African Journal of Business Management*, 6(37), 10159-10170.

Carlson, K. (2008). *Green Your Work: Boost Your Bottom Line While Reducing Your Carbon Footprint.* New York: Simon and Schuster.

Chahal, H., Dangwal, R., & Raina, S. (2014). Conceptualisation, development and validation of green marketing orientation (GMO) of SMEs in India: a case of electric sector. *Journal of Global Responsibility, 5*(2), 312-337.

Chang, C. H. (2011). The influence of corporate environmental ethics on competitive advantage: the mediation role of green innovation. *Journal of Business Ethics*, *104*(3), 361-370.

Chang, H., Fang, P., & Cho, F. (2013). *Customer-Based Performance on Customer Relationship Management: The Role of Customer Relational Information Process. In Diversity, Technology, and Innovation for Operational Competitiveness*: Proceedings of the 2013 International Conference on Technology Innovation and Industrial Management (pp. 4-98). ToKnowPress.

Charmaz, K.C. (2006). *Constructing grounded theory: a practical guide through qualitative analysis.* Los Angeles: Sage Publications.

Check, J., & Schutt, R. K. (2012). *Research methods in education*. Thousand Oaks, CA.: Sage Publications.

Chen Y-S, Lai S-B & Wen, C. T. (2006). The Influence of Green Innovation Performance on Corporate Advantage in Taiwan, *Journal of Business Ethics*, 67(4), 331-339

Chen, Y. S. (2008). The driver of green innovation and green image—Green core competence. *Journal of Business Ethics,* 81(3), 531–543.

Chen, Y. S., Lai, S. B., & Wen, C. T. (2006). The influence of green innovation performance on corporate advantage in Taiwan. *Journal of Business Ethics*, 81(3), 531–543.

Cheng, C. C., Yang, C. L., & Sheu, C. (2014). The link between eco-innovation and business performance: a Taiwanese industry context. *Journal of Cleaner Production*, *64*, 81-90.

Cheung, G. W., & Rensvold, R. B. (2002). Evaluating goodness-of-fit indexes for testing measurement invariance. *Structural equation modeling*, *9*(2), 233-255.

Chiellini, E. (Ed.). (2008*). Environmentally compatible food packaging*. Amsterdam: Elsevier.

Chiloane-Tsoka, E., Mabiza-ma-Mabiza, J., & Mbohwa, C. (2014). Green Economy and SMEs in South Africa: How Green are South African SMEs?. *Academic Journal of Interdisciplinary Studies*, *3*(6), 181-186.

Chimwani, P.M., Nyamwange, O., & Otuyo, R. (2013). Application of Strategic Performance Measures in Small and Medium-Sized Manufacturing Enterprises in Kenya: The Use of the Balanced Scorecard Perspectives. *International Journal of Management Sciences and Business Research*, 2(6), 45-60.

Chinomona, R. (2011). *Non-mediated channel powers and relationship quality: A case of SMES in Zimbabwe channels of distribution*, Unpublished PhD. National Central University, Taiwan.

Chiou, T. Y., Chan, H. K., Lettice, F., & Chung, S. H. (2011). The influence of greening the suppliers and green innovation on environmental performance and competitive advantage in Taiwan. *Transportation Research Part E: Logistics and Transportation Review*, *47*(6), 822-836.

Cho, Y.Y. (2012). *Consumers' value orientations and green advertising effectiveness: The moderating role of public self-awareness*, Doctoral dissertation, School of Journalism and Communication and the Graduate School of the University of Oregon.

Choto, P., Tengeh, R.K. & Iwu, C.G. (2014). Daring to survive or to grow? The growth aspirations and challenges of survivalist entrepreneurs in South Africa, *Environmental Economics*, 5 (4), 93-101.

Christelis, T. A. (2013). *An analysis of the state of green business in the South African retail sector* (Master of Environmental Science dissertation, University of Cape Town).

Chuang, S. P., & Yang, C. L. (2014). Key success factors when implementing a green-manufacturing system. *Production Planning & Control*, 25(11), 923-937.

Churchill Jr, G.A., Brown, T.J. & Suter, T.A. (2010). *Basic marketing research*. 7th ed. Australia: South-Western, Cengage Learning.

Churchill, G.A. & Iacobucci, D. (2010). *Marketing research: methodological foundations*. 10th ed. Canada: South-Western, Cengage Learning.

Churchill, G.A., Brown, T.J. & Suter, T.A. (2010). *Basic marketing research*. 7th ed. Canada: South Western, Cengage Learning.

Claudy, M. (2011) *An Empirical Investigation of Consumer Resistance to Green Product Innovation.* Doctoral Thesis. Dublin Institute of Technology.

Cocca, P. & Alberti, M. (2010). A framework to assess performance measurement systems in SMEs. *International Journal of Productivity and Performance*, 59(2), 186-200.

Cohen, L., Manion, L., & Morrison, K. (2007). *Research methods in education*. London/NewYork: Routledge.

Comrey, A.L., & Lee, H.B. (2013). *A first course in factor analysis*. New York: Psychology Press.

Cooper, D. R. & Schindler, P.S. (2006). *Business research methods*. (9th ed). New York: McGraw-Hill.

Cooper, D.R. & Schindler, P. (2014). *Business research methods*, 14th edn., New York: McGraw-Hill.

Cooper, D.R. & Schindler, P.S. (2014). *Business research methods*, 12th edn. Ne wYork: McGraw-Hill.

Cramer, D. (2006). *Advanced quantitative data analysis*. New York: Open University Press.

Creswell, J. W. (2009). *Research Design, Qualitative, Quantitative and Mixed Methods Approaches.* 3rd ed. Thousand Oaks: Sage Publications.

Crowther, D.E.A. (1996). Corporate performance operates in three dimensions. *Managerial Auditing Journal*, 11(8), 4-13.

Damodaran, A. (2007). *Return on capital (ROC), return on invested capital (ROIC) and return on equity (ROE): Measurement and implications*. Stern School of Business.

Damodaran, A. (2012). *Investment valuation: Tools and Techniques for Determining the Value of Any Asset.* Hoboken, New Jersey: John Wiley and Sons, Inc.

Dangelico, R. M., & Vocalelli, D. (2017). "Green Marketing": An analysis of definitions, strategy steps, and tools through a systematic review of the literature. *Journal of Cleaner Production*, *165*, 1263-1279.

Darlow, T. (2003). *Waste Plans: Report on Categorisation and Pilot Studies*. Edinburgh, Scottish Institute of Sustainable Technology, 1-65.

Dawes, J. (1999). The relationship between subjective and objective company performance measures in market orientation research: further empirical evidence. *Marketing Bulletin-Department of Marketing Massey University*, *10*, 65-75.

de Oliveira Brasil, M.V., de Abreu, M.C.S., da Silva Filho, J. C. L., & Leocádio, A. L. (2016). Relationship between eco-innovations and the impact on business performance: an empirical survey research on the Brazilian textile industry. *Revista de Administração*, 51(3), 276-287.

De Vlieger, L., Hudders, L., & Verleye, G. (2013). The Effectiveness of Green Advertisements: Combining Ad-based and Consumer-based Research. In *Advances in Advertising Research (Vol. IV)* (pp. 213-222). Wiesbaden: Springer.

Dean, G., Fahsing, I.A., Gottschalk, P., & Solli-Saether, H (2008). Investigative thinking and creativity: an empirical study of police detectives in Norway. *International Journal of Innovation and learning*, 5(2), 170-185.

Decoene V., Bruggeman W., (2006). Strategic alignment and middle-level managers' motivation in a balanced scorecard setting, *International Journal of Operations & Production Management*, 26(4), 429-448.

Delport, C. S. L. & Roestenburg, W. J. H. (2011). Quantitative data collection methods research. In De Vos, A.S., Strydom, H., Fouche, C.B. & Delport, C.S.L. *Research at Grass Roots for the Social Sciences and Human Service Professions* (pp. 195-196). 4th ed. Pretoria: Van Schaik Publishers.

Department Of Trade and Industry. (2005). *Integrated Strategy on the promotion of Entrepreneurship and Small Enterprises: Unlocking the Potential of South Africa Entrepreneurs (summarised version)*. Pretoria: Government Printer.

Dess, G.G., Lumpkin, T. and Eisner, A.B. (2010). *Strategic Management: Texts & Cases*. 5th Ed. New York: McGraw-Hill.

Desta, N.T (2015). *Networking As A Growth Initiative for Small and Medium Enterprises in South Africa.* Masters in Development Studies dissertation. University of the Free State, Bloemfontein.

Dewi, D.M., Sudarma, M., Djumahir & Ganis, S.K. (2014). CSR effect on market and financial performance. *International Journal of Business and Management Invention*, 3(1), 56–66.

Dhanaraj, C., Lyles, M.A., Steensma, H.K. & Tihanyi, L. (2004). Managing tacit and explicit knowledge transfer in IJVs: The role of relational embeddedness and the impact on performance. *Journal of International Business Studies*, 35:428-442.

Dhlomo, P. E. (2017). *A framework for small and medium tourism enterprises in Tshwane townships, South Africa*, Masters Dissertation in Tourism Management. University Of South Africa, Pretoria.

Diab, S. M., AL-Bourini, F. A., & Abu-Rumman, A. H. (2015). The impact of green supply chain management practices on organizational performance: a study of Jordanian food industries. *Journal of Management and Sustainability*, *5*(1), 149-198.

Ding, L., Velicer, W. F., & Harlow, L. L. (1995). Effects of estimation methods, number of indicators per factor, and improper solutions on structural equation modeling fit indices. Structural Equation Modeling: *A Multidisciplinary Journal*, 2(2), 119-143.

Diwekar, U. M., & Shastri, Y. N. (2010). Green process design, green energy, and sustainability: A systems analysis perspective. *Computers & chemical engineering*, *34*(9), 1348-1355.

Dlodlo, N. & Dhurup, M. (2010). Barriers to e-marketing adoption among small and medium enterprises (SMEs) in the Vaal Triangle. *Acta Commercii*, 10:164 - 180.

Doherty, B. (2011). *Resource advantage theory and fair trade social enterprises*. Doctor of Philosophy thesis. Liverpool John Moores University. City campus.

Donaldson, T. & Dunfee, T. (1994). Toward a Unified Conception of Business Ethics: Integrative Social Contract Theory, *Academy of Management Review*, 19(2), 252–284.

Donaldson, T., & Preston, L. (1995). The stakeholder theory of the corporation: Concepts, evidence and implications. *Academy of Management Review*, 20 (1), 65-91.

Doorasamy, M. (2015). *Using environmental management accounting to investigate benefits of cleaner production at a paper manufacturing company in Kwadakuza, KwaZulu-Natal: a* *case study*. Master of Technology degree in Cost and Management Accounting dissertation. Durban University of Technology, Durban, South Africa.

Drucker, P.F. (2007). *The practice of management* (2nd ed). Burlington, MA: Butterworth-Heineman.

Dube, S. (2014). *The impact of exchange rate volatility on international trade between South Africa, China and USA: The case of the manufacturing sector*. Masters of Commerce in Financial Economics, University of Johannesburg, Johannesburg.

Dubihlela, J. (2012). *Barriers to and Determinants and Enablers of Market Orientation: Impact on Business Performance for Small and Medium Enterprises in South Africa*. Philosophiae Doctor in Business Management Thesis. North-West University. Vaal Triangle Campus.

Dunn, T. J., Baguley, T., & Brunsden, V. (2014). From alpha to omega: A practical solution to the pervasive problem of internal consistency estimation. *British Journal of Psychology*, 105(3), 399-412.

Dusick, D., (2011). *Writing the methodology section*. Retrieved from: http://www.bolded.com/ch3.htm. Accessed [23/01/2018].

Drost, E.A., 2011. Validity and reliability in social science research. *Education Research and perspectives,* 38(1), 86-105.

Dyer, J. H., & Singh, H. (1998). The relational view: Cooperative strategy and sources of interorganizational competitive advantage. *Academy of management review*, *23*(4), 660-679.

Eiadat, Y., Kelly, A., Roche, F., & Eyadat, H. (2008). Green and competitive? An empirical test of the mediating role of environmental innovation strategy. *Journal of World Business*, 43, 131-145.

Elshamly, A. (2013). *Developing a strategic framework for small and medium-sized enterprises (SMEs)* (Doctoral dissertation, University of Gloucestershire).

Eltayeb, K., Zailani, S., & Ramayah, T. (2011). Green supply chain initiatives among certified companiesn in Malaysia and environmental sustainability: Investigating the outcomes. *Resources, Conservation and Recycling, 55*(5), 495–506.

Eltebrandt (2010). *The role of green marketing in development of consumer behavior towards green energy*. MIMA – International Marketing Master Thesis, School of Sustainable Development of Society and Technology (HST)

Emmett, S., & Sood, V. (2010). *Green supply chains: an action manifesto*. New York: John Wiley & Sons.

Enz, C. A. (2009). *Hospitality strategic management: Concepts and cases*. New York: John Wiley and Sons.

Epetimehin, F.M. (2011). Achieving competitive advantage in insurance industry: the impact of marketing innovation and creativity. *Journal of Emerging Trends in Economics and Management Sciences (JETEMS), 2*(1), 18-21.

Esu, B. B. (2015). Transforming the Nigeria tourism industry through tourism entrepreneurial development. *African Journal of Business Management*, 9(15): 569-580

European Commission. (2011). *Facts and Figures about EU's small and medium-enterprises(SME)*.http://ec.europa.eu/enterprise/policies/some/facts-figures-analysis/index_en.html [Retrieved March 8, 2017].

Falkena, H. (2000). *SMEs access to finance in South Africa: A supply-side Regulatory Review. Report by the Task group of the Policy Board of Financial Services and Regulations*. Cape Town: Kluwer Publishers.

Fassin, Y. (2008) Imperfections and Shortcomings of the Stakeholder Model's Graphical Representation. *Journal of Business Ethics*, 80, 879-888

Fatoki, O. & Garwe, D. (2010). Obstacles to the growth of new SMEs in South Africa: A principal component analysis approach. *African Journal of Business Management*. 4(5):729-738.

Feilzer, M.Y. (2010). Doing mixed methods research pragmatically: Implications for the rediscovery of pragmatism as a research paradigm. *Journal of Mixed Methods Research*, 4(1): 6-16.

Ferreira, E.J. & Loggerenberg, N.V. (2012). Incident rates of Small and Medium Enterprises in South Africa. *Journal of Contemporary Management*, (9) 212 – 233.

Flannelly, L. T., Flannelly, K. J., & Jankowski, K. R. (2014). Independent, dependent, and other variables in healthcare and chaplaincy research. *Journal of health care chaplaincy*, *20*(4), 161-170.

Freeman, R. E. (1984). *Strategic management: A stakeholder approach*. Boston, MA: Pitman.

Freeman, R.E., Harrison, J. S., Wicks, A. C., Parmar, B. L., & de Colle, S. (2010). *Stakeholder theory: The state of the art*. Cambridge, England: Cambridge University Press. Freeman, R. E., Wicks.

Freeman, R. E., Wicks, A. C., & Parmar, B. (2004). Stakeholder theory and “the corporate objective revisited”. *Organization science*, *15*(3), 364-369.

Fu, C., & Yang, S. (2012). The combination of dependence-based interval-valued evidential reasoning approach with balanced scorecard for performance assessment. *Expert Systems with Applications*, *39*, 3717–3730.

Fuentes, C. (2015). How green marketing works: Practices, Materialities, and images. *Scandinavian Journal of Management*, *31*(2), 192-205.

Gajanan, R. (2015), A Study on Sustainable Marketing Practices for Gaining Competitive Advantage, *Elk Asia Pacific Journal Of Marketing And Retail Management*, 6(4), 2346-2317.

Gallagher, D.R. (2012). *Environmental Leadership*: Volume 1 of the environmental leadership: A reference handbook, edited by Deborah Riglling Gallagher. The SAGE reference series of leadership. Thousand Oaks, CA: SAGE Publications.

Gaya, H. J., Struwig, M. & Smith, E. E. (2013). Creating a sustainable competitive advantage at a high performing firm in Kenya. *African Journal of Business Management*, 7(21), 2049-2058.

Gerbing, D. W., & Anderson, J. C. (1992). Monte Carlo evaluations of goodness of fit indices for structural equation models. *Sociological Methods and Research*, 21(2), 132-160.

Ghodeswar, B., & Kumar, P. (2014). A Study of Green Marketing Practices in Indian Companies. *International Journal of Applied Management Sciences and Engineering (IJAMSE)*, 1(2), 46-64.

Gibson, B. & Cassar, G. 2005. Longitudinal analysis of relationships between planning and performance in small firms. *Small Business Economics*, 25, 207-222.

Gibson, K.: (2000). The Moral Basis of Stakeholder Theory, *Journal of Business Ethics*, 26(3), 245–257.

Gibson. C, H. (2010). *Financial Reporting and Analysis: Using Financial Accounting Information.* Stanford, USA. Cengage Learning

Glesne, C. & Peshkin, P. (1992). *Becoming Qualitative Researchers: An Introduction*. New York: Longman.

Godfrey, M & Qiang, T. (2000). *Evolution in Open Source Software: A Case Study*, in Proc. IEEE, International Conference on Software Maintenance (ICSM'00), Washington, 131-136.

Goh, J.W. (2003). The resource advantage theory of competition: Implications for higher educational institutions in Singapore. *Educational Research for Policy and Practice*, *2*(2), 93-106.

Gomera, S. W. (2016). *An investigation into the relationship between strategic planning and business performance in Small, Micro and Medium Scale Enterprises (SMMEs)* (Doctoral dissertation, University of Fort Hare).

Gond, J.P., & Mercier, S (2004). *Les the´ories des parties prenantes: une synthe`se critique de la litte´rature*. Actes du Congre`s de l'Association francophone des ressources humaines, Montre´al. http://www.agrh(2004)-esg.uqam.ca/pdf/Tome1/Gond_Mercier.pdf

Gorondutse, A. H., & Hilman, H. (2016). Mediation effect of organizational culture on the relationship between perceived ethics and SMEs performance. *Journal of Industrial Engineering and Management*, *9*(2), 505-529.

Grahn, G. A. (2013). *Mobile Customer Relationship Marketing: a tool to create competitive advantage within the licensed liquor industry* (Masters dissertation, Cape Peninsula University of Technology).

Grant, R.M. (1991). The resource-based theory of competitive advantage: implications for strategy formulation. *California management review*, *33*(3), 114-119.

Gravetter, F.J. & Wallnau, L.B. (2000). *Statistics for the behavioral sciences*. 5th ed. Belmont: Wadsworth – Thomson Learning..

Gravetter, F.J., & Wallnau, L.B. (2007). *Essentials of Statistics for the Behavioral Sciences*, Boston: Cengage Learning.

Green, K. W., Zelbst, P. J., Meacham, J., & Bhadauria, V. S. (2012). Green supply chain management practices: impact on performance. *Supply Chain Management: An International Journal*, *17*(3), 290-305.
Green, K. W., Toms, L. C., & Clark, J. (2015). Impact of market orientation on environmental sustainability strategy. *Management Research Review*, *38*(2), 217-238.

Greenwood, M. (2007). Stakeholder engagement: Beyond the myth of corporate responsibility. *Journal of Business Ethics*, 74, 315-327.
Grigoroudisn, E., Orfanoudaki, E., & Zopounidis, C. (2012). Strategic performance measurement in a healthcare organization: A multiple criteria approach based on balanced scorecard. *Omega*, *40*(2012), 104–119.

Grillo, N., Tokarczyk, J. & Hansen, E. (2008). Green advertising developments in the US forest sector: a follow up, *Forest Products Journal*, 58(5), 40–46.

Grobler, M.P.J. (2012). *Green Business and Environmental Issues: Family versus Non-Family Business.* Magister in Business Administration Dissertation. Nelson Mandela Metropolitan University. Port Elizabeth.

Guercini, S. (2014). Guest Editorial: New qualitative research methodologies inmanagement. *Management Decision*, 52(4): 662-674.

Gumbus, A. & Lussier, R.N. (2006). Entrepreneurs use a Balanced Scorecard to translate strategy into performance measures. *Journal of Small Business Management*, 44(3), 407-425.

Gunzler, D. D., & Morris, N. (2015). A tutorial on structural equation modeling for analysis of overlapping symptoms in co-occurring conditions using MPlus. *Statistics in medicine*, *34*(24), 3246-3280

Guoyou, Q., Saixing, Z., Chiming, T., Haitao, Y., & Hailiang, Z. (2013). Stakeholders Influences on Corporate Green Innovation Strategy: Case Study of Manufacturing Firms in China. *Journal of Corporate Social Responsibility & Environmental Management*, 20, 1–14.

Gutierrez, I., Alcaraz, J. M., Susaeta, L., Suárez, E., & Pin, J. R. (2015). *Managing Sustainability for Competitive Advantage: Evidence from the Hospitality Industry*. Working Paper WP-1115-E January, IESE Business School – University of Navarra.

Hair, J, Anderson, R.E, Tatham, R.L & Black, W.C. (1995). *Multivariate data analysis*. 4th ed. New Jersey: Prentice-Hall Inc.

Hair, J. F., Hult, G., Tomas, M., Ringle, C. M., & Sarstedt, M. (2013). *A primer on partial least squares structural equation modeling (PLS-SEM)* Thousand Oaks, CA: SAGE Publications, Incorporated.

Hair, J.F., Babin, B.J., Anderson, R.E. & Tatham, R.L. (2010). *Multivariate Data Analysis*. *A Global Perspective*. 7th ed. London: Prentice-Hall.

Hair, J.F., Hult, G.T.M, Ringle, C.M. and Sarstedt, M., (2017). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)* (2nd Ed). Thousand Oaks, CA. Sage Publication, Inc.

Hair, J.F, Bush, R.P. & Ortinau, D.J. (2003). *Marketing research: Within a changing information environment,* 2nd edn. New York: McGraw-Hill.

Halíř, Z. (2012). Different Perspectives on Business Performance and Impact on Performance System Design. *European Financial and Accounting Journal*, *7*(2), 56-81.

Hamann, R., Smith, J., Tashman, P., & Marshall, R. S. (2017). Why do SMEs go green? An analysis of wine firms in South Africa. *Business & Society*, *56*(1), 23-56.

Hamer, S & Collinson, G. (2014). *Achieving Evidence-Based Practice - A Handbook for Practice.* Retrieved from: bookdirectory. net/? p=312122 (Date accessed 24.04.17).

Hana, U. (2013). Competitive Advantage Achievement through Innovation and Knowledge. *Journal of Competitiveness,* 5(1), 82-96.

Harrison, H., Birks, M., Franklin, R & Mills, J. (2017). Case Study Research: Foundations and Methodological Orientations. Forum Qualitative Sozialforschung / Forum: *Qualitative Social Research*, 18(1), Art. 19,

Hass, S., Burnaby, P. & Biertaker, J.L. 2005. The use of performance measures as an integral part of an entity's strategic plan. *Managerial Auditing Journal*, 20(2), 179-186.

Hayes, A. F. (2009). Beyond Baron and Kenny: Statistical mediation analysis in the new millennium. *Communication Monographs,* 76(4), 408-420.

Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. New York: Guilford Press

Hayes, A. F., Preacher, K. J., & Myers, T. A. (2011). Mediation and the estimation of indirect effects in political communication research. *Sourcebook for political communication research: Methods, measures, and analytical techniques*, 23, 434-465.

Haytko, D. L., & Matulich, E. (2008). Green advertising and environmentally responsible consumer behaviors: Linkages examined. *Journal of Management and Marketing Research*, *1*, 2.

He, Y., Gai, Y., Wu, X. & Wan, H. (2012). Quantitatively analyze composition principle of Ma Huang Tang by structural equation modelling. *Journal of Ethnopharmacology*, 143:851-858.

Hellriegel, D., Jackson, S.E., Slocum, J., Staude, G., Amos, T., Klopper, K.B., Louw, L. And Oosthuizen, T. (2004). *Management*. South African Ed. Cape Town: Oxford University Press.

Herbst, J. I., & Mills, G. (2015). *How South Africa Works: And Must Do Better*. Cape Town: MacMillan

Hernández-Perlines, F., Moreno-García, J., & Yáñez-Araque, B. (2016). Training and business performance: the mediating role of absorptive capacities. *SpringerPlus*, 5(1), 207.

Hilton C.E (2017). The importance of pretesting questionnaires: a field research example of cognitive pretesting the Exercise Referral Quality of Life Scale (ER-QLS), *International Journal of Social Research Methodology*, 20:1, 21-34.

Hitt, M.A., Keats, B.W., & DeMarie, S.M. (1998). Navigating in the new competitive landscape: Building strategic flexibility and competitive advantage in the 21st century. *The academy of management executive*, *12*(4), 22-42.

Hlatshwayo, Z.A. (2015). *Brand positioning strategy in growing and sustaining South African B2C SMES*, Master of Management in Strategic Marketing dissertation. Johannesburg.

Ho, J.C., Shalishali, M.K., Tseng, T.L & Ang, D.S (2009). Opportunities in green supply chain management, *The coastal business journal*, 8(1), 18-31.

Ho, T. C., Ahmad, N. H., & Ramayah, T. (2016). Competitive capabilities and business performance among manufacturing SMEs: Evidence from an emerging economy, Malaysia. *Journal of Asia-Pacific Business*, 17(1), 37-58.

Ho, T. C., Ahmad, N. H., & Ramayah, T. (2016). Competitive capabilities and business performance among manufacturing SMEs: Evidence from an emerging economy, Malaysia. *Journal of Asia-Pacific Business*, *17*(1), 37-58.

Hoffman, T & Bennett, S. (2013). *Evidence based practice across the health professions*. Chatswood, Sydney: Churchill Livingstone, Elsevier.

Hooper, D., Coughlan, J. & Mullen, M.R. (2008). Structural equation modelling: guidelines for determining model fit. *The Electronic Journal of Business Research Methods*, 6:53-60.

Horbach, J., & Rennings, K. (2013). Environmental innovation and employment dynamics in different technology fields – an analysis based on the German Community Innovation Survey 2009. *Journal of Cleaner Production*, 57: 158-165.

Horng, D. & Huang, K. (2012). The process to affect entrepreneurship: The example of tourism in Taiwan. *African Journal of Business Management*, 6(25), 7583-7592.

Hove, P., & Masocha, R. (2014). Interaction of technological marketing and Porter's five competitive forces on SME competitiveness in South Africa. *Mediterranean Journal of Social Sciences*, *5*(4), 254-262.

Hu, L. T. & Bentler, P.M. 1998. Fit indices in covariance structure modeling: Sensitivity to under parameterized model misspecification. *Psychological Methods*, 3(4):424-453.

Hu, L.T. & Bentler, P.M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: conventional criteria versus new alternatives. *Structural Equation Modeling*, 6:1-55.

Huang, M.H., Yen, G.F. & Liu, T.C., (2014), 'Re-examining supply chain integration and the supplier's performance relationships under uncertainty', *International Journal of Supply Chain Management*, 19(1), 64–78.

Huang, Y. C., & Wu, Y. C. J. (2010). The effects of organizational factors on green new product success: Evidence from high-tech industries in Taiwan. *Management Decision*, 48(10), 1539- 1567.

Hull, C.E. & Rothenberg, S. 2008. Firm performance: the interactions of corporate social performance with innovation and industry differentiation. *Strategic Management Journal*, 29(7), 781–789.

Hunt, S. D., & Morgan, R. M. (2005). The resource-advantage theory of competition. In *Review of marketing research* (pp. 153-206). Boston Spa: Emerald Group Publishing Limited.

Hunt, S.D. & Morgan, R.M. (1995). The comparative advantage theory of competition, *Journal of Marketing*, 59(2) 1-15.

Hunt, S.D. & Morgan, R.M. (1996). The resource-advantage theory of competition: dynamics, dependencies, and evolutionary dimensions, *Journal of Marketing*, 60(4), 107-14.

Hunt, S.D. & Morgan, R.M. (1997). Resource-advantage theory: a snake swallowing its tail or a general theory of competition, *Journal of Marketing*, 6 (4) 74-82.

Hunt, S.D. (1999). The strategic imperative and sustainable competitive advantage: public policy implications of resource-advantage theory, *Journal of the Academy of Marketing Science*, 27(2), 144-159.

Hunt, S.D. (2000). A general theory of competition: too eclectic or not eclectic enough? Too incremental or not incremental enough? Too neoclassical or not neoclassical enough? *Journal of Micromarketing*, 20(1), 77-8.

Hunt, S.D. (2000). *A General Theory of Competition*. Thousand Oaks, CA.: Sage.

Hunt, S.D. (2001). Commentary: a general theory of competition: issues, answers and an invitation, *European Journal of Marketing*, 35 Nos 5/6, 524-50.

Ian, F.A & Lowther, D.L. 2010. Factors affecting technology integration in K-12 classroms: A path model. *Educational Technology Research and Development*, 58 (2): 137-154.

Ilker, I. M. (2012). The impact of green product innovation on firm performance and competitive capability: the moderating role of managerial environmental concern. *Procedia-Social and Behavioral Sciences*, 62, 854-864.

Inglis, S. & Maclean, J. (2005). Research and Inquiry. (In Parkhouse, B.L., Ed. *The Management of Sport: It's foundation and application* Boston: McGraw-Hill. p. 15-30

Iriondo, J.M., Albert, M.J. & Escudero, A. (2003). Structural equation modeling: An alternative for assessing causal relationships in threatened plant populations. *Biological Conservation*, 113:367-377.

Isa & Yao (2013). Investigating the preference for green packaging in consumer product choices: A choice-based conjoint approach. *Business Management Dynamics*, 3(2),84-96

Ismaila, B. (2011). *Financial performance measurement of manufacturing small and medium enterprises in Pretoria: a multiple exploratory case study*, Magister of Technologiae, dissertation. University of South Africa. Pretoria.

Itanyi, O., Ewurun, U. J.F.E. & Ukpere, W. I. (2012). Evaluation of decision making criteria with special reference to quantitative and qualitative paradigms. *African Journal of Business Management*. 6 (44): 11110-11117.

Jaju, A. (2016). *A study of the Impact of Green Marketing on Consumer Purchasing Patterns and Decision Making in Telangana, India.* MSc in Management National College of Ireland.

Jankowski, K. R., & Flannelly, K. J. (2015). Measures of central tendency in chaplaincy, health care, and related research. *Journal of health care chaplaincy*, *21*(1), 39-49.

Jarin, A. (2014). Ecological Marketing Practices for Creating Competitive Advantage. *European Journal of Business and Management*, 6(24), 138-143.

Jarin, A., Rahat, M & Kashem, M.A (2014). Eco-Banking Strategies for Competitive Advantages, *European Journal of Business and Management*, 6(3), 84-91

.

Jasper, F. (2010). Applied dimensionality and test structure assessment with the START-M mathematics test. *The International Journal of Educational and Psychological Assessment*, 6, 104-25.

Jawahar, I. & McLaughlin, G. (2001) Toward a Descriptive Stakeholder Theory: An Organizational Life Cycle Approach, *Academy of Management Review* 26(3), 397–414.

Jeevan, P., & Bhargav, V. R. (2016). A Study on Green Packaging-A Case Study Approach with Reference to Dell Inc. *International Educational Scientific Research Journal*, 2(7), 83-84.

Jenatabadi, H.S. & Ismail, N.A. (2014). Application of structural equation modelling for estimating airline performance. *Journal of Air Transport Management*, 40:25-33.

Jensen, M.C., (2001). Value Maximization, Stakeholder Theory, and the Corporate Objective Function, *Journal of Applied Corporate Finance,* 14(3), 8-21.

Jirojwong, S, Johnson, M & Welch, A. (2014). *Research Methods in Nursing and Midwifery*. 2nd Edition. Sydney: Oxford University Press.

Johnson, J.S. (2015). Broadening the application of mixed methods in sales research. *Journal of Personal Selling & Sales Management*, 35(4), 334-345.

Johnson, R. B., & Onwuegbuzie, A. (2006). Mixed methods research: A research paradigm whose time has come. *Educational Researcher*, 33(7), 14-26.

Jones, G. R. & George, J. M. (2009). *Contemporary management*. 6th International British Journal of Arts and Social Sciences, New York, USA: McGraw-Hill.

Kaler, J. (2003). Differentiating Stakeholder Theory, *Journal of Business Ethics*, 46, 71–83.

Kambule, N (2014). *A survey on the state of energy efficiency adoption and related challenges amongst selected manufacturing SMMEs in the Booysens area of Johannesburg*. Magister atrium in Environment management. The University of Johannesburg. Johannesburg.

Kanakulya, E. K., & Jinzhao, W.A.N.G. (2017). The Status of Africa's Construction Industry and its Porter's Five Forces Analysis. *International Business and Management*, *14*(2), 50-53.

Kapetanopoulou, P. & Tagaras, G., (2011). Drivers and obstacles of product recovery activities in the Greek industry. *International Journal of Operations & Production Management, 31*(2), 148-166.

Kapetanopoulou, P. & Tagaras, G., (2011). Drivers and obstacles of product recovery activities in the Greek industry. *International Journal of Operations & Production Management*, *31*(2), 148-166.

Kaplan, R. S., & Norton, D. P. (1996a). *Using the balanced scorecard as a strategic management system*. January–February. Harvard Business Review. Product, 4126, p. 2-13

Kaplan, R. S., & Norton, D. P. (1996b). *The balanced scorecard—Translating strategy into action*. Boston, MA: Harvard Business School Press.

Kariuki, M. B. J. (2011). *Analysis of Market Performance: A Case of 'OMENA' Fish in selected outlets in Kenya*. Sc Thesis in Agricultural and Applied Economics of Egerton University.

Kassaye, W. (2001). Green dilemma. *Marketing Intelligence and Planning*, 19(6), 444–455

Kasse, T. (2008). *Practical insight into CMMI*. New York: Artech House.

Kataja, R. (2014). *Green Marketing and its Role in Firm's Strategy*. Bachelor's Thesis, Department of Management and International Business, Lappeenranta University of Technology.

Kawulich, B. (2009). The role of theory in research. *Teaching research methods in the social sciences*, 37-48.

Key, S., (1999). Toward a New Theory of the Firm: A Critique of Stakeholder ‘‘Theory’’, *Management Decision* 37(4), 317–328.

Khalique, M., Shaari, J. A. N., Isa, A. H. Md., & Ageel, A. (2011). The challenges faced by the small and medium enterprises (SMEs) in Malaysia: in intellectual capital perspective. *International Journal of current research*, 3(6), 398-401.

Khan, M. W. J., & Khalique, M. (2014). An overview of small and medium enterprises in Malaysia and Pakistan: Past, present and future scenario. *Business and Management Horizons*, *2*(2), 38.

Khan, M., Hussain, M & Ajmal, M.M., (2016). Green Supply Chain Management for Sustainable Business Practice: Advances in Logistics, Operations, and Management Science, New York: IGI Global.

Kharub, M., Kharub, M., Sharma, R., & Sharma, R. (2017). Comparative analyses of competitive advantage using Porter diamond model (the case of MSMEs in Himachal Pradesh). *Competitiveness Review: An International Business Journal*, *27*(2), 132-160.

Khomba, J. K. (2011). *Redesigning the Balanced Scorecard model: an African perspective* (Doctoral dissertation). The University of Pretoria.

Kimani, J.W (2015). *Green marketing practices and Performance of Eco-Tourism in Kenya*. Master of Business Administration (MBA) dissertation, School Of Business, University Of Nairobi.

Kirsten, E., Vermaak, F., & Wolmarans, H. (2015). Performance measurement in small and medium enterprises: South African accountants' view. *Journal of Economic and Financial Sciences*, *8*(1), 13-34.

Klein, J. (2002). Beyond competitive advantage. *Strategic Change*, *11*(6), 317-327.

Kleinbaum, D., Kupper, L., Nizam, A. & Rosenberg, E. (2013). *Applied regression analysis and other multivariable methods*. London: Nelson Education.

Kline, R.B. (2010). *Principles and Practice of Structural Equation Modeling,* 3rd edn New York: Guilford Press.

Kline, R.B. (2005). *Principles and practice of structural equation modeling*. 2nd ed. New York: The Guilford Press.

Kline, T.J.B. & Klammer, J.D. (2001). Path model analyzed with ordinary least squares multiple regression versus LISREL. *Journal of Psychology Interdisciplinary and Applied,* 135:213-225.

Ko, E., Hwang, Y.K, & Kim, E.Y. (2013). Green marketing' functions in building corporate image in the retail setting. *Journal of Business Research*, 66(10), 1709– 1715.

Kolanchu, P.S. (2011). *An Analysis of Community Awareness to Chemical Hazards in Zamdela Township – Sasolburg*. Masters in Disaster Management, Disaster Management Training and Education Center for Africa, University of the Free State. Bloemfontein.

Kotler, P. & Levy, S.J. (1969). Broadening the concept of marketing. *Journal of Marketing*, 33(1): 10-15.

Kraaijenbrink, J., Spender, J. C., & Groen, A. J. (2010). The resource-based view: a review and assessment of its critiques. *Journal of management*, *36*(1), 349-372.

Kraja, Y. B., & Osmani, E. (2015). Importance of external and internal environment in creation of competitive advantage to SMEs.(Case of SMEs, in the Northern Region of Albania). *European Scientific Journal, ESJ*, *11*(13), 120-130.

Krause D.R., Handfield R.B. & Tyler B.B. (2007), 'The relationships between supplier development, commitment, social capital accumulation and performance improvement', *Journal of Operations Management,* 25(2), 528–545.

Kroon, L., Vrijens, G., (1995), Returnable containers: an example of reverse logistics, *International Journal of Physical Distribution and Logistics Managemen*t, (25)2, 56-68.

Kumar, M., Agarwal, A., & Singh, P. (2017). Green Packaging and Marketing in Promoting Agribusiness. *Management*, *3*(1), 1-8

Kumar, M., Talib, S. A., & Ramayah, T. (2013). *Business Research Methods*. Selangor, Malayisa: Oxford University Press.

Kumar, P. (2015). Green marketing innovations in small Indian firms. *World Journal of Entrepreneurship, Management and Sustainable Development*, *11*(3), 176-190.

Kumar, P., & Kumar, P. (2017). Intents of green advertisements. *Asia Pacific Journal of Marketing and Logistics*, *29*(1), 70-79.

Kumar, V., Aaker, D.A. & Day, G.S. (2002). *Essentials of marketing research*. 2nd ed. New York: John Wiley & Sons.

Kumar, P.A., Kumar, B.D & Sandip, A. (2017). Green Initiatives for Business Sustainability and Value Creation *Advances in Business Strategy and Competitive Advanta*ge. IGI Global,.

Kuo, S. C. (2007, October). *Green manufacturing process—surface pre-treatment with micro bubble cavitation.* In: Semiconductor Manufacturing, 2007. ISSM 2007. International Symposium (pp. 1-4). New York: IEEE.

Kurapatskie, B. & Darnall, N., (2013). Which corporate sustainability activities are associated with greater financial payoffs?, *Business Strategy and Environment* 22, 49–61.

Lammers, W. J., & Badia, P. (2004). *Fundamentals of behavioral research*. Recording for the Blind & Dyslexic.

Lampadarios, E. (2014). *Challenges and success factors for SMEs in the chemical distribution industry: a literature review*. eprints.leedsbeckett.ac.uk.

Laroche, M., Bergeron, J. & Barbaro-Forleo, G. (2001). Targeting consumers who are willing to pay more for environmentally friendly products, *Journal of Consumer Marketing*, 18(6), 503-20.

Lash, J. & Wellington, F. (2007), Competitive advantage on a warming planet, *Harvard Business Review*, 85(3), 94-102.

Lau, J. W. (2014). Enriching stakeholder theory: Student identity of higher education. *American Journal of Industrial and Business Management*, *4*(12), 762-766.

Ledgerwood, J. (2014). *Microfinance Handbook: An Institutional and Financial Perspective.* Washington, DC.: The World Bank.

Lee, J., & Kim, S. J. (2017). Curvilinear Relationship between Corporate Innovation and Environmental Sustainability. *Sustainability*, *9*(7), 1267.

Lei, P.W. & Wu, Q. (2007). Introduction to structural equation modeling: issues and practical considerations. Instructional *Topics in Educational Measurement: Issues and practice,* 33-43.

Lekhanya, L. M. (2010). *The use of marketing strategies by small, medium and micro enterprises in rural KwaZulu-Natal* (Master of Technology: Marketing dissertation). Durban University of Technology, Durban, South Africa.

Lekhanya, L.M. (2014). The Level of awareness of green marketing and its managerial implications amongst selected South African manufacturing Small, Medium and Micro Enterprises (SMMEs) in KwaZulu–Natal. *Journal of Economics and Behavioral Studies*, 6(8), 625-635.

Leonidou, C.N., Katsikeas, C.S. and Morgan, N.A. (2013). Greening' the marketing mix: do firms do it and does it pay off?, *Journal of the Academy of Marketing Science*, 41(2), 151-170.

Leonidou, L. C., Leonidou, C. N., Palihawadana, D., & Hultman, M. (2011). Evaluating the green advertising practices of international firms: a trend analysis. *International Marketing Review*, *28*(1), 6-33.

Leonidou, N.C. & Leonidou, C.L. (2011). Research into environmental marketing/management: a bibliography analysis. *Journal of European marketing*, 45(2): 68-103.

Leste, A., Binns, T & Nel, E. (2014*). South Africa, Past, Present and Future: Gold at the End of the Rainbow?* London: Routledge.

Lesuthu, K (2013). *Job seekers' perceptions about the pnet website as an e-recruitment tool within South Africa*. Master of Technology Degree in Human Resource Management. Vaal University of Technology, Vanderbijlpark.

Levi-Jakšić, M. (Ed.). (2012*). Proceedings of the XIII International Symposium* SymOrg 2012: Innovative Management and Business Performance. University of Belgrade, Faculty of Organizational Sciences.

Lin, R. J., Tan, K. H., & Geng, Y. (2013). Market demand, green product innovation, and firm performance: evidence from Vietnam motorcycle industry. *Journal of Cleaner Production*, *40*, 101-107.

Lincoln, Y. S. Lynham, S. A. & Guba, E. G. (2011). Paradigmatic controversies, contradictions, and emerging confluences, revisited in qualitative research. In Norman K. Denzin & Yvonna S. Lincoln (Eds.), *The Sage handbook of qualitative research* (4th ed., pp.97-128). Thousand Oaks, CA: Sage.

Lindsey, K., Mauck, N., & Olsen, B. (2017). *The Coming Wave of Business Succession: The Role of Private Equity and Stakeholder Theory. doi.org/10.2139/ssrn.2925608*

Liu, X.H., GE, Y.H. & Wang, Q. (2014). The effects of TMT interaction on enterprise performance from the perspective of enterprise culture. *African Journal of Business Management*, 8(4), 137-145.

Lohr, S. (2010). *Sampling: Design and Analysis*. New York: Brooks/Cole.

Longenecker, J., Petty. J., Palich, L & Loy. F. (2013). *Small business management: launching and growing entrepreneurial ventures.* Stanford: Cengage Learning

Lose, T. (2016). *The role of business incubators in facilitating the entrepreneurial skills requirements of small and medium-size enterprises in the Cape metropolitan area, South Africa*. Masters dissertation, Cape Peninsula University of Technology. Cape Town. South Africa.

Louw, L. & Venter, P. (2010). *Strategic Management: Developing Sustainability in Southern Africa.* Cape Town: Oxford University Press.

Lucas, R. E., Diener, E. & Suh, E., (1996). Discriminant validity of well-being measures. *Journal of Personality and Social Psychology*, 71(3), 616-268.

Luo, X. & Bhattacharya, C.B. (2006), Corporate social responsibility, customer satisfaction and market value, *Journal of Marketing,* 70(4), 1-18.

Luo, Yadong, & Zhao, Hongxin. (2004). Corporate link and competitive strategy in multinational enterprises: a perspective from subsidiaries seeking host market penetration. *Journal of International Management,* 77-105.

Luotonen, D., & Hasselström, M. (2009). *Subjective and objective performance assessment: Performance pay at Trelleborg Forsheda AB. Internationella Handelshögskolan*.

Ma, Y., Hou, G., & Xin, B. (2017). Green Process Innovation and Innovation Benefit: The Mediating Effect of Firm Image. *Sustainability, 9*(10), 1-15

Macmillan, H. & Tampoe, M. (2000). *Strategic Management*. New York: Oxford University Press.

Madhani, P. M. (2009). Resource Based View (RBV) of Competitive Advantages: Importance, Issues and Implications. Issues and Implications. *Indian Management Research Journal*, 1(2), 1-15

Mafini, C. (2014). *The relationship between organisational resources and organisational performance in a national government department* (Doctoral dissertation). Vaal University of Technology. Vanderbijlpark.

Mafini, C., & Muposhi, A. (2017). The impact of green supply chain management in small to medium enterprises: Cross-sectional evidence. *Journal of Transport and Supply Chain Management*, *11*(1), 1-11.

Mahembe, B., Engelbrecht, A.S., & De Kock, F.S. (2013). A confirmatory factor analytic study of a self-leadership measure in South Africa. *SA Journal of Human Resource Management/SA Tydskrif vir Menslikehulpbronbestuur*, *11*(1),

Majeed, S. (2011). The impact of competitive advantage on organizational performance. *European Journal of Business and Management*, 3(4), 191-196.

Makhutla, E. N. (2014). *The impact of fast moving consumer goods on green consumerism*, Masters in Communication Science dissertation, University of Zululand.

Malcolm, M. & Martin, C. (2003). *Marketing: A Complete Guide*. New York: Palgrave Macmillan Ltd.

Manikandan, S. (2011). Frequency distribution. *Journal of pharmacology & pharmacotherapeutics*, *2*(1), 54-56.

Manikandan, S. (2011). Measures of central tendency: The mean. *Journal of Pharmacology and Pharmacotherapeutics*, *2*(2), 140-142.

Mansor, M.N.M & Ahmad, F.S (2014). *Linking brand's competitive advantage and customer satisfaction in private chain clinic industry*, Proceedings Book of ICETSR, 2014, Malaysia Handbook on the Emerging Trends in Scientific Research.

Maphiri, M. C. (2015). *Business rescue in South Africa and its practical application to SME's (small to medium enterprises)* (Master of Laws degree in approved courses and a minor dissertation, University of Cape Town. South Africa.

Marcoux, A.M. (2000). *"Balancing Act," in Contemporary Issues in Business Ethics*, 4th edition, edited by J. R. Desjardins & J. J. McCall (Wadsworth), pp. 92-100.

Maria, A.R. & Yusniza, K., (2016). Predictors of customer Loyalty in the Malaysian hotel are outsourcing relationships. *International Review of Management and Marketing, 6*(S8), 205-211.

Mark, J., & Nwaiwu, J. N. (2015). Impact of political environment on business performance of multinational companies in Nigeria. *African Research Review*, *9*(3), 1-10.

Masitenyane,L.A.(2010).*Examining customer-supplier relationships customer service quality in a precast concrete manufacturing company*, Magister Technologiae in Marketing, Vaal University of Technology.

Mason, J. (2007). *Qualitative Researching*. (2nd Ed). London: Sage Publications.

Matchaba-Hove, T., Farrington, S. & Sharp, G. (2015). The entrepreneurial orientation-performance relationship: A South African Small Business Perspective. *Southern African Journal of Entrepreneurship and Small Business Management*, 7(2015), 36-68.

Matsheke, O.T. (2015). *The Influence Of ntrepreneurial-Related Programmes On Student Intentions To Venture Into New business Creation*. Master of Technology Degree in Business Administration dissertation, Vaal University of Technology. Vanderbijlpark.

Matsoso, M.L. (2014). *Performance measures in supply chain management of small manufacturing enterprises*, Master of Technology: Cost and Management Accounting dissertation, Cape Peninsula University of Technology, Cape Town.

Matsuno, K. & Mentzer, J.T. (2000). The effects of strategy type on the market orientation-performance relationship. *Journal of Marketing*, 64(4),1-16.

Matthews, T. D., & Kostelis, K. T. (2011). *Designing and conducting research in health and human performance*. Now York: John Wiley & Sons.

Matzler, K. & Renzl, B. 2006. The Relationship between interpersonal trust, employee satisfaction, and employee loyalty. *Total Quality Management and Business Excellence*, 17(10),1261-1271.

Maupin, A. J., & Stauffer, L. A. (2010). *A design tool to help small manufacturers reengineer a product family*. In ASME Design Engineering Technical Conference Proceedings, DETC99/DTM (Vol. 14568).

Mbatha, S (2014). *Development of competitive advantage strategy for the apparel manufacturing industry of South Africa*, Magister Technologiae: Fashion Design and Technology, Tshwane University of Technology. Pretoria.

Mbizi, R., Hove, L., Thondhlana, A., & Kakava, N. (2013). Innovation in SMEs: A review of its role in organisational performance and SMEs operations sustainability. *Interdisciplinary Journal of Contemporary Research in Business*, *4*(11), 370-389.

Mcmillan, J. H. & Schumacher, S. (2010). *Research in Education: Evidence Based Inquiry*. 7th ed. Boston: Pearson Education International.

McMillan, J. H. (2000). *Essential assessment concepts for teachers and administrators* (Vol. 1). New York: Corwin Press.

Mcquitty, S. 2004. Statistical power and structural equation models in business research. *Journal of Business Research*, 57:175-183.

Meeus, M.T.H., and Edquist, C. (2006). Introduction to part 1: Product and process innovation, In Hage, J. & Meeus, M. T. H. (Eds.), *Innovation, science and institutional change*, Oxford: Oxford University Press.

Mello, J. & Flint, D.J. (2009). A refined view of grounded theory and its application to logistics research. *Journal of Business Logistics*, 30(1):107-126.

Memon, M. A., Ting, H., Ramayah, T., Chuah, F., & Cheah, J. H. (2017). A review of the methodological misconceptions and guidelines related to the application of structural equation modeling: A Malaysian scenario. *Journal of Applied Structural Equation Modeling*, *1*(1). 1-13.

Merchant, K.A. & Stede, W.A. (2007). *Management Control Systems: Performance Measurement, Evaluation and Incentives.* London: Pearson Education.

Mhlophe, B. (2015). *Antecedents of Consumer Purchase Intentions towards Organic Food Produces: A Case Study of the Johannesburg Municipality*. Master of Commerce (Marketing), School of Economic and Business Science, University of the Witwatersrand.

Miller, D.C. & Salkind, N. J. (2002). *Handbook of research design and social measurement.* 6th ed. Thousand Oaks: Sage Publication.

Miller, S, & Read. G. (1998). Questionnaire design. *ESOMAR Handbook of Market and Opinion Research.*

Miryala, R.K & Mennakanti, J.P (2016). *Responsible marketing for sustainable business*, New York: Zenon Academic publishing.

Mirzahassan, H. & Imani, F. H. (2013). The chain impact of customers' value on organizational performance: A customer-based perspective in a command economy. *African Journal of Business Management,* 7(29), 2852-2862.

Mishra, S. & Suar, D. (2010). Does social responsibility influence firm performance of Indian Company? *Journal of Business Ethics*, 95(4), 571–601.

Mita, G. O. (2017). Influence of generic strategies on performance of metal works SME businesses in Naivasha town. *International Academic Journal of Human Resource and Business Administration*, *2*(3), 477-500.

Modimogale, L., & Kroeze, J. H. (2009). Using ICTs to become a competitive SME in South Africa. *Knowledge Management and Innovation in Advancing Economies: Analyses & Solutions*, 503-513.

Mogeni, L. M., & Kiarie, D. M. (2016). Effect of Green Logistics Practices on Performance of Supply Chains in Multinational Organizations in Kenya. *The International Journal of Business & Management*, *4*(4), 189-198.

Mohabier, R. (2016). *The Application of a Social Networking Learning Tool in a Primary School within South Africa*. Master of Business Administration Dissertation Regenesys Business School, Sandton, South Africa.

Mohamed, S. N. S. (2016). *The Factors of Practising Green Packaging Adoption among Food Industry around Melaka,* Project Report. Universiti Teknikal Malaysia Melaka UTeM, Melaka, Malaysia.

Moloi, N. (2013). *The sustainability of construction small-medium enterprises (SMEs) in South Africa*. Master of Science in building. The University of the Witwatersrand. Johannesburg. South Africa.

Momba, K.C. (2016). *Open innovation for manufacturing in small and medium enterprises*. M.Com. (Business Management) dissertation. University of Johannesburg, Johannesburg.

Mongan-Rallis, H. (2014). *Guidelines for writing the Literature Review*. Retrieved December 29, 2017 from. http://www.duluth.umn.edu/~hrallis/guides/researching/litreview.html.

Moonsamy, U. (2016). *Open innovation in South African SMEs: A business model perspective*. The Gordon Institute of Business Science: University of Pretoria. South Africa

Moore, G. (1999). Tinged Shareholder Theory: Or What's So Special About Stakeholders?', *Business Ethics: A European Review*, 8(2), 117–127.

Mora, M., Gelman, O., Steenkamp, A & Raisinghani, M.S (2012). *Research methodologies: Innovattions and philosophies in software system engineering and info systems*. Hershey, PA: IGI Global.

Morisky, DE, Ang, A & Krousel-Wood, M. (2008). Predictive Validity of a Medication Adherence Measure in an Outpatient Setting. *The Journal of Clinical Hypertension*, 10(5), 348-354.

Mouton, J. (2011). *How to succeed in your master's and doctoral studies: A South African guide and resource book*. Pretoria: Van Schaik.

Mpatane, L. M. (2015). *The impact of electricity supply on the manufacturing sector output in South Africa*. Masters of Commerce (Economics). North-West University, Mafikeng Campus.

Mukonza, C. (2016). *Analysis of Factors Influencing Green Entrepreneurship in South Africa*. Research, International Development Research Centre, Ottawa, Canada.

Mukwarami, S., Nyirenda, G., & Fakoya, M. B. (2017). Governance of corporate social responsibility and return on assets in the South African mining firms. *African Journal of Public Affairs*, 9(5), 137-153.

Mupemhi, S., Duve, R & Mupemhi, R. (2013). *Factors Affecting the Internationalization of Manufacturing SMEs in Zimbabwe*, Investment Climate and Business Environment (ICBE) Research Fund, Research Report N0. 62/13, pp6-40.

Murthy, S. N. & Bhojanna, U. 2010. *Business research methods*. 3rd ed. New Delhi: Excel Books

Murthy, S. N., & Bhojanna, U. (2009). *Business research methods*. New Delhi: Excel Books India.

Murthy, S.N. & Bhojanna, U. (2010). *Business research methods*. 3rd ed. New Delhi: Excel Books.

Musara, M. (2012). Impact of Just-In-Time (JIT) inventory system on efficiency, quality and flexibility among manufacturing sector, small and medium enterprises (SMEs) in South Africa. *African Journal of Business Management*, 6(17), 5786-5791.

Mwaura, A. W., Letting, N., Ithinji, G., & Orwa, B. H. (2016). Green distribution practices and competitiveness of food manufacturing firms in Kenya. *International Journal of Economics*, 189-207.

Naidoo, R., & Urban, B. (2010). The relevance of operational skills towards business sustainability: a focus on SMME manufacturers in the Vaal triangle region. *Acta Commercii*, *10*(1), 234-248.

Nanath, K., & Pillai, R. R. (2017). The influence of green IS practices on competitive advantage: mediation role of green innovation performance. *Information Systems Management*, *34*(1), 3-19.

Naude, M. J. (2013). Supply chain challenges in the South African automotive sector: do location, size and age matter? *South African Journal of Economic and Management Sciences*, *16*(4), 407-417.

Ncube, T. R. (2016). *The intrinsic motivational factors of small and medium business growth: a study on the furniture manufacturing sector in the Ethekwini Metropolitan area,* Master's Degree in Management Sciences (Business and Administration). Durban University of Technology, Durban, South Africa

Ndovela, S.M. (2016). *An investigation into entrepreneurial intent amongst final year commerce students at the Durban University of Technology*. Master of Technology in Business Administration dissertation. Durban University of Technology, Durban, South Africa

Nelson, L, S. (2015). *Quick Books 2015 All-in-One for Dummies*. Hoboken, New Jersey: John Wiley and Sons, Inc.

Nematatane, P. (2017). Supply Chain Partnership, Collaboration, Integration and Relationship Commitment as Predictors Of Supply Chain Performance In South African SMEs, *Business and Social Sciences Journal*, 2(1), 134-168.

Neto, J. F. D.R., Souza, C. C. D., Gallego, P. A. M., Pareira, F.D.A. R., Bono, J.A.M. & Lopez, M. D. R. (2015). The organizational capabilities of rural enterprises, incremental innovation, and the university's contribution. *African Journal of Agricultural Research*, 10(21), 2203-2212.

Netshandama, K.P. (2001). *The clothing and the textile industry in South Africa, 1945 to 2001: Developments, problems and prospects*. Masters in public administration dissertation. The University of the Western Cape. Bellville, Cape Town.

Neuman, L.W. (2006). *Social research methods: qualitative and quantitative approaches*. 6th ed. Boston MA: Pearson Education.

Newbert, S. L. (2008). Value, rareness, competitive advantage, and performance: A conceptual-level empirical investigation of the resource-based view of the firm. *Strategic Management Journal*, 29(7), 745–768.

Newby, P. (2014). *Research Methods for Education*. 2nd Ed.. New York: Routledge.

Nidumolu, R., Prahalad, C.K. & Rangaswami, M.R. (2009). Why sustainability is now the key driver of innovation. *Harvard Business Review* 87, 56–64.

Nidumolu, R., Prahalad, C. K., & Rangaswami, M. R. (2015). Why sustainability is now the key driver of innovation. *IEEE Engineering Management Review*, *43*(2), 85-91.

Nusair, K. & Hua, N. 2010. Comparative assessment of structural equation modeling and multiple regression research methodologies: E-commerce context. *Tourism Management*, 31, 314-324.

Nwaizugbo, I.C & Anukam, A.I (2014). Assessment of Entrepreneurial Marketing Practices among Small and Medium Scale Enterprises in Imo State Nigeria: Prospects and Challenges, *Review of Contemporary Business Research*, 3(1)77-98.

Nyilasy, G., Gangadharbatla, H., & Paladino, A. (2014). Perceived greenwashing: The interactive effects of green advertising and corporate environmental performance on consumer reactions. *Journal of Business Ethics, 125*(4), 693-707.

Nyirenda, G., Ngwakwe, C.C., & Ambe, C.M. (2013). Environmental management practices and firm performance in a South African mining firm. *Managing Global Transitions*, *11*(3), 243-249.

Nzawou, A. (2013). *E-Commerce Strategies for SMME Sustained Growth in the Manufacturing Sector*. Master of Technology thesis in Business Information System, Cape Peninsula University of Technology. Cape Town.

Nze, G. O. (2016). *Exploring fast moving consumer goods (FMCG) small, medium and micro enterprises (SMME) manufacturers need for innovation to achieve growth in KwaZulu-Natal,* Master’s Degree in Technology: Business Administration, Durban University of Technology. Durban.

O’regan, N., Sims, M.A. & Gallear, D. (2008). Leaders, loungers, laggards: the strategic – planning environment performance relationship re-visited in manufacturing SMEs. *Journal of Manufacturing Technology Management*, 19(1), 6-21.

Obokoh, L. O., & Goldman, G. (2016). Infrastructure deficiency and the performance of small-and medium-sized enterprises in Nigeria's Liberalised Economy. *Acta Commercii*, *16*(1), 1-10.

Ocloo, C.E. & Tsetse, E.K. (2013). Customer retention in the Ghanaian mobile telecommunication industry. *European Journal of Business and Social Sciences*, 2(7), 136-160.

Ofori, D.F., Nyuur, R.B. and S-Darko, M.D. 2014. Corporate social responsibility and financial performance: Fact or fiction? A look at Ghanaian banks. *Aosis Open Journal*, 14(1), 1–11.

Ogiogio, G. (2005). Measuring performance of interventions in capacity building: some fundamentals. *The African Capacity Building Foundation Occasional Running Paper* 4: 1-21.

Okusolubo, T. O. (2013). *The Effect of Selection Processes on Employee Turnover In Small And Medium Enterprises In Sunnyside, Pretoria*, Masters Dissertation, Vaal University Of Technology. Vanderbijlpark. South Africa.

Olatunji, O. S. (2015). *The Impact of Information Communication Technology on Small and Medium Scale Enterprises Productivity in Nigeria*. Bachelor of Business Administration, Vaasa University of applied science.

Olawale, F. & Garwe, D. (2010). Obstacles to the growth of new SMEs in South Africa: A principal component analysis approach. *African Journal of Business Management*. 4(5):729-738.

Omoruyi, O (2015). *The Influence of Supply Chain Networks, Flexibility and Integration on the Performance of Small and Medium Enterprises in the Southern Gauteng Region*, Doctor Technologiae in Business (Logistics). The Vaal University of Technology Vanderbijlpark.

Ongore, V.O. & Kusa, G.B. 2013. Determinants of financial performance of commercial bank in Kenya. *International Journal of Economics and Financial Issues*, 3:257–252.

Orlitzky, M., Schmidt, F. and Rynes, S. (2003). Corporate social and financial performance: *A meta-analysis. Organization Studies*, 24(3), 403–441.

Orsato, R. J. (2006). Competitive environmental strategies: When does it pay to be green? *California Management Review*, 48(2), 127–143.

Ottman, J. A., Stafford, E. R., & Hartman, C. L. (2006). Avoiding green marketing myopia: Ways to improve consumer appeal for environmentally preferable products. *Environment: Science and Policy for Sustainable Development*, *48*(5), 22-36.

Oualalou, F. (2012). *Report on the role of Small and Medium-Sized Enterprises in the Mediterranean. Third Plenary Session* Bari.Oxford Dictionary. (2015a). Substitute. http://www.oxforddictionaries.com/definition/english/substitute [150328].

Palalic, R. & Busatlic, S. (2015). Exploratory research on relationship between entrepreneurial orientation dimensions and business performance and growth of fast and slow growing small and medium enterprises in Bosnia and Herzegovina. *International Journal of Business and Management*, 10(2), 15-30.

Pamacheche, R. (2015). *The role played by management's commitment, education and ethics on organisational entrepreneurship in Gauteng non-profit organisations*. Master of

Commerce (Marketing), School of Economic and Business Science, University of the Witwatersrand.

Pamulu, M.S. (2010). *Strategic management practices in the construction industry: A study of Indonesian enterprises,* Doctor of Philosophy thesis, Queensland University of Technology.

Patterson, K & Winston, B (2016). *Leading an African Renaissance: Opportunities and Challenges.* Palgrave Studies in African Leadership, London: Springer.

Pearl, J. (2011). *Bayesian networks*. Department of Statistics, UCLA.

Peattie, K. & Crane, A. (2005). Green marketing: legend, myth, farce or prophesy? *International Journal of Qualitative Market Research*, 8(4),357- 370.

Peattie, K. (2001). Towards sustainability: The third age of green marketing. *The Marketing Review*, *2*(2), 129-146.

Peng, M. (2013). *Global Strategy*. Mason OH: Cengage Learning.

Peranginangin, J. (2015). A Conceptual Mapping Resource Advantage Theory, Competitive Advantage Theory, and Transient Competitive Advantage. *Expert Journal of Business and Management*, *3*(2), 140-149.

Peston, R. (1996). Votes at stake over vision for economy. *Financial Times*, 11 January 1996, p. 5.

Phau, I., & Ong, D. (2007). An investigation of the effects of environmental claims in promotional messages for clothing brands. *Marketing Intelligence & Planning*, *25*(7), 772-788.

Phillips, R., Freeman, E & Wicks, A.C (2003). What Stakeholder Theory Is Not. *Business Ethics Quarterly*, 13(4), 479-502.

Pillay, S. (2010). *A critical analysis of the role of stakeholder engagement in establishing the renewable energy sector in South Africa*. Masters in Business Administration. The University of Pretoria. Pretoria, South Africa.

Polit, DF & Hungler, BP. (2013). *Essentials of Nursing Research: Methods, Appraisal, and Utilization.* 8th ed. Philadelphia: Wolters Kluwer/Lippincott Williams and Wilkins.

Pomerantz, A. M. (2016). *Clinical psychology: Science, practice, and culture*. Thousand Oaks, CA.: Sage Publications.

Pooe, D., Mafini, C., & Loury-Okoumba, V.W. (2015). The influence of information sharing, supplier trust and supplier synergy on supplier performance: The case of small and medium enterprises. *Journal of Transport and Supply Chain Management*, *9*(1), 1-11

Porter, M. E. (1985). Competitive advantage. New York: Free Press.

Porter, M. E. (2011). *The competitive advantage of nations: creating and sustaining superior performance.* New York: Simon and Schuster.

Porter, M. E., & Van der Linde, C. (1995). Toward a new conception of the environment competitiveness relationship. *Journal of Economic Perspectives*, 9(4), 97-118.

Porter, M.E. (2008). The Five Forces That Shape Competition. *Harvard Business Review*, 80(2), 2-23.

Pranee, C. (2010). Marketing ethical implication & social responsibility. *International Journal of Organizational Innovation*, 2(3), 6-11.

Pratistha, B. (2016). The Influence of Strategic Control, Strategy Orientation, and Business Environment on Competitive Strategy and Its Effect to Business Performance. *Academy of Strategic Management Journal*, 15, 15-23.

Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior research methods, instruments, & computers*, *36*(4), 717-731.

Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies forassessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40(3), 879-891

Preble, J. (2005). Towards a comprehensive model of stakeholder management. *Business and Society Review*, 110 (4), 407-431.

Quoquab, F. Thurasamy, R & Mohammad, J. (2017). *Driving Green Consumerism through Strategic Sustainability Marketing.* IGI Global.

Qureshi, S.M. & Kang, C.W. (2014). Analysing the organisational factors of project complexity using structural equation modelling. *International Journal of Project Management*. [Online]. Available at: <http://dx.doi.org/10.1016/j.ijproman.2014.04.006>. Accessed: 17/01/2018.

Rahim, S. A., Fernando, Y., & Saad, R. (2016). Sustainable Green Supply Chain Management and Impact on Organisations. *Journal of Emerging Trends in Economics and Management Sciences (JETEMS)*, *7*(3), 147-155.

Ramani, G., & Kumar, V. (2008). Interaction orientation and firm performance, *Journal of Marketing*, 72(1), 27-45.

Ramayah, T., Lee, J. W. C., & In, J. B. C. (2011). Network collaboration and performance in the tourism sector. *Service Business*, *5*(4), 411-428.

Rao, P.K., & Bhargav, V.R. (2016). A Study on Green Packaging-A Case Study Approach With Reference To Dell Inc. *International Educational Scientific Research Journal*, 2(7), 83-84.

Rea, L.M. & Parker, R.A. (2014). *Designing and conducting survey research: A comprehensive guide*. New York: Wiley.

Reed, M.S. (2008). Stakeholder participation for environmental management: A literature review. *Biological Conservation*, 141, 2417-2431.

Reinhardt F L (1998). Environmental Product Differentiation: Implications for Corporate Strategy, *California Management Review*, 40(4), 43-73.

Renko, N., Sustic, I., & Butigan, R. (2011). Designing marketing strategy using the five competitive forces model by Michael E. Porter-Case of Small Bakery in Croatia. *International journal of management cases*, *13*(3), 376-385.

Rennings, K., & Ziegler, A. (2004). *Determinants of Environmental Innovations in Germany: Do Organizational Measures Matter? A Discrete Choice Analysis at the Firm Level* (No. 04-30). ZEW Discussion Papers.

Rich, J., Jones, J., Heitger, D., Mowen, M., & Hansen, D. (2011). *Cornerstones of Financial and Managerial Accounting* (2nd Ed). Boston:South western, Cengage Learning.

Rigdon, E. E. (1996). CFI versus RMSEA: A comparison of two fit indexes for structural equation modeling. Structural Equation Modeling. *A Multidisciplinary Journal*, 3(4), 369-379.

Robinson, L. (Ed.). (2014). *Proceedings of the 2009 Academy of Marketing Science (ams) Annual Conference*. Berlin: Springer.

Robinson, H.S., Anumba, C.J., Carrillo, P.M. & Al-Ghassani, A.M. (2005). Business performance measurement practices in construction engineering organisations. *Measuring Business Excellence*, 9(1), 13-22.

Roche, M., Duffield, C. & White, E. (2011). Factors in the practice environment of nurses working in impatient mental health: A partial least squares path modeling approach. *International Journal of Nursing Studies*, 48:1475-1486.

Ross, S. A., Westerfield, R., Jordan, B.D. (2003). *Fundamentals of Corporate Finance*. 6th ed. New York: McGraw-Hill.

Rossouw, D., Roux, S.J. & Groenewald, D. (2003). *Strategic Management: An Applied South African Perspective.* Cape Town: New Africa Books (Pty) Ltd

Rothaermel, F. T. (2012). *Strat.Mgmt.: Concepts and Cases*. New York: McGraw-Hill/Irwin

Rumelt, R. P. (2003). What in the world is competitive advantage? *Policy working paper*, *105*, 1-5.

Russell, B., & Purcell, J. (2009). *Online research essentials: designing and implementing research studies*. New York: John Wiley & Sons.

Russo, M. V., & Fouts, P. A. (1997). A resource-based perspective on corporate environmental performance and profitability. *Academy of Management Journal*, *40*(3), 534-559.

Saad, R., & Abdullah, M. Z. (2013). Determining young people environmental consciousness of green packaging in consumer product packaging. *Elixir Marketing Mgmt*, 57(1),14034-14040

Sabir, R. I., Safdar, M., Khurshid, N., & Hafeez, I. (2014). Influence of Factors in Green Advertising upon Purchase Intentions-A Study of Pakistani University Students. *International Review of Management and Business Research*, *3*(4), 2131.

Sahay, B.S, Stough, R.R, Sohal, & Goyal, S (2006). *Green Business*. Volume 1. Kolkota: Allied Publishers.

Saini, M. (2014). Emerging Trends In Green Marketing. *International Journal of Advanced Engineering and Management (IJAEM)*, *1*(1).1-4.

Sambu, F.K. (2016). Effect of green packaging on business performance in the manufacturing in Nairobi County, Kenya *International Journal of Economics, Commerce and Management,* 4(2), 741-753.

Sanchez-Rodriguez, C., Hemsworth, D. & Martinez-Lorente, A.R. (2005).The effect of supplier development initiatives on purchasing performance: A structural model. *Supply Chain Management: An International Journal*, 10(4), 289–301

.

Sandada, M. (2013*). Strategic Planning and its Relationship with the Performance of Small and Medium sized enterprises in Gauteng*. Unpublished Doctoral Dissertation. Vaal University of Technology, Johannesburg. South Africa.

Sandada. M., Pooe. D., & Manilall. D. (2014). Strategic Planning and Its Relationship with Business Performance among Small and Medium Enterprises in South Africa. *International Business & Economics Research Journal*. 3, (3), 167- 183.

Santamaria, S., Nieto, M. J., & Miles, I. (2012). Service innovation in manufacturing firms: Evidence from Spain. *Journal Technovation*, 32, 144-155.

Santos-Vijande, M, L., Lopez-Sanchez, J, A., & Trespalacios, J, A. (2012). How organizational learning affects a firm's flexibility, competitive strategy, and performance. *Journal of Business Research*, 1079-1089.

Sari, L. A., & Hutagaol, Y. R. (2009). Debt to equity ratio, degree of operating leverage stock beta and stock returns of food and beverages companies on the Indonesian stock exchange. *Journal of Applied Finance and Accounting*, *2*(1), 1-12.

Sarstedt, M., Ringle, C.M., Smith, D., Reams, R. & Hair, J.F. (2014). *Journal of Family Business Strategy*, 5, 105-115.

Saunders, M., Lewis, P. & Thornhill, A. (2007). *Research methods for business students*. 4th Ed. Essex: Prentice Hall.

Saunders, M., Lewis, P., and Thornhill, A. (2009). *Research Methods for business students*. 5th ed. London: Prentice Hall.

Saunders, M.N., Saunders, M., Lewis, P & Thornhill, A (2011). *Research Methods for Business Students.* (5th ed.). New Delhi: Pearson Education.

Saurombe, M.D (2014). *Talent Management As a Predictor of Positive Work Related Outcomes for Academic Staff in South African HEIs*. Master of Commerce in Human Resource Management, North West University, Mafikeng Campus.

Schermelleh-Engel, K., & Moosbrugger, H. (2003). Evaluating the fit of structural equation models: tests of significance and descriptive goodness-of-fit measures. *Methods of Psychological Research Online,* 8(2), 23-74.

Schlegelmilch, B.B. (2002). Special Symposium on Shelby D. Hunt's "A general Theory of Competition: Resources, Competences, Productivity Economic Growth" Part 1. *Journal of Marketing Management*, 18, 221-227.

Schmuck, D., Matthes, J., Naderer, B., & Beaufort, M. (2017). The Effects of Environmental Brand Attributes and Nature Imagery in Green Advertising. *Environmental Communication,* 1-16.

Schreiber, J.B., Stage, F.K., King, J., Nora, A., & Barlow, E.A. (2006). Reporting Structural Equation Modeling and Confirmatory Factor Analysis Results: A review. *The journal of educational research*, 99(6), 323-337.

Schriber, S., & Löwstedt, J. (2015). Tangible resources and the development of organizational capabilities. *Scandinavian Journal of Management*, *31*(1), 54-68.

Schulze, S. & Kamper, G. (2014). The use of mixed methods as reflected in two eminent South African educational research journals. *Journal for New Generation Sciences,* 10(1),130-147.

.

Schumacker, R. E. & Lomax, R.G. (2004). *A Beginner's Guide to Structural Equation Modeling.* 2nd ed. Mahwah: Erlbaum.

Schumacker, R. E., & Lomax, R. G. (2010). *A beginner's guide to structural equation modeling.* New York: Routledge.

Schumacker, R. E., & Lomax, R. G. (2012). *A beginner's guide to structural equation modeling*. New York: Routledge.

Schumacker, R.E. & Lomax, R.G. (2010). *A beginner's guide to structural equation modeling.* 3rd ed. New York: Routledge.

Schvaneveldt, S. J. (2003). Environmental performance of products: Benchmarks and tools for measuring improvement. *Benchmarking: An International Journal*, 10(2), 137-152.

Majeed, S. (2011). The impact of competitive advantage on organizational performance. *European Journal of Business and Management*, 3(4), 191-196.

Scotland, J. (2012). Exploring the Philosophical Underpinnings of Research: Relating Ontology and Epistemology to the Methodology and Methods of the Scientific, Interpretive, and Critical Research Paradigms. *English Language Teaching*; 5(9), 9-16.

Sedmark, M. & Longhurst, P. (2010). Methodological choices in enterprise systems research. *Business Process Management Journal*, 16(1), 76-92.

Sefotho, M.M (2015). A Researcher's Dilemma: Philosophy in Crafting Dissertations and Theses. *Journal of Social Sciences*, 42(1, 2), 23-36.

Seggie, S. H., & Griffith, D. A. (2008). The resource matching foundations of competitive advantage: An alternative perspective on the globalization of service firms. *International Marketing Review*, *25*(3), 262-275.

Sekaran, U & Bougie, R. (2013). *Research Methods for Business*. (6th ed). Brighton, West Sussex: John Wiley & Sons Ltd.

Sekaran, U. & Bougie, R. (2009). *Research Methods for Business. A skills building approach.* London: SAGE.

Sekaran, U., & Bougie, R. (2011). *Business Research Methods: A skill-building approach*. New York: McGraw-Hill

Sekaran, U., & Bougie, R. (2013). *Research Methods for Business: A skills building approach,* Sixth Ed. Brighton: John Wiley & Sons Ltd.

Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach*. Brighton: John Wiley & Sons.

Sen, P.K., Bohidar, S.K, Shrivas, Sharma, Y & Modi, V (2015). Study On Innovation, Research And Recent Development In Technology For Green Manufacturing, International *Journal of Mechanical Engineering and Robotics Research*, 4(1), 185-194.

Sen, R. A. (2014). A Study of the Impact of Green Marketing Practices on Consumer Buying Behavior in Kolkata. *International Journal of Management and Commerce Innovations*, *2*(1), 61-70.

Sengfeng (2012). *The Balanced Scorecard as an instrument to manage strategy in the Water Board* (MBA dissertation, North-West University (South Africa), Potchefstroom Campus).

Serebro and Creamers Media Research Council, (2010), *South Africa's Electricity Industry*. Available Online: http://http://www.engineeeringnews.co.za Assessed online [4 April 2017]

Shafi, A.A. (2016). *The effects of access to finance on the productivity and profitability of small and medium enterprises in the manufacturing sector of Ethiopia*. Doctor Technologiae. Tshwane University of Technology, Pretoria.

Shannon-Baker, J. (2016). Making Paradigms Meaningful in Mixed Methods Research. *Journal of Mixed Methods Research*, 10(4), 319–334.

Shao, A.T. (2002). *Marketing research: An aid to decision making*. Cincinnati: South Western Thompson Learning.

Shapfi, A.H.B.M (2015). *The Influence of Green Product Innovation toward Business Performance.* Bachelor Degree of Technology Management in Innovation Technology research report. Universiti Teknikal Malaysia Melaka

Sheehan, K., & Atkinson, L. (Eds.). (2016). *Green Advertising and the Reluctant Consumer*. London: Routledge.

Sheehan, N. T., & Foss, N. J. (2009). Exploring the roots of Porter's activity-based view. *Journal of Strategy and Management*, *2*(3), 240-260.

Sibanda, M.M. (2013). Small Medium and Micro-Enterprises in Local Economic Development: A South African Local Government Perspective: *Journal of Public Administration*, 48(8), 656-670.

Siddique, M., Hayat, K., Akbar, I., & Cheema, K. U. R. (2013). Impediments of Green Marketing in Pakistan. *International Journal of Management & Organizational Studies*, 2(1), 22-27.

Sihite, M. (2018). Competitive Advantage: Mediator of Diversification and Performance. *IOP Conference Series: Materials Science and Engineering* 288(1), 012.

Sikhwari, T.M. (2015). *The influence of supplier information sharing and information quality on strategic partnerships and internal lean practices among small to medium enterprises in South Africa* (Master's dissertation). Vaal University of Technology. Vanderbijlpark.

Silvestro, R. (2014) Performance topology mapping: understanding the drivers of performance, *International Journal of Production Economics*, 156(1), 269-282.

Simon, D.H., & Gomez, M.I. (2005, May). *The Competitive Causes and Consequences of Customer Satisfaction.* In American Agricultural Economics Association Annual Meeting, Providence, Rhode Island, July.

Singh, B., Matthews, J., Mullineux, G., & Medland, T. (2009). *Product development in manufacturing SMES: Current state, challenges and relevant supportive techniques*. In DS 58-6: Proceedings of ICED 09, the 17th International Conference on Engineering Design, Vol. 6, Design Methods and Tools (pt. 2), Palo Alto, CA, USA, 24.-27.08. 2009.

Singh, M. P., Chakraborty, A., & Roy, M. (2016). The link among innovation drivers, green innovation and business performance: empirical evidence from a developing economy. *World Review of Science, Technology and Sustainable Development*, *12*(4), 316-334.

Singh, P. B., & Pandey, K. K. (2012). Green marketing: Policies and practices for sustainable development. *Integral Review*, 5(1), 22-30.

Singh, R.K., Garg, S.K. & Deshmukh, S.G. (2010). The competitiveness of SMEs in a globalized economy: Observations from China and India. *Management Research Review*, 33(1), 54-65.

Sinha, G. (2012). *Financial Statements Analysis*. New Delhi. PHI learning private limited

Sitharam, S (2014). *Factors Affecting the Performance of Small and Medium Enterprises in Kwazulu-Natal.* Master of Business Administration dissertation. University Of KwaZulu-Natal, Durban.

Small Enterprise Development Agency (SEDA) (2012). *Analysis of the needs, state and performance of small and medium businesses in the Agriculture, Manufacturing, ICT and Tourism Sectors in South Africa. Final report*. Available online: http://www.seda.org.za/Publications. [4 April 2017].

Smith, R. V., Densmore, L. D., & Lener, E. F. (2016). *Graduate research: A guide for students in the sciences*. New York: Academic Press.

Solvalier, I. (2010). *Green Marketing Strategies - Case Study about ICA Group AB*, Master Thesis in Business Administration and Economics Degree Thesis. Karlstad University Karlstad Business School.

Somekh, B. & Lewin, C. (2005). *Research methods in social sciences*. London: Sage.

Steiger, J. H. & Lind, J.C. (1980). *Statistically based tests for the number of common factors*. Paper presented at the annual Spring Meeting of the Psychometric Society, Iowa City, IA.

Steiger, J.H. (2007). Understanding the limitations of global fit assessment in structural equation modeling. *Personality and Individual differences*, 42(5):893-898.

Stein, C.M., Morris, N.J. & Nock, N.L. (2012). Structural equation modeling. *Methods in Molecular Biology*, 850,495-512.

Steinert, Y. (ed) (2014). *Faculty Development in the Health Professions: A focus on Research Practice*. Montreal, QC: Springer.

Sternberg, E. (1997). The defects of stakeholder theory. *Corporate Governance: An International Review*, *5*(1), 3-10.

Sternberg, E. (2000). *Just Business*. New York: Oxford University Press.

Sternberg, E. (1996). The Defects of Stakeholder Theory, *Corporate Governance* 5(1), 3–10.

Stoelhorst, J. W., & Bridoux, F. (2007, June). *Beyond competitive advantage: What can theories of strategy explain?* In Emory University Conference (pp. 14-16).

Stoppani, T. (2011). *Paradigm Islands: Manhattan and Venice: Discourses on Architecture and the City*. New York:: Routledge.

Suhr, D.D. (2006). *Exploratory or confirmatory factor analysis?* (pp. 1-17). Cary: SASInstitute.

Sumaedi, S., Bakti, I. G. M. Y., Astrini, N. J., Rakhmawati, T., Widianti, T., & Yarmen, M. (2014). *Public Transport Passengers' Behavioural Intentions: Paratransit in Jabodetabek–Indonesia*. Springer Science & Business Media.

Sung-Hoea, K., Gyeong-Seokb, K., Seong-Sikc, C., Yung-Sungd, C & Seung-Neoe, S. (2018). *A Research on the Use Ofmobile Move Centers Service Using Structural Equation Model (SEM).* 4th international conference of theory and practice. Asia Pacific Institute of Advanced Research (APIAR), 45-53.

Sunjka, B.P., & Emwanu, B. (2015). *Risk Management in Manufacturing SMEs in South Africa*. *International Association for Management of Technology*. IAMOT 2015 Conference Proceedings, 1469-1486.

Swanson, A.R & Chermack, J.T (2013). *Theory building in applied disciplines*. San Francisco: Berrett-Koehler Publishers, Inc.

Swenson, D. (2009). *Society, spirituality, and the sacred: a social scientific introduction*. North York, Ontario: University of Toronto Press.

Synodinos, C. (2013). *Black Generation Y Students' Environmental Concerns, Attitudes towards Green Advertising and Environmental Behaviour*, Magister Commercii dissertation. North-West University Vaal Triangle Campus.

Synodinos, C. (2014). *Antecedents of green purchase behaviour amongst black Generation Y students*, PhD thesis, Faculty of Economic Sciences and Information Technology, North-West University, Vaal Triangle Campus.

Synodinos, C., Bevan-Dye, A. L. & De-Klerk, N. (2013). Influence of conative attitudes towards green advertising on black Generation Y students' environmental behaviour. *Mediterranean Journal of Social Sciences*, 4(3), 17-24.

Taasoobshirazi, G., & Wang, S. (2016). The performance of the SRMR, RMSEA, CFI, and TLI: An examination of sample size, path size, and degrees of freedom. *Journal of Applied Quantitative Methods*, *11*(3), 31-40.

Tabachnick, B.G. & Fidell, L.S. (2007). *Using multivariate statistics*. 5th Ed. New York: Allyn and Bacon.

Tan, Y., Zhang, Y., & Khodaverdi, R. (2017). Service performance evaluation using data envelopment analysis and balanced scorecard approach: an application to automotive industry. *Annals of Operations Research*, *248*(1-2), 449-470.

Tangen, S. (2003). An overview of frequently used performance measures. *Work study*, 52(7): 347-354.

Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education*, 2, 53-55.

Tehrani, N. (2011). *Understanding green business*. New York: AuthorHouse.

Tehseen, S., & Ramayah, T. (2015). Entrepreneurial competencies and SMEs business success: The contingent role of external integration. *Mediterranean Journal of Social Sciences*, *6*(1), 50-59.

Teitelbaum, R.S., McDonald., K.S. & Brown. E. (1996). What’s Driving Return on Equity? You Need to look Beyond the Single Number to Understand Why roe Is Booming. *cnnmoney,* 29 April. http://www.uic .edu/classes/mba/mba501/Readings/ROE.htm

Teo, T., & Khine, M. S. (Editors.) (2009). *Structural equation modeling in educational research: Concepts and applications.* Rotterdam, Netherlands: Sense Publishers.

Thibault, M. (2002). *Factors influencing sales performance in small and medium-sized enterprises.* Master of Science thesis, The Faculty of Graduate Studies, The University of Guelph.

Thota, H., & Munir, Z. (2011). *Key concepts in innovation*. London: Palgrave Macmillan.

Tias, R.A (2013). *Analysis the Influence on Green Advertising and Green Product to Consumer Involvement and Affect Purchasing Decision of Ades Mineral Water*. Bachelor of Economics research report. International Management Faculty of Economics and Business State Islamic University Syarif Hidayatullah Jakart.

Tiwari, J. (2012). *Green marketing in India: An Overview*. In 2nd National Conference on Value Based Management-Business for Value or Values in Business (pp. 34-40).

Toppo, L., & Prusty, T. (2012). From performance appraisal to performance management. *Journal of Business and Management, 3*(5), 1-6.
Troup, J. N. (2010). *Green marketing perceptions and opinions: An online comparative company case study of communication strategies*. Berlin: Lambert Academic Publishing.

Tuan, N. P., & Yoshi, T. (2010). Organisational capabilities, competitive advantage and performance in supporting industries in Vietnam. *Asian Academy of Management Journal*, 15(1), 1-21.

Turkmen, H. (2013). *Scientific review of the relational view theory and its contribution to critical sourcing decisionmaking* (Master's thesis, University of Twente).

Tustin, D., Ligthelm, A., Martins, D & Van Wyk, J. (2010). *Marketing research in practice*. Pretoria: UNISA Press.

Tustin, D.R., Ligthelm, A.A., Martins, T.H. & van Wyk, H. (2005). *Marketing research in practice.* .Pretoria: UNISA Press.

Uddin, R., Bose, T. K. & Yousuf, S. (2015). Entrepreneurial orientation (EO) and performance of business in Khulna City, Bangladesh. *Journal of Small Business and Entrepreneurship*, 27(4): 343-352.

UNIDO. (1999). *SMEs in Africa survive against all odds*. [Online]. Available at: Accessed: 08/06/2017.

Urban, B. & Naidoo, R. (2012). Business sustainability: Empirical evidence on operational skills in SMEs in South Africa', *Journal of Small Business and Enterprise Development* 19(1), 146–163

USAID, (2012a). *Energy Efficiency Finance: Supporting SME lending activities in South Africa- A mapping study.* Available Online: http://fspblog.finfindeasy.co,za/wp-content/uploads/USAID-FSP-Energy-Efficiency-Finance-Mapping-Study.pdf Assessed online [7 January 2017]

Van Auken, H., Madrid-Guijarro, A., & García-Pérez-de-Lema, D. (2008). Innovation and performance in Spanish manufacturing SMEs. *International Journal of Entrepreneurship and Innovation Management*, *8*(1), 36-56.

Van den Berg, U., Labuschagne, J-P. & Van den Berg, H. (2013). The effects of greening the supplier and innovation on environmental performance and competitive advantage, *Journal of Transport and Supply Chain Management*, 7(1), 1-20.

van den Elzen, J. (2016). *Consumers' perception regarding sustainable packaging*. Thesis for the Marketing and Consumer Behaviour Group Wageningen University.

Van der Walt, J. (2010). *Barriers to Exports faced by Manufacturing SME's in South Africa*, Master of Business Administration dissertation, University of Pretoria. Pretoria.

Vazquez, R., Santos, M. L. & Alvarez, L. I.. (2001). Market orientation, innovation, and competitive strategies in industrial firms. *Journal of Strategic Marketing*, 69-90.

Venkataraman, S. (2002). Stakeholder Value Equilibrium and the Entrepreneurial Process, *Business Ethics Quarterly*, 3, 45–58.

Vigario, F. (2005). *Managerial Finance*. 3rd ed. Durban: LexisNexis Butterworths.

Vij, S., & Bedi, H. S. (2016). Are subjective business performance measures justified? *International Journal of Productivity and Performance Management*, *65*(5), 603-621.

Viviers, S. (2009). Going green: A SMME perspective. *The Southern African Journal of Entrepreneurship and Small Business Management*, *2*(1) 30-49.

Vosloo, J.J. (2014). *A sport management programme for educator training in accordance with diverse needs of South African schools*. Dissertation. North West University. Vanderbijlpark.

Waddock, S.A. & Graves, S.B. (1997). The corporate social performance: Financial performance link. *Strategic Management Journal*, 18(4),303–309.

Wagner, J. (2005). *Potenciál účetních informací pro měření finanční výkonnosti. (in English: Accounting Information Potential for Performance Measurement).* Praha, University of Economics, 2005, Doctoral Thesis.

Wahid, N. A., & Lee, T. T. (2011). Product, process and combined green innovations on firm's competitive advantages‖. *Elixir Marketing Marketing*, *38*, 4330-4334.

Wahyuni, D. (2012). The research design maze: Understanding paradigms, cases, methods and methodologies. *Journal of Applied Management Accounting Research*, 10(1),69-80.

Wang, X. (2014). What drives Chinese private colleges' internationalization? *African Journal Business Management*, 8(16), 671-680).

Webb, J. (2000). Questionnaires and their design. *The Marketing review,* 1(2), 197-218.

Wegner, T. (2000). *Quantitative methods for marketing decisions*. Cape Town: Juta.

Weiss, A. (1995). Cracks in the Foundations of Stakeholder Theory. *Electronic Journal of Radical Organizational Theory.* http://www.mgnt.waikato.ac.nz/research/ejrot:Vol1_1/weiss.pdf

Welman, C., Kruger, F. & Mitchell, B. (2005). *Research methodology*. Cape Town: Oxford University Press.

Wen-Cheng, W., Chien-Hung, L & Ying-Chien, C. (2011). Types of competitive advantage and analysis, *International Journal of Business Management*, 6(5), 100-105.

Wentzel, P.J (2012). *Modelling Financial Services Adoption through an Intermediary in South Africa: TAM and SEM Approach*. Doctor of Philosophy thesis. University of Pretoria. Pretoria

Wiid, J. & Diggines, C. (2011). *Marketing Rresearch*. Cape Town: Juta and Company.

Wijetunge, W. (2016). Service Quality, Competitive Advantage and Business Performance in Service Providing SMEs in Sri Lanka. I*nternational Journal of Scientific and Research Publication*, 6(7), 720-728.

Williams, L.J., Vandenberg, R.J., & Edwards, J.R. (2009). Structural Equations Modeling in management research: A guide for improved analysis. *The Academy of Management Annals*, *3*(1), 543–604.

Williamson, K., Burstein, F. & McKemmish, S. (2002). The Two Major Traditions of Research. In P. R. Harvey & D. S. Ferguson (Eds.), *Research Methods for Students, Academics and Professionals: Information Management and Systems* (2nd ed.): Centre of Information Studies, Charles Sturt University, Wagga Wagga, New South Wales

Wilson, J. (2010). *Essentials of business research: a guide to doing your research project*. Thousand Oaks, CA.: Sage.

Wong, J. M. (2011). A relational view of resources-based theory: the case of internationalization of Li & Fung group. *The Journal of Human Resource and Adult Learning*, *7*(2), 34-39.

Wongrassamee, S., Gardiner, P.D. & Simmons, J.E.L. (2003). Performance measurement tools: the balanced scorecard and the EFQM excellence model. *Measuring Business Excellence,* 7(1), 14-29.

World Economic Forum, (2016). *Insight report: The global competitiveness report 2015–2016*, viewed 17 May 2017, http://www3.weforum.org/docs/gcr/20152016/Global_Competitiveness_Report_2015-2016.pdf

Wothke, W. (2010). Introduction to structural equation modelling course note. *American Institute of Research,* 1-63.

Wu, I. L., & Chang, C. H. (2012). Using the balanced scorecard in assessing the performance of e-SCM diffusion: A multi-stage perspective. *Decision Support Systems*, *52*, 474–485.

Wu, M. (2013). Towards a stakeholder perspective on competitive advantage. *International Journal of Business and Management, 8*(4), 20-29.

WU, W.W. (2010). Linking Bayesian networks and PLS path modeling for causal analysis. *Expert Systems with Applications*, 37, 134-139.

Wu, Z. Choi, T.Y. & Rungtusanatham, M.J. (2010). Supplier–supplier relationships in buyer–supplier–supplier triads: Implications for supplier performance, *Journal of Operations Management* 28, 115–123.

Xie, X., Huo, J., Qi, G., & Zhu, K. X. (2016). Green Process Innovation and Financial Performance in Emerging Economies: Moderating Effects of Absorptive Capacity and Green Subsidies. *IEEE Transactions on Engineering Management*, *63*(1), 101-112.

Yan, Y. K., & Yazdanifard, R. (2014). The concept of green marketing and green product development on consumer buying approach. *Global journal of commerce and management perspective*, *3*, 33-38.

Yang, X. S., Nagar, A. K., & Joshi, A. (Eds.). (2017). *Smart Trends in Systems, Security and Sustainability: Proceedings of Ws4 2017* (Vol. 18). Berlin: Springer.

Yannopoulos, P. (2011). Defensive and offensive strategies for market success. *International Journal of Business and Social Science*, *2*(13), 1-12.

Yeboah-Boateng, E. O. (2013). *Cyber-Security Challenges with SMEs in Developing Economies: Issues of Confidentiality, Integrity & Availability (CIA).* Aalborg: Institut for Elektroniske Systemer, Aalborg Universitet.

Yee, H.P. (2016). *Green Marketing Practice and Its Effect on Small and Medium Enterprises Performance.* Bachelor of Technopreneurship dissertation. Universiti Teknikal Malaysia Melaka.

Yen, H.J & Chen, J. (2010). *The Effects of Co-operation on Innovation Competence*. 4th International Conference on Operations and Supply Chain Management, Hong Kong & Guangzhou, Jul.25 to Jul.31, 2010.

Yilmaz, C., Sezen, B. & Kabadayi, E.T. (2004). Supplier fairness as a mediating factor in the supplier performance–reseller satisfaction relationship, *Journal of Business Research* 57, 854–863.

Yuan, Ke-Hai. (2005). Fit indices versus Test Statistics. *Multivariate Behavioral Research*. 40(1), 115- 148.

Zahari, F., & Thurasamy, R. (2012). *Linking green product innovation, technological and human resource capabilities: A conceptual model*. In *Innovation Management and Technology Research (ICIMTR), 2012 International Conference on (pp. 162*-167). New York: IEEE.

Zahari, F.M & Ramaya, T. (2017). Green Innovation and Firm Performance: The Ecological Modernization Perspective. *Journal of Technology and Operations Management,* 12 (1), 21-31.

Zailani, S., Shaharudin, M. R., Govindasamy, V., Ismail, M., & Mahdzar, S. F. A. S. (2015). *The eco-efficiency practices of the sustainable packaging and its effect towards sustainable supply chain performance*. In *Technology Management and Emerging Technologies (ISTMET), 2015 International Symposium on* (pp. 448-453). IEEE., August).

Zait, A. & Bertea, P. E. (2011). Methods for testing discriminant validity. *Management and Marketing*, 9(2), 217-224.

Zeeman, R.C. (2013). *Hedonic and Unitarian shopping motivations among South African black generation Y students*. MCom dissertation in Marketing Management. North West University. Vaal Triangle.

Zhanglan, (2016). *Green Marketing Practices and Competitive Advantage: A Case of Commercial Real Estate Development Companies in Nairobi, Kenya.* Master of Business Administration (MBA), School of Business, University Of Nairobi.

Zhu, Q., Sarkis, J. & Lai, K. (2013). Institutional-based antecedents and performance outcomes of internal and external green supply chain management practices, *Journal of Purchasing and Supply Management*, 19(2), 106–117.

Ziegler, A., & Nogareda, J. S. (2009). Environmental management systems and technological environmental innovations: Exploring the causal relationship. *Research Policy, 38*(5), 885-893.

Zikmund, M., Babin, B.J., Carr, J.C. & Griffin, M. (2013). *Business Research Methods*. 8th Ed. Mason: South Western.

Zikmund, W.G. & Babin, B.J. (2013). *Essentials of marketing research*. 5th ed. Mason: SouthWestern Cengage Learning.

Zou, P.X.W., Sunindijo, R.Y. & Dainty, A.R.J. (2014). A mixed methods research design for bridging the gap between research and practice in construction safety. *Safety Science*, 70:316–326.

Zulkiffli, S. & Perera, N. (2011). *A literature analysis on business performance for SMES - subjective or objective measures?* 2011 SIBR Conference on Interdisciplinary Business and Economics Research (pp. 1-9). Bangkok, Thailand: Society of Interdisciplinary Business Research (SIBR).

Zulkiffli, S. N. A. (2014). Business performance for SMEs: Subjective or objective measures. *Review of Integrative Business and Economics Research*, *3*(1), 371-381.

Zulwayo, N.V. (2013). *Correlation Between Coping Strategies And The Levels Of Posttraumatic Stress Disorder And Depressive Symptoms Among Sexually Assaulted Survivors In North West Province, South Africa*. Masters of Curationis (Nursing Sciences) In the Faculty of Agriculture, Science and Technology at North West University (Mafikeng Campus).

APPENDIX A: ETHICAL CLEARANCE CERTIFICATE

UNIVERSITY OF THE WITWATERSRAND JOHANNESBURG

Research Office

HUMAN RESEARCH ETHICS COMMITTEE (NON-MEDICAL)
R14/49 Maziriri

CLEARANCE CERTIFICATE	**PROTOCOL NUMBER: H17/06/26**
PROJECT TITLE	The impact of green marketing practices on competitive advantage and business performance among manufacturing small and medium enterprises (SMEs) in South Africa
INVESTIGATOR(S)	Mr E Maziriri
SCHOOL/DEPARTMENT	Economic and Business Sciences/
DATE CONSIDERED	23 June 2017
DECISION OF THE COMMITTEE	Approved
EXPIRY DATE	17 July 2020

DATE 18 July 2017 **CHAIRPERSON** J. Knight
(Professor J Knight)

cc: Supervisor : Professor R Chinomona

DECLARATION OF INVESTIGATOR(S)

To be completed in duplicate and **ONE COPY** returned to the Secretary at Room 10004, 10th Floor, Senate House, University. Unreported changes to the application may invalidate the clearance given by the HREC (Non-Medical)

I/We fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee. **I agree to completion of a yearly progress report.**

Signature

29 / 06 / 2017
Date

PLEASE QUOTE THE PROTOCOL NUMBER ON ALL ENQUIRIES

APPENDIX B: CONSENT LETTER

UNIVERSITY OF THE
WITWATERSRAND,
JOHANNESBURG

I acknowledge that I understand the research and that the research has been fully explained to me. I also understand that the information which I give to the researcher will be used in the research report.

I further acknowledge that the researcher has promised me the following:

That my participation in this research is voluntary

That my personal details will remain anonymous throughout the research study as well as in the research dissertation

That I can refuse to answer any questions which I feel uncomfortable with

I hereby consent to being a participant for the research study: ***The Impact of green marketing practices on competitive advantage and business performance among manufacturing small and medium enterprises (SMEs) in South Africa.***

Signature ☐ **(Please Sign with an X)**

Date Signed ______________________

APPENDIX C: PARTICIPANT INFORMATION SHEET

UNIVERSITY OF THE
WITWATERSRAND,
JOHANNESBURG

23 July 2017

Dear Sir/Madam

My name is Eugine Tafadzwa Maziriri, and I am currently studying my Doctor of philosophy (PhD) in Marketing at the University of the Witwatersrand, Johannesburg. I am conducting research on the impact of green marketing practices on competitive advantage and business performance among manufacturing small and medium enterprises (SMEs) in South Africa. As a manager of a manufacturing small and medium enterprise, you are invited to take part in this survey. The primary objective of this study is to determine the impact of green marketing practices on competitive advantage as well as to determine how competitive advantage has an impact on business performance of SMEs in the manufacturing sector of South Africa. The results of the study will be a doctoral thesis, and will become available online after completion of the research. Please take note that there are no right or wrong answers. This survey is confidential and anonymous, which are both guaranteed by no need to enter your name on the questionnaire. The participants' involvement is solely answering the questionnaire, and participation does not involve any risk or loss of benefits whether or not you participate, neither when ambiguity arises, nor does the research does not under any circumstance involve payment. In addition, your participation is completely voluntary, you may chose not to participate in the study, not to answer any questions or withdraw at any time without any penalty.

The first part of the survey captures some demographic data. Please tick whichever boxes are applicable. The second part of the survey comprises 50 statements. Please indicate the extent to which you agree with each statement, by ticking in the appropriate box. The entire survey should take you 30 minutes to complete. Thank you for considering participation. Should you have any questions, or should you wish to obtain a copy of the results of the survey, please contact me on (081)-040 5090, or online via email at eugine.maziriri@wits.ac.za. My supervisor's name and contact details are: Professor Richard Chinomona- to reach at richard.chinomona@wits.ac.za (071)-024 7488. My co-supervisor's name and contact details are: Dr Norman Chiliya-to reach at norman.chiliya@wits.ac.za (060) 985 4838.

Kind regards,

Eugine Tafadzwa Maziriri
PhD Candidate: Division of Marketing
School of Economic and Business Science
University of the Witwatersrand, Johannesburg

APPENDIX D: QUESTIONNAIRE

UNIVERSITY OF THE
WITWATERSRAND,
JOHANNESBURG

SECTION A: DEMOGRAPHIC INFORMATION

This section seeks some background information about you. It is important to obtain this information, as this will have a bearing on the results of the survey. Please tick whichever boxes are applicable.

A1	**Please indicate your gender**		
	Male	**Female**	**Prefer not to say**

A2	**Please indicate your age category**				
	18 to 30 years	**31-39 years**	**40-49 years**	**50-59 years**	**60 years and above**

A3	**What is your highest level of education?**				
	No formal education	**Basic Education**	**Diploma**	**Degree**	**Postgraduate or equivalent degree**

A4	Is this a family business?	
	Yes	No

A5	Please indicate the number of employees working in your business?				
	Less than 10 employees	Between 10 and 50 employees	Between 50 and 100 employees	Between 100 and 200 employees	Above 200 employees

A6	How long have you been in business?				
	1-3 years	4-6years	7 to 10years	11-20years	21 years and above

A7	In which area is your business situated			
	CBD	Outskirts	Industrial	Other

SECTION B: Green packaging

Below are statements about green packaging you can indicate the extent to which you agree or disagree with the statement by ticking the corresponding number in the 5 point scale below:

1=strongly disagree 2= disagree 3= moderately agree 4= agree 5= strongly agree

Please tick only one number for each statement

GP1	*The packaging of our products is non-biodegradable*	Strongly disagree	1	2	3	4	5	Strongly agree
GP2	*The packaging of our products is reusable*	Strongly disagree	1	2	3	4	5	Strongly agree
GP3	*We package most of our products in recycle materials*	Strongly disagree	1	2	3	4	5	Strongly agree

GP4	*We substitute our unfriendly packaging materials with friendly materials*	Strongly disagree	1	2	3	4	5	Strongly agree
GP5	*Our products have no excessive packaging*	Strongly disagree	1	2	3	4	5	Strongly agree

SECTION C: Green advertising

Below are statements about green advertising you can indicate the extent to which you agree or disagree with the statement by ticking the corresponding number in the 5 point scale below:

1=strongly disagree 2= disagree 3= moderately agree 4= agree 5= strongly agree

Please tick only one number for each statement

GA1	*Our messages on sustainability focus on environmental impact of the products*	Strongly disagree	1	2	3	4	5	Strongly agree
GA2	*Our messages on sustainability focus on environmental benefits of the products*	Strongly disagree	1	2	3	4	5	Strongly agree
GA3	*Our messages on sustainability intend to encourage environmentally responsible behaviour among consumers*	Strongly disagree	1	2	3	4	5	Strongly agree
GA4	*Our messages on sustainability focus on company's values regarding impact on environment*	Strongly disagree	1	2	3	4	5	Strongly agree
GA5	*Our messages on sustainability focus on company's mission regarding impact on environment*	Strongly disagree	1	2	3	4	5	Strongly agree
GA6	*We make environmental claims based on life expectancy of products (e.g. raw material production, manufacturing)*	Strongly disagree	1	2	3	4	5	Strongly agree

SECTION D: Green product innovation

Below are statements about green product innovation you can indicate the extent to which you agree or disagree with the statement by ticking the corresponding number in the 5 point scale below:

1=strongly disagree 2= disagree 3= moderately agree 4= agree 5= strongly agree

Please tick only one number for each statement

GPI1	*Our firm often places emphasis on developing new green-products through new technologies to simplify their package.*	Strongly disagree	1	2	3	4	5	Strongly agree
GPI2	*Our firm often places emphasis on developing new green-products through new technologies to simplify their construction.*	Strongly disagree	1	2	3	4	5	Strongy agree
GPI3	*Our firm often places emphasis on developing new green-products through new technologies to easily recycle their components.*	Strongly disagree	1	2	3	4	5	Strongly agree
GPI4	*Our firm often places emphasis on developing new green-products through new technologies to easily decompose their materials.*	Strongly disagree	1	2	3	4	5	Strongly agree
GPI5	*Our firm often places emphasis on developing new green-products through new technologies to use natural materials.*	Strongly disagree	1	2	3	4	5	Strongly agree
GPI6	*Our firm often places emphasis on developing new green-products through new technologies to reduce damage from waste as much as possible.*	Strongly disagree	1	2	3	4	5	Strongly agree
GPI7	*Our firm often places emphasis on developing new green-products through new technologies to use as little energy as possible.*	Strongly disagree	1	2	3	4	5	Strongly agree

<u>SECTION E: Green process innovation</u>

Below are statements about green process innovatiomn you can indicate the extent to which you agree or disagree with the statement by ticking the corresponding number in the 5 point scale below:

1=strongly disagree 2= disagree 3= moderately agree 4= agree 5= strongly agree

Please tick only one number for each statement

GPRI1	*The manufacturing process of the business effectively reduces the emission of hazardous substances or waste.*	Strongly disagree	1	2	3	4	5	Strongly agree
GPRI2	*The manufacturing process of the business recycles waste and emission that allow*	Strongly disagree	1	2	3	4	5	Strongly agree

	them to be treated and re-used.							
GPRI3	*The manufacturing process of the business reduces the consumption of water, electricity, coal, or oil.*	Strongly disagree	1	2	3	4	5	Strongly agree
GPRI4	*The manufacturing process of the business reduces the use of raw materials.*	Strongly disagree	1	2	3	4	5	Strongly agree

SECTION F: Competitive advantage

Below are statements about competitive advantage you can indicate the extent to which you agree or disagree with the statement by ticking the corresponding number in the 5 point scale below:

1=strongly disagree 2= disagree 3= moderately agree 4= agree 5= strongly agree

Please tick only one number for each statement

CA1	*Our products are difficult for competitors to copy*	Strongly disagree	1	2	3	4	5	Strongly agree
CA2	*Our response to competitive moves in the market place is good*	Strongly disagree	1	2	3	4	5	Strongly agree
CA3	*Our ability to track changes in customer needs and wants is good*	Strongly disagree	1	2	3	4	5	Strongly agree
CA4	*We are quick to respond to customer complaints*	Strongly disagree	1	2	3	4	5	Strongly agree
CA5	*Our collection of strategic information about customers and competitors for use with strategic planning is good*	Strongly disagree	1	2	3	4	5	Strongly agree
CA6	*Our speed of disseminating information in-house about competitors is good*	Strongly disagree	1	2	3	4	5	Strongly agree
CA7	*Our analysis of customer satisfactions with the products is good*	Strongly disagree	1	2	3	4	5	Strongly agree
CA8	*We make effort for products changes to overcome customer dissatisfaction with existing products*	Strongly disagree	1	2	3	4	5	Strongly agree

CA9	*Our products have a significant advantage over those of our competitors.*	Strongly disagree	1	2	3	4	5	Strongly agree
CA10	*Our product designs are unique*	Strongly disagree	1	2	3	4	5	Strongly agree
CA11	*We are quick to respond in meeting changes to customer needs and wants*	Strongly disagree	1	2	3	4	5	Strongly agree

SECTION G: Business Performance

Below are statements describing the business performance of a firm. These statements are divided into five sections: Market, Suppliers, Process, People and Customer Relationships measures. You are expected to indicate their level of agreement with regards to their firm's actual current conditions of business performance relative to their major industry competitors. You can indicate the extent to which you agree or disagree with the statement by ticking the corresponding number in the 5 point scale below:

1=strongly disagree 2= disagree 3= moderately agree 4= agree 5= strongly agree

Please tick only one number for each statement

Market Performance								
BP1	*0ur market-share growth is the best in the industry*	Strongly disagree	1	2	3	4	5	Strongly agree
BP2	*Our sales turnover is the best in the industry*	Strongly disagree	1	2	3	4	5	Strongly agree
Supplier Performance								
BP3	*We provide the best supplier product quality in the industry*	Strongly disagree	1	2	3	4	5	Strongly agree
BP4	*We provide the best Suppler communication in the industry*	Strongly disagree	1	2	3	4	5	Strongly agree
BP5	*We provide the best Supplier delivery performance in the industry*	Strongly disagree	1	2	3	4	5	Strongly agree
Process Performance								
BP6	*We provide the best work in process (WIP)* inventory in the industry*	Strongly disagree	1	2	3	4	5	Strongly agree
BP7	*We have the best order-fulfilment*	Strongly disagree	1	2	3	4	5	Strongly agree

	*lead time*** in the industry*							
BP8	*We have the best product-quality development in the industry*	Strongly disagree	1	2	3	4	5	Strongly agree
People performance								
BP9	*We have the best Performance-appraisal results in the industry*	Strongly disagree	1	2	3	4	5	Strongly agree
BP10	*We have the best skill level of employees in the industry*	Strongly disagree	1	2	3	4	5	Strongly agree
BP11	*We have the best departmenta l communication in the industry*	Strongly disagree	1	2	3	4	5	Strongly agree
Customer-Relationship Performance								
BP12	*Our resolution of customer complaints is the best in the industry*	Strongly disagree	1	2	3	4	5	Strongly agree
BP13	*Our customer loyalty/retention is the best in the industry*	Strongly disagree	1	2	3	4	5	Strongly agree
BP14	*Our quality reputation and award achievement is the best in the industry*	Strongly disagree	1	2	3	4	5	Strongly agree
BP15	*Our product returns rate is the best in the industry*	Strongly disagree	1	2	3	4	5	Strongly agree
BP16	*Our speed of order handling and processing is the best in the industry*	Strongly disagree	1	2	3	4	5	Strongly agree

***Work-in-Process (WIP)** relates to the products or components that are no longer raw material but have yet to become finished products.

****Lead time** is the time between placement and receipt of an order.

THE END- Thank You

APPENDIX E: DATA ANALSYS RESULTS

SCALE RELIABILITY CHECK: GREEN PACKAGING SCALE

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.805	.806	5

Item Statistics

	Mean	Std. Deviation	N
GP1	3.56	1.010	304
GP2	3.65	1.086	304
GP3	4.09	1.024	304
GP4	3.75	.986	304
GP5	3.92	1.039	304

Inter-Item Correlation Matrix

	GP1	GP2	GP3	GP4	GP5
GP1	1.000	.716	.512	.574	.258
GP2	.716	1.000	.418	.595	.307
GP3	.512	.418	1.000	.435	.311
GP4	.574	.595	.435	1.000	.413
GP5	.258	.307	.311	.413	1.000

Inter-Item Covariance Matrix

	GP1	GP2	GP3	GP4	GP5
GP1	1.019	.784	.529	.572	.270
GP2	.784	1.178	.465	.636	.346
GP3	.529	.465	1.048	.439	.330
GP4	.572	.636	.439	.972	.424
GP5	.270	.346	.330	.424	1.080

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.797	3.563	4.092	.530	1.149	.045	5
Item Variances	1.059	.972	1.178	.206	1.212	.006	5
Inter-Item	.480	.270	.784	.514	2.900	.023	5

Covariances							
Inter-Item Correlations	.454	.258	.716	.458	2.777	.020	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
GP1	15.42	9.558	.690	.586	.737
GP2	15.33	9.246	.676	.566	.739
GP3	14.89	10.315	.536	.310	.784
GP4	15.23	9.775	.672	.462	.743
GP5	15.06	11.066	.397	.198	.825

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
18.98	14.888	3.858	5

SCALE RELIABILITY CHECK: GREEN ADVERTISING SCALE

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.786	.787	6

Item Statistics

	Mean	Std. Deviation	N
GA1	3.52	1.152	304
GA2	3.77	1.002	304
GA3	3.72	1.042	304
GA4	3.73	1.044	304
GA5	3.80	1.033	304
GA6	3.84	1.054	304

Inter-Item Correlation Matrix						
	GA1	GA2	GA3	GA4	GA5	GA6
GA1	1.000	.320	.304	.415	.320	.337
GA2	.320	1.000	.529	.343	.266	.281
GA3	.304	.529	1.000	.416	.429	.375
GA4	.415	.343	.416	1.000	.520	.381
GA5	.320	.266	.429	.520	1.000	.483
GA6	.337	.281	.375	.381	.483	1.000

Inter-Item Covariance Matrix						
	GA1	GA2	GA3	GA4	GA5	GA6
GA1	1.326	.369	.365	.499	.380	.409
GA2	.369	1.005	.552	.358	.276	.296
GA3	.365	.552	1.085	.452	.462	.412
GA4	.499	.358	.452	1.090	.561	.419
GA5	.380	.276	.462	.561	1.067	.525
GA6	.409	.296	.412	.419	.525	1.110

Summary Item Statistics							
	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.729	3.520	3.842	.322	1.092	.013	6
Item Variances	1.114	1.005	1.326	.322	1.320	.012	6
Inter-Item Covariances	.422	.276	.561	.286	2.036	.007	6
Inter-Item Correlations	.381	.266	.529	.263	1.987	.007	6

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
GA1	18.86	13.986	.470	.238	.771
GA2	18.61	14.648	.483	.317	.765
GA3	18.65	13.786	.580	.395	.742
GA4	18.65	13.688	.593	.377	.739
GA5	18.58	13.882	.573	.393	.744
GA6	18.53	14.124	.521	.299	.757

Scale Statistics			
Mean	Variance	Std. Deviation	N of Items
22.38	19.357	4.400	6

SCALE RELIABILITY CHECK: GREEN PRODUCT INNOVATION SCALE

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.797	.798	7

Item Statistics			
	Mean	Std. Deviation	N
GPI1	3.56	1.088	304
GPI2	3.55	1.089	304
GPI3	3.64	1.017	304
GPI4	3.49	.985	304
GPI5	3.35	1.035	304
GPI6	3.41	1.148	304
GPI7	3.93	1.002	304

Inter-Item Correlation Matrix							
	GPI1	GPI2	GPI3	GPI4	GPI5	GPI6	GPI7
GPI1	1.000	.460	.269	.339	.314	.292	.240
GPI2	.460	1.000	.395	.299	.225	.331	.221
GPI3	.269	.395	1.000	.393	.405	.390	.421
GPI4	.339	.299	.393	1.000	.535	.367	.340
GPI5	.314	.225	.405	.535	1.000	.434	.450
GPI6	.292	.331	.390	.367	.434	1.000	.462
GPI7	.240	.221	.421	.340	.450	.462	1.000

Inter-Item Covariance Matrix							
	GPI1	GPI2	GPI3	GPI4	GPI5	GPI6	GPI7
GPI1	1.185	.545	.298	.363	.354	.365	.262
GPI2	.545	1.185	.438	.320	.254	.414	.241
GPI3	.298	.438	1.035	.394	.427	.456	.430
GPI4	.363	.320	.394	.970	.545	.415	.336
GPI5	.354	.254	.427	.545	1.072	.515	.467

GPI6	.365	.414	.456	.415	.515	1.318	.531
GPI7	.262	.241	.430	.336	.467	.531	1.005

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.562	3.345	3.928	.582	1.174	.036	7
Item Variances	1.110	.970	1.318	.348	1.359	.015	7
Inter-Item Covariances	.399	.241	.545	.304	2.258	.009	7
Inter-Item Correlations	.361	.221	.535	.313	2.416	.007	7

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
GPI1	21.37	18.954	.462	.276	.783
GPI2	21.38	18.903	.467	.312	.782
GPI3	21.29	18.594	.557	.335	.765
GPI4	21.44	18.795	.556	.357	.766
GPI5	21.59	18.316	.578	.410	.761
GPI6	21.52	17.801	.557	.333	.765
GPI7	21.00	18.974	.519	.329	.772

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
24.93	24.513	4.951	7

SCALE RELIABILITY CHECK: GREEN PROCESS INNOVATION SCALE

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.762	.763	4

Item Statistics			
	Mean	Std. Deviation	N
GPRI1	3.63	1.136	304
GPRI2	3.69	1.097	304
GPRI3	3.70	1.075	304
GPRI4	3.67	1.119	304

Inter-Item Correlation Matrix				
	GPRI1	GPRI2	GPRI3	GPRI4
GPRI1	1.000	.491	.494	.361
GPRI2	.491	1.000	.540	.353
GPRI3	.494	.540	1.000	.433
GPRI4	.361	.353	.433	1.000

Inter-Item Covariance Matrix				
	GPRI1	GPRI2	GPRI3	GPRI4
GPRI1	1.290	.612	.603	.458
GPRI2	.612	1.203	.636	.434
GPRI3	.603	.636	1.156	.521
GPRI4	.458	.434	.521	1.251

Summary Item Statistics							
	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.673	3.628	3.697	.069	1.019	.001	4
Item Variances	1.225	1.156	1.290	.135	1.117	.003	4
Inter-Item Covariances	.544	.434	.636	.203	1.468	.007	4
Inter-Item Correlations	.445	.353	.540	.186	1.527	.005	4

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
GPRI1	11.06	6.791	.565	.330	.703
GPRI2	11.00	6.861	.585	.365	.692
GPRI3	10.99	6.752	.630	.402	.668
GPRI4	11.02	7.353	.466	.225	.756

Scale Statistics			
Mean	Variance	Std. Deviation	N of Items
14.69	11.429	3.381	4

SCALE RELIABILITY CHECK: COMPETITIVE ADVANTAGE SCALE

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.837	.846	11

Item Statistics			
	Mean	Std. Deviation	N
CA1	3.76	1.040	304
CA2	3.62	1.065	304
CA3	3.78	1.102	304
CA4	4.02	.953	304
CA5	4.10	.884	304
CA6	3.84	1.038	304
CA7	4.07	.884	304
CA8	4.29	.850	304
CA9	4.33	.798	304
CA10	4.05	.819	304
CA11	3.93	.909	304

Inter-Item Correlation Matrix											
	CA1	CA2	CA3	CA4	CA5	CA6	CA7	CA8	CA9	CA10	CA11
CA1	1.000	.453	.280	.181	.238	.320	.240	.147	.234	.127	.121
CA2	.453	1.000	.536	.227	.181	.133	.279	.147	.175	.125	.131
CA3	.280	.536	1.000	.280	.296	.149	.147	.290	.118	.174	.096
CA4	.181	.227	.280	1.000	.515	.323	.434	.283	.536	.287	.272
CA5	.238	.181	.296	.515	1.000	.427	.469	.523	.483	.508	.321

CA6	.320	.133	.149	.323	.427	1.000	.623	.483	.513	.379	.313
CA7	.240	.279	.147	.434	.469	.623	1.000	.611	.662	.460	.429
CA8	.147	.147	.290	.283	.523	.483	.611	1.000	.472	.518	.288
CA9	.234	.175	.118	.536	.483	.513	.662	.472	1.000	.489	.410
CA10	.127	.125	.174	.287	.508	.379	.460	.518	.489	1.000	.440
CA11	.121	.131	.096	.272	.321	.313	.429	.288	.410	.440	1.000

Inter-Item Covariance Matrix

	CA1	CA2	CA3	CA4	CA5	CA6	CA7	CA8	CA9	CA10	CA11
CA1	1.081	.501	.321	.179	.218	.345	.220	.130	.194	.108	.115
CA2	.501	1.135	.629	.231	.170	.147	.263	.133	.149	.109	.127
CA3	.321	.629	1.213	.294	.289	.170	.143	.272	.104	.157	.096
CA4	.179	.231	.294	.907	.434	.319	.365	.229	.407	.224	.236
CA5	.218	.170	.289	.434	.782	.392	.366	.393	.341	.368	.258
CA6	.345	.147	.170	.319	.392	1.077	.571	.426	.425	.322	.295
CA7	.220	.263	.143	.365	.366	.571	.781	.459	.467	.333	.345
CA8	.130	.133	.272	.229	.393	.426	.459	.723	.320	.361	.223
CA9	.194	.149	.104	.407	.341	.425	.467	.320	.636	.319	.298
CA10	.108	.109	.157	.224	.368	.322	.333	.361	.319	.670	.327
CA11	.115	.127	.096	.236	.258	.295	.345	.223	.298	.327	.826

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.980	3.615	4.326	.711	1.197	.049	11
Item Variances	.894	.636	1.213	.577	1.907	.040	11
Inter-Item Covariances	.284	.096	.629	.533	6.522	.015	11
Inter-Item Correlations	.333	.096	.662	.566	6.878	.024	11

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted

CA1	40.02	35.366	.377	.290	.836
CA2	40.16	35.055	.390	.446	.835
CA3	40.00	34.947	.380	.403	.837
CA4	39.76	34.366	.523	.420	.823
CA5	39.68	33.868	.627	.487	.814
CA6	39.94	33.207	.571	.466	.818
CA7	39.71	33.261	.693	.656	.809
CA8	39.49	34.495	.590	.530	.818
CA9	39.45	34.427	.646	.567	.814
CA10	39.73	35.183	.541	.432	.822
CA11	39.85	35.645	.427	.274	.830

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
43.78	41.110	6.412	11

SCALE RELIABILITY CHECK: BUSINESS PERFORMANCE SCALE

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.858	.856	16

Item Statistics

	Mean	Std. Deviation	N
BP1	3.65	1.006	304
BP2	3.93	.959	304
BP3	4.09	.915	304
BP4	4.01	.921	304
BP5	4.19	.820	304
BP6	4.02	.966	304
BP7	4.23	.915	304
BP8	3.96	1.006	304
BP9	3.90	.995	304
BP10	3.86	.973	304
BP11	3.92	1.042	304
BP12	4.10	.956	304
BP13	3.79	1.170	304
BP14	3.60	1.268	304

BP15	3.72	1.148	304
BP16	3.86	1.041	304

Inter-Item Correlation Matrix

	BP1	BP2	BP3	BP4	BP5	BP6	BP7	BP8	BP9	BP10	BP11	BP12	BP13	BP14	BP15	BP16
BP1	1.000	.347	.330	.328	.358	.142	-.046	-.084	.076	-.094	.054	.087	.146	.065	.138	-.008
BP2	.347	1.000	.515	.502	.434	.019	.139	.032	.128	.017	.041	.083	.054	.164	.095	.112
BP3	.330	.515	1.000	.751	.651	.159	.240	.261	.266	.184	.152	.254	.199	.138	.208	.037
BP4	.328	.502	.751	1.000	.666	.055	.033	.196	.109	.083	.008	.250	.072	.020	.127	.012
BP5	.358	.434	.651	.666	1.000	.200	.129	.237	.213	.068	.133	.258	.263	.100	.129	.024
BP6	.142	.019	.159	.055	.200	1.000	.354	.299	.451	.283	.149	.173	.353	.194	.183	.061
BP7	-.046	.139	.240	.033	.129	.354	1.000	.590	.405	.485	.330	.355	.443	.398	.348	.279
BP8	-.084	.032	.261	.196	.237	.299	.590	1.000	.435	.581	.419	.532	.409	.281	.385	.247
BP9	.076	.128	.266	.109	.213	.451	.405	.435	1.000	.565	.441	.436	.476	.451	.236	.162
BP10	-.094	.017	.184	.083	.068	.283	.485	.581	.565	1.000	.510	.434	.412	.412	.292	.173
BP11	.054	.041	.152	.008	.133	.149	.330	.419	.441	.510	1.000	.504	.498	.439	.456	.346
B P	.087	.083	.254	.250	.258	.173	.355	.532	.436	.434	.504	1.00	.635	.504	.527	.063

12												0				
BP13	.146	.054	.199	.072	.263	.353	.443	.409	.476	.412	.498	.635	1.000	.542	.609	.293
BP14	.065	.164	.138	.020	.100	.194	.398	.281	.451	.412	.439	.504	.542	1.000	.566	.534
BP15	.138	.095	.208	.127	.129	.183	.348	.385	.236	.292	.456	.527	.609	.566	1.000	.553
BP16	-.008	.112	.037	.012	.024	.061	.279	.247	.162	.173	.346	.063	.293	.534	.553	1.000

Inter-Item Covariance Matrix

	BP1	BP2	BP3	BP4	BP5	BP6	BP7	BP8	BP9	BP10	BP11	BP12	BP13	BP14	BP15	BP16
BP1	1.012	.335	.304	.304	.295	.138	-.042	-.085	.076	-.092	.056	.084	.171	.083	.159	-.008
BP2	.335	.919	.452	.443	.341	.018	.122	.030	.122	.016	.041	.076	.061	.199	.105	.112
BP3	.304	.452	.838	.633	.488	.141	.201	.241	.243	.164	.145	.223	.213	.160	.219	.035
BP4	.304	.443	.633	.848	.503	.049	.027	.182	.100	.074	.007	.220	.078	.024	.135	.011
BP5	.295	.341	.488	.503	.672	.159	.097	.195	.174	.054	.114	.202	.252	.104	.121	.020
BP6	.138	.018	.141	.049	.159	.934	.313	.291	.434	.266	.150	.160	.400	.238	.203	.062
BP7	-.042	.122	.201	.027	.097	.313	.838	.543	.369	.432	.315	.311	.474	.462	.366	.266
BP8	-.0	.03	.24	.18	.19	.29	.54	1.01	.43	.569	.439	.512	.481	.358	.445	.259

	85	0	1	2	5	1	3	2	5							
BP9	.076	.122	.243	.100	.174	.434	.369	.435	.991	.548	.458	.415	.554	.569	.270	.168
BP10	-.092	.016	.164	.074	.054	.266	.432	.569	.548	.947	.517	.403	.468	.508	.326	.175
BP11	.056	.041	.145	.007	.114	.150	.315	.439	.458	.517	1.087	.503	.608	.580	.546	.376
BP12	.084	.076	.223	.220	.202	.160	.311	.512	.415	.403	.503	.914	.711	.610	.579	.063
BP13	.171	.061	.213	.078	.252	.400	.474	.481	.554	.468	.608	.711	1.368	.804	.818	.357
BP14	.083	.199	.160	.024	.104	.238	.462	.358	.569	.508	.580	.610	.804	1.607	.824	.704
BP15	.159	.105	.219	.135	.121	.203	.366	.445	.270	.326	.546	.579	.818	.824	1.319	.660
BP16	-.008	.112	.035	.011	.020	.062	.266	.259	.168	.175	.376	.063	.357	.704	.660	1.083

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.927	3.602	4.230	.628	1.174	.032	16
Item Variances	1.024	.672	1.607	.935	2.392	.054	16
Inter-Item Covariances	.280	-.092	.824	.916	-8.968	.044	16
Inter-Item Correlations	.271	-.094	.751	.845	-7.998	.037	16

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
BP1	59.18	79.015	.199	.268	.863
BP2	58.91	77.718	.293	.392	.858

BP3	58.75	75.025	.487	.679	.849
BP4	58.83	77.152	.345	.711	.856
BP5	58.64	76.672	.435	.579	.852
BP6	58.82	76.609	.357	.327	.855
BP7	58.61	74.232	.540	.507	.847
BP8	58.88	72.776	.571	.618	.845
BP9	58.93	72.722	.581	.528	.845
BP10	58.98	73.775	.530	.556	.847
BP11	58.91	72.785	.546	.487	.846
BP12	58.74	72.523	.623	.707	.843
BP13	59.05	69.314	.662	.628	.839
BP14	59.24	69.521	.589	.621	.844
BP15	59.12	70.708	.598	.632	.843
BP16	58.98	75.976	.359	.600	.856

Scale Statistics			
Mean	Variance	Std. Deviation	N of Items
62.84	83.581	9.142	16

CFA TABLES: MODEL FIT SUMMARY

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	143	548.674	385	.000	1.425
Saturated model	528	.000	0		
Independence model	32	4765.390	496	.000	9.608

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.053	.902	.865	.658
Saturated model	.000	1.000		
Independence model	.248	.353	.312	.332

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.885	.852	.963	.951	.962
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.776	.687	.746
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	163.674	105.566	229.800
Saturated model	.000	.000	.000
Independence model	4269.390	4051.843	4494.234

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	1.811	.540	.348	.758
Saturated model	.000	.000	.000	.000
Independence model	15.727	14.090	13.372	14.832

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.037	.030	.044	.999
Independence model	.169	.164	.173	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	834.674	869.630	1366.209	1509.209
Saturated model	1056.000	1185.067	3018.591	3546.591
Independence model	4829.390	4837.212	4948.335	4980.335

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	2.755	2.563	2.973	2.870
Saturated model	3.485	3.485	3.485	3.911
Independence model	15.939	15.221	16.681	15.964

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	239	250
Independence model	35	37

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
GP4	<---	GP	.688
GP3	<---	GP	.585
GP2	<---	GP	.828
GP1	<---	GP	.850
GA6	<---	GA	.614
GA5	<---	GA	.770
GA4	<---	GA	.676
GA3	<---	GA	.572
GPI7	<---	GPI	.731
GPI6	<---	GPI	.651
GPI5	<---	GPI	.616
GPI4	<---	GPI	.498
GPI3	<---	GPI	.588
GPRI3	<---	GPRI	.739
GPRI2	<---	GPRI	.727
GPRI1	<---	GPRI	.696
CA4	<---	CA	.482
CA5	<---	CA	.619
CA6	<---	CA	.693
CA7	<---	CA	.886
CA8	<---	CA	.711
CA9	<---	CA	.763
CA10	<---	CA	.603
BP15	<---	BP	.748
BP14	<---	BP	.719
BP13	<---	BP	.776
BP12	<---	BP	.720
BP11	<---	BP	.634
BP10	<---	BP	.523
BP9	<---	BP	.627
BP8	<---	BP	.647
BP7	<---	BP	.560

SEM RESULTS TABLES: SEM MODEL FIT RESULTS

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	143	543.661	322	.000	1.688
Saturated model	465	.000	0		
Independence model	30	4413.162	435	.000	10.145

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.126	.890	.841	.616
Saturated model	.000	1.000		
Independence model	.255	.358	.314	.335

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.877	.834	.946	.925	.944
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.740	.649	.699
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	221.661	161.216	289.988
Saturated model	.000	.000	.000
Independence model	3978.162	3768.652	4194.987

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	1.794	.732	.532	.957
Saturated model	.000	.000	.000	.000
Independence model	14.565	13.129	12.438	13.845

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.048	.041	.055	.705
Independence model	.174	.169	.178	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	829.661	862.257	1361.196	1504.196
Saturated model	930.000	1035.993	2658.418	3123.418
Independence model	4473.162	4480.001	4584.673	4614.673

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	2.738	2.539	2.964	2.846
Saturated model	3.069	3.069	3.069	3.419
Independence model	14.763	14.071	15.479	14.785

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	204	214
Independence model	34	35

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
CA	<---	GP	.069	.044	1.587	.113	
CA	<---	GA	.065	.059	1.104	.270	
CA	<---	GPI	.170	.066	2.579	.010	
CA	<---	GPRI	-.007	.052	-.132	.895	
BP	<---	CA	.338	.096	3.514	***	
BP	<---	GP	.224	.060	3.747	***	
BP	<---	GA	.085	.082	1.042	.298	
BP	<---	GPI	.306	.088	3.478	***	
BP	<---	GPRI	.314	.079	3.982	***	
GP4	<---	GP	.825	.060	13.701	***	
GP3	<---	GP	.710	.063	11.332	***	
GP2	<---	GP	1.042	.062	16.759	***	

			Estimate	S.E.	C.R.	P	Label
GP1	<---	GP	1.000				
GA6	<---	GA	1.000				
GA5	<---	GA	1.281	.138	9.286	***	
GA4	<---	GA	1.129	.126	8.988	***	
GA3	<---	GA	.981	.120	8.147	***	
GPI7	<---	GPI	1.000				
GPI6	<---	GPI	1.184	.136	8.723	***	
GPI5	<---	GPI	1.072	.119	9.031	***	
GPI3	<---	GPI	.972	.118	8.210	***	
GPRI3	<---	GPRI	1.037	.115	8.991	***	
GPRI2	<---	GPRI	1.101	.123	8.933	***	
GPRI1	<---	GPRI	1.000				
CA5	<---	CA	1.000				
CA6	<---	CA	1.276	.123	10.386	***	
CA7	<---	CA	1.317	.114	11.545	***	
CA8	<---	CA	1.111	.103	10.731	***	
CA9	<---	CA	1.074	.099	10.862	***	
CA10	<---	CA	.843	.083	10.191	***	
BP15	<---	BP	1.000				
BP14	<---	BP	1.054	.087	12.070	***	
BP13	<---	BP	1.013	.081	12.555	***	
BP12	<---	BP	.776	.069	11.253	***	
BP10	<---	BP	.687	.077	8.972	***	
BP9	<---	BP	.754	.083	9.130	***	
BP8	<---	BP	.668	.068	9.761	***	
BP7	<---	BP	.572	.064	8.955	***	
BP11	<---	BP	.785	.071	11.006	***	

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
CA	<---	GP	.103
CA	<---	GA	.072
CA	<---	GPI	.188
CA	<---	GPRI	-.009
BP	<---	CA	.231
BP	<---	GP	.228
BP	<---	GA	.065
BP	<---	GPI	.232
BP	<---	GPRI	.274
GP4	<---	GP	.708
GP3	<---	GP	.584
GP2	<---	GP	.822
GP1	<---	GP	.842

			Estimate
GA6	<---	GA	.602
GA5	<---	GA	.776
GA4	<---	GA	.684
GA3	<---	GA	.591
GPI7	<---	GPI	.654
GPI6	<---	GPI	.655
GPI5	<---	GPI	.649
GPI3	<---	GPI	.600
GPRI3	<---	GPRI	.702
GPRI2	<---	GPRI	.738
GPRI1	<---	GPRI	.647
CA5	<---	CA	.648
CA6	<---	CA	.693
CA7	<---	CA	.847
CA8	<---	CA	.746
CA9	<---	CA	.771
CA10	<---	CA	.591
BP15	<---	BP	.747
BP14	<---	BP	.701
BP13	<---	BP	.742
BP12	<---	BP	.685
BP10	<---	BP	.600
BP9	<---	BP	.650
BP8	<---	BP	.568
BP7	<---	BP	.526
BP11	<---	BP	.634

Covariances: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
e39	<-->	e40	.238	.036	6.615	***	
e37	<-->	e39	.179	.036	5.046	***	
e37	<-->	e38	.145	.034	4.332	***	
e33	<-->	e39	-.181	.037	-4.915	***	
e32	<-->	e37	-.133	.035	-3.815	***	
e32	<-->	e38	-.275	.036	-7.677	***	
e4	<-->	e38	-.140	.035	-3.967	***	
e4	<-->	e28	.125	.022	5.799	***	
e3	<-->	e38	.197	.037	5.281	***	
e3	<-->	e29	.129	.029	4.481	***	
e3	<-->	e35	.112	.030	3.765	***	
e4	<-->	e7	.081	.029	2.793	.005	
e7	<-->	e16	.085	.038	2.213	.027	
e8	<-->	e28	.031	.027	1.142	.254	

			Estimate	S.E.	C.R.	P	Label
e9	<-->	e12	.087	.039	2.238	.025	
e12	<-->	e22	.249	.050	4.942	***	
e14	<-->	e31	.086	.031	2.802	.005	
e16	<-->	e20	.142	.043	3.315	***	
e26	<-->	e28	-.057	.021	-2.646	.008	
e26	<-->	e31	.074	.028	2.650	.008	
e28	<-->	e39	-.098	.021	-4.691	***	
e29	<-->	e30	-.079	.020	-4.024	***	
e29	<-->	e42	-.117	.029	-3.991	***	
e35	<-->	e39	.124	.027	4.674	***	
e34	<-->	e35	.155	.034	4.564	***	
e22	<-->	e33	-.151	.047	-3.186	.001	
e7	<-->	e34	.102	.034	3.000	.003	
e5	<-->	e40	-.068	.025	-2.707	.007	
e3	<-->	e20	.127	.037	3.444	***	
e2	<-->	e35	-.105	.028	-3.813	***	
e20	<-->	e32	.122	.038	3.227	.001	
e7	<-->	e31	-.102	.028	-3.594	***	
e2	<-->	e13	-.113	.039	-2.912	.004	
e5	<-->	e41	.072	.023	3.085	.002	
e6	<-->	e27	.109	.040	2.753	.006	
e8	<-->	e27	-.075	.040	-1.876	.061	
e8	<-->	e21	.126	.041	3.060	.002	
e12	<-->	e36	-.119	.036	-3.319	***	
e35	<-->	e41	-.072	.022	-3.245	.001	
e31	<-->	e36	-.074	.028	-2.636	.008	
e29	<-->	e36	-.081	.026	-3.136	.002	
e28	<-->	e33	.042	.029	1.427	.153	
e27	<-->	e33	-.113	.039	-2.873	.004	
e13	<-->	e20	.152	.048	3.156	.002	
e4	<-->	e33	-.149	.036	-4.173	***	
e9	<-->	e14	-.112	.044	-2.565	.010	
e4	<-->	e37	-.134	.028	-4.762	***	
e26	<-->	e33	-.091	.034	-2.641	.008	
e27	<-->	e40	-.078	.030	-2.593	.010	
e16	<-->	e36	-.105	.038	-2.783	.005	
e13	<-->	e39	.098	.035	2.784	.005	
e5	<-->	e34	.099	.028	3.574	***	
e37	<-->	e40	.122	.034	3.561	***	
e35	<-->	e36	.054	.028	1.940	.052	
e16	<-->	e39	.083	.031	2.624	.009	
e14	<-->	e22	.168	.049	3.433	***	
e8	<-->	e30	.068	.030	2.278	.023	
e4	<-->	e9	-.090	.033	-2.762	.006	

			Estimate	S.E.	C.R.	P	Label
e3	<-->	e42	-.119	.041	-2.886	.004	
e14	<-->	e37	.070	.033	2.092	.036	
e13	<-->	e22	.149	.056	2.654	.008	
e12	<-->	e37	-.057	.031	-1.851	.064	
e12	<-->	e33	.088	.040	2.231	.026	
e12	<-->	e21	.089	.041	2.199	.028	
e9	<-->	e39	-.076	.032	-2.369	.018	
e6	<-->	e16	-.093	.044	-2.113	.035	
e36	<-->	e37	.109	.033	3.279	.001	
e12	<-->	e41	.047	.026	1.815	.069	
e12	<-->	e30	.045	.024	1.882	.060	
e7	<-->	e32	.089	.035	2.525	.012	
e14	<-->	e27	-.077	.036	-2.129	.033	
e8	<-->	e36	-.045	.035	-1.257	.209	
e5	<-->	e36	.089	.027	3.248	.001	
e5	<-->	e38	.086	.031	2.765	.006	

Correlations: (Group number 1 - Default model)

			Estimate
e39	<-->	e40	.386
e37	<-->	e39	.293
e37	<-->	e38	.261
e33	<-->	e39	-.253
e32	<-->	e37	-.236
e32	<-->	e38	-.508
e4	<-->	e38	-.314
e4	<-->	e28	.436
e3	<-->	e38	.322
e3	<-->	e29	.275
e3	<-->	e35	.189
e4	<-->	e7	.203
e7	<-->	e16	.159
e8	<-->	e28	.088
e9	<-->	e12	.141
e12	<-->	e22	.402
e14	<-->	e31	.168
e16	<-->	e20	.229
e26	<-->	e28	-.181
e26	<-->	e31	.170
e28	<-->	e39	-.258
e29	<-->	e30	-.279
e29	<-->	e42	-.286

			Estimate
e35	<-->	e39	.217
e34	<-->	e35	.287
e22	<-->	e33	-.198
e7	<-->	e34	.203
e5	<-->	e40	-.163
e3	<-->	e20	.199
e2	<-->	e35	-.213
e20	<-->	e32	.217
e7	<-->	e31	-.239
e2	<-->	e13	-.191
e5	<-->	e41	.239
e6	<-->	e27	.173
e8	<-->	e27	-.130
e8	<-->	e21	.227
e12	<-->	e36	-.206
e35	<-->	e41	-.182
e31	<-->	e36	-.142
e29	<-->	e36	-.180
e28	<-->	e33	.100
e27	<-->	e33	-.169
e13	<-->	e20	.232
e4	<-->	e33	-.275
e9	<-->	e14	-.169
e4	<-->	e37	-.288
e26	<-->	e33	-.153
e27	<-->	e40	-.134
e16	<-->	e36	-.163
e13	<-->	e39	.142
e5	<-->	e34	.240
e37	<-->	e40	.209
e35	<-->	e36	.096
e16	<-->	e39	.126
e14	<-->	e22	.250
e8	<-->	e30	.178
e4	<-->	e9	-.174
e3	<-->	e42	-.195
e14	<-->	e37	.117
e13	<-->	e22	.203
e12	<-->	e37	-.103
e12	<-->	e33	.137
e12	<-->	e21	.169
e9	<-->	e39	-.112
e6	<-->	e16	-.138
e36	<-->	e37	.181

			Estimate
e12	<-->	e41	.118
e12	<-->	e30	.123
e7	<-->	e32	.183
e14	<-->	e27	-.129
e8	<-->	e36	-.074
e5	<-->	e36	.207
e5	<-->	e38	.217

Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
GP	.713	.081	8.793	***	
GA	.398	.076	5.225	***	
GPI	.394	.068	5.819	***	
GPRI	.524	.093	5.627	***	
e41	.306	.052	5.893	***	
e42	.531	.076	6.980	***	
e2	.482	.045	10.764	***	
e3	.695	.059	11.722	***	
e4	.372	.045	8.258	***	
e5	.293	.038	7.736	***	
e6	.700	.067	10.402	***	
e7	.431	.062	6.950	***	
e8	.579	.063	9.173	***	
e9	.713	.068	10.539	***	
e12	.526	.056	9.386	***	
e13	.735	.079	9.290	***	
e14	.621	.065	9.590	***	
e16	.660	.065	10.170	***	
e20	.581	.070	8.265	***	
e21	.533	.073	7.258	***	
e22	.730	.078	9.306	***	
e26	.446	.042	10.750	***	
e27	.569	.050	11.293	***	
e28	.221	.027	8.171	***	
e29	.318	.032	10.054	***	
e30	.254	.026	9.709	***	
e31	.426	.037	11.663	***	
e32	.546	.056	9.676	***	
e33	.792	.072	10.983	***	
e34	.579	.054	10.776	***	
e35	.507	.043	11.686	***	
e36	.632	.054	11.646	***	

	Estimate	S.E.	C.R.	P	Label
e37	.579	.053	10.976	***	
e38	.537	.050	10.766	***	
e39	.646	.052	12.324	***	
e40	.590	.049	12.022	***	

APPENDIX C: LANGUAGE EDITING LETTER

CONFIRMATION OF PROOFREADING

This serves to confirm that I have proofread this thesis and have made the necessary corrections and emendations:

The Impact of Green Marketing Practices on Competitive Advantage and Business Performance among Manufacturing Small and Medium Enterprises (SMEs) in South Africa

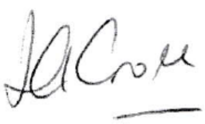
By

Eugine Tafadzwa Maziriri

I have been proofreading Honours, Masters and Doctoral dissertations, research reports and theses for the past 10+ years for, *inter alia*, the following institutions: University of the Witwatersrand; GIBS; University of Cape Town; Milpark; Mancosa; University of KwaZuluNatal; University of Johannesburg; Unisa; Tshwane University of Technology; Henley Business School, and more recently, the Da Vinci Institute.

I have also undertaken proofreading for publishers, such as Oxford University Press and Juta & Company, companies, institutions and non-governmental organisations.

I have a major in English, and excellent knowledge of Afrikaans.



Jennifer Croll

BA(Wits); H.Dip.Lib. (UCT); B.Tech(LIS), B.Inf.Sc.(Hons)(Unisa); MM(Research), MM(Strategic Marketing)(Wits).

Email: Jennifer.croll@wits.ac.za

Mobile: 072-351-7997

Date: 1st July 2018