

**BUYER-SUPPLIER COMMITMENT AND  
COMPETITIVE PERFORMANCE AMONG SMALL AND MEDIUM  
ENTERPRISES IN SOUTHERN GAUTENG**



by

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Dissertation submitted in fulfilment of the requirements for the degree

**MAGISTER TECHNOLOGIAE**

in the discipline of

**LOGISTICS MANAGEMENT**

in the

**FACULTY OF MANAGEMENT SCIENCES**

at the

**VAAI UNIVERSITY OF TECHNOLOGY**

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**2020**

## DEDICATION

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I dedicate this dissertation first of all to God almighty for his abundant grace upon my life.

I also dedicate this study to the loving memory of my dear father, the late Mr. Sylvanus Oguamalam Nwele and my step mother, the late Mrs. Bridget Nwele.

I also dedicate this study to my mother Mrs. Marceline Nwaozuzu Nwele. Together you have taught me and my siblings how to live in harmony and to support one another. Your love for knowledge acquisition through western education have motivated me this far.

I also dedicate this work to my fiancée Miss Onyekachi Uche for her patience throughout this period. You are the best and I will always love you.

I also dedicate this research to the next generations of Nwele who will see this work and get motivated to study.

## **DECLARATION**

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

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This dissertation is being submitted in fulfilment of the requirements for the degree of Magister Technologiae: Logistics Management.

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### **STATEMENT 2**

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

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## ACKNOWLEDGEMENTS

I give my sincere appreciation to my supervisor and co-supervisor Dr. Osayuwamen Omoruyi and Dr. E. Chinomona. This study would not have come to this stage without your earnest desire and commitment from the start to finish. You took me to my first South Africa Institute of Management Scientist conference. Thank you so much.

A big thanks to my big brother Mr. Silva Albans Nwele and his dear wife Mrs. Happiness Sibongile Nwele for their support which have contributed immensely to the completion of this research.

I also want to acknowledge the immense contribution of my brothers Ikenna and Anayo for their immeasurable morale support throughout this study. My sincere appreciation goes to my whole family back home in Nigeria. Thank you all for filling the gap left behind by my absence throughout this period.

My sincere gratitude also goes to Vaal University of Technology for financial support and to the Logistics Department for giving me the opportunity to study and complete this master's programme in the department. I am also thankful to Professor Mafini the head of Logistics department for his support. To the participating SMEs who willingly gave their time in the completion of the questionnaire and to my friends, thanks for your support.

Thank you my Angel Onyekachi.

Now I can sing "Jesus you love me too much".

## ABSTRACT

Economic growth, job creation and improved standard of living have resulted to focus mostly on small and medium enterprises (SMEs) across the world. Hence, establishing and maintaining relationships with partners across the supply chain has become a prerequisite for achieving long-term competitive benefits in the present business competitive environment. For this reason, buyer-supplier commitment is deemed an important long-term business relationship strategy towards achieving competitive performance. Although buyer-supplier commitments can serve as the basis for the development of relational standards, unbalanced commitments, on the other hand, may become a harbinger of opportunistic behaviours. This development is inimical to continued business relationship and its consequential benefits for the SMEs' supply chain collaborators.

Guided by the theoretical lens of the social exchange theory (SET), this study examines the influence of communication, product quality, flexibility, and buyer-supplier commitments on SMEs competitive performance in southern Gauteng. Using a convenience sampling technique, the study quantitatively analysed the 396 returned questionnaires.

Data analysis was conducted using the statistical package for social sciences (SPSS) version 25.0 and AMOS 25.0 for the confirmatory factor analysis and the structural equation modelling (SEM) respectively. The SEM analysis helped to confirm the suitability of the model fit as well as the positive and significant relationships of the proposed hypotheses. The analysis revealed that communication, product quality and flexibility are important variables in predicting buyer-supplier commitment as they displayed positive association with buyer-supplier commitment and the latter is significant in a firm's effort towards achieving competitive performance. The study recommends the anchoring of SMEs strategies on commitment in order for partners to efficiently and effectively enjoy competitive benefits.

This research contributes new knowledge to the body of literature by developing a research framework on SME's business growth and competitive performance and offered recommendations based on the study, which if implemented, could improve the economy. The study also revealed a higher relationship among the baseline constructs (communication, product quality and flexibility) which have received little or no conceptualisation in literature.

**Keywords:** *communication; product quality; flexibility; buyer-supplier commitment and SMEs' competitive performance*

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# **CHAPTER 1**

## **INTRODUCTION AND BACKGROUND OF THE STUDY**

### **1.1 INTRODUCTION**

Small and medium enterprises (SMEs) have attracted several studies for the past decades, both locally and internationally (Brink, Cant & Ligthelm 2003:4; Olawale & Garwe 2010:729). It is generally believed that the SME sector holds the key for economic growth, employment generation, potential for the influx of foreign direct investment and growth in infrastructure (Mafini & Loury-Okoumba 2016:617). Thus, in this study, the researcher contends that helping the SME sector to achieve high levels of business performance would be of great significance to the South African economy. This study, therefore, proposes that buyer-supplier relationship commitment among SMEs, facilitated by communication, product quality and flexibility is an essential business component towards fostering a healthy business operation and competitive performance.

According to Stanko, Bonner and Calantone (2007:1095), commitment is associated to the smooth sharing of information that facilitates resourcefulness and brings fresh prospects of meeting with other people, as well as decreases vulnerability in the marketplace. Morgan and Hunt (1994:23) affirm that commitment among SMEs within a supply chain is fundamental for attaining good relationship benefits. Tungjitjarun, Suthiwartnarueput and Pornchaiwiseskul (2012:189) note that commitment, if adhered to, can facilitate business strategies which will promote the overall relationship performance of the SMEs. However, as Roloff, Abländer and Nayir (2015:29) note, the insignificant success in buyer-supplier relationship management prevails as a consequence of the practice of unprincipled inspectors and partners' inability to enforce good behaviours, which could reduce high levels of commitment in relationships. Therefore, this study is focused on determining communication, product quality and flexibility as factors that influence buyer-supplier commitment and SME competitive performance in South Africa.

### **1.2 SOCIAL EXCHANGE THEORY (SET)**

This study is grounded in the theoretical lens of the social exchange theory (SET). The views shared in SET is that societal conduct occurs from an interchange procedure, which creates responsibility (Börekeçi, Say, Kabasakal & Rofcanin 2014:810). This necessitates the aim of the interchange to rely squarely on the premise of optimising profitability while simultaneously

reducing cost or penalties (Börekçi *et al.* 2014:810). According to Eamonn, Donna and Daniel (2010:4), the assumption of SET is based on persons or clusters cooperating for the purpose of achieving benefits and reducing or eliminating disadvantages or extortions. Emmerson (1976:341) acknowledges that the existence of a relationship in an exchange is based on the unfolding futures of the relations. This premise holds that positive actions and behaviours which are not reciprocated by the exchange partners would result in the termination of the exchange process. According to Griffith, Harvey and Lusch (2006:86), reciprocity is an important view in the realm of the social exchange theory. This means that actions and attitudes of one party in the relationship will induce attitudinal response(s) by the exchange partner. SET portrays the significance of buyer-supplier relationships dominated in lock-in situations, thereby making an exchange partner to continuously rely on the other party for the purpose of reaping future benefits (Cheng-Min, Cheng-Tao, Bor-Wen & Pen-Chen 2013:1059). However, the commitment that forms part of the basis of the SET principles have become a common concept in the study of marketing and supply chain relationships (Morgan & Hunt 1994:22; Ulaga & Eggert 2006:315; Mafini & Loury-Okoumba 2016:619). This study therefore believes that the set principles which promote mutual benefits can prove a significant factor in partners' ability and willingness to share information among one another that will propel the partners into a long-term committed relationship. Furthermore, frequent communication anchored in the principle of togetherness can help SME partners to address issues and improve their product(s) quality based on an external stakeholder's perspective. The flexibility or agility of the buyer and supplier to respond to modern day business challenges can be enhanced in an environment that promotes mutual benefits for the collaborating partners. This is so true because when partners realise that facilitating the progress of one party will result in the other achieving significant benefits, they (partners) will be more obliged to assist without hesitation. Finally, this study maintains that buyer-supplier commitment based on mutual benefits will enable collaborating SME partners achieve a significant competitive performance. The next section examines various literatures in relation to the research constructs.

### **1.3 LITERATURE REVIEW OF RESEARCH CONSTRUCTS**

In order to facilitate the achievement of the objectives of this study, which concern factors influencing buyer-supplier commitment and SMEs' competitive performances, the researcher made use of articles, textbooks, journals and internet material to gain knowledge that help to enrich it.

### **1.3.1 Buyer-supplier communication**

Award and Alhashemi (2012:135) define communication as involving “a two-way process in which a sender reaches a receiver with a message.” Award and Alhashemi (2012:135) further perceive the significance of communication in firms’ willingness to generate and sustain buyer-supplier relationship through dissemination of concepts, demonstration of views, understanding what is important, sorting divergent views and showing emotions. Razal, Nordin, Saad and Idahab (2014:230) consider communication as the “glue that holds together the channels of distribution.” The authors noted that communication involves the revealing of information among partners, which could be interpersonal, organisational and inter-firm communication. The understanding of what information to communicate, the type of mode to use in communication and where to communicate is significant for successful SMEs’ communication (Abugre & Nyuur 2015:165). In this study, the researcher conceptualises communication as a force that pulls buyer-supplier into a contractual agreement in a frequent, formal, rational and reciprocal manner, for the purpose of achieving improved performance (Meek, Davis-Sranks, Baucus & Germain 2011:562). Researchers such as Razal, *et al.* (2014:230) and Rogiest, Segers and Witteloostuijn (2015:1096) consider the role of communication to be of significance in reducing doubts, lowering transaction costs and improving the speed of partners in responding to market demands. Chawla and Kelloway (2004:487) agreed that a non-restricted communication will facilitate good behaviours in the time of restructuring and eliminate anxiety through enlightening partners as well as promoting the organisations capability to cope during transformation.

### **1.3.2 Buyer-supplier product quality**

Homburg, Kuester, Beutin and Menon (2005:5) relate the quality of a product to be concerned with the customer’s views regarding the relative advantage of a firm’s offering in line with appropriate product features. Hence, good product quality can help the supplier to develop a strong image for the business. Marie, Pillet and Baudet (2013:63) define product quality as the ability of a product to meet buyer-supplier expectations. According to Cantarello, Filippini and Nosella (2012:3907), product quality can be grouped into internal and external product quality. The former is concerned with product features that facilitate delivery of optimum benefit to the exchange partner, while the latter refers to the perception of the buyer on the product, which by implication is not related to the physical performance of the product. Hall, Baker, Andrews, Hunt and Rapp (2016:25) acknowledge the significance of product quality in relation to performance and thereby affirm that product quality has a positive impact on buyer-supplier commitment and improved

performance. In other words, buyer-supplier attention to product quality will have a positive impact on buyer-supplier relationship commitment.

### **1.3.3 Buyer-supplier flexibility**

Buyer-supplier flexibility, as defined by Seebacher and Winkler (2013:3416) and Mandal (2015:206), represents the strength of partners to respond efficiently to unpredictable conditions. It is the ability of SMEs to create instruments in their relationship which will enable them achieve superior performance when compared to their rivals (Seebacher & Winkler 2013:3416). Mandal (2015:206) observes flexibility as an organisation's winning strategy, which is highly significant in the present marketplace. Kouropalatis, Hughes and Morgan (2012:1390) define flexibility as the capability of the buyer-supplier to function swiftly in a dynamic business setting through interactions with people or groups. Hence, to achieve flexibility, SME partners need to understand each other's behaviour in terms of business variations and its vulnerabilities. The recognition of flexibility by SMEs within a supply chain will offer partners the privilege to effectively and efficiently react to business dynamics, leading to significant growth in buyer-supplier managerial capability (Linawati 2017:124). Therefore, buyer-supplier flexibility can enhance SMEs' competitive performance through closely coordinated distribution arrangements directed towards delivering the product to where it is required (Hua, Chatterjee, & Kang 2009:32; Jin, Hopkin & Wittmer 2010:951). In this study, the researcher, through empirical evidence, demonstrates the influence of flexibility on buyer-supplier commitment.

### **1.3.4 Buyer-supplier commitment**

Commitment is defined as "an implicit or explicit pledge of relational continuity between exchange partners" (Fynes & Voss 2002:593). Commitment also refers to the wish of buyer-supplier to remain in a bond and the preparedness of the partners to preserve the relationship in the future (Clauß 2012:297). Fynes and Voss (2002:593) stress that commitment is associated with the readiness of the parties to be in an exchange relationship in order to employ their strengths for the purposes of protecting their shared interest against business uncertainties. Tungjitjarurn *et al.* (2012:184) define commitment as "the desire to develop a stable relationship, a willingness to make short-term sacrifices to maintain the relationship, and the confidence in the stability of the relationship." Hence, the presence of commitment in a buyer-supplier relationship makes the relationship seemingly impossible to disband. In this study, the researcher resonates with the definition of commitment as offered by Tungjitjarurn *et al.* (2012:184) based on the elements of wilful sacrifices and confidence in the relationship, which suggests trust. Mafini and Loury-Okumba (2016:619) emphasise that the role of buyer-supplier commitment in an exchange

relationship is significant in facilitating an organisation's performance improvement. A key role of commitment is that its establishment enables organisations to realise positive results in product quality and enhanced client satisfaction (Chowdhury, Paul & Das 2007:18). According to Stanko *et al.* (2007:1095), buyer-supplier commitment can be strengthened and reinforced through social interactions involving collaborative reciprocal activities and intercompany social outings. However, Award and Alhashemi (2012:139) and Nambudiri (2012:978) observe the dimensions of commitment to include affective, normative and continuance commitment. Mesquita, Patrocínio and Dornas (2014:23) note commitment to be the criteria for distinguishing the constancy of persistent acquisitions. In this case, commitment works together with loyalty. Hence, loyalty is believed to be the reality of profound commitment to buy or salvage merchandise steadily into the unknown future (Mesquita *et al.* 2014:23). The interaction of this nature is likely to result in enduring relationships by the parties, thereby discouraging any pressure from potential competitors who would likely push for a change in the attitude of their partners (Mesquita *et al.* 2014:23). SMEs' buyer-supplier commitment therefore would stabilise when partners demonstrate a greater percentage of trust in their relationship (Togna 2014:74).

### **1.3.5 SMEs competitive performance**

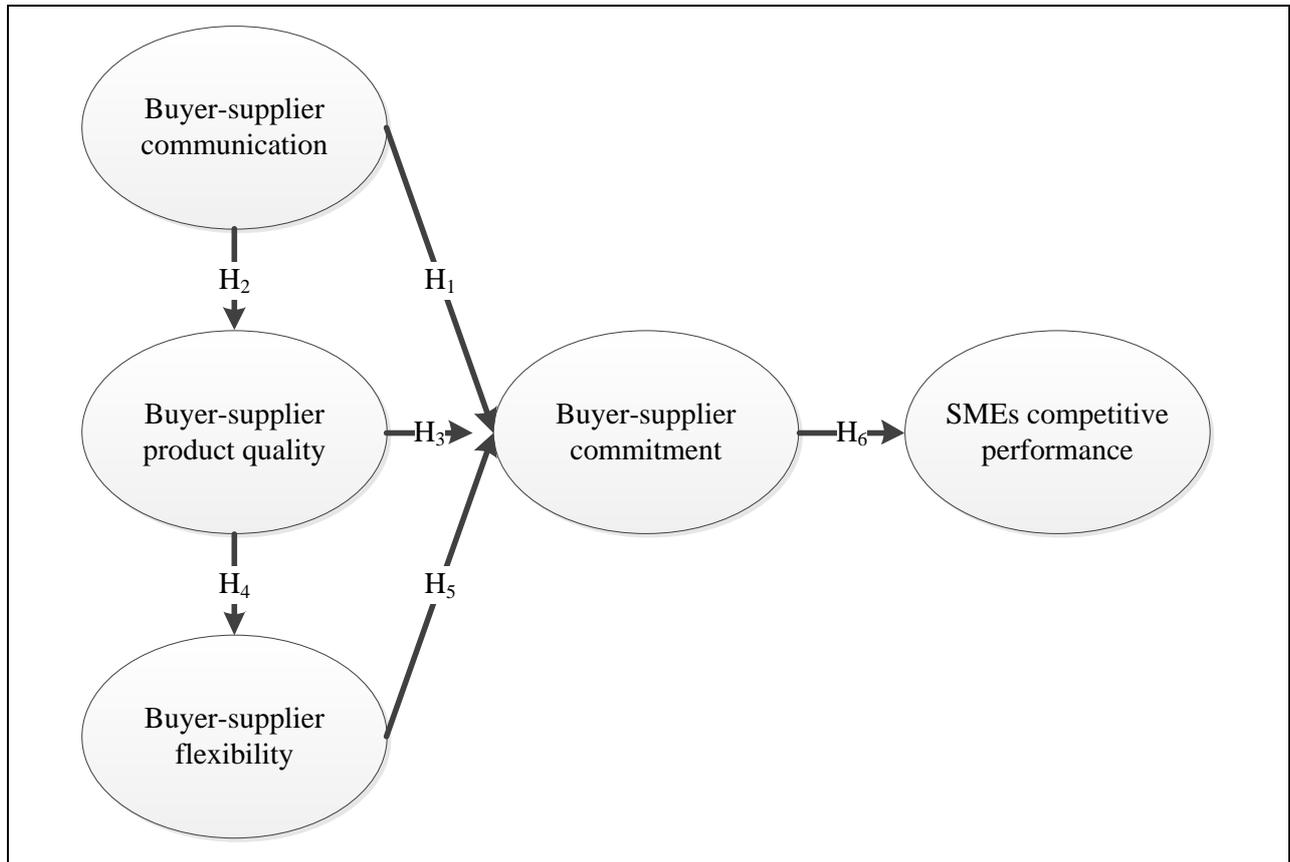
As Nkundabanyanga, Akankunda, Nalukenge and Tusiime (2017:117) note, there is no generally accepted definition of competitive performance. Hence, the lack of a concrete definition resulted in it being defined only in terms of the firm accomplishments and factors responsible for achieving those accomplishments. Ehlers and Lazenby (2010:118), in an effort to define competitive performance, viewed it as any distinctive resource which is competent enough to enhance the organisations' core capabilities. These are held by competitors with a performance that is far above the industrial average and difficult for rival firms to duplicate. For SMEs to achieve competitive performance, it is important for their efforts to be directed towards those products that result in greater significance for partners than its rivals and aspire to maintain relationships, that benefit the partners (Hung-Tai, Colin, Cheng & Hsuan-Yu 2015:2112). Buyer-supplier relationships can help an SME perform better than its rivals and generate good value through meeting clients' demand (Madhani 2016:52). The existence of a buyer-supplier relationship creates a shift from improved productivity as a means of achieving competitive advantage to a relationship-based system that focuses on buyer-supplier commitment. Guenzi and Troilo (2007:103) note that through buyer-supplier commitment, partners can develop superior value for their customers and enhance SME competitive performance.

## 1.4 PROBLEM STATEMENT

Buyer-supplier commitment is an ongoing issue which SMEs have grappled with across the world and in South Africa (Brink *et al.* 2003:4; Stanko *et al.* 2007:1094). At the heart of this problem is the buyer's inability to meet its financial obligations to the supplier in record time and the supplier's abrupt refusal or denial to deliver quality products that match buyers' needs, thereby causing relationship hostility (Nambudiri 2012:977). Studies on buyer-supplier relationship management in SMEs have attracted attention from several authors such as Olawale and Garwe (2010:729), Jiun-Sheng and Yun-Chi (2012:89), and Omoruyi & Dhurup (2016:121). Mafini and Loury-Okoumba (2016:618) also note that for SMEs to improve their business performance significantly, their attention should be directed towards commitment, trust and cooperation. Olawale and Garwe (2010:730) argued that government investments in SMEs in South Africa have not yielded their desired goal of 5 percent growth rate since 2004 – 2014, and as such, SMEs have failed to promote economic growth because most were established as a last option and not first priority business. This shows the need for commitment and relationship management (Brink *et al.* 2003:4). According to the trust-commitment theorist (Morgan & Hunt 1994:20), "a successful relationship marketing requires relationship commitment and trust." Tungjitjarun *et al.* (2012:183) observed that "buyer-supplier relationship and transaction-specific investments are key elements of buyer-supplier commitment." This study is justified by the need to offer a deep knowledge of the factors that positively and significantly influence buyer-supplier commitment among SMEs in South Africa, and to enable them to achieve higher levels of competitive performance.

Due to the need for successful SME buyer-supplier relationship improvement, several waves of research have been conducted which emphasise the following: buyer-supplier commitment (Tungjitjarun *et al.* 2012:184; Mafini & Loury-Okoumba 2016:619); employee organisational commitment (Chinomona & Chinomona 2013:59); buyer purchase behaviour (Stanko *et al.* 2007:1097); and supplier development (Yang & Zhang 2017:114); all of which, to some extent, theoretically could have an impact on SMEs' buyer-supplier relationships. However, none of these studies have theoretically and empirically emphasised and examined buyer-supplier commitment as a practical antecedent in inter-firm structures to improve and to achieve SMEs' competitive performance effectively. This vacuum, with little contribution from previous literature, is evidenced by the gap in the literature this study has come to address. Thus, a research framework showing factors that can influence positively and significantly buyer-supplier commitment and competitive performance among SMEs in southern Gauteng is proposed, which would strengthen buyer-supplier relationships among SMEs in this region of South Africa.

The study's research conceptual framework is developed based on a detailed literature review. From the conceptualised framework shown below, buyer-supplier communication, product quality and flexibility form the independent variables in which the researcher hypothesised as having a positive and significant influence on buyer-supplier commitment (mediating variable). In the same manner, SMEs' competitive performance (outcome variable) is dependent on buyer-supplier commitment.



**Figure 1.1: Research conceptual framework**

Source: Own source

## 1.5 RESEARCH HYPOTHESES STATEMENTS

Based on the literature review and the conceptualised research framework, six hypothesised relationships (null hypotheses and their corresponding alternative hypotheses) developed in the study are presented below.

**H1:** Buyer-supplier communication has a positive and significant influence on buyer-supplier commitment.

- H01:** Buyer-supplier communication has no positive and significant influence on buyer-supplier commitment.
- H2:** Buyer-supplier communication has a positive and significant influence on buyer-supplier product quality.
- H02:** Buyer-supplier communication has no positive and significant influence on buyer-supplier product quality.
- H3:** Buyer-supplier product quality has a positive and significant influence on buyer-supplier commitment.
- H03:** Buyer-supplier product quality has no positive and significant influence on buyer-supplier commitment.
- H4:** Buyer-supplier product quality has a positive and significant influence on buyer-supplier flexibility.
- H04:** Buyer-supplier product quality has no positive and significant influence on buyer-supplier flexibility.
- H5:** Buyer-supplier flexibility has a positive and significant influence on buyer-supplier commitment.
- H05:** Buyer-supplier flexibility has no positive and significant influence on buyer-supplier commitment.
- H6:** Buyer-supplier commitment has a positive and significant influence on SMEs' competitive performance.
- H06:** Buyer-supplier commitment has no positive and significant influence on SMEs' competitive performance.

## **1.6 OBJECTIVES OF THE STUDY**

The research objectives of this study were classified into primary and the secondary objectives. The secondary objective is further classified into two: the theoretical objective and empirical objective.

### **1.6.1 Primary Objective**

The primary objective is to determine the influence of buyer-supplier communication, buyer-supplier product quality, buyer-supplier flexibility on buyer-supplier commitment and competitive performance among SMEs in southern Gauteng.

### **1.6.2 Secondary objective**

The secondary objective is further classified into theoretical and empirical objectives.

#### **1.6.2.1 Theoretical objectives**

In order to facilitate the achievement of the primary objective, the following theoretical objectives, which are based on a detailed literature review are formulated:

- to review literature on the general (locally and international) perceptions of SMEs;
- to conduct a literature review on the Social Exchange theory;
- to review the literature that focuses on buyer-supplier commitment;
- to conduct a literature review on buyer-supplier communication;
- to carry out a literature review on buyer-supplier product quality;
- to generate insight from the literature on buyer-supplier flexibility;
- to provide an overview of the literature on SMEs competitive performance.

#### **1.6.2.2 Empirical objectives**

In this study, the the following empirical objectives were formulated in support of the primary objectives:

- to determine SMEs perceptions concerning communication, product quality and flexibility as influencing factors of buyer-supplier commitment and SMEs' competitive performance;
- to examine the influence of communication on buyer-supplier commitment;
- to examine the influence of communication on buyer-supplier product quality;
- to investigate the influence of product quality on buyer-supplier commitment;
- to investigate the influence of product quality on flexibility;
- to explore the influence of flexibility on buyer-supplier commitment; and

- to assess the influence of buyer-supplier commitment on SMEs' competitive performance in southern Gauteng.

## **1.7 SIGNIFICANCE OF THE STUDY**

The findings of this study provide a good structure and strategy to aid SMEs navigating through modern business challenges while maintaining competitive relevance in the marketplace. The study further ensures the continuous growth and expansion of the SMEs through frequent manipulation and interaction of the model baseline factors. Finally, the study evokes the consciousness of SME practitioners to the realities of commitment to relational values towards achieving consequential relationship deliverables.

## **1.8 RESEARCH DESIGN**

Research design is a framework which guides the collection as well as the analysis of data in order to respond to research problems and thereby achieve research objectives, offering well-structured explanations on bases of data selection, and approaches for gathering data and the investigation procedure (Saunders, Lewis & Thornhill 2016:726). Three research designs in use are quantitative, qualitative and mixed method research designs.

Quantitative research can be defined as a research approach which emphasises the significance of quantities/numbers in data collection and analysis (Bryman & Cramer 2009:362). In quantitative approach the analysis is centred on numbers and mathematical procedures to determine the effects of the data (Walliman 2006:112). It comprises the collection of quantitative data that can be exposed to careful quantitative analysis or rigour order to facilitate support in the capability to draw conclusions based on the population of study (Bloomfield & Fisher 2019:27).

Qualitative research research design, on the other hand, focuses on the value of words/language and understanding the views of research participants (Bryman & Cramer 2009:362). In qualitative research, the emphasis is on establishing a direct link with the research participants in order to understand the subject or concept from the participants' standpoint (Corbin & Strauss 2015:5).

The mixed method technique combines the elements of qualitative and quantitative research techniques (Denscombe 2010:138).

In this study, a quantitative research design was used because it offers the researcher the benefit of testing the relationships existing among the various research constructs.

### **1.8.1 Literature review**

Various literatures on communication, product quality and flexibility as baseline factors influencing buyer-supplier commitment and SMEs competitive performance was investigated as the theoretical segment that this study demanded. The study made use of books, peer reviewed journal articles, newspapers and Internet as sources of information for the study.

### **1.8.2 Empirical research design**

An empirical investigation was conducted to facilitate the knowledge of the nature of the relationships between the variables under study. Furthermore, because the study was constrained by time, a cross-sectional design was used to establish the factors influencing SME buyer-supplier commitment and competitive performance in the Gauteng province.

### **1.8.3 Target population**

A target population is the focus of the research investigation wherein statistical inferences and deductions can be drawn (Malhotra 2010:372). Based on this research, the target population includes all SMEs involved in buyer-supplier businesses that are located in the southern Gauteng region of South Africa. The samples were generated from business owners, managers, sales representatives and senior staff of the various SMEs in the Sedibeng region, which forms the business hub of the Gauteng province.

### **1.8.4 Sample frame**

A sample frame is a complete list of all possible sampling units' frame from which a sample is collected (Ajay & Micah 2014:3). It represents the functional population from which the sample is drawn (Cooper & Emory 2009:18). However, in business/management related studies, the common approach towards achieving a sample frame relies mostly on the elements of subjective judgement which is non-probability sampling (Saunders *et al.* 2016:295). Because there is no specific sample frame for this study, convenient sampling technique was used to draw samples.

### **1.8.5 Sampling method**

Two commonly employed sampling techniques in research are probability sampling and non-probability sampling. However, the use of the non-probability sampling has gained increased popularity (Al-Nasiri1, Muniswamy, Maskari 2017:160). In this study, a non-probability sampling technique with focus on purposive and convenience sampling technique will be utilised. Heterogeneous or maximum variation sampling will facilitate the researcher's decision in

selecting participants with different attributes to generate optimum data that reflect the views of buyer-suppliers during data collection (Saunders *et al.* 2016:301). Hence, the target population will be grouped into the buying firms and the supplying firms and samples will be extracted from these groups. The decision to use these techniques is significant because it allows a selection of respondents on the basis of availability, ease of access and the respondents' suitability for the study. Data realised are likely to be significant because they reflect the research constructs.

### **1.8.6 Sample size**

Kothari (2004:56) defines sample size as "the number of items to be selected from the universe to constitute a sample." Hence, selecting a sample size becomes an issue of great significance to the researcher because the size of a sample should be neither too small nor too large. Kothari (2004:56) identifies an optimum sample size as the one that satisfies the conditions of proficiency, representativeness, consistency and workability in the study. Pearson and Mundform (2010:359) maintain that a sample size of 300 is assumed to be "very good" for factor analysis, while 1000 and above is "excellent". Because this study was constrained by time and finance, a sample size of 1000 and above may be unrealistic to achieve. In order to realise a sample size for this study, a historical decision based on previous studies was employed. Researchers such as Olawale and Garwe (2010:729); Nambudiri (2012:977); Chinomona, and Chinomona (2013:57); Omoruyi and Dhurup (2016:121) and Mafini & Loury-Okoumba (2016:617) who examined SMEs' relationship used sample sizes ranging from 100-500. Based on evidence and the need to achieve a good result in factor analysis, a total sample size of n=450 was distributed and n=396 was returned and used.

## **1.9 DATA COLLECTION METHOD AND MEASURING INSTRUMENT**

The design of a questionnaire determines the type of data to be collected. Approach in research is the adoption, adaptation or possible development of one's own research question (Mafini & Loury-Okoumba 2016:632). In this study, data was obtained through adapted and adopted instruments from previous studies. To achieve good results, the researcher ensured that the questions chosen are suitable for the South African context. Data was collected through a self-administered standardised questionnaire supported by two research assistants. The questionnaire was designed in a five-point Likert scale format, ranging from 1=strongly disagree to 5=strongly agree. Section A of the questionnaire consists of questions directed at understanding participants' demography. Section B measured communication and was adapted from Fynes and Voss. (2002:612). Section C, measured product quality and was adapted from Hall *et al.* (2016:32). Section D, measured flexibility and was adapted from Humburg *et al.* (2005:25). Section E measured buyer-supplier commitment and was adapted from the work of Ulaga and Eggert

(2006:320). Buyer-supplier competitive performance measurement in Section F was adapted from (Mafini & Loury-Okoumba 2016:632).

### **1.9.1 Pilot study**

A pilot study is a small scale questionnaire distributed to a particular group of respondents in order to ascertain the reliability and validity composition(s) of the measuring instruments before the actual data collection (Cockburn, Jahdi & Cockburn-Wootten 2017:276). Saunders *et al.* 2016:723) defined pilot study as a small-scale study to test a questionnaire, interview checklist or observation schedule to minimise the likelihood of the respondents having problems responding to the questions, and also to facilitate the reliability and validity of the measuring instruments before the actual data collection.

## **1.10 STATISTICAL ANALYSIS**

“Statistical analysis is the process of testing hypotheses about, and drawing inferences from data using mathematically based rules” (Dunn 2009:281). The process of data analysis starts with a careful coding of the data from a completed questionnaire into the Microsoft Excel spread sheet. Through descriptive statistics, the researcher organised, summarised and analysed the key attributes of the data drawn from the sample by using Statistical Package for Social Sciences (SPSS) software version 25.0. The use of the confirmatory factor analysis (CFA) enable the researcher to ascertain the psychometric properties of the various instruments employed. The researcher was able to determine the pattern of relationship existing between the common factors and their indicators through factor analysis. The structural equation modelling (SEM) was used to examine the research hypothesis for existence of causal relationships among the study variables. The study used Analysis of Moments Structure (AMOS) software version 25.0 to examine the CFA and the SEM.

## **1.11 RESEARCH MODEL FIT ASSESSMENTS**

The purpose of model fit is to ascertain the resourcefulness of the data in the conceptualised research model. However, in order to examine the fitness of this study model, the study was guided by chi-square/degree 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), comparative fit index (CFI) and root mean square error of approximation (RMSEA).

## **1.12 RELIABILITY AND VALIDITY**

Reliability and validity, according to Saunders *et al.* (2016:202), “are central to judgements about the quality of research in the natural sciences and quantitative research in the social sciences.” Reliability suggests repetition and constancy (Walliman 2006:34). The ability of a given research design to replicate previous studies and achieve the exact result means that the research is consistent (Walliman 2006:34). Validity, on the other hand, focuses on the ability of a measuring instrument(s) to quantify what it is meant to quantify (Punch 2006:157). The reliability of the measurement instruments, which was employed in this study, was tested using the Cronbach alpha coefficient and composite reliability (CR) value. The convergent validity of this study was ascertained using item total correlation values, item loading values and the average variance extracted values (AVE). Hence, to determine discriminant validity, a comparison is drawn among average variance, shared variance and inter-construct correlations.

## **1.13 ETHICAL CONSIDERATIONS**

Ethics in research denotes the principles that direct the conduct of the researcher in relation to the rights of individuals who, by implication, become the field of research or impinge on the study (Stewart, Fenn & Aminian 2017:666). With regards to collecting data in this study, the researcher exerted effort to ensure that the research was conducted in an ethical manner. Hence, participants’ rights to confidential information, non-participation and anonymity was upheld. Information regarding the procedure for involvement and risks was explained to respondents who provided their consent through participation. Respondents’ right of participation was protected from any circumstance capable of causing emotional or physical harm and from any kind of discomfort. The data collection process was undertaken at the best comfort state of the respondents.

## **1.14 CLASSIFICATION OF CHAPTER ONE**

The five chapters of this dissertation are summarised below:

### **Chapter 1: Introduction and research background**

Chapter 1 comprised the introduction of the study, statement of the problem, research objectives, hypothesis and highlights of the study’s constructs, and followed up with an overview on the research methodology.

## **Chapter 2: Literature review on SMEs and the research constructs**

Chapter 2 focused on the various local and international literature relevant in the study of SMEs and its various constructs.

## **Chapter 3: Research methodology**

In this chapter, the researcher discussed the research design, sampling design and method of data collection. Attention then moved to statistical analysis, which was again followed up with ethical issues.

## **Chapter 4: Data analysis and results**

Chapter 4 focused on the analyses of data, interpretation of data, and brief discussion on the results. It also explained the data analysis procedure together with the statistical package in use. The researcher also explained the reliability and validity of the measurement instruments employed, the model fit criteria, hypothesis and discussion on the findings of the study.

## **Chapter 5: Results, conclusion and recommendations**

Chapter 5 represents the summary of the entire research. Conclusion, recommendations and limitations of the study were presented together with directions for future research.

## **CHAPTER 2**

### **LITERATURE REVIEW ON SMALL AND MEDIUM-SCALE ENTERPRISES AND RESEARCH VARIABLES**

#### **2.1 INTRODUCTION**

In the previous chapter an overview of the research background was presented with focus on buyer-supplier commitment. This was followed with statement of the problem, a review of the research underpinning theory and the study variables. In addition, the research objectives and methodology were equally highlighted. This chapter extends our knowledge on SMEs and their contributions to national development, as well as the challenges which inhibit their operation in South Africa. Furthermore, this chapter extends our understanding of the various research variables and their relationships to buyer-supplier commitment and SMEs' competitive performance.

The significance of the SME sector to the growth and development of the South African economy and the general emancipation of her citizens has come to the forefront of the South African government's economic agenda. Hence the continued success of the economy is to a greater extent dependant on the success of the SME sector. Importantly, for the South African economy to be positioned on a par with the top economies of the world may arguably require little or no margin(s) of error(s) for practitioners in the SMEs sector. On this basis, it is important that partners show greater commitment to their partnership engagements, as these will yield immense benefits, not only to the partners but also to the society at large.

In this regard, the pursuit for economic growth and competitive performance within the SME sector can be influenced by factors like effective communication, improved product quality and partners' relationship flexibility anchored through buyer-supplier commitment. This is because collaborative and mutual behaviours have shown to be important for firms to enjoy enduring success (Omoruyi 2015:16).

#### **2.2 DEFINITIONS OF SMALL AND MEDIUM-SCALE ENTERPRISES**

There is a general belief that SMEs play a prominent role in economic development of countries (Amra, Hlatshwayo & McMillan 2013:4). As noted in National Credit Regulator (NCR) (2011:7), SMEs are well-known for the roles they play in creating new jobs, created through improving manufacturing capabilities that result in higher export earnings for the economy and their ability

to offer the people unrestricted access to skills. The policy brief of the Organisation for Economic Co-operation and Development (OECD) (2000:1) notes that SMEs account for about 95% of firms and creates about 60%-70% job opportunities, thereby making the SME sector the highest contributor to job creation in the OECD countries.

However, generating employment capacity may require developing strategic partnerships and long-term relationship commitment among SMEs. A higher levels of SME relationships will promote healthy collaborations, facilitate information flow and resource development, which avails the partners the opportunity to grow locally and go global (OECD 2000:1). Also, the ability to start small encourages the innovative capabilities of the SMEs, which is evidenced in SMEs business re-engineering processes and operating dynamics aimed at expanding the firms' market reach (OECD 2000:3).

In the European Union, over 20 million SMEs account for about 99 percent of the region's commerce, and hence they are regarded as the foundation for entrepreneurship development because they represent the drivers for innovativeness, job creation and societal absorption (Czegledi, Fonger, & Reich 2015:104). Mellett and O'Brien (2014:1001) note that 98 per cent of the companies in the European Union are made up of SMEs, contributing 67 per cent of employment in the region.

In the South African context, SMEs account for about 91 per cent of the total business in the country (Abor & Quartey 2010:219). They are responsible for over 52-57 per cent of the national gross domestic products (GDP) whilst contributing 61 per cent of employments in the country (Abor & Quartey 2010:219), a sector (SMEs) which controls 9 out of every 10 enterprises and contributes 2 out of every 3 jobs (European Union commission 2015:3) requires adequate attention. These account for the government's increased interest in relation to policies and initiatives to stimulate the sector (NCR 2011:15). In line with the significant impact of SMEs within and outside the South Africa economy, thrusting buyer-supplier commitment into the mix of other relationship strategies will further strengthen the SME sector. However, the definition of SMEs varies among different economy's (Gupta, Gregoriou & Healy 2014:848); Ardic, Mylenko and Saltane (2011:7) and Walaski (2017:63).

### **2.3 INTERNATIONAL DEFINITION OF SMALL AND MEDIUM-SCALE ENTERPRISES**

Defining SMEs has not been an easy exercise. A common approach is to define it from the standpoint of the number(s) of employee(s) in the firm, the firm's annual turnover and assets

(Omoruyi 2015:17). In literature, researchers have maintained the definition proposed by the European Union commission (EU 2005) classify SMEs in terms of “Economic” and “Statistical” classifications NCR (2011:22); Abor and Quartey (2010:219). Based on “Economic” classification, a firm is regarded as SME:

- when the organisation controls a little proportion of the industry it belongs to;
- when the organisation’s management structure is centred on the owners/co-owners;
- when there is no formal administrative unit or chain of command; and
- when the firm does not belong to a big firm.

The “Statistical” classification focuses on the following conditions:

- Quantification is based on the size of the small organisation and its involvement in terms of GDP, job creation and overseas sell.
- Assessment and comparing the changes in economic input of the organisation is in relation to years of establishment.
- The extent to which the small firm sector’s economic contribution has changed over time.
- Benchmarking for the economic input of the small firm with others across the region.

The above definition puts into focus three important criteria for SMEs: staff headcount, annual turnover, and annual balance sheet. The first category of SMEs, the “Medium-sized” firms, is made up of firms with less than 250 employees, and an annual turnover of less than or equal to EUR 50 million and with total balance sheet less than or equal to EUR 43 million (EU 2015:11). In the same vein, a “Small” enterprise will have less than 50 employees, an annual turnover of less than or equal to EUR 10 million, or an annual balance sheet total of less than or equal to EUR 10 million. While a “Micro” firm will have less than 10 employees, an annual turnover of less than or equal to EUR 2 million or an annual balance sheet total of less than or equal to EUR 2 million.

In addition, the American definition of SMEs holds that for an enterprise to qualify as an SME, its staff headcount should be between 100 and 1,500 employees and must depend on the North American Industry Classification System (NAICS) (Walaski 2017:63). It is important to note that since the EU definition of SMEs is not generally applicable to every country, the OECD 2004 conference has encouraged affiliates and outsiders to: develop their own trademark definition(s) of SMEs; and create a statistical criteria for SMEs similar to anyone overseas (Ardic, Mylenko & Saltane 2011:4).

On this regard, in Singapore, SME are defined as “enterprises with 30% local shareholders and annual sales’ turnover of not more than S\$100 million or an enterprise with staff head count numbering about 200 (Spring Singapore 2011:2). Hua (2007:159), while aligning with the OECD classification in a study focusing on Singaporean SMEs, observed that the SMEs in Singapore amount to about 68% of the total number of enterprises and with staff head count of less than 10 persons and annual turnover of US\$500,000. However, 24% of the enterprises create employment capacity of 10-49 workforce with annual turnover that is within US\$3 million, while 7% employ 50-299 workforce with turnover up to US\$30 million. The remaining 1% of the entire enterprises create employment capacity of 300 or more and annual turnover that is over US\$30 million.

#### **2.4 SMALL AND MEDIUM SCALES ENTERPRISES DEFINITION IN SOUTH AFRICA**

The South African SMEs are categorised into survivalist, micro, very small, small, and medium enterprises (Fatoki 2016:6874; NCR 2011:24). Just like every other economy in the world, the contribution of the SME sector to national development, job creation, export promotion and many more, as noted in Bureau for Economic Research (BER 2016:5) cannot be over-emphasised. South Africa’s SME area of domination cuts across mining and quarrying, manufacturing, electricity and gas, construction, retail and motor trade and repair services, wholesale trade and commercial agents (Republic of South Africa,RSA 2003:8; BER 2016:11).

South Africa’s “SME” include the registered and non-registered enterprises defined in (NCR 2011:24); and (RSA 2017:9) as:

*“...separate and distinct business entity, including co-operative enterprises and Non-governmental organisations, managed by one owner or more which, including its branches or subsidiaries, if any, is predominantly carried on in any sector or sub sector of the economy mentioned in Column I of the Schedule....”*

The 2003 Small Business Amendment Act classified SMEs into five categories as:

The survivalist enterprise: this category consists of individuals that are not employed in the formal sector of the economy. The group of businesses that fall within this category can only create an earning which usually falls below the threshold of poverty. A common trait of this group is their inability to raise capital and lack of proper training. Hence, the main objectives of the enterprise are to provide food for the family. They are often referred to as part of the micro enterprise category (Abor & Quartey 2010:221).

The next category, the micro enterprise: this group employment capacity is between 1 and 5 employees which is usually made up of the owner and other family members. They are characterised with lack of formal business procedure and ethics with include compliance to labour laws, defined business operating centre and VAT registration. Their annual turnover is around R200, 000 which is below VAT registration threshold. Those in this category are likely to take their business to the next level, hence they are trained.

Very small enterprise: they have not less than 20 paid employees across all subsectors, except in the agricultural subsector which has about 10 paid employees. Their annual turnover amounts between R1m-R5.10m across all subsectors, with formal systems and operating procedures.

In like manner, small enterprise creates 50 employments with a total turnover ranging between R6m-R32m and with a gross asset between R1m-R6m (excluding fixed property). They operate a formal business with a well-defined complex management structure.

Based on the definition noted in RSA 2017:14, a medium-sized enterprise generates between 100-200 employments, with a total turnover ranging between R5 million – R64 million and gross asset (excluding fixed property) amounting between R3 million – R18 million, based on firm classification. Medium sized enterprises also operate a formal business with a well-defined complex management structure.

However, in the Bureau for Economic Research (2016:1), the number of SMEs in South Africa as at the second quarter of 2015 is 2, 251 821. Out of this, 667 433 operate as formal SMEs while 1,497 860 are informal businesses. The Gauteng province, which boasts a staggering number of 676 831 and 687 556 SMEs within the period of 2007 and 2008 (BER 2016:13) respectively, represents the highest number of SMEs in the country. Western Cape ranks the lowest with a total of 18 823 and 29 894 SMEs based on the year in focus. Notwithstanding the massive employment opportunity that connotes SMEs, as indicated by the figures above, achieving competitive performance in the sector would require buyer-supplier commitment and its influencing factors as proposed in this study.

An important dimension in the definition of SMEs in South Africa, is clustering. The Gauteng province, which has become the home for much of the South Africa SMEs is no stranger to concentration (BER 2016:13). Rogerson (2000:690) opined that clustering occurs when a group of enterprises involved in the same line of, or comparable business, are located near to each other. According to Rauch, Doorm and Hulsink (2014:342), the concentration of enterprises in a given area is important for the integration of home-grown financial system(s) with the outside market.

This, the author noted, has significant impact in the ability of enterprises to exchange knowledge with regards to product quality, markets, and technologies resulting in business innovation. However, there is a varying degree of concentration in today's business world: what is important is the ability of these clusters to harness their relative strengths through commitment in relational values and networking to improve individual enterprise market performance (Rodríguez & Corzo 2012:57; Rauch *et al.* 2014:342).

In line with this study which focuses on the influencing factors of buyer-supplier commitment and SMEs' competitive performance, the research upholds the definition of SMEs as proposed in the Small Business Amendment Act of 2003 and 2004, and operationalised in Fatoki and Garwe (2010:731) as "a separate and distinct business entity, including cooperative enterprises and non-governmental organisations, managed by one owner or more, including its branches or subsidiaries, if any, is predominantly carried on in any sector or sub sector of the economy and which can be classified as a very small, a small or a micro enterprise."

Having established the contributions, compositions and definitions of the SMEs, its challenges are presented below.

## **2.5 CHALLENGES OF SOUTH AFRICAN SMES**

According to SBP Alert (2014:1), notwithstanding the numerous contributions of the SME sector in global and South African economy, its efficiency and effectiveness has often been limited by inadequate or lack of skilled staff, tough and burdensome government regulations, tough economic conditions, lack or inadequate finances and the cost of hiring skilled workers. Sikhwari (2015:29) listed five (5) challenges of SMEs to include: the inability of SMEs to access funding for their business; the bureaucracy in business registration and general administrative requirements which are most likely inefficient; a firm's weakness in research and development (R&D) operationalisation; a firm's reliance on unbalanced employees' code of practice; and high cost of compliance to legislation and other codes of practice.

However, lack of accountability coupled with financial recklessness among the SMEs have resulted to more cases of failures in the sector (Sikhwari 2015:29). Experience has shown that owner managers often find it difficult to separate their personal spending from normal business expenses. The implication of this scenario is the inability of the business to plan and execute business growth strategies as finances needed to leverage business opportunities are used otherwise by the owner manager.

Access to funding and stringent registration procedures are among the general business challenges for SMEs (Abor & Quatey 2010:224). Assessing finance from various financial institutions has not come with ease to most of the SME start-ups. This is because of the various credibility assessment procedures of the banks which the SMEs (start-ups) may not have. More so, as noted in Abor and Quartey (2010:224), registering a business in South Africa takes approximately 176 days, with about 18 procedures required for dealing with SMEs licencing. These prolonged times can be frustrating for the SMEs.

Additionally, research and development operationalisation in the SME sector has not come with much ease, based on the high cost associated with such implementations. Research and development are important for the continued cooperation of SMEs with big companies because of the ability to help improve their product quality (Mather 2005:616). The author observed that most SMEs face delisting from big retailers because of quality inconsistency in product offering. However, investment in research and development in the areas of laboratory equipment and technical staff to manage the firms' quality sections will strengthen the dwindling relationship (Mather 2005:616).

The lack of business managerial competency poses a great challenge to the SME sector which the government, through its Reconstruction and Development Programme (RDP) seeks to address (Ladzani & Vuuren 2002:155). The programme ensures that good and quality training with regard to business administration and general administrative skills are provided to entrepreneurs through the various institutions of learning.

## **2.6 RECOMMENDED SOLUTIONS TO IMPROVE SMES PERFORMANCE**

Apart from policy or regulatory related challenges of SMEs, which arguably could be regarded as external influencing factors, most of their challenges are internally based. To this end, solutions presented in this study are firm-based solutions. The recommendations presented in the following paragraphs represent the researcher's viewpoint and do not encompass all possible solutions.

SME practitioners should afford themselves the opportunities for learning new and improved skills needed to be successful in the present market-driven competitive environment. Quality training is the foundation for business success as it empowers the SMEs managers with the required skills needed to compete and succeed in the ever-changing complex business and competitive environment (Rogerson 2000:690).

Importantly, the ability to leverage relational values through effective supply chain management is an issue for the SME sector. SME owner managers have come to terms with supply chain

integration with particular focus on building relationships with key partners as a step closer to achieving competitive performance (Tlale 2014:28). The researcher observed the growing need for relationship flexibility, anchored in the partners' ability to respond quickly to market demands and innovativeness as tools and strategies needed for SMEs to be successful in the present consumer-driven business environment. Omoruyi (2015:37) notes that the modern business customers are demanding so much more from SMEs, hence the need for the sector to actively identify and engage itself with those activities to ensure a quick response to customers' order and requirements.

Additionally, commitment which forms the basis for this study represents an important dimension in the SME sector for business success and sustainability going forward. Martin, (2006:62) posits that SMEs and entrepreneurs should show greater commitment to the business they are doing by investing their own capital and avoiding the debt trap occasioned in borrowing. Commitment also entails that SME practitioners establish relationships and respect the terms that govern these relationships whether written or oral.

In line with commitment is the need for SMEs to establish alliances. Strategic alliance is the framework of interactions existing between exchange partners wishing to exploit their relationship benefits to create or commercialise new products or technology or services (Shi-Chi, Shiu-Wan & Ming-Ji 2015:192). By establishing alliances, SMEs are able to improve their competitive positions, which aid the quest for survival (Shi-Chi *et al.* 2015:192). It involves toeing the path of innovation with the sole purpose of creating items of value for the partners, customers, establishing effective groups and cooperating through trade borderlines (Rezgui & Miles 2010:559). Through alliances SMEs are able to increase their knowledge base by sharing and learning the arts and skills required to achieve success in the SME sector (Mattos, Burgess, & Shaw 2013:2). Mattos *et al.* (2013:2) highlight that since SMEs are financially restricted from engaging in research and development, the opportunity for knowledge acquisition through alliances would be very significant for their continued existence.

Another issue of great significance to their growth and success is the ability to market their brands and product offerings. SME firms can effectively market their product(s) through hiring competent and trained professionals. Firms that employ more resources and time to marketing are most likely to enjoy the benefits of improved sales volumes and customer's loyalty (Langwerden 2017:12). Importantly, firms that convincingly and strategically market their products/services to present potential customers through efficient and effective utilisation of resources such as offline and online word-of-mouth communication can improve sales volume through offering a quick

response time to the customer(s) (Bulearca & Bulearca 2010:299; Reijonen 2010:281). The next section presents the theory underpinning this study.

## **2.7 THEORETICAL FRAMEWORK TO AID THE IMPORTANCE OF SOCIAL EXCHANGE THEORY ON THE VARIABLES**

Social exchange theory which emanated from the field of anthropology that covers the disciplines of sociology, social psychology, philosophy and economics, have received considerable attention in the study of inter-firm partnership and buyer-supplier relationship (Frow 2007:244; Chao, Yu, Cheng, & Chuang 2013:1059). SET notes that SMEs can achieve competitive performance through commitment and reciprocated exchange (Lai 2009:243). Liao (2008:1882); Yeniyurt, Henke and Yalcinkaya (2014:293) believe that rewards and benefits are the basis for interaction among partners. Hence, the presence of high exchange cost discourages engagement while high benefits will encourage exchange among partners (Liao 2008:1882). The hallmark of social exchange is that the buyer-supplier show stronger commitment to create and sustain good cooperative relationships through reciprocated exchanges that benefit partners (Yeniyurt, *et al.* 2014:293). In this regard, Krause and Ellram (2014:193) contend that the premise of SET's assumption is that the buyer-supplier can avoid "opportunistic behaviour" through commitment and trust.

However, relationships strengthen through ongoing communication. Partners that talk to each other frequently tends to know each other better (Karanges, Beatson, Johnston, & Lings 2014:331). Social relations evolve in ongoing communication and trust wherein partners can share proprietary information (John, Visinescu, Guynes & Prybutok 2016:215). The SET principles aid partners to guess the availability or not of social welfares in a buyer-supplier relationship through evaluating interchange values by judging from partners' views about communication and commitment to relationship (John *et al.* 2016:215). Accordingly, communication which is a form of resource in social exchange relationship is significant for establishing a successful buyer-supplier relationship (Karanges *et al.* 2014:331; John *et al.* 2016:215).

Additionally, with regard to product quality, Dunk, (2002:719) notes that good product quality is significant in a firm's ability to achieve competitive performance. This study argues that through social interaction built on effective and efficient communication, partners can improve the quality of their product, which will result in them committing to a long-term relationship. However, social relationships or in this case buyer-supplier relationships are enhanced in the presence of items of value (good product quality), meaning that when partners are satisfied with the quality of a product on offer, their propensity to continue the relationship increases (Waller & Ahire 1996:24). The

view shared in social exchange is that the satisfaction of partners in the exchange relationship enhances their trust and commitment into an ongoing relationship (Kwark, Chen & Raghunathan 2017:766). In other words, this means that partners will exert efforts to ensure that the quality of the product on offer is good in order to continue their exchange relationship.

However, in response to social exchange influence on buyer-supplier flexibility, Young-Ybarra and Wiersema (1999:443) observed that (1) relationships built on trust have a significant impact on partners' propensity to adapt to varying business demands by modifying or terminating the exchange relationship and (2) that partners' reliance on the exchange relationship can as well become a factor for the enthrone of flexibility in exchange relationships. However, Palmatier (2008:78) underscores that the influence of social exchange on flexibility can be viewed from the perspective that it enables the exchange partners to undertake risky ventures, or to some extent modify relationship arrangements in favour of their cooperating partners, irrespective of assurance or not of their imminent reciprocal behaviour. Dhir and Sushil (2017:142) conclude that an exchange relationship formed on faith would require flexibility structures to survive and be profitable for the partners going forward.

Finally, this study believes that commitment in social relationship is integral for the attainment of social benefits (competitive performance). Partners that are satisfied in a given relationship tend to show their satisfaction through relationship commitment. This reciprocated action makes commitment a social behaviour, aligning it with the principle of SET reciprocity (Morgan & Hunt 1994:23). In social engagements, partners express their long-term intentions through pledges, or by investing in items of value such as idiosyncratic investment, and allotting specific resources to the partner (Gundlach *et al.* 1995:79). By willingly deploying its resources into the relationship, partners make exiting the relationship difficult, even during tentative situations. Hence the investment serves as a social bond that ties the partner into the relationship Gundlach *et al.* 1995:79). Hence, the continued mutual relationship existing between the partners, anchored in communication, product quality, flexibility and buyer-supplier commitment, which in this study, represents social variables are significant for partners to achieve long-term relationship benefits, or in this case, competitive performances.

Importantly, the SET assumptions underpinning this study is synthesised in the first chapter. Integrating these assumptions into buyer-supplier commitment as a focal construct for this research is particularly significant for a study among SMEs. The next section defines buyer-supplier commitment.

## **2.8 BUYER-SUPPLIER COMMITMENT**

Buyer-supplier commitment is defined as a force that binds partners into certain actions that are of significance to shared values (Lapointe & Vandenberghe 2018:101). It can be referred to as partners' emotional connection to interchange relationships (Acharya & Dasbiswas 2017:80). Lee (2016:328) views buyer-supplier commitment as relating to partners' feelings towards the advancement or conservation of unwavering, long-term reciprocal connection. Hur, Ahn, and Kim (2011:1197) sees commitment as the creation of unwavering relationships with partners, which involves taking responsibilities for temporary disadvantages for the purpose of ensuring the longevity of the relationship. This study upholds the definition of commitment, offered by Tungjitjarurn *et al.* (2012:184) as "the desire to develop a stable relationship, a willingness to make short-term sacrifices to maintain the relationship, and the confidence in the stability of the relationship." This definition is significant in a buyer-supplier commitment context because for partners to enjoy long-term benefits in their relationship requires that they make sacrifices and have confidence, which reflects trust in the partnership engagement.

## **2.9 THE IMPORTANCE OF BUYER-SUPPLIER COMMITMENT**

The study of buyer-supplier commitment on SMEs has gained increasing prominence in literature (Tungjitjarurn *et al.* 2012:184; Mafini & Loury-Okoumba 2016:613). This is not unconnected to the increased development in technologies, product proliferations, highly competitive market environment and customers' complexity (Morgan & Hunt 1994:20; Frow, 2007:245; Shiu, Jiang & Zaefarian 2014:888), and the need for SME partners to maintain competitive performances (Mafini & Loury-Okoumba 2016:625). Ganesan, Brown, Mariadoss and Ho (2010:361) contend that buyer-supplier commitment is important for the creation of relationship within the SMEs sector, and to ensure that the relationship established by the parties last the taste of time. The author's further note that commitments echoes the wishes of the cooperating partners to protect their investment for the purpose of obliterating the negative impact of their disengagement. Commitment rooted in trust enables efficient and effective sharing of information, reduces partners' opportunistic behaviours and improves their social simplicity (Lee 2016:328).

Morgan and Hunt (1994:22), while objecting the notion that "power" is significant for network analysis and cooperation, propose that commitment built on trust is a significant factor for success. The authors view is that commitment enables partners to work cooperatively to protect investment, and help partners resist short-term alternatives which stand to oppose long-term opportunities available for the partners. Hence, through commitment, partners can engage in high risk investment on the basis that the supplier will not act opportunistically at the detriment of the buyer.

In line with the Morgan and Hunt view, Frow (2007:246) contend that commitment and trust result in cooperative behaviours which encourage continuity and reciprocated positive bonding. The researcher accentuates the importance of fostering buyer-supplier commitment in that through commitment, buyer-supplier relationship adherence in the SMEs is done willingly, as opposed to power, whose compliance is coercive.

Borrowing from organisational commitment literature, Akehurst, Comeche & Galindo (2009:281) state that commitment is concerned with team behaviour rooted in emotions, empathy and oneness of purpose, which enables parties to work for one another. Through commitment, buyers and suppliers in the SMEs sector can disseminate proprietary business information, support one another technically, and engage in asset specific investment, education and training (Lee, 2016:329). Commitment is fundamental to expanding the SMEs' partner's relationship by ensuring their performance improvement, establishing reliability, long-term relationship, and eliminating supply chain vulnerability and cost (Lee, 2016:329). Tungjitjarurn *et al.* (2012:184) concludes that specific investment of assets and the buyer-supplier relationship represents the key elements of effective commitment between a buyer and the supplier. However, this study believes that good understanding of the importance of buyer-supplier commitment requires the examination of the nature of commitment. Hence, the next section addresses this commitment.

## **2.10 THE NATURE OF BUYER-SUPPLIER COMMITMENT**

Buyer-supplier commitment refers to the degree to which a buyer or a supplier is enthusiastic about developing a long-term relationship with one another (Sharma, Young & Wilkinson 2006:64). This is particularly significant in the SME sector because the organisations' enduring market position is determined by the level of their interactions with one another and their ability to support a firm's goals using buyer-supplier range (Shiu *et al.* 2014:888). Among the varied nature of commitment available in literature are attitudinal, behavioural and calculative commitment (Shiu, *et al.* 2014:889; Ganesan *et al.* 2010:363; Sharma *et al.* 2006:66; Yu, Lin, Wang, Ma, Wei, Wang, Guo & Shi 2016:30). These commitments are further discussed below.

### **2.10.1 Attitudinal commitment**

Attitudinal commitment is focused on the wish to establish an unwavering relationship by partners (Sharma, Young & Wilkinson 2015:46). It involves the willingness to invest in relations and ensure that the relationship with a buyer-supplier lasts (Sharma, *et al.* 2006:64). Common forms of attitudinal commitment in literature are: affective, continuance and normative commitment (Sharma *et al.*, 2015:46; Frow, 2007:244; Wu, Chiag, Wu, & Tu, 2004:323). However, in this

study the researcher applies a holistic approach to the dimensions under the umbrella of buyer-supplier commitment. These dimensions are discussed below.

Sharma *et al.* (2015:46) notes affective commitment to be rooted on an emotional connection and social tie with the partner; a kind of commitment that is developed over a period of time as a result of positive engagement existing between the SMEs' buyer-supplier partners, thereby requiring that the relationship is reinforced in confidence. Commitment is significant in achieving effective business success in a buyer-supplier relationship (Löfblad, Hyder & Lönnstedt 2012:275). This is because in a buyer-supplier relationship, partners who are affectively committed to the same cause will feel that they belong to the partnership, which makes them exhibit a kind of emotional attachment to the organisation (Wu *et al.* 2004:323). Lewicka and Krot (2015:1459) emphasised that a high level of affective commitment within the SMEs' buyer-supplier relationship circle is capable of generating improved performance and reducing the intention to breakout from the partnership, which leads to improved loyalty.

Continuance commitment is concerned with the decision to leave or to remain in a relationship with a partner (Frow, 2007:247). This decision can be facilitated by the presence of the assets' specific investment in the partners' engagement. Wu *et al.* (2004:324) believe that partners' idiosyncratic investment in the form of embracing a unifying order facilitating scheme, preparing or consecrating personnel to maintain partners' equipment will encourage the partnership's stability and continuity. Ucanok, and Karabat (2013:97) accentuate that the decision by partners to continue in a given relationship (seemingly unfavourable) can be attributed to the lack of favourable alternatives outside the relationship environment. This calls for the SMEs' buyer-supplier partners to ensure that mechanisms are required to ensure continued commitment in the relationship are in place and functional.

Fullerton (2014:660) defines normative commitment as a commitment born out of moral obligation which the SMEs buyer-supplier partners have for one another in a relationship. The author further enthuses that the moral obligation to remain in the relationship is, to some extent, a feeling of reciprocity for the other partner in the relationship. Fatima, Razzaque and Mascio (2015:262) note normative commitment to be significant in a "business-to-business" relationship. Ucanok, and Karabat (2013:97) perceive normative commitment from the standpoint of cooperative loyalty standards. They argue its relevance in a buyer-supplier context based on the inadequacy of empirical evidence to justify its influence on the overall partners' relationship. The next section discusses behavioural commitment, another kind of commitment.

### **2.10.2 Behavioural commitment**

Shiu *et al.* (2014:889) note that behavioural commitment as related to the obvious indicator of “relationship continuation” and its concomitant investments. The authors further assert that the specific investment of assets in the SMEs buyer-supplier relationship is capable of altering the inducement arrangement of the partners, thereby making it impossible for them to act opportunistically in the relationship. Frow (2007:247) notes behavioural commitment to be associated with the manner by which SME partners trapped in a relationship respond to it. Shiu *et al.* (2014:889) who examined three antecedents of behavioural commitment to include: “trust, reliance and dependence” contend that such commitment is concerned with the intent to continue in a relationship, as well invest in the creation of social, economic, and corporal assets through asset-specific investment. Sharma *et al.* (2015:53) found that behavioural commitment is strongly linked with affective and locked-in commitment. The author further notes that through asset-specific investment in relations, partners demonstrate their willingness to establish robust ties for the future. Caceres and Paparoidamis (2007:839-842) note that SME partners’ positive actions repeated over time become a behaviour which relatively occur because of their “satisfaction” with the relationship category. Fink and Harms (2012:167) conclude that in any partnership arrangement where the same ideology is shared by the cooperating partner, the chances for opportunistic behaviours are reduced. The next section discusses calculative commitment.

### **2.10.3 Calculative commitment**

Gilliland and Bello (2002:28) defines calculative commitment as “the state of attachment cognitively experienced as a realisation of the benefits sacrificed and losses incurred if the relationship were to end”. From the perspective of a buyer-supplier relationship lens, calculative commitment is a rational examination of the importance of maintaining the buyer-supplier relationship (Yanamandram & White 2010:572). This type of commitment is generally concerned with the appraisal of the benefits or profits that relate to continuing a relationship with a partner, as well as the cost impacts associated with exiting the relationship. Lewicka, and Krot, (2015:1471) observed that calculative commitment which mediates affective commitment, can presumably condition it, based on emotional engagement associated with the latter. Gilliland and Bello (2002:28) argued that although calculative commitment has some attributes of continued commitment, it lacks a relational connection with partners since it shows strong affirmation for unprincipled conduct and the quest for other sources. Johnson (2007:7) sees calculative commitment as a cogent cost-effective perception of commitment, which occurs as a result of partner’s perception of value in offerings. The author further notes that in a service industry such

as the banking sector, customers calculative commitment will originate from accessibility factors like “24-hour access, lack of terrestrial boundary, and speed of service delivery and process mechanisation.” Gustafsson, Johnson and Roos (2005:211) acknowledged this type of commitment as being “colder, or more rational economic based dependence on the merits of a product due to a lack of choice or high switching cost”. The next section will discuss the influencing factors of buyer-supplier commitment.

## **2.11 FACTORS INFLUENCING BUYER-SUPPLIER COMMITMENT AMONG SMES**

Studies on the factors which influence buyer-supplier commitment have ostensibly been focused on relationship termination cost, benefits, shared values and trust (Morgan & Hunt 1994:22; Morris 2005:4). In Morgan and Hunt (1994:33), the trust impact on commitment is jointly predicted by the organisation’s shared values and communication in the relationship. Pfanelo (2016:438) identified collaboration and integration as key influential factors of commitment. According to Pfanelo (2016:431), commitment enabled by collaboration and integration helps partners to drive down their operating cost, which leads to a significant boost in their profit potentials and shared performance. In this study, the focus of the factors influencing buyer-supplier commitment are directed towards trust, communication, product quality and flexibility, which forms part of the study’s conceptual model. This is because these factors may be regarded as a prerequisite or antecedent towards a successfully integrated and collaborating relationship among SMEs, thereby enhancing buyer-supplier commitment. Communication is discussed next.

### **2.11.1 Communication**

Yeniyurt *et al.* (2014:295) defines buyer-supplier communication as the honest dissemination of sufficient information by both the buyer and the supplier. The authors note that in a business environment bursting with uncertainty and risk from both the buyer and supplier, effective communication is the means of ensuring the desire to continue in an exchange relation. Lee (2016:74) defines communication as a “meaning-making activity” with the objective to improve, consolidate, and dispense information. The author states that through communication, partners in a relationship are more inclined to keep to their objectives for engagement. In the context of buyer-supplier, communication incorporates “informing”, “answering” as well as “listening” to each other, which signals cooperativeness and partners’ preservation (Lee 2016:74). Information sharing capability represents an important milestone which the partners must cover to boost operational performance (Vogt & Inderfurth 2012:639). A serious issue arises in communication when the communicator and the receiver, or in the case of this study the buyer and supplier, are

not in agreement (Cole 2015:567). In this study, the researcher stresses communication as the official or casual effective reciprocal interchange of information between the buyer and the supplier (John *et al.* 2016:219). The importance of communication in buyer-supplier relationship is contextualised next.

### **2.11.1.1 The importance of communication**

Kaynak and Sert (2012:221) note that for the SME buyer-supplier to enjoy effective communication, both parties should be willing to make information sharing very open, available and a necessity. They further accentuate that communication helps to enthrone a successful relationship in the SME buyer-supplier, improves satisfaction, which reduces a partner's opportunistic behaviour, and leads to long-term engagement. Hill, Seo, Kang and Taylor (2012:763) underscore that in an environment of change, SMEs' buyer-supplier communication can help partners avoid trepidation of uncertainty, which are common occurrences. John *et al.* (2016:220) hypothesis found strong empirical evidence supporting the positive influence of communication on partnership engagement. This is because when partners are satisfied they institute profitable communication links, which help them resolve issues concerning their partnership (Kaynak & Sert 2012:222). Therefore, the willingness of the buyer-supplier to solve problems collectively will encourage joint exchange and tolerate buyer-supplier relations. Partners with an institutionalised communication structures are found to have reduced unethical behaviours, which strengthen satisfaction in the partnership engagement (Kaynak & Sert 2012:225).

However, John *et al.* (2016:215) record that partners who predict a good result in their relationships are most likely to share more information concerning one another, which help them improve their cost reduction capability. They further noted that partners' good behaviour, which flourishes over a period, is tantamount to effective communication that generates two-way models capable of strengthening engagement and promoting partners' self-confidence. Communication significantly improves relationships by allowing partners to understand their bonding factors, resolving business issues, provides partners with the channels to uncover as well as integrates objectives, and seek to produce value through cost reduction or improve investment returns (Morgan & Hunt 1994:25; Palmatier, Houston, Dant & Grewal 2013:20). Palmatier, *et al.* (2013:21) further state that partners' ability to communicate is significant because of the intricacies involved in creating value, which requires constant alteration. Leonidou, Samiee, Aykol and Talias (2014:34) summarised that in the case of an export-import exchange relationship between buyer-supplier, communication has a significant impact on the partner's cooperation,

trust and commitment, which help strengthen as well improve performance. Communication antecedents and methods are discussed below.

### **2.11.1.2 Antecedents and methods of communication**

Most research where communication is contextualised has focused on its successors rather than the antecedents (Yeniyurt, *et al.* 2014:294; Azeem & Ahmed 2015:25; Chalwla & Kelloway 2004:486). Bakar, Mustaffa, and Mohamed (2009:12) decried the continued use of communication as a background component instead of the main focus area in dyadic studies like buyer-supplier relations, irrespective of the commanding role communication plays in fostering relationships. A research work focused on the attitude towards adopting the social networking site as a means of communication, identified the perceived ease of use, usefulness and risks as communication antecedents (Jaafar, Darmawan & Ariffin 2014:703). These constructs, the author notes, are overwhelming, leading to enjoyment, convenience and social presence, which are ways of behaving that help inform partners' knowledge. Kyriazis, Couchman and Johnson (2012:215) discovered that to enjoy excellent communication in SMEs' buyer-supplier relationships, requires reductions in "thought world differences and psychological distance".

A good means of communication should encourage hands-on norms that help partners share information as well as engage in processes designed for the creation of mutual knowledge (Olsson 2014:113). This knowledge, the author continued, exists only when partners agree to pool their capabilities based on the fact that no partner knows it all. Tang and Zimmerman (2013:28) note information technology as an important contributor in buyer-supplier exchange because of the ability to provide visibility and timely information sharing. Facebook, an interpersonal means of communication, has gained recognition for formal and exchange communication in modern day business (Parrigot, Kacker, Basset & Cliquet 2012:541). However, knowing which way SME partner can communicate is important, and discussed next.

### **2.11.1.3 Dimensions of communication**

Two important dimensions of communication notable are: context and content communication (Cole 2015:568). According to Cole, context messages/information are not explicitly stated in the message. Hence, its use is based on previous experiences, interactions and exchanges between the interlocutor and the recipient (buyer-supplier), which facilitates meaning. Cole notes that content communication, otherwise known as "low-context" communication, is a means of communicating in which the information exchanged is explicitly engraved in the message. Observing from Cole's (2015:569) reasoning, this study underlines that partners' choice of message should be based on

the one (context/content) which satisfy their need for communicating to one another. In other words, the one (message) that the partners understand so as to encourage smooth information flow that benefits the SME partners.

Olsson (2014:116) conceptualised four dimensions of communication to include: operational and strategic, reputational and resilience dimensions. In this study, the researcher's interest is on the previous two (operational and strategic) because of their link to two-way communication which the researcher has previously operationalised. In the work of Olsson (2014:116), the operational communication dimension is concerned with making available complete information to partners to facilitate decision making. In other words, operational communication empowers buyer-supplier in an SME context to share the whole information package necessary to uplift them, while strategic dimension underscores the willingness of the partners to continue in the SMEs buyer-supplier engagement by instilling progressive views in exchanges. The next section discusses product quality.

### **2.11.2 Product quality**

Lee, Yang and Yu (2001:692) define quality in relation to value, conformance to standard, excellence and the possibility of matching or surpassing a customer's expectations. This definition which originates from the field of total quality management, reflects the views shared in operations management, wherein quality is seen as the ability of a given product to fulfil a purpose, with attributes available that meet customer demand, and whether the product can be trusted (Wang, Lo & Hui, 2003:75; Crosby, Devito & Pearson 2003:18). Lee *et al.* (2001:692) further suggest that achieving good product quality requires a systematic approach throughout the product initiation phase and across product "value chain". Whereas value chain refers to the sequence of activities within and outside the organisation that aid the creation of value for the customer, within the course of activities the organisation can incorporate good production ethics which facilitate good product quality (Ehlers & Lazenby 2010:121). Dunk (2002:719) defines product quality in terms of product shape and its fitness for purpose. Kwark *et al.* (2017:764) define product quality as concerned with the degree of excellence of the product which the consumer agrees and accepts as a standard for making selection, when the consumer prefers a superior quality product than its opposing complement. Maire, Pillet, and Baudet (2013:63) note that consumer expectation has metamorphosed in recent years to incorporate varying degree of attributes far above the usual product prototypes, to approaches of post purchase deliverables and face value of products. This dynamic therefore requires to shift attention from customer expected quality to customer perceived quality, which calls for approaches such as product innovation, customer focus and employee

involvement (Chowdhury, Paul & Das 2007:24). In line with the above definition, this study defines product quality as possessing not only exceptional attributes that match suppliers' resourcefulness but also satisfy customers' requirements. This definition involves customers' opinion about non-price characteristic of firm products, services, and intrinsic and non-intrinsic attributes such as resilience and after-sale services (Cowherd & Levine 1992:308). This study advances the importance of product quality.

### **2.11.2.1 The importance of product quality**

Product quality is heralded as important for organisations to achieve significant comparative advantage and performance upgrade (Dunk 2002:719; Prajogo 2007:71). When the quality of a product is low compared to market offering, customers tend to switch to the products which they perceived as having a better product quality (Waller & Ahire 1996:24). This scenario has led to organisations reviewing and adjusting their quality standards to match customer demands and industry wide acceptable standards to enhance market competitiveness (Jacobson & Aaker 1987:31). Kwark *et al.* (2017:766) posit that product quality is associated to the optimum value of satisfaction which a consumer draws from the product. This plays a significant role in the organisation's ability to manage and to maintain the loyalty of its customers thereby resulting in a massive boost in the organisation's profit potentials (Shin, Park & Lee 2016:739). However, a teething concern that organisations face in achieving high product quality is the cost incurred, not only in research and development but also in customer orientated production procedures which is usually passed on to the product users in the form of high premium charge (Kang 2012:269). Shin *et al.* (2016:739) suggest that the extra cost of quality which serves as a means of differentiating the product from the rest in the market can be overhauled in improved market performance originating from customers' loyalty. Lee *et al.* (2001:692) contend that organisations' interest on product quality stems from its role in providing best quality "customer's value," which is important for maintaining strong competitive advantage. This study believes that the knowledge of factors which predict product quality will aid the understanding of the role product quality plays in SME relationships. The antecedents of product quality form the next discussion.

### **2.11.2.2 Antecedents of product quality**

Wang *et al.* (2003:75-80) empirically examined four antecedents of product quality to include: product availability; product convenience; reliability; and tangible. They found evidence supporting the positive impact of product availability, reliability and tangible on firms' product quality. The same could not be said of product convenience as their findings suggest otherwise. The researchers attributed the contrary result of product convenience on product quality to

business expansions that made it a little easier for customers to access a firm's product offerings (Wang *et al.* 2003:80). This explanation bodes well with this study, which claims that for money to still retain its value, it has to be relatively scarce (Hill 2013:3).

In another study context, Lee *et al.* (2001:692) theoretically examined the "level of knowledge acquisition from customer" and the "participation of employees on knowledge dissemination" as predictors of firms' product quality. The theory found strong support from empirical evidence in their study. The researchers' logic is that strong interface relations between organisations and their customers, or in this case, between buyers and suppliers, will improve the partners' product quality through the customer's feedback. In a similar study, empirical evidence shows that "product innovation, customer focus and employee involvement" are strong antecedents of product quality in "high-top commitment and low-top commitment firms" (Chowdhury *et al.* 2007:24). These researchers further believe that product innovation strategies of the SME partners require active participation of the buyer and supplier through the establishment of a "cross-functional team." Customer focus involves organisations to evaluate customers' demands frequently and seek ways to adjust their processes to match or exceed customers' demand dynamics and that employee's involvement requires partners to respect and encourage the contributions of their staff to increase their self-confidence and credibility, which helps them to maintain focus on quality standards of the firm.

Arostegui, Amado and Perez (2017:704) propose partners' engagement in long-term relationship as a condition for good product quality. The researchers opined that long-term oriented relationship will enable partners to make strategic investments aimed at advancing good product quality that meets customers' requirements. They further note that suppliers' strategic investment will empower partners to show greater commitment in product quality as well as new product development initiatives from organisations. The next sub-topic focuses on the dimensions of product quality.

### **2.11.2.3 Dimensions of product quality**

Crosby *et al.* (2003:19) contextualised performance, reliability, conformance, durability, serviceability and aesthetics as elements of good product quality. In another study conducted by Shin *et al.* (2016:740), six dimensions of product quality were operationalised to include performance, reliability, durability, usability, safety and accessibility, which cut across 20 industries with 90% of the respondents drawn from product consumers and 10% from industry experts. The product quality dimensions have time and again been reinforced in several studies (Waller & Ahire 1996:25 & Prajogo 2007:75). In adherence to the contextualisation of product

quality dimensions (Waller & Ahire 1996:25; Wang *et al.* 2003:75; Crosby *et al.* 2003:19), this study defines:

Product performance as relating to the main functionalities or attributes of the product, which distinguishes the product from others. Product features relate to the “bells and whistles,” which forms part of the product. Conformance dimension relates to the extent to which these unique attributes and functionalities, inbuilt in the design, meet well-known criteria. Reliability reflects the ideology that the product will continue to perform a stipulated task over a given period under stipulated conditions of use. Durability refers to the amount of time a given product will be put to use until replenishment is required. Serviceability deals with the issues of convenience, speed and competence of available repair. Aesthetics refers to the outward appearance of the product that appeals to the five senses of smell, feel, sound, sight and taste. Also, a customer’s perceived quality deals with the way customer’s view the quality of the organisation’s offering in line with the competitor’s product.

Espejel, Fandos and Flavian (2011:207) view a customer’s perceived quality from the perspective of intrinsic and extrinsic qualities. The researchers note that intrinsic quality relates to those attributes and features of the product and the procedures involved in its production, in which an attempt to alter it would significantly impact the final product quality. Extrinsic quality, on the other hand, deals with product packaging, label, and brand names, which can be altered without impacting the quality of the product. In the next section, the researcher examined the fourth (4<sup>th</sup>) and last factor, namely flexibility, operationalised in this study to influence buyer-supplier commitment.

### **2.11.3 Flexibility**

Flexibility is defined as the degree to which supply chain partners respond to modern business dynamics instead of been stereotyped to any given market condition (Gosain, Malhotra & El Sawy 2005:10). It is the ability of a firm to resist dwindling customer demand, product dynamic and variation in production practices or co-operators (Saraf, Langdon & Gosain 2007:320). Matanda, Ndubisi and Jie (2016:121) defined flexibility in relation to firms’ ability to recognise as well as respond to customers dynamic demands through constant manipulation of competences. Furthermore, they note that flexibility which has received little conceptualisation in the small business sector, is more than just matching consumers’ demand in terms of quantity of produce, but also relates to differences in product categories that match customers’ demand.

Flexibility, in the context of information system technology, relates to the ability of firms to efficiently implement information system to meet modern business requirement (Saraf *et al.* 2007:326). In research and development, flexibility relates to a firm's ability to alter its structures and processes to accommodate new product/production realities (Chang, Chen & Lin 2014:470). In a supply chain context, flexibility has been extensively researched (Singh & Acharya 2014:93; Mandal 2015:207; Linawati 2017:124). These authors agree that a flexible supply chain system is key to serving the customer better while maintaining competitive advantage. Linawati (2017:124) further asserts that a firm's ability to maintain a flexible operational framework will deepen its "relationship and confidence" in the system, which leads to improve performance.

Following these definitions, what is common is change and responsiveness. Hence, in the context of an SME buyer-supplier relationship, this study defines flexibility as the ability to respond to partners' demand, not only in product varieties, quality and volume, but also to create a flexible finance structure that balances partners' engagement. The inclusion of finance in this definition is significant because through credible finance systems, partnership engagement can be reinforced (Fayezi & Zomorodi 2015:1133). The next section examines the relevance of flexibility on SMEs.

### **2.11.3.1 The importance of flexibility**

Meeting or exceeding customer's dynamic demand is an important capability which can only be achieved through enthrone of flexible systems and operations (Rundh 2011:335). This is particularly significant because firms can only continue to be relevant when they are able to react rapidly to customer/consumers ever-changing demand in the market place (Gligor 2014:283). Kouropalatis, Hughes and Morgan (2012:1393) mentioned that the more unpredictable the business operating environment, the more significant flexibility becomes for partners' continued success. Sigh, Koul and Kumar (2017:672) note that to maintain a supply chain approach, modern business challenges have resulted to a holistic approach of flexibility across suppliers' and buyers' relationship as well as their internal functional areas to ensure operational benefits and improve performance. Tiwari, Tiwari and Samuel (2015:767) underscore the importance of flexibility in a firm's ability to cope with business uncertainties and risks. Sanchez, Perez, Carnicer and Jimenez (2007:44) note that uncertainties in business are created by customers' improve demand, coupled with technological changes in the business operating environment. Rundh (2011:335) further suggests that exchange partners that practise flexible systems and operations can respond quickly and efficiently to a customer's dynamic demand. This view aligns with Obayi, Koh, Oglethorpe and Ebrahimi's (2017:345) contextualisation that partners' investment in flexibility facilitates better responsiveness in times of uncertainty, encourages adaptability in managing business

penalties and helps firms to better align their operations with key exchange partners. Sanchez *et al.* (2007:45) note that firms which enthrone flexibility are bound to offer quick and unique response to business uncertainties by creating and expanding a knowledgeable and favourable atmosphere. They further suggest that an organisation's capabilities in managing changes in which flexibility is at the forefront, may represent significant competence that differentiates superior performance organisations from those with a trough performance. To fully understand the importance of flexibility in buyer-supplier relationship, the knowledge of factors that constitute flexibility is imperative and is now discussed.

### **2.11.3.2 Antecedents of flexibility**

In literature, authors have uncovered varying degrees of antecedents of flexibility (Kandemir & Acur 2012:617; Matanda, *et al.* 2016:125). Kandemir and Acur (2012:617) found that "long-term orientation, strategic planning, internal commitment, innovative climate and proactive strategy" would have a positive influence on a firm's flexibility. Matanda *et al.* (2016:125) conceptualised four antecedents of flexibility to include cooperation, trust and commitment, dependency, and exercise of power. These variables predicted by the authors were found to have a negative influence on flexibility. This is because prolonged cooperation between buyer and supplier would increase a partner's dependency on the other, signalling trust and commitment, which would result in one party abusively exercising power for personal gains (Matanda *et al.* 2016:130). Fayezi and Zomorodi (2015:1131) put into context the supporting role of knowledge and the dissemination of information among partners in fostering flexibility. Karuppan and Kepes (2006:1041), in a manufacturing context, found that increased involvement and machine flexibility is positively responsible for mix flexibility. They defined mix flexibility as the ability of partners to respond quickly and economically to change in customers' demand mix. Mishra (2018:238) notes that factors such as environmental uncertainty, variability in buyers ordering quantities and general vulnerabilities in the marketplace are predictive of the need for partners to focus on flexibility mechanisms. Combe (2012:1258) emphasised the impact of world economic crises in driving firms to adapt flexibility as a mean of responding to consumer demand. The author further notes the varied nature of consumer behaviour, differing lifestyle and values as indicative of the need for firms' application of flexibility. Notably in the study is the need to remain competitive in hyper-competitive business operating environment through alliances and innovativeness, which require maximum flexibility approaches to reconfigure business models to maintain competitive advantage (Combe 2012:1259). Bjørnstad and Lichacz (2013:765) opined that for complete operationalisation of flexibility systems, the administrative structures of SMEs should remain flat and decentralised. This is because hierarchical structures have shown to be a negative predictor of

a firm's flexibility operationalisation. More so, the hierarchical levels can distort the smooth flow of information at each processing point and may lead to slow response of a customer's demands. The next section of this study brings into focus the various conceptualisations of flexibility dimensions.

### **2.11.3.3 Dimensions of flexibility**

In their study of a flexible supply chain, Singh *et al.* (2017:676) conceptualised manufacturing flexibility, supplier flexibility, and distribution flexibility as dimensions of flexibility. Fayezi, Zutshi, and O'Loughlin (2014:368) contextualise time, cost and uniformity as important dimensions of flexibility. The authors recognise time and cost as a yardstick for measuring efficient flexible engagement through which firms could be able to respond to changes in the operating environment and still maintain consistency and uniformity. Ndubisi, Jantan, Hing and Ayub (2005:335) contextualise product, volume and launch flexibility as three dimensions of manufacturing flexibility. Kumar, Shankar and Yadav (2008:280) underscore delivery flexibility, volume flexibility, routing flexibility, access flexibility, trans-shipment flexibility, postponement flexibility, launch flexibility and sourcing flexibility dimensions. Observing a system perspective, Pereira, Takahashi, Ahumada and Paredes (2009:6360) proposed adjustment degree, and effort and time of adjustment as three important dimensions of flexibility. These analysts note that since adjustment requires considerable effort and time, some variables may seem to oppose changes by signalling mistrust. In a multinational concept these variables could well be seen as: firm specific flexibility dimension, use specific flexibility dimension and location specific flexibility dimensions (Maitland & Sammartino 2012:95). In a manufacturing setting, Jain, Jain, Chain and Singh (2013:5949) put into context machine flexibility, operations flexibility, routing flexibility, volume flexibility, process flexibility, product flexibility, production flexibility, material handling flexibility, programme flexibility, market and labour flexibility. In Kim, Suresh and Kocabasoglu-Hillmer's study (2013:5603), labour, machine, product, market and e-procurement were observed as dimensions of supply chain responsiveness. In line with other flexibility dimensions, Tachizawa and Gimenez (2009:5794) highlight the importance of "buffer stock" in fostering partnership flexibility. In the context of buyer-supplier relationship, Chung, Talluri, and Narasimhan (2014:50) define inventory buffer as relating to the maintenance of quantity flexibility. The SME buyer-supplier can achieve good benefits in quantity flexibility if the buyer's demand predictions or specifications are made available to enable the supplier to plan its production units above the buyer's demands estimate. The application of a buffer becomes important in order to protect a firm's relationship in moments of high "volume and low-mix" irregularity from the suppliers (Tachizawa & Gimenez 2009:5794). In this study, the researcher, whilst examining flexibility

from the buyer-supplier lens, puts in context quantity/volume flexibility, product mix flexibility and market flexibility as important flexibility dimensions for the study. These dimensions are explained further.

### ➤ **Quantity/volume flexibility**

Chung *et al.* (2014:50) note that a quantity flexibility arrangement enables the supplier to keep and maintain a certain amount of inventory buffer to cushion the effects of a buyer's demand volatility. This allows partners to achieve some degree of synchronisation by establishing exchange value under which the supplier is obliged to produce quantities, which results in maximum benefits for the partners. However, the authors note that the application of quantity flexibility requires that the supplier knows and understands the buyer's ordering pattern. In situations where quantity flexibility is not established and the buyer demand is higher than what the supplier could offer, the relationship suffers "loss of sales" (Martinez-de-Albeniz & Simchi-Levi 2013:399). Owing to the challenges (cost and penalties) associated in achieving parity in quantity demanded and supplied in the buyer-supplier relationship, Durango-Cohen and Yano (2011:681) propose "forecast-commitment contract"; an arrangement which ensures that the cost and penalties associated in the exchange relationship are passed on to the responsible partners whilst sustaining the partner's relationship. Szejczewski and Cousens (2007:17) uncover the significance of quantity flexibility, also known as volume flexibility, in sustaining the SME buyer-supplier relationship in the moments of the buyer increasing demand. The next section discusses product mix flexibility.

### ➤ **Product mix flexibility**

Po-Young, Kuo-Hsiung, and Hsu-Feng (2011:159) define product mix flexibility as the ability of a co-operating partner (supplier) to positively improve the number of products it produces in a cost-efficient manner and in a given time frame. It refers to the firm's ability to respond rapidly to divergent product mix dynamics of the buyer for the purpose of facilitating the fulfilment of the firm's buyer's demands. Awwad (2007:4) alludes to a computer manufacturing firm to acknowledge that a firm which engages in the production of two divergent products, such as a personal computer and a laptop will obviously be more market relevant than its counterpart which specialises in the making of two computers with different processing speeds. Hence, in a buyer-supplier commitment context, it is significant that the supplier understands the significance of leveraging its relationship competency with the buyer by making varying degrees of products within its operational capacity. To achieve mix flexibility, the standard practice for organisations is the strengthening of its operational performance through the implementation/adoption of

technology and normalisation of business operative processes (Szwejczewski & Cousens 2007:18). Firms engage in product mix because they want to take advantage of the prevailing market. Hence the need to discuss market flexibility.

### ➤ **Market flexibility**

Market flexibility refers to the ability of the supplying firm to adapt to changing market conditions (Awwad 2007:6; Kim *et al.* 2013:5601). In addition, Awwad (2007:6) contends that the ease of adaptability is synonymous to firms taking advantage of new opportunities in the business operating environment ahead of their rivals. Kim *et al.* (2013:5601) further highlight the importance of market flexibility in enabling the supplier to respond to its customer's demand in record time without incurring additional cost or penalty. Their study found a positive and significant relationship between market flexibility and responsiveness. Jain *et al.* (2013:5955), while observing the short and long-terms focus of the market flexibility, note that the short-term focus is geared towards time and effort needed to cope with buyers' demand dynamics, whereas in the long-term, emphasis should be placed on buyers' demands, products life-span and technological dynamics in relation to a firm's offerings. Kim *et al.* (2013:5602) addressed the importance of technology in SMEs in a manufacturing context to increase output and boost creative capacity with little or no penalties. The prevalent discussions in this study so far have centred on buyer-supplier commitment and its influencing factors. In the next section, the researcher brings into focus SMEs' competitive performance as an outcome variable in the study.

## **2.12 SMES' COMPETITIVE PERFORMANCE**

Performance is the means of measuring an organisation's activities, which are responsible for the overall success of the organisation (Ibrahim & Shariff 2016:475). For SMEs to achieve competitive performance, they seek to effectively satisfy their customers' needs and demands more than their rivals. Umrani, Johl and Ibrahim (2017:397) define performance as the use of a firm's in-house resources to maintain its position in the marketplace. They further highlight performance as a reflection of its reaction to "competitive forces" through efficient and effective utilisation, integration and alignment of its internal capabilities with outside influences. Kamyabi and Devi (2012:64), considering superior resources, note the impact of accounting service on the overall performance of the firm, ranging from increase in staff numbers to sales growth and workers' productivity. Herzallah, Gutierrez and Rosas (2014:637) posit that firms which achieve competitive gain develop competitive approaches. They define these approaches as the firm's ability to identify and exploit the opportunities prevalent in its operating environment. The main objective, therefore, is to maintain its profit position in which the competitive industry operates.

Umrani *et al.* (2017:397) further contend that firms focus attention on innovation in order to achieve efficient and effective competitive performance. Ong and Ismail (2012:267) contend that a good knowledge of firm performance is appraised on the basis of its growth, finances, ability to retain its workforce, and the firm's holistic performance. Ismail, Rose, Abdullah and Uli (2010:160) note that a firm's operational performance assessment measures will capture not only business financial standing but also non-financial dimensions of the firm. In this study, SMEs' competitive performance is operationalised as a multidimensional construct, reflecting both financial and non-financial aspects of performance (Ismail *et al.* 2010:160; Bianchi, Glavas & Mathews 2016:179). This study adopts the definition of SME performance as put forward by Isaga (2017:14) as an effective means of assessing the firms standing by relating its sales volume to current resources. This is significant because a firm's assets and sales volume represent its prospects and the capacity to launch into new markets. However, the understanding of the role of SMEs' competitive performances (dependent variable) in enhancing a firm's market positioning is imperative and is discussed.

### **2.12.1 Importance of SMEs competitive performance**

Prior research on performance has ostensibly been conceptualised as an outcome variable, thereby limiting its empirical significance (Wang & Yen 2012:1036; Mokhtar, Yusoff & Ahmad 2014:52). However, a common objective of every business establishment is to make profit. This profit must be made in a complex business operating environment where competencies are constantly replicated by competitors, making it seemingly difficult for firms to actively maintain competitive performance (Kamaluddin, Hasan, Arshad & Samah 2016:199). Torugsa, O' Donohue and Hecker (2012:485) note that firms which adapt to the changing conditions of business are able to identify new opportunities through which they add value to their customers and earn improved benefits. Firms that enjoy competitive performance are able to sell products and services at lower rate than rivals, offer products with unique attributes through a differentiation approach or focus approach to aid increased sales volume (Herzallah, *et al.* 2014:637). The differentiation approach is a niche strategy and is responsible for growth in sales volume and return on investment, whereas the focus approach is the trade-mark of firms pursuing competency through a combination of low cost and differentiation approaches (Ehlers & Lazenby 2010:186). From the study conducted by Kamyabi and Devi (2012:64), it could be deduced that firms with positive competitive performance grow not only in the number of staff but also in market reach. The product offering of these firms are of high quality and reliable, which they seem to deliver in record time (Drohomeretski, Costa, Lima & Garbuio 2014:814). Abebe (2014:103), referring to the importance of e-commerce on firm performance, implicitly allude the importance of SMEs' competitive performance in a firm's

ability to (1) boost prominence and become attractive to new customers, (2) attend to present and potential customer needs better by using minimal resources, and (3) identify as well as respond to customers' demand dynamism. This study believes that a good knowledge of the importance of SME competitive performance will hinge on the factors that promote competitive performance. Hence, these factors, otherwise known as the antecedents of SMEs' competitive performance are discussed below.

### **2.12.2 Antecedents of SMEs competitive performance**

Mallick, Ritzman and Sinha (2013:192) conceptualised two antecedents of performance to include quality and cost. Kamaluddin *et al.* (2016:208) empirically examined the influence of innovative capital and social capital as two important predictors of SME performance. The authors found innovation capital, operationalised as "innovation capabilities and culture" to significantly impact on SMEs' performance. The social capital variables, represented in "structural and relational" terms were also found to have significant impact on the performance of SMEs. However, Wang and Yen's (2012:1036) conceptualisation of "innovativeness, proactiveness and risk-taking" as the predictors of firm competitive performance was positively supported by empirical evidence. They note that innovation reflect the firms' desire to continuously seek ways to improve its deliverables to customers through new product development, enhanced service and the incorporation of technology. The authors note further that proactiveness is a reflection of the heartbeat of an organisation that is ahead of its time; one which understands the dynamic nature of the business operating environment and quickly aligns itself for the purpose of maintaining competitive performance. Risk-taking represents a firm's tendency to commit a reasonable portion of its capital into an unfamiliar project or investment (Wang & Yen 2012:103). Mokhtar *et al.* (2014:52) contextualise a firm's ability to identify customers' demands and the willingness to respond to those demands to be significant for the firm to achieve improved performance. Hung, Hung and Lin (2015:194) hypothesised cost, delivery, quality and flexibility, and reflecting firms' "competitive priorities" as antecedents of competitive performance. The next section discusses the various dimensions of SMEs' competitive performance.

### **2.12.3 Dimensions of SMEs competitive performance**

Ong and Ismail (2012:272) uncovered firms' overall performance, financial performance, and customer retention and firms' growth as dimensions of SMEs' performance. Umrani *et al.* (2017:397) note that the concept of innovation became paramount to firm performance because of the competitive nature of the business environment, occasioned by the customer's complex demand and changing technology. Apong, Osei and Akomea (2015:11); Herzallah *et al.*

(2014:637) acknowledged cost leadership strategy, differentiation strategy and focus strategy as important dimensions of the firm's competitive performance. Zhu and Nakata (2007:190) are of the view that a good performance metric should comprise marketing and financial dimensions. The assumption behind the marketing dimension holds that a firm's ability to uncover what customers want and the desire to satisfy these demands earns the firm's premium returns on investment through increased sales volume (Zhu & Nakata 2007:187; Majeed 2011:191). Zhu and Nakata (2007:190) contend that the usefulness of the marketing performance dimension is in the quality of the firm's products and their ability to keep hold of the firm's loyal customers. They further contend that sales growth appraisal and financial performance reflects the firm's efficiency in financial terms, which are usually acknowledged by "gross profit margin and returns on equity". Majeed (2011:191) further highlights the significant of the firm's financial performance dimension in relation to its return on assets (ROA). Isaga (2017:10), while acknowledging the multidimensionality of the SMEs' competitive performance, highlights six (6) dimensions which are: "sales, employment, assets, market shares, physical output, and profits". The author further highlights the need for preferences in line with the best dimensions that meet requirements. Ahmad and Alaskari (2014:479) uncovered seven dimensions of SMEs performance which are grouped into (1) external dimensions represented as firm "financial performance and competitiveness" and (2) internal dimensions, represented in "cost, production factors, activities, products and revenues". The authors further note the dimension (external) as reflective of the firm's competitiveness in the marketplace whereas the latter (internal) is responsible for observing the firm's in-house processes. For the purpose of this study, the researcher contextualised three competitive performance dimensions (innovativeness, customer's satisfaction/retention and employee's motivation), which are significant for the study.

### **2.12.3.1 Innovativeness**

As noted in Azis, Kartini, Bernik, and Harsanto (2017:393) the need for firm innovativeness originated as a result of competition in the marketplace, requiring firms to actively re-adjust their strategies in order to thrive. Innovation therefore becomes the creation of value to the customer. To achieve innovative capabilities in the SMEs sector, firms seek to improve the quality of their creative offering procedures, promotional skills, distribution mechanisms and general operational strategies for the benefit of the buyer-supplier relationship. Hervas-Oliver, Ripoll-Sempere and Moll (2016:507-508) posit that the attention of the SME practitioners has often been diverted toward "product technological innovation" to the neglect of the all-important market driven innovativeness like creation of "new market, managerial practice innovativeness and firm design". They underscore that the SME can take advantage of the latter by leveraging the firm's internal

marketing research and development competency to achieve competitive advantage and gain market share. Sok, O’Cass and Miles (2016:809), whilst adopting a resource and capability complementarity approach, observed that a focus on product technological innovation (new product development, production flexibility and product improvement) together with the leveraging of marketing capabilities through research and development impacts positively on a firm’s competitive performance. McAdam, McAdam and McCall (2016:1317-1318), while adopting a network perspective or in the case of this study, buyer-supplier perspective, posits that SME partners can implement innovativeness in their relationship through the enthronement of “explorative-exploitative innovation” concept. The authors see explorative as relating to the search for “new knowledge” and the creation of improved “product for new or existing markets”. Exploitative innovation, on the other hand, deals with the consolidation of present know-how while extending present products to present customers or market. They note the significance of the concept in advancing partnership engagement in the SMEs sector.

### **2.12.3.2 Customers satisfaction/retention**

Lariviere, Keiningham, Aksoy, Yalcin, Morgeson and Mithas (2016:92) see satisfaction as relating to the degree to which a customer perceives its contentment as pleasurable or not. Lai and Nguyen (2017:77) define customer satisfaction as emerging from a customer’s conscious consideration of the firm’s product or service offerings in relation to the customers’ expectations from the product or service offerings performance. Hence, customers’ satisfaction is positively related to their willingness to pay for a giving product or service and more importantly to commit into an ongoing relationship (Haumann, Quaiser, Wieseke & Rese 2014:82). Establishing a long-term relationship with customers requires continued improvement of the firm’s product or service offering, which facilitates customers’ brand identification, loyalty and the firm’s improved financial performance (Mostert, Petzer & Weideman 2016:25). When customers are satisfied with the firm’s product or service offering, their propensity to switch loyalty to competitors is reduced (Mostert *et al.* 2016:26; Malshe & Agarwal 2015:26). Malshe and Agarwal (2015:26) believe that customer satisfaction is significant for improving the firm’s financial returns and positioning for prospective development. They further opined that customer satisfaction helps increase their repurchase behaviours and results in high-level customer “retention,” which benefits the firm’s competitive performance in the long-run. Han, Kim, Lee and Kim (2018:894) note that customers’ (buyers’) satisfaction with a given supplier product range would stimulate the buyers interest in buying other products from the given supplier. Through empirical evidence they found that customer satisfaction is significant for ensuring customer retention. In the buyer-supplier context, this study

believes that when partners pay attention to satisfying each other's basic requirements, their relationship will strengthen and result in partners achieving competitive benefits.

### **2.12.3.3 Employee motivation**

Ganesh (2016:101) defines motivation as an insufficient physical or emotional state that results in a habit directed towards an objective or inducement. It is basically an important inducement to work execution and the basis for employees' commitment. Ganesh (2016:101) observed that when employees in the firm are duly motivated, they seem to apply a high level of energy in the execution of a task within a given time. This is because when the organisational objectives are in congruence with their personal objectives, they work to own those firm objectives (Qayyum & Sukirno 2012:4). Hence, the link between a firm's objectives and employees' aspirations becomes so significant for the employee since it showcases the firm's enduring values and beliefs toward their employees (Carton 2018:326). Ganesh (2016:102) further notes that a firm's attention has been drawn to the significance of employee motivation as a result of complex business operating environment, coupled with the need to maintain competitiveness in the marketplace. Another significant contribution of a motivated employee is the impact it has in the firm's quest to attain innovative capabilities (Wei, Frankwick & Nguyen 2012:555). Innovativeness has earlier been noted in this study to impact positively on a firm's competitive performance. While recognising the complex nature of the buyer-supplier relationship, this study is of the opinion that at firm levels, good employee motivational policies will go a long way to enhance the competitive performance of the partnership engagement. The next section focuses on the research conceptualisation and the development of the research hypothesis.

## **2.13 HYPOTHESIS DEVELOPMENT**

Hypothesis is a prediction of the relationship existing between two variables (Neuman 2009:49). Hypothesis refers to the predicted answers to the research questions (Punch 1998:39). Hence it enables the researcher to tell with some levels of confidence, what the expected answers to the research questions would be prior to testing them. Two critical decisions which revolve around an inferential statistical test is the null hypothesis ( $H_0$ ) and alternate hypothesis ( $H_a$ ) (Fawcett & Pockett 2015:76). A hypothesis is said to be null ( $H_0$ ) when there is no significant difference existing between what is stated and what is established empirically in the study (Neuman 2009:51). In alternative hypothesis, the focus is to explicitly establish the type of hypothesis that will invariably be considered true should the null hypothesis be proved wrong through statistical testing (Kumar 2014:103). Hence, alternative hypothesis could arguably be seen as a precautionary measure taken by the researcher to aid reportage. However, in this study the decision to reject the

null hypothesis (Ho) and accept the alternative hypothesis (Ha) would be subjected to statistical examination. The research hypothesis are precise statements presumed to have significant positive influence on the variables under study. These hypotheses are discussed in the sections below.

### **2.13.1 Communication, product quality and buyer-supplier commitment**

It is stated that communication built on open and honest sharing of information is strategic in fostering efficient and effective buyer-supplier collaborative relationship (Yeniyurt *et al.* 2014:295). In literature, it is believed that partners' willingness to commit into a given relationship is born out of trust, established over a period of time (Morgan & Hunt 1994:24). This is made possible through the establishment of good communication channels that allow partners to deliberate on various issues that may enhance the partnership engagement (Clauß 2012:395). Kaynak and Sert (2012:221) note that the establishment of good communication channels in buyer-supplier relationship will invariable help in bridging the gap against partners' opportunistic behaviour, improve satisfaction and long-term relationship. The prospect for a long-term relationship powered through partners' deliberations may well signal the link between communication and commitment in exchange relationship. Nevertheless, commitment is seen as the concerted effort of partners to ensure the relationship endures into the future (Clauß 2012:397).

Prior study conducted by Rashid, Nordin and Salleh (2014:280) shows that the willingness of organisations, or in this case the buyer-supplier, to share information will go a long way to enhance buyer-supplier commitment in the relationship. Varona (1996:134) observed that communication satisfaction within intra-firm settings is significant in fostering partners' relationship commitment. Theron, Terblanche and Boshoff (2008:999), and Theron, Terblanche, & Boshoff, (2013:38) in a business-to-business setting, uncovered the existence of positive relationship between communication and relationship commitment.

However, the relationship between communication and product quality have received little or no conceptualisation in literature. This begs the need for this study to examine if a relationship exists within the variables and also to uncover whether they have any positive relationship to SMEs' buyer-supplier commitment. However, Espinosa, Nan and Carmel (2015:165) uncovered that in an exchange interaction, higher levels of convergence communication can have a significant influence on higher task product quality. Park, Lee and Lee (2014:325) noted that in the service industries, communication frequency is significant for inspiring functional service quality by promoting trust and confidence within the system. In line with the views shared above, this study hypothesises that:

H1: Buyer-supplier communication has a positive and significant influence on buyer-supplier commitment.

H2: Buyer-supplier communication has a positive and significant influence on buyer-supplier product quality.

### **2.13.2 Product quality and buyer-supplier commitment.**

Product quality is significant in helping SMEs to achieve long-term competitive advantage (Dunk 2002:719; Prajogo 2007:71). It may be seen as the basis for collaborating partners to achieve satisfaction as their relationship develops (Yuen & Chen 2010:227). The fact that customers who are satisfied with a given product quality talk to others and refer them to the particular product after usage may well suggest their commitment to the product (Yuen & Chen 2010:227). However, it is stated that partners who are satisfied with product quality will most likely exert efforts toward maintaining the exchange relationship by continuing to have business deals with the exchange partner (Peng-Chan, Chun-Ling, Wang-Ching & Wei-Ching 2015:207). This development in the buyer-supplier exchange could well portray partners' commitment and as well, signalling the link between product quality and commitment.

Importantly, prior research has established that the link between product quality and commitment is attainable through the intervention of trust and satisfaction (Yieh, Yu-Ching & Ya-Kang 2007:270). Also established is the existence of a direct linkage existing between product quality and commitment in the study previously mentioned. Additionally, other studies with different models, differing organisational settings and environments have established that the link between product quality and commitment exist (Espejel *et al.* 2011:217; Cater & Cater 2010:1322; Hall, Baker, Andrews, Hunt & Rapp 2016:34). Based on this reasoning, this study hypothesises that:

H3: Buyer-supplier product quality has a positive and significant influence on buyer-supplier commitment.

H4: Buyer-supplier product quality has a positive and significant influence on buyer-supplier flexibility.

### **2.13.4 Flexibility and buyer-supplier commitment.**

Given the need for partners to achieve continuing business success in the light of the present business and customers demand dynamics, the focus on flexibility for SMEs has become imperative (Sanchez *et al.* 2007:44; Kouropalatis *et al.* 2012:1393; Tiwari *et al.* 2015:767). Since

flexibility offers SMEs' partners the privilege to respond quickly to their dynamic demands such as quick delivery, product range, quantity/volume, quality products and services, its application or operationalisation in the SME sector may well require considerable commitment by the cooperating partners. In literature, it is noted that for a supplier to achieve quantity flexibility in a buyer's potential order, the supplier has to maintain some extra amount of the inventory prior to the buyer placing formal order (Chung *et al.* 2014:50). This gesture of keeping extra inventory otherwise called buffer stock by the supplier, and the supplier reciprocating the gesture by placing a formal order may well be seen as buyer-supplier commitment in the exchange relationship. Additionally, for the SME supplier to achieve the product mix flexibility required by the buyer, the supplier has to show greater commitment and effort to produce those goods and services in a cost efficient manner (Po-Young *et al.* 2011:159).

However, prior research has noted the link between flexibility and commitment (Kandemir & Acur 2012:617; Rašković, Brenčić, & Riječi 2015:10; Choo, Desa & Asaar 2016:31). Others, for example, Wong, Leung, Hung and Ngai (2007:882) have contextualised a mediated relationship between flexibility and commitment. Based on this, this study argues that in the SMEs buyer-supplier context, their flexibility would impact on their commitment. This study thus hypothesises that:

H5: Buyer-supplier flexibility has a positive and significant influence on buyer-supplier commitment.

### **2.13.3 Buyer-supplier commitment and SMEs competitive performance**

Relationship management literatures emphasises that SMEs' buyer-supplier commitment can be enabled through buyer-supplier satisfaction and trust (Crotts, Coopage & Andibo 2001:197; Ulaga & Eggert 2006:322; Hur *et al.* 2014:612). When SME buyers and suppliers show levels of satisfaction in the relationship, trust in the exchange grows as the partners identify themselves better with the goals enshrined in the exchange, which leads to partners' positive performance (Siders, George & Dharwadkar 2001:573). Importantly, the SMEs' buyer-supplier may engage in long-term relationship commitment because of the prospect of achieving future benefits or competitive performances (Mafini & Loury-Okoumba 2016:625). Additionally, continuance commitment principle encourages that partners make assets specific-investment (Wu *et al.* 2004:324). This is possible in a relationship that is living up to its billing by delivering the required performance benefits the SMEs' buyers and suppliers deserve (Ucanok & Karabat 2013:97). Moreover, as the buyer-supplier relationship endures through trust and other relationship factors, the partners become aware of the business challenges and seek ways of addressing them (Lee

2016:330). This shared commitment to problem solving will translate into positive performance for the partners (Lee 2016:330). From the above review, it could be argued that the link between buyer-supplier commitment and competitive performance exist. However, studies have shown that buyer-supplier commitment in exchange relationship will have a positive impact on the competitive performance of the SMEs' partners (Kim 2014:43; Lee 2016:335; Abidin, Hashim & Ariff 2017:76). Sequel to this development, this study hypothesises that:

H6: Buyer-supplier commitment has a positive and significant influence on SMEs' competitive performance.

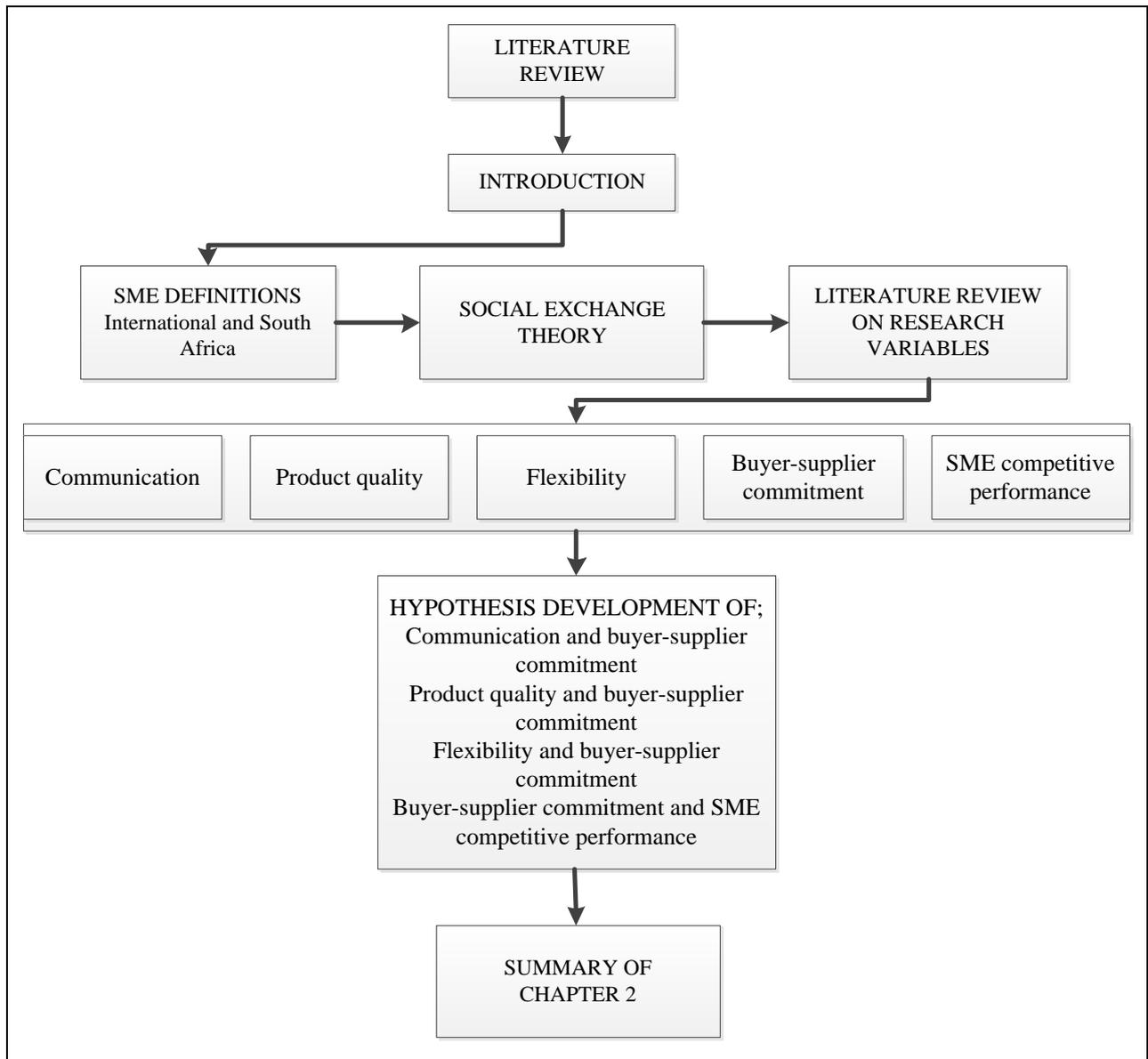
## **2.14 CONCLUSION**

Over the years SMEs have continued and will continue to dominate economic headlines based on the significant roles that they play in economic development, social emancipation and wealth creation of nations and its occupants. Good and vibrant economies of the world are renowned by the energy emanating from their small and medium scaled enterprises. To this end, theories, concepts and strategies are developed to further examine SMEs with the view to offering informed knowledge concerning the factors that may result to success in the SME sector. These concepts may well prove significant for such economies like the South African economy where the rate of start-up failures are high. Consequentially, buyer-supplier commitment is a focal construct examined in this chapter. Partners' willingness to commit to a given relationship is based on the perceived benefits of the relationship. This therefore begs the question of what services or product do the SME offer? And what benefit can an intending partner achieve by collaborating with the SME. The ability and willingness of the SME operator to answer these questions may well signal its resolve for a buyer-supplier relationship commitment.

However, as observed from leading literature on SMEs in this study, buyer-supplier commitment can be enabled through three baseline commitment factors: buyer-supplier communication, buyer-supplier product quality, and buyer-supplier flexibility. A combined force of these factors together with buyer-supplier commitment will result in the SME's partner to achieve a positive competitive performance.

The main focus of this chapter is on reviewing the literature on SMEs and the research variables of the study. Discussions started with the examination of the SMEs, its contributions to various economies of the world and to the South African economy. SMEs' definitions and challenges were highlighted. Discussion on the study continued with the examination of the social exchange theory

and the various research variables, leading to the development of the research hypothesis. A diagrammatic representation of the chapter two (2) is presented below in Figure 2.2.



**Figure 2.2: Summary of chapter 2 (Own source)**

## **CHAPTER 3**

### **RESEARCH METHODOLOGY**

#### **3.1 INTRODUCTION**

This study, based on the factors influencing buyer-supplier commitment and SMEs' competitive performance explored the relevant literature in previous chapters. The theory underpinning the study, the various research variables related to its conceptual framework and corresponding hypothesis were also discussed. This chapter examines the research methodology or design and its various processes.

Among the critical issues considered in this chapter are the various research paradigms, research sampling techniques, data collection and analysis techniques and statistical method used in the study. Research methodology is considered a detailed plan of work intended to be followed throughout the completion of a given study (Maree 2016:36). It puts into focus processes of data collection, measuring and method of data analyses in order to realise the inherent goals of a study. This study therefore evolves with the explanation of the research approach to research reasoning.

#### **3.2 RESEARCH REASONING**

Two commonly used research reasoning approaches are the inductive and deductive reasoning. They represent- the commonly used logical approaches that guide good research by making it more significant with regards to good decisions (Kothari 2004:20). The inductive reasoning approach is the kind of reasoning that “moves from the particular to the general, from a set of specific observations to the discovery of a pattern that represents some degree of order among all the given events” (Babbie 2010:22). This means that inductive reasoning is built on the context in which the event takes place. It therefore allows the use of small samples of data to infer findings. In this respect, inductive studies are mostly qualitative in nature.

On the other hand, the deductive approach to reasoning is concerned with views on the nature of the relationships between concept and investigation (Bryman, Bell, Hirschsohn, Dos Santos, Du Toit, Masenge, Van Aardt & Wagner 2014:9). This type of study is based on the known knowledge of a given sphere, theory and practice that aids the deduction of hypotheses, which is subjected to further empirical examination to enable a conclusion.

This study maintained the deductive approach because it empowers the researcher to search different sources in order to examine and explain causal relationships between concepts and variables (Babbie 2010:23). Additionally, the approach allows the operationalisation of concepts in such a way that facilitates the measurement of realities using a quantitative technique. Finally, the deductive view is important for the generalisation of the finding of the study using a reasonable and carefully selected sample size.

### **3.3 RESEARCH PHILOSOPHIES AND PARADIGMS**

Research philosophy according to Wynn and Williams (2012:788), is a method of beliefs or assumptions that revolves around knowledge creation and improvement. It is concerned with what a given researcher or group of researchers are doing while conducting research. Paradigms refer to “a cluster of beliefs and dictates which for scientists in a particular discipline influence what should be studied” (Bryman, *et al.* 2014:19). Philosophical positions in research have relevance to the relationship between the nature of reality (ontology) and what constitutes reality (epistemology) (Wynn & Williams 2012:788). For this reason, Wilson (2017:325) acknowledged that the knowledge of research philosophies or paradigms is significant for researchers because of its ability to influence the type of research approach to be used in a study (quantitative or qualitative). The positivist research philosophy sustained in this study is discussed below.

#### **3.3.1 Positivism paradigm and reasons for adoption**

Positivism refers to the philosophical position of a natural scientist that involves drawing conclusions devoid of personal feelings or views from events within our environment (Adler & Clark 2015:7). Charmaz (2017:229) notes that positivism is concerned with observable phenomena existing without human bias or interpretations and therefore tries to make rules that are generally acceptable across a given population.

Positivism is based on observable and measurable behaviours that is devoid of the researcher’s influence (Bryman *et al.* 2014:6). Hence, it enables the use of existing theories to develop or create testable hypotheses that may be approved or disproved leading to further development of theory which may undergo further empirical examination (Wynn & Williams 2012:788). Because positivist studies aim to provide justification by establishing causal linkages amongst the study variables, positivism mostly favours the quantitative research approach, which ensures that through objective valuation of data in numbers, absolute knowledge can be achieved (Wynn & Williams 2012:788; Wilson 2017:329).

In this study, the positivist view is sustained because of its association to a quantitative research method through the use of a predetermined and structured data collection technique and analyses. Importantly, the positivist view is significant for this study that focuses on establishing the relationships existing between factors of buyer-supplier commitment and SMEs' competitive performance. By applying the positivist paradigm, this study measured the level of validity and reliability of the research variables by experimenting the research hypotheses. Finally, the result generated through the rigours of a positivist paradigm may be generalised to a larger population. The next section discusses the research approach and design.

### **3.4 RESEARCH APPROACH AND DESIGN**

The two most commonly used research approaches in literatures which any researcher may wish to utilise are quantitative and qualitative approaches (Blaikie 2010:204). The purpose of any chosen research approach is to ensure that data constructed for the study will allow the actualisation of the various research objectives set out for the study (Kent 2015:6). In this study the quantitative research approach is used and discussed.

#### **3.4.1 Quantitative research approach**

The quantitative research approach entails using measurements and numbers to help formulate and test ideas. It usually involves analysing numerical data to examine differences and relationships between sets of variables in a value-free perspective (Wilson 2017:217). Bryman *et al.* (2014:31) described it as a unique research approach, which involves the collection of numeric data and perceives the linkage of theory and research to a deductive reasoning by maintaining positivist and objectivist views to a common truth.

In this study which is focused on buyer-supplier commitment, the principles of quantitative research approach become significant as a result of the large array of numerical data that require statistical investigation to ascertain their relevance. As Westerman (2014:45) observed, to streamline, adapt and expand the knowledge of a given phenomenon requires the application of quantitative system which engages measurable techniques with elements of the subject under investigation.

Importantly, this study employs the quantitative research approach because it provides the comfort of utilising a single data collection system like a questionnaire (utilised in this study), and an equivalent quantitative investigative technique (Saunders *et al.* 2016:166).

### 3.4.2 Research design

Zikmund, Babin, Carr and Griffin (2010:66) define research design as a master plan that specifies the methods and procedures for collecting and analysing the needed information. According to Babbie (2010:117), research design refers to the system of directing one's view for the purposes of a given research. Bloomfield and Fisher (2019:27) describe research design as a "blueprint" to be used in answering research questions and satisfying research objectives. The author further notes that a good research design should possess a detailed plan, structure, and strategy which guides the attainment of the research goals. A research design may follow a cross-sectional or longitudinal approach (Babbie 2010:106-107). Longitudinal studies are intended to observe a given phenomenon over a prolonged period. As noted in Saunders *et al.* (2016:200), the beauty of a longitudinal study is built on its capability to study variation and growth in a prolonged interval. A cross-sectional design, on the other hand, as defined by Bryman *et al.* (2014:106), "involves the collection of data on more than one case and at a single point in time". It is essential for gathering measurable data in association with more than one variable.

This study, which is based on factors influencing buyer-supplier commitment and SMEs' competitive performance, favours a cross-sectional design procedure as it helps the researcher gather larger number of data for the variables in focus using the questionnaire. Also, by using a cross-sectional design, the researcher will be able to examine the relationship between the study variables.

However, as Babbie (2010:106) emphasises, cross-sectional studies can be exploratory, explanatory or descriptive in nature. The three classifications help define the purpose for which a research is undertaken. Therefore, the knowledge of the three classification helps the researcher to choose the method that is appropriate for the research purpose.

In exploratory research the purpose may be to explore a topic or offer fundamental knowledge about the topic. This style is commonly used when sharing new knowledge as the focus of the researcher, and when the subject of discussion or research is new (Babbie, Mouton, Voster & Prozesky 2016:79).

In explanatory research, the purpose is to explain things (Babbie 2010:94). To achieve this purpose, the researcher puts into perspective two complementary scenarios (A&B) and seeks to explain or motivate them. However, alluding to Babbie *et al.* (2016:81) an explanatory research purpose may be seen as a surrogate of a descriptive study because it would seek to explain deeper about a given phenomenon or situation.

In this study, the researcher observed the descriptive approach. The next section discusses this approach and the reason for its selection.

### **3.4.3 Descriptive research**

Descriptive research is the type of research conducted to provide answers to who, what, when, where and how questions (Saunders *et al.* 2016:175). Descriptive research helps to explain causal relationships between variables but does not explicitly and convincingly state the impact of a given variable on the other. Its objective is to explain phenomena and predict human behaviour in social science through the explanation of relationship existing between variables and their corresponding impact on one another (Wilson 2017:67). As noted in Kothari (2004:3), what makes descriptive research unique is that the researcher is detached from the variables under investigation and hence can only provide information based on what has happened or what is happening.

The choice of a descriptive study for this research is significant because it enables the researcher to explain events such as the relationship existing between the variables under study and as well predict the impact of the variables by using symbolic sample of the right population (Wilson 2017:66-67). Importantly, through descriptive research, this study would seek to present an accurate and detailed picture of phenomena through accurate and precise description of situations as observed from the data (Babbie *et al.* 2016:80).

## **3.5 SAMPLING DESIGN PROCEDURE**

A sample is a representative of the actual population that is considered in a given study (Bryman *et al.* 2014:176). A good sample should possess the characteristics or resemblance of the population universe to allow for generalisation of findings (Adler & Clark 2015:97). Neuman (2009:88) defines sample as “a small collection of units taken from a larger collection”. The author further observed that good samples encourage the researcher to study features of the sample and produce highly accurate generalisations about the entire population of interest. A sample design procedure as reflected in Babbie (2010:208-209) comprises a target population, sampling frame, and sample size. These are further elaborated in the sections below.

### **3.5.1 Population**

Bryman *et al.* (2014:176) describe population as comprising entire elements or units of investigation from which a researcher can deduce a sample. According to Babbie (2013:78), a population involves a larger collection of units from which a sample is taken. In this study, the population of interest is SMEs in the Gauteng province of South Africa.

### **3.5.2 Target population**

A target population is a subset of the entire population. The concept of target population originates from the ideology that it would be difficult for a given researcher to get in touch with the universal population for a particular study, given the study limitations such as time and finances. Target population, therefore, defines succinctly the focus area of the research. In this study, the target population are owners, managers, and senior employees of the SMEs in the southern Gauteng region of South Africa. The choice of this target population is based on their knowledge of internal operations and relationships with other stakeholders (partners) of the business.

### **3.5.3 Sampling frame**

According to Bryman *et al.* (2014:176) a sampling frame is defined as the enumeration of all units in the population universe from which a researcher is obliged to pick his or her sample. It is known as a list of elements from which a sample may be drawn (Zikmund *et al.* 2010:391). In line with the above definitions, SME firms within the Vaal triangle such as Vanderbijlpark, Vereeniging and Meyerton were chosen for this study because of their proximity with the researcher, which helped the speed of data collection. This sample frame is deduced from the Vaal triangle business directory and other data bases from relevant municipalities (a list of SMEs in Emfuleni District Municipality) within the southern Gauteng region.

### **3.5.4 Sampling techniques**

Common approaches to sampling in research are the probability sampling and non-probability sampling techniques (Babbie *et al.* 2016:166). Probability sampling is a technique that is based on selecting a random sample from a list made up of the entire population of study (Babbie 2010:192). According to Babbie *et al.* (2016:166) the probability sampling technique is a dominant method of sampling a large population because of its ability to ensure inclusiveness in social science research. This technique is usually applied through simple random sampling, stratified sampling, systematic sampling, cluster sampling and multistage cluster sampling (Babbie 2010:211-226).

A nonprobability sampling technique is operationalised in situations where the researcher cannot, or has difficulty in drawing a random sample (Babbie 2013:73). As noted in Bernard (2013:163), nonprobability samples are significant for large studies where it is impossible to achieve probability samples. In this study, the nonprobability sampling technique was used through the purposive or judgemental approach. It allows use of personal judgements in choosing research participants to generate optimum data which will reflect the opinions of the SMEs participants. The nonprobability sampling method enables the selection of respondents suitable for this study

who are also available and easy to access. This study believes that data realised through this method will be significant since it symbolises the key constructs of the study.

### 3.5.5 Sampling size

A sample size refers to the number of items that will be chosen from the population universe to establish a sample (Taherdoost 2017:238). What is important in deciding a good sample size is the likelihood of achieving efficiency, representativeness, reliability and flexibility which fulfils the optimum sample requirement. However, as the author further observed, researchers should determine a certain level of precision and level of confidence for the given estimate. As Bryman and Bell (2007:194) note, large sample sizes help to bring precision in the accuracy of outcomes. However, Blaikie (2010:186) contends that if a quantitative analysis is to be undertaken using a nonprobability sample, the sample size should be seen as a function of the type of analysis in focus. On this regard, Pearson and Mundform (2010:359) note that a sample size of 300 units is good for factor analysis whereas 1000 or more units will give an excellent result. Geuens and Pelsmacker (2017:87) argued that a sample size is supposed to be “big enough” for it to be scientifically significant with statistical applicability. The decision for a sample size for this study was based on the numbers utilised by previous researchers (Olawale, *et al.* 2010:729; Nambudiri 2012:977; Chinomona & Chinomona 2013:57; Mafini, *et al.* 2016:617) who used sample sizes ranging from 100-500 in their various studies on SME. Based on these, the sample size for this present study is pegged at N =450 respondents. This sample size will be suitable for Structural Equation Modelling and Analyses of Moment Structures (AMOS 25) in data analysis. The Table 3.1 below shows the list of sample sizes used in previous studies.

**Table 3.1: Sample sizes used by previous studies**

Years	Authors	Scope of study	Sample size
2014	Bourlakis, M., Maglaras, G., Aktas, E., Gallear, D. & Fotopoulos, C.	Firm size and sustainable performance in food supply chains: insights from Greek SMEs	591
2014	Wu, I.L., Chuang, C.H. Hsu, C.H.	Information sharing and collaborative behaviours in enabling supply chain performance: a social exchange perspective	201

Years	Authors	Scope of study	Sample size
2014	Van Hoof, B. & Thiell, M.	Collaboration capacity for sustainable supply chain management: small and medium-sized enterprises in Mexico	191
2009	Bayraktar, E., Demirbag, M., Koh, S.C.L., Tatoglu, E. & Zaim, H.	A causal analysis of the impact of information systems and supply chain management practices on operational performance: evidence from manufacturing SMEs in Turkey	229
2007	Vaaland T.I & Heide M.	Can the SMEs survive the supply chain challenges	200

Source: Omoruyi (2015:96).

The above table displayed sample sizes utilised by various authors from the year 2007 to 2014 for studies on small and medium-sized enterprises. The average sample size based on the above table is 282.5. This, therefore suggests that sample sizes of 283 and above would be appropriate for the present study.

### **3.6 QUESTIONNAIRE DESIGN AND DATA COLLECTION METHOD**

The next section examines other methods of data collection with particular reference to questionnaire design which forms an integral part of the data collection technique utilised in this study.

#### **3.6.1 Questionnaire design**

Tolmie, Muijs and McAteer (2011:300) see the questionnaire as a survey method of data collection in which participants are asked to respond to same question in a predetermined pattern. It is a structural technique for data collection, which contains a number of answerable questions, written or verbal, in which research participants wilfully agree to answer (Omoruyi 2015:97). The different kinds of questionnaire, according to Maree (2016:176-178) which a researcher may utilise, include a self-completed questionnaire. This type is typically completed by the research participants and may also be referred to as surveys. The type of questionnaires which the

respondent can access and return through the post office is called the postal or mail questionnaire. The delivery and collection of the questionnaire is done by hand after completion through a research assistant or the researcher herself or himself. A face-to-face questionnaire is concerned with questions the interviewer administers directly to his or her research participants, face-to-face. However, as noted in Saunders *et al.* (2016:440) the choice of a given questionnaire can be influenced by a number of factors which include:

- Characteristics of the respondents from which the researcher wants to collect the data.
- The importance of reaching a particular person as a respondent.
- The importance of the answers from respondents not being tampered with.
- The size of sample a researcher needs for analysis, with focus on the response rate.
- Types and numbers of questions needed to collect data.

Based on the above criteria, this study used the questionnaire's design to generate primary data. Closed questions were operationalised in the study based on its attachment to the Likert scales of measurements, which makes it quicker and easier to answer. The implementation of closed questions helps the researcher to generate large samples from the buyer-supplier.

The questionnaire design for this study was structured into five (5) categories, starting from: SMEs demography, trust, communication, product quality, flexibility, buyer-supplier commitment and SMEs' competitive performance. Scales for this study were adopted from previous studies with little adaptation made where necessary to suit the present study context and intention. The measuring scale for communication was adapted from Fynes and Voss (2002:612) and Choo, Jung and Chung (2009:492). Product quality scale was adapted from Li, Wang and Liu (2011:182) and Waller and Ahire (1996:33). The measuring scale for flexibility was adapted from Homburg, Kuester, Beutin and Menon (2005:25). Scales for measuring buyer-supplier commitment was adopted from Ulaga, and Eggert (2006:320). And the scales for measuring SMEs' competitive performance was adopted from Mafini and Loury-Okoumba (2016:632) and Kumar and Pansari (2016:507).

In using a Likert scale rating, researchers sometimes include both negative and positive statements to ensure that respondents read them before expressing their views. Maeda (2015:16) observed that negatively worded questions tend to confuse the respondents as they are made to give responses that are contrary to their opinions, which seem to reduce the study's internal consistency reliability. To this end, this study used the positively worded questions to improve internal consistency reliability.

The scales for this study was measured in a 5-point Likert scale rating, wherein respondents were asked to express their agreement or disagreement with the questions covering the study variable from a list of 1 = strongly disagree, 2 = disagree, 3 = slightly agree, 4 = agree and 5 = strongly agree. As Tolmie *et al.* (2011:295) established, Likert scale items are fixed reply items in the questionnaires presented to respondents with questions asking them to mark the one that best defines their answers. This study used a 5-point Liker scale because Likert scale questions are easy and quicker for the respondents to answer. Importantly, considering that the source of data are business owners, managers and senior staff of the various SMEs in southern Gauteng who may not have enough time to answer the research questions, the Likert scale system makes it easy to generate the needed data because of is preciseness. Finally, by keeping or maintaining the same order of response categories, the Likert scale helps reduce response bias. Presented below are Tables 3.2.1 to 3.2.5 showing the adopted/adapted measuring instruments original formats and sources.

**Table 3.2.1: Measurements for buyer-supplier communication**

<b>Research construct</b>	<b>Adapted measurement items</b>	<b>Original measurement items</b>
Bsc-1	We exchange information frequently with our buyer/supplier	Exchange of information in this relationship takes place frequently and informally, and not only according to a pre-specified agreement (Fynes & Voss 2002:612).
Bsc-2	We communicate any information that might be helpful to our partners	In this relationship, any information that might help the other party will be provided for them (Fynes & Voss 2002:612)
Bsc-3	Both parties keep each other informed about events or changes that may affect the other party.	Both parties keep each other informed about events or changes that may affect the other party (Fynes & Voss 2002:612)
Bsc-4	Both parties in the relationship will provide privately-owned information if it can help the other party	Both parties in the relationship will provide proprietary if it can help the other party (Fynes & Voss 2002:612)
Bsc-5	We communicate well with this buyer/supplier	We communicate well with this supplier (Choo, Jung & Chung 2009:492).
Bsc-6	We communicate with this buyer/supplier quite often	We communicate with this supplier quite often (Choo <i>et al.</i> 2009:492).

Research construct	Adapted measurement items	Original measurement items
Bsc-7	We discuss various issues related to this buyer/supplier	We discuss various issues related to the business with this supplier (Choo <i>et al.</i> 2009:492).
Bsc-8	This buyer/supplier is straightforward in the relationship with us	This supplier is ingenuous in the relationship with us (Choo <i>et al.</i> 2009:492).

Source: (own source)

The above table represents the measurement (questionnaires) for the buyer-supplier communication. Displayed in the table are the adopted versions of the original scales and sources from which they were adopted. From the table eight scales were adopted for measuring buyer-supplier communication.

**Table 3.2.2: Measurement for buyer-supplier product quality**

Research construct	Adapted measurement items	Original measurement items
Bpq-1	The quality of our products compares well with competitors' products.	The quality of our products compares well with competitors' products (Li, Wang & Liu 2011:182).
Bpq-2	Our products are perceived by customers as being more reliable than competitors.	Our products are perceived by customers as being more reliable than competitors' products (Li <i>et al.</i> 2011:182).
Bpq-3	Our products are of higher quality than our competitors' products.	Our products are of higher quality than our competitors' products (Li <i>et al.</i> 2011:182).
Bpq-4	Our products quality does what it is supposed to do for the user.	How well does the primary product do what it is supposed to do for the customer? (Waller, & Ahire 1996:33)
Bpq-5	The quality of the product we offer to our customers' is highly durable	How durable is the primary product? (Waller, & Ahire 1996:33)

Source: (own source).

Table 3.2.2 presents the scales (questionnaires) for measuring buyer-supplier product quality. From the table, five scales were adopted for measuring the buyer-supplier product quality. The original scales format and source were also presented in the table.

**Table 3.2.3: Measurements for buyer-supplier flexibility**

Research construct	Adapted measurement items	Original measurement items
Bsf-1	This buyer/supplier is flexible enough to handle unforeseen problems	This supplier is flexible enough to handle unforeseen problems (Homburg, Kuester, Beutin & Menon 2005:25).
Bsf-2	This buyer/supplier handles changes well.	This supplier handles changes well (Homburg, <i>et al.</i> 2005:25).
Bsf-3	This buyer/supplier can readily adjust its inventories to meet changes in our needs.	This supplier can readily adjust its inventories to meet changes in our needs. (Homburg, <i>et al.</i> 2005:25)
Bsf-4	This buyer/supplier is flexible in response to request we make.	This supplier is flexible in response to requests we make. (Homburg, <i>et al.</i> 2005:25)
Bsf-5	Our products conform to its engineering specifications	Our products conform to its engineering specifications.

Source: (own source).

Table 3.2.3 presents the scales (questionnaires) for measuring buyer-supplier flexibility. The table showcased the five instruments used in measuring buyer-supplier flexibility.

**Table 3.2.4: Measurement scales for buyer-supplier commitment**

Research construct	Adapted measurement items	Original measurement items
Com-1	The relationship with our buyer/supplier is something to which we are very committed	The relationship with our main supplier is something to which we are very committed (Ulaga & Eggert 2006:320)
Com-2	The relationship with our buyer/supplier is very important to our business	The relationship with our main supplier is very important to our business (Ulaga & Eggert 2006:320)

<b>Research construct</b>	<b>Adapted measurement items</b>	<b>Original measurement items</b>
Com-3	The relationship with our buyer/supplier is something our business intends to maintain indefinitely	The relationship with our main supplier is something our business intends to maintain indefinitely (Ulaga & Eggert 2006:320)
Com-4	The relationship with our buyer/supplier is very much like being family	The relationship with our main supplier is very much like being family (Ulaga & Eggert 2006:320)
Com-5	The relationship with our buyer/supplier is something our business really cares about	The relationship with our main supplier is something our business really cares about (Ulaga & Eggert 2006:320)
Com-6	The relationship with our buyer/supplier deserves our business maximum effort to maintain	The relationship with our main supplier deserves our business maximum effort to maintain (Ulaga & Eggert 2006:320)

Source: (own source).

Table 3.2.4 represents the measurement instruments (questionnaires) for buyer-supplier commitment. From the table, six instruments were used for measuring the buyer-supplier commitment construct. The source of these instruments and their original version were also displayed in the table.

**Table 3.2.5: Measurements for SMEs Competitive Performance**

<b>Research construct</b>	<b>Adapted measurement items</b>	<b>Original measurement items</b>
Scp-1	There is a high level of improvement in this company	There is a high level of innovation in this company (Mafini & Louri-Okoumba 2016:632)
Scp-2	Employees in this company are happy with our services	Employees in this company are happy and motivated (Mafini & Louri-Okoumba 2016:632).
Scp-3	Our customers are satisfied with our services	Our customers are satisfied with our service (Mafini & Louri-Okoumba 2016:632).

<b>Research construct</b>	<b>Adapted measurement items</b>	<b>Original measurement items</b>
Scp-4	Our performance in the last appraisal exceeded expectations	My performance in the last appraisal exceeded expectations (Kumar & Pansari 2016:507).
Scp-5	The level of opportunity to improve our performance is high	The amount of opportunity for my performance improvement at my organisation is high (Kumar & Pansari 2016:507).

Source: (own source).

Table 3.2.5 presents the five measurement instruments adopted for measuring SMEs' competitive performance. The table also displayed the sources of these scales and their original formats. Having presented the questionnaires for this study, the next section discusses the data gathering procedures.

### **3.7 DATA GATHERING PROCEDURES**

The researcher utilised the services of two research assistants with good knowledge of the study environment and experience in the administration and collection systems to gather the data, together with a self-administration technique to facilitate good response frequency. The data collection exercise started on November 2017 and lasted until March 2018. The data gathering process covered a total of six months. Through discussions with the study supervisors, it was felt that respondents sometimes feel burdened while responding to lengthy spells and well worded questionnaires. This study therefore ensured that a maximum of 5-10 minutes was used in responding to the questionnaires by making use of short and coherent sentences. SME owners, managers, marketing/salesperson(s) and senior employees are the people allowed to provide answers to the questionnaires since they possess background knowledge of this study, based on factors influencing buyer-supplier commitment and SMEs' competitive performance.

#### **3.7.1 Ethical considerations**

Ethics in research denotes the principles that directs the conduct of the researcher in relation to the rights of individuals who, by implication, become the field of research or impinge on the study (Tolmie *et al.* 2011:60-63). It represents the principles that details and clarifies the manner under which a research is conducted. Ethical procedures exemplified in this study are explained bellow.

### **3.7.1.1 Informed consent**

To achieve good response from research participants, a covering letter with details of the research title and purpose, together with the VUT logo accompanied the research questionnaires. The researcher requested in a letter for the consent of the research participants, who in return responded very well, knowing full well that the research is purely for academic purposes.

### **3.7.1.2 Voluntary Participation**

Respondents were made to understand that their decision to participate in the survey is essential for the progress of the study, but that their participation was voluntarily. They were given sufficient time to complete the questionnaire. Occasions abound in the data gathering process wherein the researcher had to walk away from an intended respondent who did not feel comfortable when providing the needed information in the questionnaire.

### **3.7.1.3 Right to personal privacy**

This study ensured that participants' rights to personal privacy was maintained throughout the data collection by not requesting for any personal phone numbers and e-mails of the respondents. Importantly, the study ensured that the structuring and wording of the questionnaire was formal and that information which may deter the confidence of the respondents in the process was removed.

### **3.7.1.4 Protection from harm**

The respondents' right of participation was protected from any circumstance capable of causing emotional or physical harm and from any kind of discomfort. The data collection process was undertaken to ensure that they felt comfortable, hence could be stopped at any point that they felt uncomfortable. Importantly, respondents who wished to provide answers to the questionnaires at a later date were allowed to do so.

## **3.8 DATA PREPARATION METHODS**

As noted in Kent (2015:39), before subjecting quantitative data to any statistical analysis technique appropriate for achieving the study objectives, the data collected must be prepared in various ways to ensure their readiness for proper analysis. These processes are checking, editing, coding, assembling and transferring. The data processing methods used in the study are discussed in the subsequent sections.

### **3.8.1           Checking**

Checking was carried out in the questionnaire to ensure that respondents did not leave a good number of the questions unattained. It was also undertaken to ensure that the pattern of responses in the questionnaires indicated that respondents understood and followed the instructions on the questionnaire.

### **3.8.2           Editing**

The purpose of editing is to ensure that information (data) realised through questionnaire is consistent, reliable, readable and complete for purpose. It is a process designed to ensure that common errors of omission from the raw data are identified and corrected when necessary. Editing is therefore the procedure which helps improve the quality of the data for coding (Kent 2015:40-41). In this study, questions that were not consistent with the study objectives and capable of misleading the respondents, resulting to response bias were adjusted or removed to foster consistency in the data. To ensure well-organised and effective editing, two basic stages of editing are field editing and the central office editing stages.

#### **3.8.2.1       Field editing**

Field editing was undertaken to ensure that errors of omissions were detected earlier by the researcher by scanning through the completed questionnaires right before the research respondent to facilitate correctness and usability of the data. However, in the case of an interview investigation, editing may be carried out immediately after the investigation by the investigator to enhance comprehensibility of the data. Research investigators can avoid bias representations through careful handling of the errors of omissions.

#### **3.8.2.2       Central editing**

With regard to central office editing, editing was carried out after all completed questionnaires had been returned. To ensure consistency and correctness of the data, editing was undertaken by a single individual (the researcher) who also understands the study objective and is able to handle the sample size of the study. The editor responded to identified missing replies by discarding them since the numbers of the identified missing replies are insignificant.

### **3.8.3           Coding**

Coding is the means of allocating numbers to responses to ensure that they are put into reduced groups suitable for the research problems considered (Adler & Clark 2015:426. Good coding

practice ensures that all data are recorded in their specific cells through the principle of “exhaustiveness” and shared exclusiveness (Kent 2015:43). The later meaning that a given answer or data can only be allotted to one single cell in any given group. Also important in coding is the principle of unidimensionality, which signify that all groups of data are well-defined and based on one idea.

However, the implementation of coding during data collection, known as pre-coding, is important to save time and foster the ease of comparing results with others previously collected. This study used pre-coded questionnaires to generate data. According to Adler and Clark (2015:390), coding may be seen as the name ascribed to the process of breaking down intricate explanations into modest values by attaching code numbers. Code numbers from 1 to 5 were used to differentiate expressions in the Likert scale.

#### **3.8.4 Data assembling and transferring to IBM SPSS**

Before carrying out data analysis, data was assembled into the Excel spreadsheet. In the spreadsheet, data was entered accordingly into their various cells following the already established codes for the constructs under study. This enables the ease of transferring the data into the IBM SPSS Statistics for proper analysis to be carried out on the data. Having explained the preparation methods used in this study, the next section explains data analysis and the statistical approach.

### **3.9 DATA ANALYSIS AND STATISTICAL APPROACH**

The focus of this section is to describe data analysis mechanisms in view of the study objectives and hypotheses. As Adler and Clark (2015:302) noted, data analysis “is the essential ingredient for making theoretical sense of observations.” Analyses of data therefore involves the means of ensuring the validity, reliability and the consistency of the measuring instrument by subjecting the raw data to analytical techniques such as IBM SPSS Statistics (Kent 2015:43).

In this study, the first process to achieve this is through the screening of data. Questionnaires that were not properly answered were removed. This was then followed with the coding of the data into the Excel spreadsheet and followed up with data cleaning to ensure comprehensive entry of the raw data. From the Excel work book, data was imported into Statistical Package for Social Sciences (SPSS) version 25.0 for applying descriptive statistics on the respondent’s demographic summary of SMEs. This procedure was then followed with Factor Analysis (FA) using Principal Component Analysis (PCA).

Factor analysis is a mathematical technique that aids the explanation of interconnected procedures to uncover configurations in a group of variables (Yong & Pearce 2013:79). Accordingly, factor analytic technique reduces large data set into manageable numbers for further analysis such as multiple regression analysis (Pallant 2007:179). The two basic approaches to factor analysis (umbrella term) utilised in this study are the principal component analysis technique (PCA) and factor analysis (FA). According to Pallant (2007:180), they are related in many ways and often used interchangeably by researchers. An important feature of these methods (FA & PCA) is that they strive to create a reduced version of direct grouping of the initial variables, which covers the variables correlational variability. Importantly, the principal component method seeks to maximise the sum of the square loadings of each factor extracted, and helps researchers to elucidate more on the variances than the loading created using any other method (Kothari 2004:330).

In the next phase of the analysis, the researcher conducted confirmatory factor analysis (CFA) and Path Modelling using the Analysis of Moment Structure (AMOS) statistical software version 25.

### **3.9.1 Descriptive statistics**

Descriptive statistics is the elementary transformation of raw data in a way that describes the basic characteristics such as central tendency, distribution and variability (Zikmund, Babin, Carr & Griffin 2013:484). It summarises data acquired from different elements of an investigation into a meaningful form (Maree 2016:204). Privitera (2015:3) defines it as the procedure used to summarise, organise, and make sense of a set of scores or observations which are usually presented graphically, or as summary of statistics. This study utilised descriptive statistics for analyses and interpretation of data sets in the form of charts and tables. These are further explained below.

#### **3.9.1.1 Charts and tables**

To make more meaningful the findings of this study, the researcher utilised frequency distribution tables and charts. This also includes, bar charts and pie charts to show differences, similarities and trends originating from the data sets. The demographic frequency result for the SMEs in this study were thus presented in tables and charts.

#### **3.9.1.2 Mean and standard deviations**

Mean is the average that is used every day when values are added up and then divided by the number of values. Mean are often applied when considering interval/ratio variables (Bryman *et al.* 2014:318). Standard deviation, on the other hand, is the square root of the variance. The

variance is the sum of the square of the difference between each value in a distribution and the mean divided by the number of observations. These measures (mean and standard deviation) are significant for comparing the distributions among variables.

### **3.9.1.3 Tabulation**

Tabulation is the process of arranging a mass of data into a concise and logical order. It summarises raw data and deploys it into a compact orderly manner usually in columns and rows (Kothari 2004:127). The importance of tabulation is that:

- it conserves space and reduces explanatory and descriptive statement to a minimum;
- it facilitates the process of comparison;
- it facilitates the summation of items and the detection of errors and omissions; and
- it provides a basis for various statistical computations.

Independent variables are presented in the contingency table to facilitate the ease of identification. Two basic classifications of tabulation are the simple tabulation and complex tabulation or cross-tabulation (Kothari 2004:127). The simple tabulation provides information about one or more groups of interdependent questions, whereas complex tabulation (cross-tabulation) shows the division of data in two or more categories. Cross-tabulation is intended to provide information in relation to one or more categories of inter-related questions. In this study, the researcher used cross-tabulation to depict and explain Cronbach's alpha values ( $\alpha$ ), Average Variance Extracted (AVE), composite reliability values (CR), factor loading of the constructs, maximum shared variance (MSV), confirmatory factor analysis (CFA), path regression coefficient results, values of standard error (SE), values of critical ratio (Cr) and the levels of significance.

### **3.9.1.4 Correlation analysis**

Correlation analysis is the establishment of a benchmark that helps to measure the strength of a given relationship (Bryman & Cramer 2011:210). It defines the extent to which changes in variable (X) can be associated with the changes in variable (Y). However, the presence of correlation would not necessarily mean that variable (X) causes a change in variable (Y) (Welman *et al.* 2007:82). To assess the strength of the relationship between two variables, a correlation coefficient is used (Evans 2014:438). Relationship between variables can either be positive or negative. A positive correlation occurs when the values of the variables in question increases together and negative when the value of one variable increases while the other decreases (Foster, Diamond & Jefferies 2015:182). This study used correlation to test for discriminant validity.

### **3.10 RELIABILITY**

Tolmie, *et al.* (2011:301) define reliability as the quality of a measuring instrument which helps to bring about the same result after recurrent examination of a given subject matter. According to Field *et al.* (2013:925), reliability is the ability of a measure to produce consistent results when the same units are considered using dissimilar circumstances. When a scale is reliable it shows how free the scale is from random error (Pallant 2016:6). Among the common pointers of reliability are the test-retest reliability and the internal consistency reliability (Pallant 2016:6). Test-retest reliability of a scale can be assessed by administering a scale to the same research participants on two different occasions and recording the correlation between the two data, whereas internal consistency reliability is obtained through the use of the Cronbach's alpha and composite reliability. This study's reliability was assessed through the use of the Cronbach's alpha coefficient and the composite reliability. The two make-ups of the internal consistency reliability are further explained below.

#### **3.10.1 Cronbach's alpha coefficient**

Cronbach's alpha is a means of measuring the reliability of a scale (Field *et al.* 2013:916). It is the most common form of assessing the internal reliability of a measuring scale, as it provides the indication of the average correlation among all the items that make up the scale. The values of the items in the Cronbach's alpha ranges from 0 to 1, with the highest value signifying a higher reliability (Pallant 2016:6). As observed in Dijkstra and Henseler (2015:300), Cronbach's alpha examines the statistic variances and covariance in order to establish internal consistency of the study. This means that Cronbach's alpha is a consistent estimate of a linear composite's reliability only when the composite pointers are from a distinct set (Dijkstra & Henseler 2015:300).

#### **3.10.2 Composite reliability**

Composite reliability is a method used in assessing the scales' internal consistency. It is developed to cushion the effects of the shortfalls of the Cronbach's alpha (Dijkstra & Henseler 2015:300). Composite reliability, according to the author, signify a suitable reliability measurement yardstick, hence it helps to determine the reliability of the hypothesis results through evaluating the "indicator loadings." Composite reliability is a nearer estimate of reliability based on the judgment that factor loading evaluation is accurate. As noted in Omoruyi (2015:110), a reliability value of 0.7 and above is a good indicator that the variable scales are measuring what it intends to measure.

### **3.11 VALIDITY**

Validity refers to the ability of an instrument to precisely measure what it intends to measure (Pallant 2016:7). However, according to Bernard (2013:48), the validity of measuring instrument is assessed through face validity, content validity, and criterion validity and construct validity. These validity components are discussed below.

#### **3.11.1 Face validity**

Face validity involves establishing a simple observation of the operational indicators of a given phenomenon and deciding whether or not on the face of it, the indicator is meaningful (Bernard 2013:48). According to the author, “a paper-and-pencil test about the rules of the road is not, on the face of it, a valid indicator of whether someone can drive a car”. Rather, it can help to determine the ability of the individual to read road signs. The researcher further observed that face validity of a measuring instrument is based on consensus among researchers. If everyone believes that a given instrument is fit for measuring a particular phenomenon, it means that that same instrument is valid. Based on this, the instruments for this present study passed the criteria for face validity as they were adopted and adapted where necessary from previous studies.

#### **3.11.2 Content validity**

Content validity is concerned with the adequacy of the instrument to cover the study population universe (Pallant 2016:7). As Bernard (2013:48) enthused, achieving content validity is based on the prevalence of appropriate content enough for determining complex constructs. Hence, achieving content validity can be very difficult but attainable by utilising the steps listed in Cooper and Schindler (2006:214) whose steps are presented below by:

- using a statistician to evaluate the content of the questionnaire;
- using probability methods to carry out sampling methods ensuring external population validity;
- using a large sample size with a margin of error of not more than 5 percent and a confidence level of 95 percent; and
- comprehensively reviewing the literature for theoretical constructs and empirical conclusions.

In this study, content validity was achieved through conscious effort by the researcher to ensure that the wordings of the measuring instruments were kept simple and short to facilitate research participants' comprehensibility.

Content validity is assessed using simple, direct and non-technical terms to formulate the questions. The questionnaire was kept short and to the point so as to avoid respondent boredom, which may result in unanswered questions.

### **3.11.3 Construct validity**

Construct validity occurs in the presence of a good balance between the construct and the instrument that measures it and the real examination composed using the instrument or scale (Bernard 2013:49). Hence, an instrument may have a high construct validity only when it supports predictions, or in this case hypotheses. As Pallant (2016:7) uncovers, it “involves the testing of a scale not against a given criterion but in terms of theoretically derived hypotheses concerning the nature of the underlying variable or construct”. This study’s construct validity was explored by examining the relationship existing between the study variables such as the relationship existing between the factors it proposed as having influence on buyer-supplier commitment (for example, trust, communication, product quality and flexibility), and the relationship between buyer-supplier commitment and SMEs’ competitive performance.

### **3.11.4 Convergent validity and discriminant validity**

Whereas convergent validity signifies a higher magnitude of correlation among divergent measurement techniques employed in assessing a particular element, discriminant validity shows lower magnitude correlation of a measuring technique (whether the same element or divergent) employed for measuring two opposing dimensions (Huang & Lee 2013:4). As pointed out in Huang and Lee (2013:4), both convergent validity and discriminant validity are components or dimensions of construct validity, previously explained. Wang and Xing (2018:193) conclude that discriminant validity is adequate when the value of the variance exchanged among constructs in a given model is assumed smaller, compared to the variance which the construct exchanged with its own measures. The discriminant validity is assessed by comparing the square roots of the average variance extracted for a given construct with the correlations of the same construct and the rest of the study constructs (Wang & Xing 2018:193).

### **3.11.5 Criterion validity**

Criterion validity is determined by aligning the results of the measuring instrument with given measurable criterion (Pallant 2016:7). According to Bernard (2013:50), a given instrument is assumed to have a high criterion validity when there is a close fit between the measures the instrument produces and the measures produced by some other instruments which are said to be valid.

### **3.12 CONFIRMATORY FACTOR ANALYSIS (CFA)**

Confirmatory factor analysis (CFA) as defined by Field, Miles and Field (2013:915) is a version of factor analysis in which specific hypotheses about structure and relations between the latent variables that underlie the data are tested. It helps the researcher to compare established results from the study against the one theorised (Bryman & Cramer 2011:319). Through a factor analysis tool, organisation and orderliness is brought to factors by helping to determine the existence or not of the relationship between the variables (Bryman & Cramer 2011:319). As noted in Maree (2016:242), factor analysis is aimed at identifying groups of variables that are detailing the same principal phenomenon. Its function is to assess the forms of correlations between the variables and to investigate whether the variables that belong to the same factor loading are measuring the same thing. Confirmatory factor analysis (CFA) was used in this study to explain the hypothesised relationship existing between the research variables: buyer-supplier trust, communication, product quality and buyer-supplier commitment and SMEs' competitive performance.

Importantly, the reliability and validity of the measurement scales for this study was assessed through confirmatory factor analysis, as recommended in He, Zhu and Zhang (2014:687). Factor analysis assessed through analysis of moment structure (AMOS) is significant for the creation of a good measurement model for the study, showcasing composite reliability (CR) and average variance extracted (AVE), which are important for the reliability and validity assessment of the study constructs (Adil & Awais 2016:111).

#### **3.12.1 Structural equation modelling (SEM)**

Structural equation modelling is an analysis technique predominantly used across various fields, notably, in management science studies for analysis involving “cause-and-effect relations” (Mardini, Streimikiena, Zavadskas, Cavallaro, Nilashi, Josoh & Zare 2017:14). According to these authors, SEM can be viewed as a collection of covariance-based statistical techniques in the sense that it combines factor analysis and regression analysis also known as path analysis. The SEM software is therefore designed to assist in examining complex relationships like confirmatory factor analyses (CFA) and time series analyses as well as linear designs.

However, according to Chin, Thatcher and Wright (2012:1004), the significance of SEM in a given study stems from its role in dictating and controlling the effects of common method bias when analysing data. SEM is important in analysing the central and the intervention effects of the study variables by examining the SEM parameters like: Chi-square ( $\chi^2$ ), degree of freedom (DF), root mean square error of approximation (RMSEA), comparative fit index (CFI) Tucker Lewis index

(TLI) and goodness of fit index which helps to ascertain model fit for the proposed study (Chin *et al.*, 2012:689).

**Table 3.3: Criteria for assessing model fit**

<b>Model Fit Index</b>	<b>Acceptable Level</b>	<b>Interpretation</b>
CMIN/DF	less than 3.0	An attempt to adjust for sample size
Root mean square error of approximation (RMSEA)	Less than or equal to 0.08	Has a known distribution. Favours parsimony. Values less than 0.05 is considered excellent fit.
Goodness-of-fit (GFI)	Value greater than or equal to 0.90	Scaled between 0 and 1, with higher values indicating better model fit. This statistic should be used with caution.
Incremental fit index (IFI) and Norm fit index (NFI) or Tucker-Lewis Index (TLI)	Value equal to or greater than 0.90 is acceptable	These indices assume zero population covariance (no covariance) among the observed variables and ranges from 0 to 1, with 1 equal to perfect fit.
Comparative fit index (CFI)	Value equal to or greater than 0.90	Compares the existing model fit or sample covariance matrix with a null model. It ranges from 0 to 1, with 1 equal to perfect fit.

The table reflects the model fit indexes used in this study and their corresponding levels of acceptability and interpretations. The table is further used to enrich our understanding of the appropriateness of the CFA and SEM models shown in chapter four of this study, by comparing the values of the model fit indexes with the acceptable levels of significance.

### **3.13 CONCLUSION**

Research methodology represents a detailed procedure or framework of action to be followed to ensure that research objectives are realised. Good research method puts in focus the approach for data collection, system of measurement employed and the data analysis to be employed in order to realise the study objectives. Research methodology also known as research design is the key issue examined in this chapter. Research philosophies such as positivism, critical realism, interpretivism, postmodernism and pragmatism and their ontological, epistemological and axiological positions were also examined. The chapter elucidated research design with emphasis on quantitative and qualitative research designs.

Descriptive research was discussed, thereby paving the way for discussions on the sampling design procedures which includes discussions on the study population, target population, sampling techniques and sample size, with discussions on data gathering techniques and questionnaire design. Emphasis was further placed on the measurement instruments adopted and operationalised in the study. Data gathering procedures, in line with the various measures undertaken to ensure the reliability, validity and readiness of the measuring instruments were examined and discussed. Among these measures were coding, tabulation/cross-tabulation, face validity, and construct validity and internal consistency through Cronbach's alpha and composite reliability. The chapter also discussed confirmatory factor analysis (CFA) and structural equation modelling (SEM). Having expended all the methodological requirements of this chapter, the study progresses to Chapter 4 for data analysis and discussions.

# **CHAPTER 4**

## **PRESENTATION, ANALYSIS AND INTERPRETATION OF EMPIRICAL DATA**

### **4.1 INTRODUCTION**

Discussions on the previous chapter three focused on research methodology, sampling design procedures, data collection procedures, and the data analysis techniques utilised in the study. This present chapter is dedicated to data analysis and discussions with the purpose of drawing logical conclusions in view of the theoretical and empirical objectives. This present chapter commences with discussions on data screening processes, followed with discussions on the result of the pilot study. The results of the demographic description of the SMEs that participated in the study were also presented and discussed. It also explored the findings emanating from the measurement of internal consistency of the scales through average variance extracted (AVE), composite reliability (CR), together with the Cronbach's alpha.

The model fit assessment for this study was measured using the confirmatory factor analysis (CFA), which also helped in the analysis of the convergent and discriminant validity. The structural equation modelling (SEM) was used to examine the path modelling and the interrelationship existing within the study variables to aid the correlation pattern of the variables. The various CFA indicators maintained in this study are the goodness of fit index (GFI), normed fit index (NFI), Tucker-Lewis index (TLI), incremental fit index (IFI), comparative fit index (CFI), root mean square error of approximation (RMSEA) and chi-square minimum discrepancy/degree of freedom (CMIN/DF). The chapter then concludes with discussion on the research hypotheses.

### **4.2 SCREENING OF DATA SETS**

After the first editing procedures, observed earlier, to ensure the correctness of the data in the questionnaire, data recorded in Excel was further scrutinised to ensure their appropriateness for further usage in the analysis. Pallant (2007:43) observed the significance of this procedure in helping researchers understand and rectify common errors of missing values or misplacement of data in the wrong cell units. The data screening and rectification procedure was implemented in two phases.

The first phase is concerned with identifying common errors of missing or out of range values in the data set by means of SPSS- descriptive statistics frequencies. The second phase of the

procedure is concerned with identifying and rectifying common errors of omission or misplacement of values in the wrong cell unit with the aid of SPSS- data sort command. This procedure enabled the researcher to ensure the readiness of the data for use in subsequent analysis. However, in the course of this data screening, otherwise known as data preparedness, references are frequently made to the questionnaire design to ensure the correctness of the data. This phase is therefore followed with the analysis of the results of the pilot study.

### 4.3 THE PILOT STUDY RESULTS

Conducting a pilot study before the commencement of the actual survey is important in order to enable the amplification of moral and theoretical concerns which is capable of limiting the relevance of the study (Moutinho & Hutcheson 2011:330). Conducting a pilot study for this research facilitates the ease of identifying errors in the questionnaires, resulting to error refinement that helps improve respondents understanding of the questions.

The table below represents the results of the pilot study. The findings indicate acceptability of the measuring instruments since the Cronbach's Alpha are greater than 0.7 recommended for reliability (Yu-Chen, Tzong-Shi, Chien-Wen & Yia-Ping 2013:142).

**Table 4.1: Pilot study results summary**

Scale	Means	Std. Dev.	Average item-total correlation	Cronbach's Alpha
Section B	3.619	5.652	0.570	.837
Section C	3.900	3.427	0.629	.833
Section D	3.445	3.117	0.523	.754
Section E	3.788	4.878	0.697	.879
Section F	3.770	3.932	0.653	.838

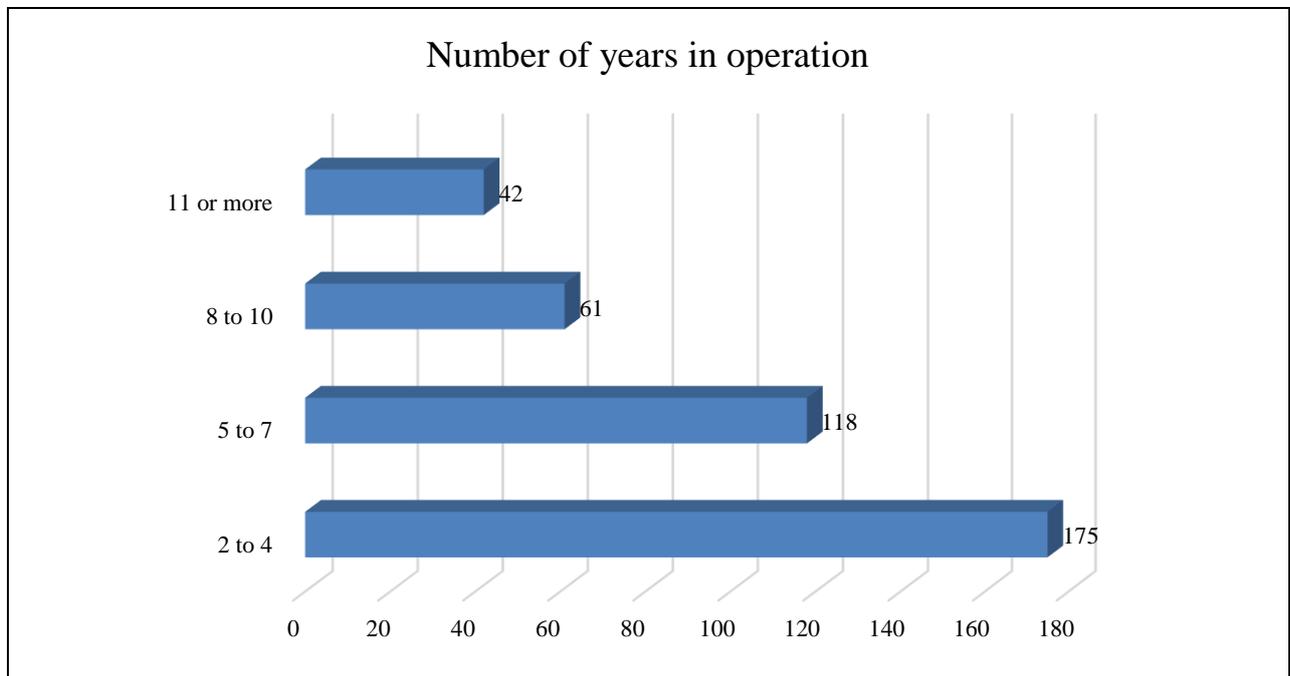
Source: own source

Table 4.1 indicates that the respondents of the pilot study agree with the questions presented before them. This assertion is confirmed by the average mean score of all the scales amounting to ( $\bar{x} = 3.704$ ), and standard deviation for the sections B, C, D, E, and F ( $SD = \pm 5.652, \pm 3.427, \pm 3.117, \pm 4.878, \text{ and } \pm 3.432$ ) respectively. The scores of average item-total-correlations, range from a lower of 0.523 to 0,697 higher. This result meets the recommended minimum threshold of 0.5.

The scores of the Cronbach's alpha portrays that the constructs are reliable as they reached the cut-off value of 0.7, recommended by Yu-Chen *et al.* (2013:142). Hence the scores for buyer-supplier communication, buyer-supplier product quality and flexibility are 0.837, 0.833, 0.754 respectively, while the scores for buyer-supplier commitment and SMEs' competitive performance are 0.879, 0.839 respectively.

#### 4.4 DEMOGRAPHIC DESCRIPTION OF THE SAMPLE

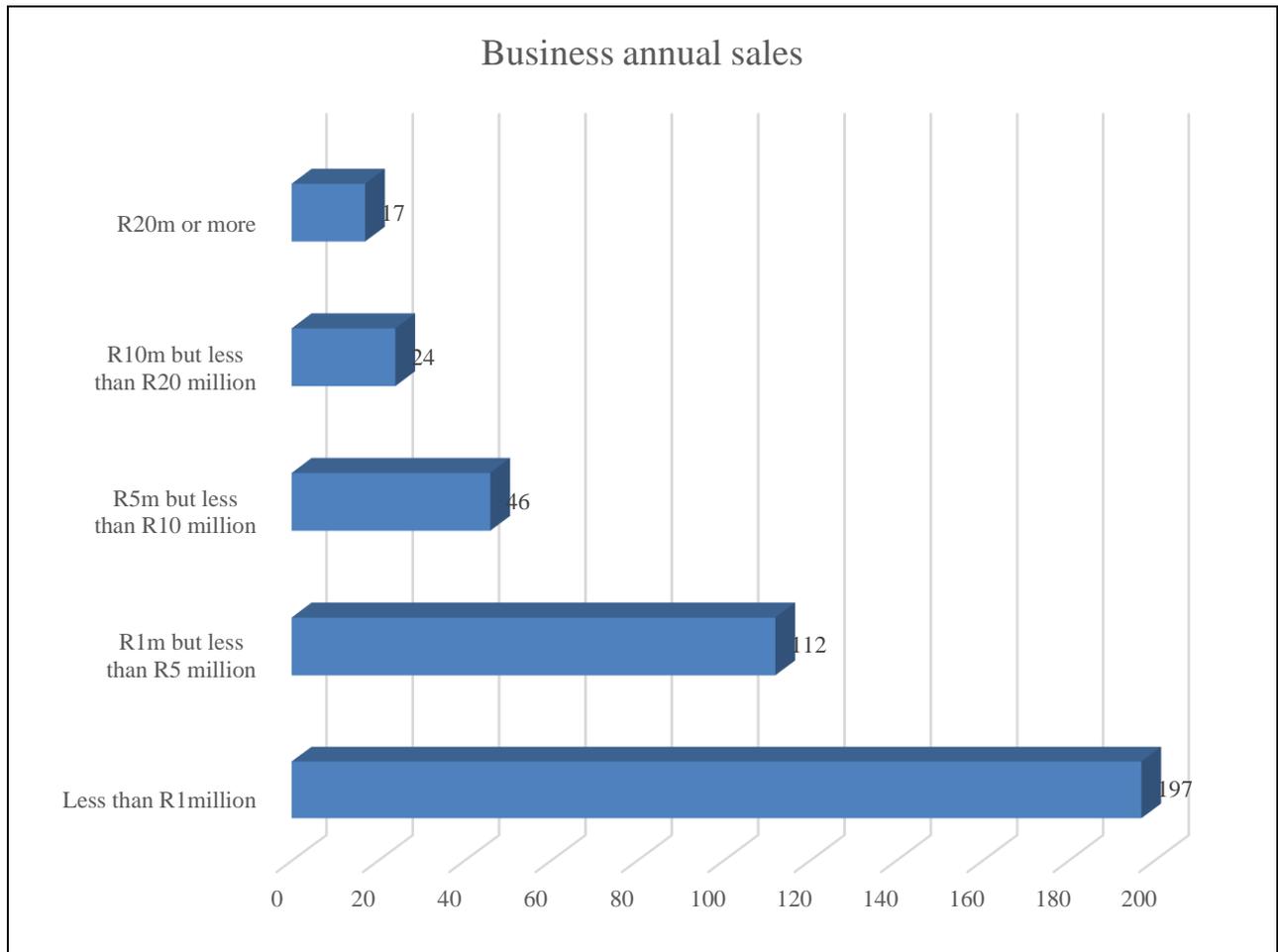
This section is concerned with the analysis of the SME's demographic data with reference to their years of practice in their chosen businesses, annual sales turnover in rand, physical assets in rand, staff head count, type of industry, respondents' job description and their academic qualifications. However, gender and age of respondents, usually included in the questionnaire design as part of demographic descriptors, were not included in the questionnaire design in order to increase the respondents (especially the shy individuals) ease and willingness to participate in the survey. Consequently, gender and age of respondents were not among the sample demographic descriptors analysed. Pictorial evidence was used to display the information from the statistical analysis. Figure 4.1 shows the demographic description of the number of years that the SMEs have been operating in business.



**Figure 4.1: Years in business operation (own source)**

Figure 4.1 showcased the number of years SMEs business owners, managers, marketing/sales personnel and senior staff who participated in this study have been in business. From the information presented on Figure 4.1, majority of the respondents indicated that they have been in

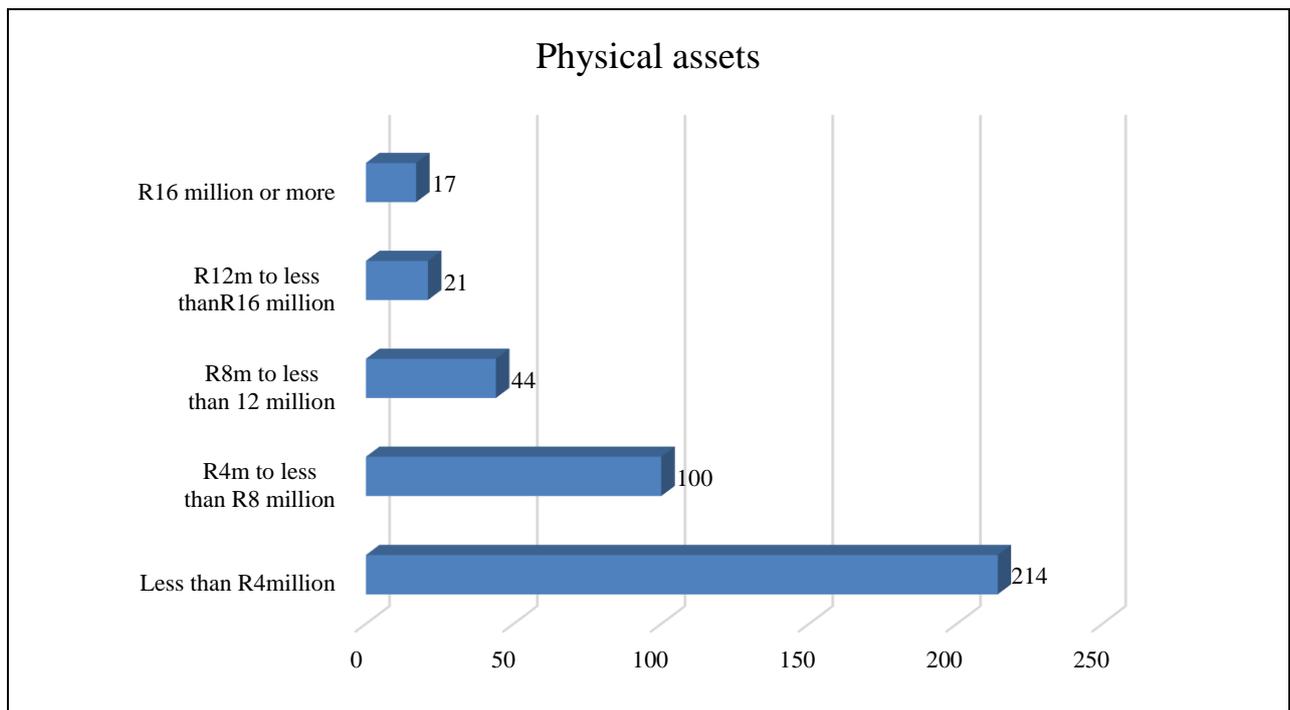
business for 2 to 4 years, representing 44.19% of the respondents. This is followed by another set of respondents who indicated that they have been in business for about 5 to 7 years, representing 29.80% of the total number of responses. In the same vein, a lower percentage of the respondents indicated that they have been in business for 8 to 10 years and 11 years or more, with scores of 15.4% and 10.6% respectively. This analysis may suggest that the number of SME start-ups may have grown over the years within the regions this study was conducted, since a good number of them indicated that they have been operating their business for 2 to 4 years.



**Figure 4.2: SMEs business annual sales (own source)**

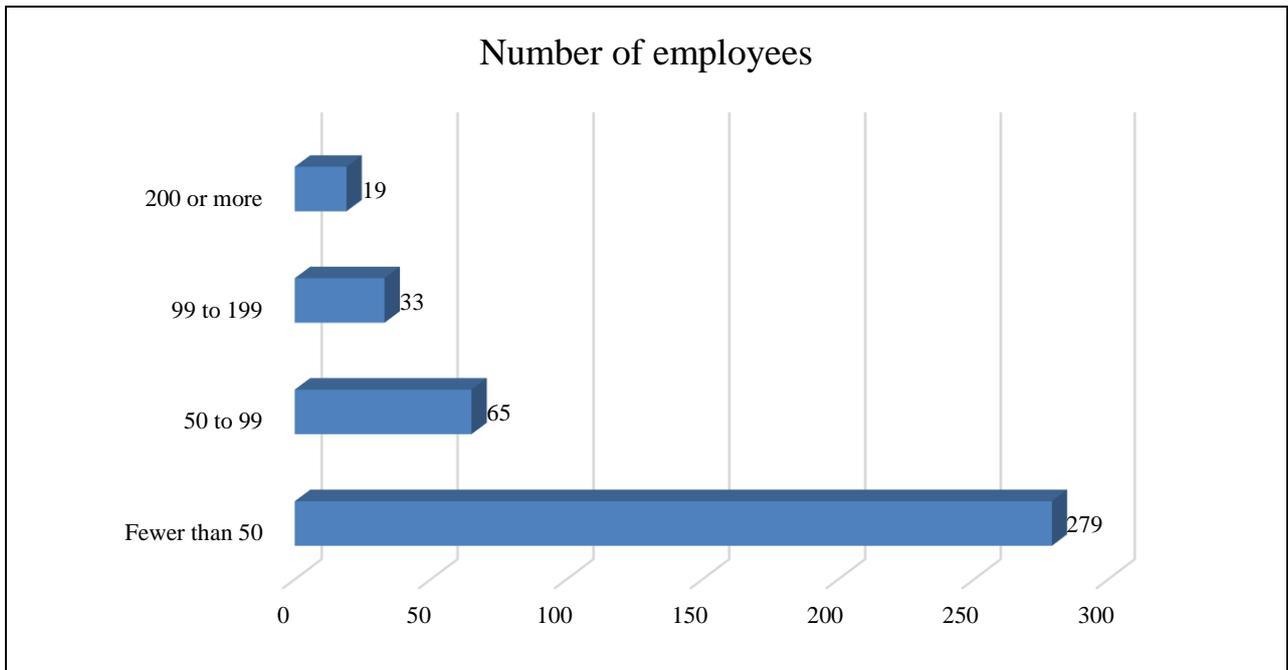
Based on the figure represented above almost half of the respondents indicated an annual sale of less than R1 million (n=197; 49.8%), followed by those with annual sales of R1 million to less than R5 million (n=112; 28.3%). Considering that the number of SMEs sampled are 396, a small proportion of them have an annual sales of R5 million to less than R10 million (n=46; 11.6%), and those which generate annual sales of R10 million to less than R20 million are also significantly low with (n=24; 6.1%), and likewise those that generate R20 million or more with (n=17; 4.3%). Based on this SMEs demographic profile, this study deduced that the reason most of the SMEs’

annual sales return falls within R1 million and R5 million could be attributed to business competitive environment where multinational cooperation has dominant presence.



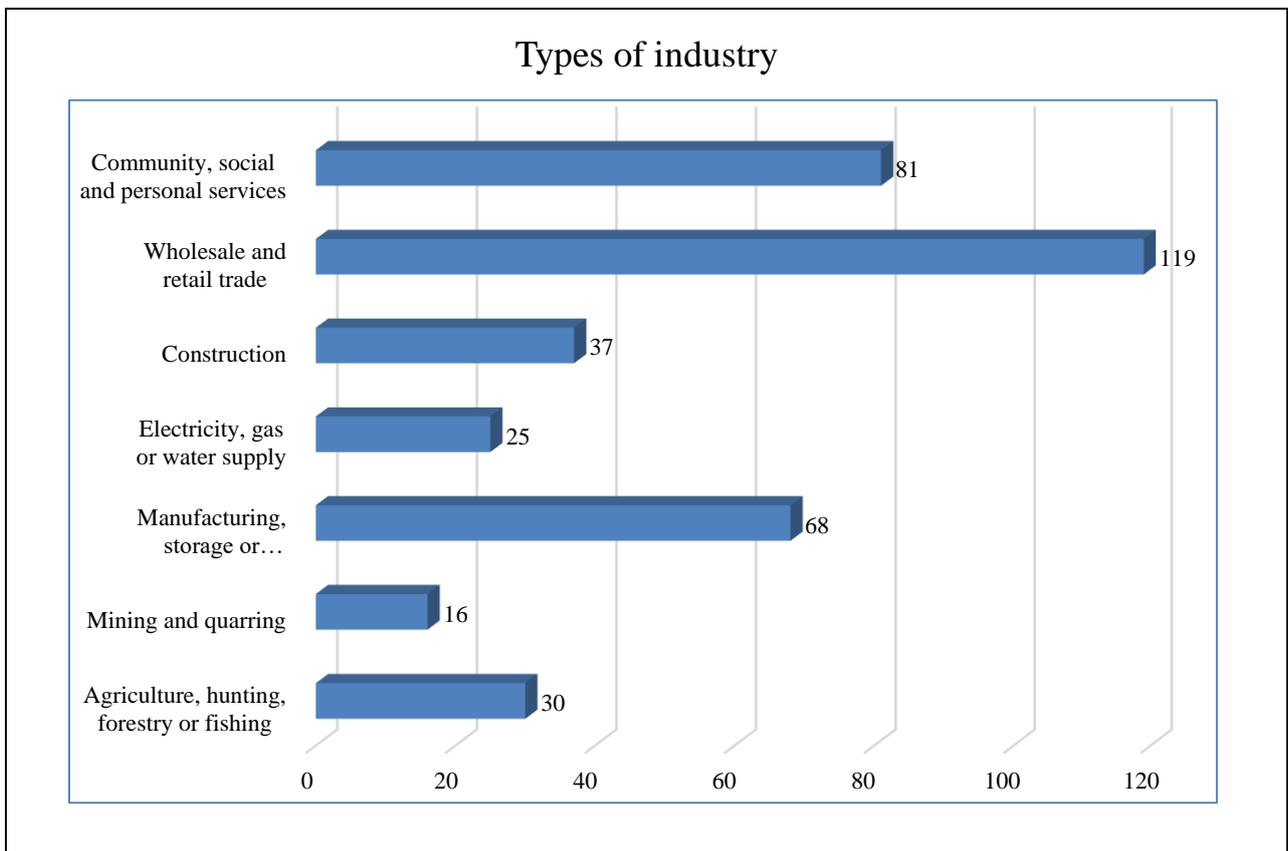
**Figure 4.3: SMEs physical assets (own source)**

Figure 4.3 represents the physical assets of the SMEs. It indicates that more than half of the SMEs have physical assets of less than R4 million (n=214; 54.04%), followed by several SMEs with physical assets of R4 million to less than R8 million (n=100; 25.25%), and those with physical assets of R8 million to less than R12 million (n=44; 11.1%). A significant small proportion of the SMEs have physical assets between R12 million to less than R16 million (n=21; 5.3%) and R16 million or more (n=17; 4.3%).



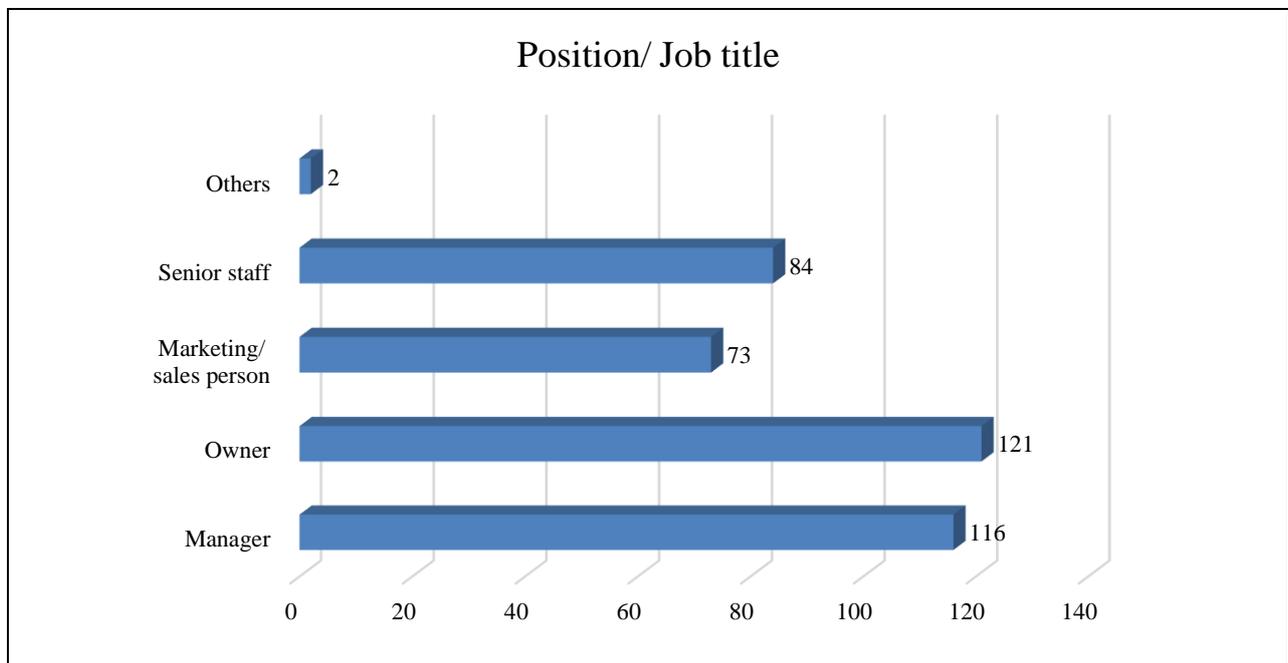
**Figure 4.4: Number of employees (own source)**

The figures indicate that a good many of the SMEs have fewer than 50 employees (n= 279; 70.5%). This is followed by another group which have 50 to 99 employees (n=65; 16.4%). The demographic profile further indicates that a small number of SMEs have 99 to 199 employees in their firms (n=33; 8.3%) and that a small amount of the SMEs employ about 200 or more (n=19; 4.8%).



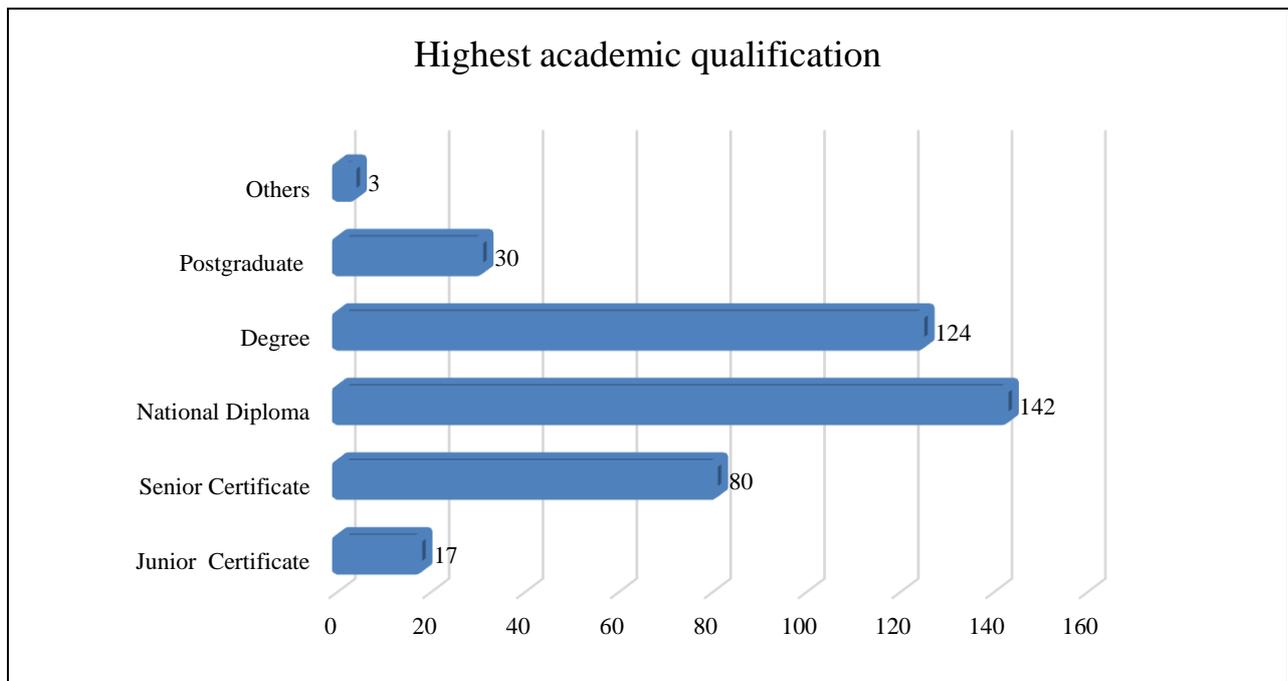
**Figure 4.5: Types of industry (own source)**

The figures describe the frequencies and percentages of the SMEs in the various industries. Based on this evidence, the majority of the respondents are in the wholesale and retail industry (n=119, 30.1%), followed by those engaged in community, social and personal services industry (n=81; 20.45%). Most of the SME respondents indicated higher involvement in the manufacturing, storage or transportation or communication industry with frequencies and percentages (n=68; 17.17%). This industry is followed by the construction industry (n=37; 9.34%), those in agriculture, hunting, forestry or fishing industry made up (n=30; 7.58%). Those in electricity, gas or water supply average (n=25; 6.31%), and those SMEs classified as others made up (n=20; 5.05%) while mining and quarrying finished the industry profiling with (n=16; 4.0).



**Figure 4.6: SMEs respondents' job position/title (own source)**

Figure 4.6 showcased the position or job title of the SME respondents. Figure 4.6 showed that SMEs business owners participated more in this study with (n=121; 30.6%), followed by SMEs managers with (n=116; 29.03%). The number of senior staff who took part in the survey were (n=84; 21.2%), while marketing and sales personnel staff were (n=73; 18.4%) while those categorised as others represents (n=2; 0.5%).



**Figure 4.7: Respondents’ highest academic qualification (own source)**

Based on Figure 4.7 above, the majority of the respondents have a national diploma as their highest academic qualification (n=142; 35.9%), while those with degrees represent the second highest with (n=124; 31.3%), followed by those with senior certificate as their highest qualification (n=80; 20.2%). Respondents with postgraduate qualifications, junior certificates and others represent (n=30; 7.6%, n=17; 4.3%, n=3; 0.8%) respectively. Having explored the study’s demographic results, the next section examines respondents’ perception of the study variables.

#### **4.5 PERCEPTIONS OF RESPONDENTS TOWARDS FACTORS INFLUENCING BUYER-SUPPLIER COMMITMENT AND SMES’ COMPETITIVE PERFORMANCE**

The respondents’ perceptions to the factors influencing buyer-supplier commitment and competitive performances are discussed in this section through the mean score analysis of the measuring instruments. A higher mean score entails that respondents agree with the question, while a lower mean score signifies disagreement with the question. In this study, mean scores above 3% are regarded as high while below 3% is regarded as low.

**Table 4.2: Buyer-supplier communication**

Items	Description	N	Mean $\bar{x}$	Std. Deviation SD
Bsc-1	We exchange information frequently with our buyer/supplier	396	4.08	.927
Bsc-2	We communicate any information that might be helpful to our partners	396	4.05	.877
Bsc-3	Both parties keep each other informed about events or changes that may affect the other party	396	4.08	.806
Bsc-4	Both parties in the relationship will provide privately-owned information if it can help the other party	396	4.03	.922
<b>Overall scale</b>		<b>396</b>	<b>4.06</b>	<b>0.883</b>
Likert Scale: 1= Strongly disagree; 2= Disagree; 3= Slightly agree; 4= Agree; 5= Strongly agree				

Source: own source

The analysis on Table 4.2 indicates that SME respondents strongly uphold the belief, shared in this study, that buyer-supplier communication is positively significant in buyer-supplier commitment with an overall mean score of ( $\bar{x} = 4.06$ ;  $SD = 0.883$ ). The analysis further revealed that timely exchange of useful information within the relationship is very important ( $\bar{x} = 4.08$ ;  $SD = 0.927$  and  $\bar{x} = 4.05$ ;  $SD = 0.877$ ). The analysis further showcased that SMEs' partners keep each other informed about events or changes that may affect the other party ( $\bar{x} = 4.08$ ;  $SD = 0.806$ ), and that they are willing to provide privately-owned information when it becomes necessary for the benefit of the other party ( $\bar{x} = 4.03$ ;  $SD = 0.922$ ). This analysis therefore suggests that in southern Gauteng the perceptions of SME respondents concerning buyer-supplier communication is high.

**Table 4.3: Buyer-supplier product quality**

Items	Description	N	Mean $\bar{x}$	Std. Deviation SD
Bpq-1	The quality of our products compares well with competitors' products	396	4.02	.961
Bpq-2	Our products are perceived by customers as being more reliable than competitors	396	4.08	.829
Bpq-3	Our products are of higher quality than our competitors' products	396	4.10	.835
Bpq-4	Our products quality does what it is supposed to do for the user	396	4.21	.787
<b>Overall scale</b>		<b>396</b>	<b>4.103</b>	<b>0.853</b>
Likert Scale: 1= Strongly disagree; 2= Disagree; 3= Slightly agree; 4= Agree; 5= Strongly agree				

Source: own source

Table 4.3 presents the mean score analysis of buyer-supplier product quality. Based on the analysis, SME respondents agree with the perception that buyer-supplier product quality is integral in relationship commitment, with an overall mean score response of ( $\bar{x}$ = 4.103; SD = 0.853). They agreed that the quality of their products compares well with competitors' products ( $\bar{x}$ = 4.02; SD = 0.961), and agreed with the notion that their products are perceived as more reliable than competitors ( $\bar{x}$ = 4.08; SD = 0.829). SME owners, managers, sales people and senior staff also agreed that the quality of their product offerings compares well with their competitors' product quality ( $\bar{x}$ = 4.10; SD = 0.835). Finally, the respondents believe that their products' quality does what it is intended to do for the user ( $\bar{x}$ = 4.21; SD = 0.787). The implication of these results is that SME respondents in southern Gauteng agreed that product-quality enhancement is important in sustaining SMEs' buyer-supplier relationship.

**Table 4.4: Buyer-supplier flexibility**

Items	Description	N	Mean $\bar{x}$	Std. Deviation SD
Bsf-1	This buyer/supplier is flexible enough to handle unforeseen problems.	396	3.88	1.026
Bsf-2	This buyer/supplier handles changes well.	396	4.02	.914
Bsf-3	This buyer/supplier can readily adjust its inventories to meet changes in our needs.	396	4.02	.897
Bsf-4	This buyer/supplier is flexible in response to requests we make.	396	4.04	.835
<b>Overall scale</b>		<b>396</b>	<b>3.99</b>	<b>0.918</b>
Likert Scale: 1= Strongly disagree; 2= Disagree; 3= Slightly agree; 4= Agree; 5= Strongly agree				

Source: own source

An analysis of buyer-supplier flexibility mean score is presented in Table 4.4. Judging from the table, the perception of most of the respondents is that buyer-supplier flexibility has a positive influence on buyer-supplier commitment with overall mean scale of ( $\bar{x}$ = 3.99; SD = 0.918). The analysis revealed that respondents agreed that their buyer/supplier is flexible enough to handle unforeseen problems ( $\bar{x}$  = 3.88; SD = 1.026), also indicating their support on the statement that buyer/supplier handles changes well ( $\bar{x}$ = 4.02; SD = 0.914). They further agreed that adjusting inventory to meet customers' changing demand within the relationship is important ( $\bar{x}$ = 4.02; SD = 0.897). This analysis suggests that SMEs in the southern Gauteng region perceive buyer-supplier flexibility as high.

**Table 4.5: Buyer-supplier commitment**

Items	Description	N	Mean $\bar{x}$	Std. Deviation SD
Com-1	The relationship with our buyer/supplier is something to which we are very committed	396	4.01	.910
Com -2	The relationship with our buyer/supplier is very important to our business	396	4.10	.858
Com -5	The relationship with our buyer/supplier is something our business really cares about	396	4.15	.815
<b>Overall scale</b>		<b>396</b>	<b>4.09</b>	<b>0.861</b>
Likert Scale: 1= Strongly disagree; 2= Disagree; 3= Slightly agree; 4= Agree; 5= Strongly agree				

Source: own source

Table 4.5 represents respondents' perceptions about the influence of buyer-supplier commitment on SMEs' competitive performance. Based on the table, most of the respondents agreed with the statements presented with an overall mean score of ( $\bar{x}$ = 4.09; SD = 0.861). The analysis showed that respondents agreed that they are very committed to the relationship with their partner (buyer/supplier) with ( $\bar{x}$ = 4.01; SD = 0.910). It further revealed that respondents agreed that buyer/supplier relationship is very important to their business with ( $\bar{x}$ = 4.10; SD = 0.858). Finally, respondents agreed that they care very much about their buyer/supplier relationship with ( $\bar{x}$ = 4.15; SD = 0.815). Importantly, this analysis shows that SMEs in southern Gauteng have high perceptions about the significance of buyer-supplier commitment towards achieving competitive performance.

**Table 4.6: SMEs competitive performance**

Items	Description	N	Mean $\bar{x}$	Std. Deviation SD
Scp-1	There is a high level of improvement in this company	396	4.00	.967
Scp-2	Employees in this company are happy and motivated	396	4.03	.884
Scp-3	Our customers are satisfied with our services	396	4.15	.845
<b>Overall scale</b>		<b>396</b>	<b>4.06</b>	<b>0.899</b>
Likert Scale: 1= Strongly disagree; 2= Disagree; 3= Slightly agree; 4= Agree; 5= Strongly agree				

Source: own source.

An analysis of SMEs' competitive performance is presented in Table 4.6. From the table, respondents agreed with all the statements about buyer-supplier competitive performance with an overall scale mean average of ( $\bar{x}$ = 4.06; SD = 0.899). They agreed that a high level improvement exists in their company ( $\bar{x}$ = 4.00; SD = 0.967), and that employees in their company are happy and motivated ( $\bar{x}$ = 4.03; SD = 0.884) and their customers are satisfied with the services they provide ( $\bar{x}$ = 4.15; SD = 0.845). This analysis suggests that SME owners, managers, sales personnel and senior staff in southern Gauteng have high perceptions concerning competitive performance. Having examined respondents' perceptions about the measuring instruments of the study, the next section discusses scales internal consistency.

#### **4.6 MEASURING SCALE INTERNAL CONSISTENCY (RELIABILITY TEST)**

The internal consistency of this study was measured using the Cronbach's alpha coefficient ( $\alpha$ ), composite reliability (CR) and the average variance extracted (AVE). The scores are presented in Table 4.7.

**Table 4.7: Results of the reliability and item statistics**

Item	Descriptive statistics		Cronbach's test		AVE	CR	Factor loading	MSV < AVE
	Mean	Std. deviation	Item-total	$\alpha$ Value				
<b>Communication</b>								
BSC <sub>1</sub>	4.08	0.927	0.682	0.815	0,533	0,819	0.801	0.452
BSC <sub>2</sub>	4.05	0.877	0.636				0.745	
BSC <sub>3</sub>	4.08	0.806	0.691				0.760	
BSC <sub>4</sub>	4.03	0.922	0.526				0.598	
<b>Product quality</b>								
BPQ <sub>1</sub>	4.02	0.961	0.666	0.839	0.537	0.822	0.660	0.445
BPQ <sub>2</sub>	4.08	0.829	0.766				0.754	
BPQ <sub>3</sub>	4.10	0.835	0.675				0.799	
BPQ <sub>4</sub>	4.21	0.787	0.584				0.712	
<b>Flexibility</b>								
BSF <sub>1</sub>	3.88	1.026	0.643	0.845	0.588	0.850	0.763	0.425
BSF <sub>2</sub>	4.02	0.914	0.782				0.853	
BSF <sub>3</sub>	4.02	0.897	0.697				0.761	
BSF <sub>4</sub>	4.04	0.835	0.605				0.680	
<b>Commitment</b>								
COM <sub>1</sub>	4.01	0.910	0.686	0.771	0.552	0.784	0.847	0.452
COM <sub>2</sub>	4.10	0.858	0.635				0.757	
COM <sub>5</sub>	4.15	0.815	0.512				0.605	
<b>Competitive performance</b>								
SCP <sub>1</sub>	4.00	0.967	0.718	0.850	0.666	0.856	0.831	0.428
SCP <sub>2</sub>	4.03	0.884	0.791				0.873	
SCP <sub>3</sub>	4.15	0.845	0.655				0.739	

BSC = Buyer-Supply Communication; BPQ = Buyer-Supply Product Quality; BSF = Buyer-Supplier Flexibility; COM = Buyer-Supplier commitment, SCP = SMEs Competitive Performance; C.R: Composite Reliability; AVE: Average Variance Extracted; MSV: Maximum Shared Variance; \* Scores: 1=Strongly Disagree; 2=Disagree; 3=Slightly Agree; 4=Agree; 5=Strongly Agree

**Note:** significance level  $p < 0.001$

**Measurement CFA model fits criteria:** CMIN/DF= 2.774; NFI=0.912, TLI=0.928, CFI=0.942, IFI=0.942, RMSEA=0.066

Source: own source

#### 4.6.1 Cronbach's Alpha Test ( $\alpha$ )

In order to indicate the internal consistency of the measuring items, Cronbach's alpha coefficient was used. In Table 4.7, the Cronbach's alpha values indicated are: 0.815, 0.839, 0.845, 0.771 and 0.850 respectively. These values therefore suggest acceptable internal reliability as they all exceeded the 0.7 threshold for higher reliability (Johnson & Christensen 2012:142). In addition to the Cronbach's alpha in improving the internal consistency of the constructs, the inter-item correlation was employed. A positive higher inter-item correlation revealed that the items are consistent in measuring the same fundamental attributes, thereby suggesting a statistical bond with items of measurement. The values of item-total correlation as indicated in Table 4.7 range from 0.5 to 0.8 approximately, which is above the 0.3 threshold recommended in Pallant (2007:98) and shows the extent to which the items are correlated with the scores. The next section discusses the composite reliability.

#### 4.6.2 Composite reliability test (CR)

In computing the composite reliability the researcher employed the composite reliability formula expressed in Hatcher and O'Rourke (2013:236). The composite reliability values as listed in Table 4.7 for each research construct range from a lower value of 0.784, to a higher value of 0.856. Based on the table, the values exhibited satisfactory reliability as they exceeded the 0.700 threshold recommended for a good reliability indicator (Kern 2011:55), providing the bases for construct measurement reliability. The formula for composite reliability is represented as:

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

Where:

CR = Composite reliability

$(\sum \lambda_i)^2$  = the squared total of the completely standardized loading for the *i*th indicator,

$\sum \delta_i$  = summation of the variance of the error term for the *i*th indicator,

n = number of indicators.

or

Composite Reliability = the squared total of the completely standardized loading for the *i*th indicator, divided by the squared total of the completely standardised loading for the *i*th indicator, plus summation of the variance of the error term for the *i*th indicator.

### **4.6.3 Average variance extracted (AVE)**

The average variance extracted for this study is calculated by dividing the sum of the factor loadings for each construct by the number of its measurement scales. A valid AVE value should be at least 0.5 or greater (Rosenan, Abdullah, Yosof & Abdullah 2018:87). From Table 4.7, the average variance extracted ranges from 0.533 to 0.666 and are accepted, hence they achieved the minimum acceptable value. However, as noted in Huang, Wang, Wu and Wang (2013:219), an AVE of 0.5 may well be accepted if the composite reliability of the various research constructs are higher than 0.5. From the above, the average variance extracted satisfied this requirement and was hereby accepted for measuring internal reliability. The formula for average variance extracted is represented below as:

$$AVE = (\sum \lambda^2)/n$$

Where:

$(\sum \lambda_i)^2$  = the squared of the total standardized regression weight for the *i*th indicator,

n = number of factors in the variables.

or

Average Variance Extracted = sum of the squared multiple correlations plus the sum of each variable, divided by the number of factors in that variable.

## **4.7 VALIDITY TESTING**

This helps to determine the extent to which the data collection technique used in the study enables the accurate evaluation of its intended objective(s).

#### 4.7.1 Convergent Validity

Convergent validity is significant to assess whether the research component or factors, namely: communication, product quality, flexibility, buyer supplier commitment and competitive performance are loaded highly on their respective factors. As noted in (inzi, Chi, Henseler and Wang (2010:437), a factor loading of 0.5 or more is recommended. From Table 4.7 the factor loading as represented, ranges from 0.598 to 0.875. It exceeded the established value and hence indicates acceptable individual item convergent for scale validity. Importantly, the convergent validity can also be assessed through the average variance extracted. For this to be possible, the average variance extracted should, in like manner, be  $\geq 0.5$  (Rosenan *et al.* 2018:87). From Table 4.7, the values of the average variance extracted as explained earlier achieved this requirement, thereby providing reseanable evidence of convergent validity.

#### 4.7.2 Discriminant Validity

To assess the discriminant validity of the study items, component correlation metrix, through principal component analysis together with the square root of average variance extracted (AVE) and the maximum shared variance (MSV) were used to examine whether the correlation among the various research components are  $< 1.0$ . From Table 4.8 below, the correlation values for all dormant variables are consistently  $< 1.0$ , which therefore indicates the presence of discriminant validity. Based on the component correlation matrix table below, the correlation values of BSC and BPQ is 0.415, BSC and BSF is 0.466, BSC and COM is 0.464, BSC and SCP is 0.303, BPQ and BSF is 0.449, BPQ and COM is 0.398, BPQ and SCP is 0.394, BSF and BSC is 0.449, BSF and COM is 0.447, and COM and SCP is 0.342. All the corresponding correlations are within the recommended limit, indicating the presence of discriminant validity (Khosrow-pour 2006:75).

The AVE and MSV rule states that the values in average variance extracted must be greater than the values of maximum shared variance ( $AVE > MSV$ ) (Deepen 2007:194). This condition was met satisfactorily as average variance extracted are correspondingly greater than the maximum shared variances of each construct. Furthermore, discriminant validity was also determined by assessing whether inter-correlation matrix among the construct are less than the square-root of the AVE (Garson 2016). In Table 4.8 below, the inter-correlation values for all paired latent variables are less than  $\sqrt{AVE}$  (ranging from 0.76-0.87), and therefore reveal the existence of discriminant validity (Khosrow-pour 2006). This therefore suggest the presence of discriminant validity in construct measurements.

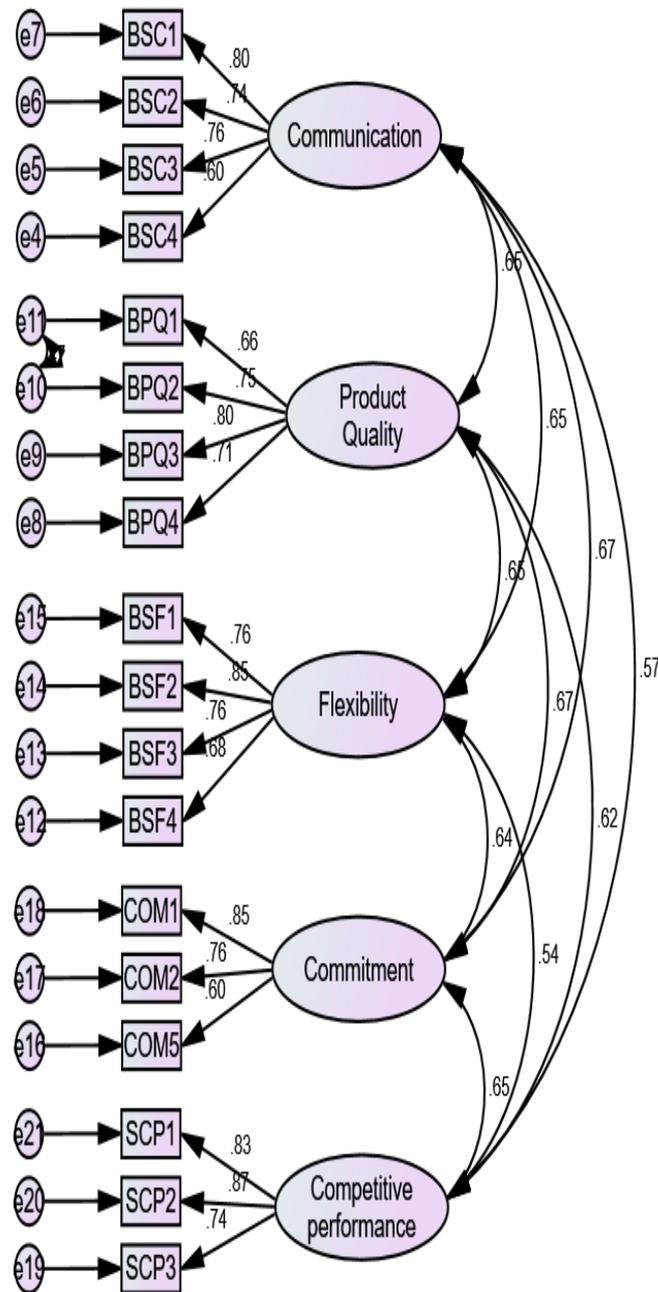
**Table 4.8: Component correlation matrix**

	<b>Competitive performance</b>	<b>Communication</b>	<b>Product Quality</b>	<b>Flexibility</b>	<b>Commitment</b>
<b>Competitive performance</b>	<b>0.816</b> =√AVE				
<b>Communication</b>	0.574=√AVE	<b>0.730</b> =√AVE			
<b>Product Quality</b>	0.617	0.650	<b>0.733</b> =√AVE		
<b>Flexibility</b>	0.542	0.652	0.652	<b>0.767</b> =√AVE	
<b>Commitment</b>	0.654	0.672	0.667	0.641	<b>0.743</b> √AVE

BSC = Buyer-Supply Communication; BPQ = Buyer-Supply Product Quality; BSF = Buyer-Supplier Flexibility; COM = Buyer-Supplier commitment, SCP = SMEs Competitive Performance, √AVE= Square root of average variance extracted

### 4.7.3 Conceptual model fit assessment

Confirmatory factor analysis (CFA), is a version of factor analysis in which specific hypotheses about structure and relations between latent variables underlying a given data are tested (Field, *et al.* 2013:915). Confirmatory factor analysis enables the evaluation of established results (model fit criteria) against the one theorised (Das & Sahu 2018:45). It is used in this section to determine the study model fit. Importantly, achieving a good model fit for this study requires the deletion of some scales for construct measurement. Table 4.9 below represents the CFA models fit results for this study.



Scores: 1=Strongly Disagree; 2=Disagree; 3=Slightly Agree; 4=Agree; 5=Strongly Agree

**Note:** <sup>a</sup> significance level  $p < 0.05$ ; <sup>b</sup> significance level  $p < 0.001$ ; <sup>c</sup> significance level  $p < 0.01$ .

**Confirmatory factor analysis model fits criteria:**  $CMIN/DF \leq 3$ ;  $NFI \geq 0.900$ ,  $RFI \geq 0.900$ ,  $TLI \geq 0.900$ ,  $CFI \geq 0.900$ ;  $IFI \geq 0.900$ ,  $RMSEA \leq 0.08$ .

**Figure 4.8: CFA model**

In Table 4.9, the values of the model fit results are presented in their corresponding positions. Based on the table, the value of CMIN/DF is 2.744. This value meets the required threshold of less than or equal to 0.3 for a good model fit. Furthermore, other correlation indicator values such

as: NFI, TLI, CFI and IFI represented on Table 4.8 are as follows: 0.912, 0.928, 0.942 and 0.942 respectively. For a model to be adjudged fit, the absolute fit indices like CFI and TLI should be greater than or equal to 0.90 (He, Zhu & Zheng 2014:689). These values are greater than the 0.9 yardstick recommended for acceptability, whereas RMSEA 0.066 is less than 0.80 recommended for acceptability and thereby suggesting that structural equation modelling is appropriate (SEM) (He *et al.* 2013:689). Considering that the proposed study model has been confirmed for SEM analysis, the next section examines the structural equation modelling using AMOS 25.0 software package.

**Table 4.9: Measures of Model Fit (CFA and SEM models)**

Goodness of fit measures	CMIN/DF	P value	NFI	TLI	CFI	RFI	IFI	RMSEA
Recommended value	≤ 3	≤ 0.05	≥ 0.90	≥ 0.90	≥ 0.90	≥ 0.90	≥ 0.90	≤ 0.80
CFA measurement model fit	2.744	0.000	0.912	0.928	0.942	0.900	0.942	0.066
SEM measurement model	3.042	0.000	0.900	0.916	0.929	0.900	0.930	0.072

Notes: CMIN = Minimum Discrepancy (Chi-Square); DF = Degree of Freedom; NFI = Normed Fit Index; TLI = Tucker-Lewis Index; CFI = Comparative Fit Index; RFI = Relative fit index; IFI = Incremental fit index and RMSEA = Root Mean Square Error of Approximation

#### 4.8 PATH ANALYSIS RESULTS

This study employed structural equation modelling to understand the casual model. AMOS version 25.0 helped the researcher to extract the relevant information regarding the model fit indices for better assessment of the construct relationships and proper conceptualisation of the research theory. The model's overall appropriateness of fit was examined through the incremental fit indices represented in the following indicators: Normalized fit index (NFI), Tucker-Lewis index (TLI), Relative fit index (RFI), Comparative fit index (CFI) and Incremental fit index (IFI), and the absolute fit indices such as: root mean square error of approximation (RMSEA), CMIN/DF, and goodness of fit index (GFI). As noted by Hunter and Perreault (2007:25) and He *et al.*, (2013:688), an incremental fit indice of  $\geq 0.9$  should be accepted as a sign of good model fit. Moreover, the absolute fit indices were used in this study to examine sample covariance matrix indicators in order to achieve a good SEM model fit. The values of these indicators are presented in Table 4.9.

#### 4.8.1 Analysis of the structural model fit results

From Table 4.9 above, little change can be observed from the values of the SEM model fit indicators when compared with the CFA values. From Table 4.12, CMIN/DF value for SEM is above the recommended threshold. The SEM value is 3.042 with P value = 0.000, RMSEA = 0.072 (< 0.80), NFI = 0.900 ( $\geq$  0.90), TLI = 0.916 ( $\geq$  0.90), RFI = 0.900 ( $\geq$  0.90), CFI = 0.929 ( $\geq$  0.9), IFI = 0.930 ( $\geq$  0.90). All the SEM indicator results were within the acceptable range, and thereby signifying satisfactory model fit. However, in the case of CMIN/DF which is slightly above the cut-off point (CMIN/DF = 3.042) is statistically significant since all other good fit indicator values such as RMSEA, TLI, RFI, CFI, and IFI meet the recommended cut-off point (Ponder, Holloway & Hansen 2014:80). In general, the SEM model displayed good model fit.

However, after ensuring that the data is consistent with the model, its theoretical content and that the estimation values are in concord with recommended criteria, the next phase examines and deduces the statistical importance of the evaluation factors (Lei & Wu 2007:38). To achieve this, AMOS 25.0 is utilised to establish the path diagram output and tables which enables visual display of the hypothesised parameter values and relationships among the study variables. The hypothesised relationships are herein discussed in the next section.

#### 4.8.2 Testing of Hypotheses

In this section, the hypothesised positive relationships existing among the research constructs, namely; buyer-supplier communication, buyer-supplier product quality, buyer-supplier flexibility, buyer-supplier commitment and SMEs competitive performance are presented. Table 4.10 and Figure 4.8 displays the causal paths and the hypothesised solutions of the variables under study.

**Table 4.10: Results of structural equation model analysis**

Causal Path			Hypotheses	Path regression coefficients	S.E	C.R.	P-values	Significance levels
Com	<---	BSC	H1 (+)	.282	.073	3.861	***	Accepted at P<0.001
BPQ	<---	BSC	H2 (+)	0.735	.083	8.901	***	Accepted at P<0.001
COM	<---	BPQ	H3 (+)	0.335	.093	3.624	***	Accepted at P<0.001
BSF	<---	BPQ	H4 (+)	0.709	.073	9.754	***	Accepted at P<0.001

Causal Path			Hypotheses	Path regression coefficients	S.E	C.R.	P-values	Significance levels
COM	<---	BSF	H5 (+)	0.193	.065	2.983	.003	Accepted at P<0.05
SCP	<---	COM	H6 (+)	0.890	.095	9.358	***	Accepted at P<0.001

Scores: 1=Strongly Disagree; 2=Disagree; 3=Slightly Agree; 4=Agree; 5=Strongly Agree

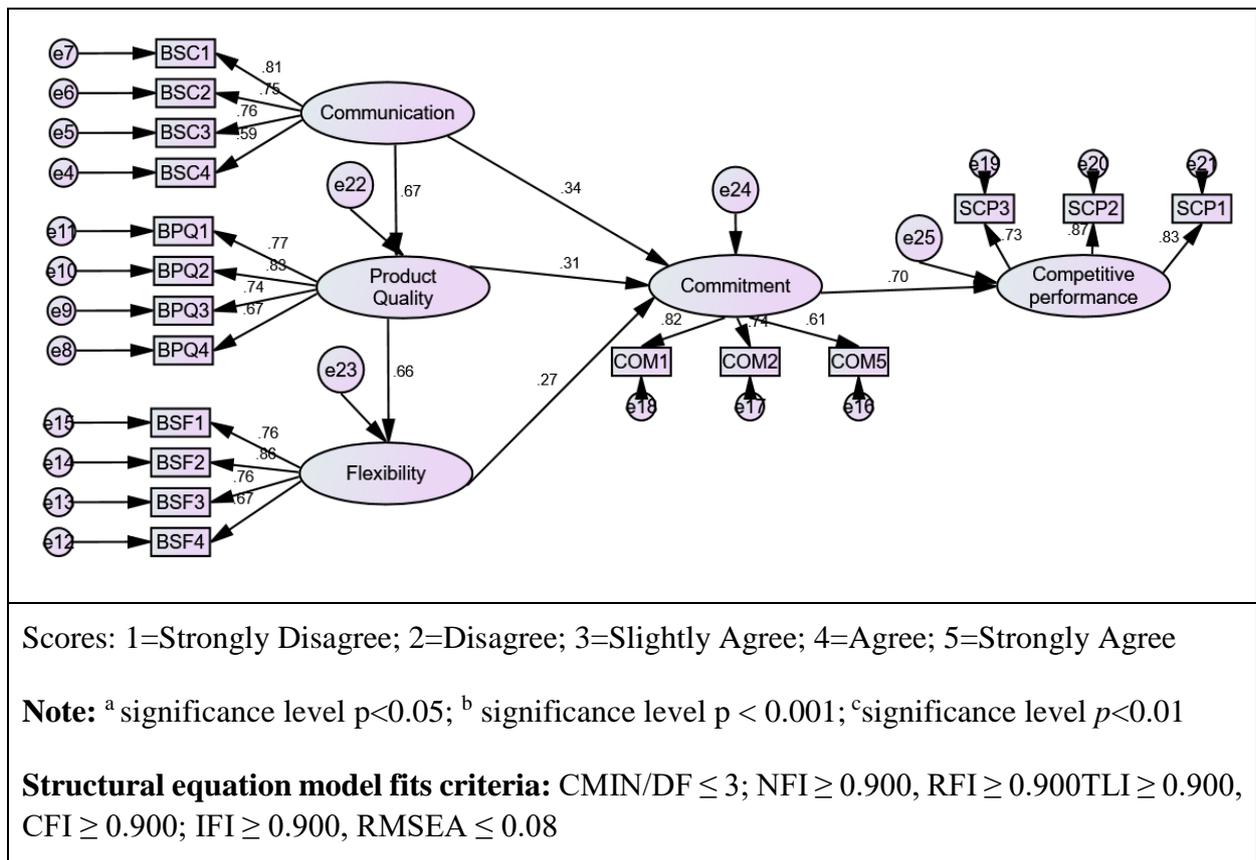
**Note:** <sup>a</sup> significance level  $p < 0.05$ ; <sup>b</sup> significance level  $p < 0.001$ ; <sup>c</sup> significance level  $p < 0.01$

**Structural equation model fits criteria:** CMIN/DF  $\leq 3$ ; NFI  $\geq 0.900$ , RFI  $\geq 0.900$  TLI  $\geq 0.900$ , CFI  $\geq 0.900$ ; IFI  $\geq 0.900$ , RMSEA  $\leq 0.08$

Table 4.10 shows the detailed results of the path modelling relationships, representing all the hypothesised relationships of the study variables (Lei & Wu 2007:38). The table displays the standard error estimate (S.E) as well as the critical ratio (C.R). From the table, P-value column which is interpreted as the statistically significant level is also represented. Information on Table 4.10 is further presented in Figure 4.8, which shows the path coefficient relationships among the study variables.

The path regression coefficient table shows that the regression analysis conducted is statistically significant. This is because a regression value greater than 0.1 should be considered relevant if the critical ratio is greater than 0.96 (Safavi, Zakaria & Am 2014:1672). In this study, the regression coefficients range from 0.193 to 0.890 and the critical ratio (C.R) ranges from 2.983 to 9.754 and therefore adjudged relevant as it signifies that the relationships among the variables and their measuring constructs are comparable and reliable.

From Table 4.10, it is important to note that all the relationships examined showed positive and significant relationships. For example, communication on product quality was significant at (path coefficient = 0.735,  $P < 0.001$ ), product quality on flexibility was significant at (path coefficient = 0.709,  $P = 0.001$ ), buyer-supplier communication on commitment was significant at (path coefficient = 0.282,  $P < 0.001$ ), product quality on commitment was significant at (path coefficient = 0.335,  $P < 0.001$ ), flexibility on commitment was significant at (path coefficient = 0.193,  $P < 0.05$ ), and commitment on competitive performance was significant at (path coefficient = 0.735,  $P < 0.001$ ), (He *et al.* 2013:688). Construct relationships with their statistical significance is examined next.



**Figure 4.9: Research model relationships**

#### 4.8.3 P-values and CR values for path coefficient statistical significance

The results in Table 4.10 and Figure 4.8 describes the correlation configuration system for each variable and their relationships with the construct measurements. The relationships proved statistically significant at 5 per cent level. This is because critical values (C.R)  $> 1.96$  is statistically adjudged significant at 5 per cent level (Lei & Wu 2007:38; Hair, Hult, Ringle & Sarstedt 2014:172). In this study, a 0.05 significant level denotes strong factor loading for buyer-supplier communication, product quality, flexibility, buyer-supplier commitment and competitive performance variables. Based on the information presented in Table 4.10. Based on the table, all the hypothesised relationships P- value (H1, H2, H3, H4 & H6) are less than 0.001 except H5 which is less than 0.05. All the critical ratios showed greater values than the recommended 1.96 suggesting strong construct relationships. Importantly, the relationship existing between product quality and flexibility showed the highest critical ratio value of 9.745, but not the highest regression coefficient (0.709). The relationship between commitment and competitive performance with the critical ratio value of 9.358 showed the highest regression coefficient (0.890). Furthermore, the relationship between buyer-supplier flexibility and buyer-supplier commitment possess both the lowest critical ratio and lowest regression coefficient values of 2.983 and 0.193 respectively. This analysis may therefore suggest that high regression coefficient values

would mean that independent variables would have higher impacts on dependent variables and that lower regression values would also suggest independent variables would have lower impacts on dependent variables. Table 4.10 further shows good support for all the six (6) hypothesised relationships. These relationships are further presented in the next table.

**Table 4.11: SEM general hypothesis testing results**

	<b>Hypothesis Statement</b>	<b>Results</b>
<b>H1</b>	Buyer-supplier communication has a significantly positive influence on buyer-supplier commitment.	Supported
<b>H2</b>	Buyer-supplier communication has a significantly positive influence on buyer-supplier product quality.	Supported
<b>H3</b>	Buyer-supplier product quality has a significantly positive influence on buyer-supplier commitment.	Supported
<b>H4</b>	Buyer-supplier product quality has a significantly positive influence on buyer-supplier flexibility.	Supported
<b>H5</b>	Buyer-supplier flexibility has a significantly positive influence on buyer-supplier commitment	Supported
<b>H6</b>	Buyer-supplier commitment has a significantly positive influence on the SMEs competitive performance	Supported
<p>Scores: 1=Strongly Disagree; 2=Disagree; 3=Slightly Agree; 4=Agree; 5=Strongly Agree</p> <p><b>Note:</b> <sup>a</sup> significance level <math>p &lt; 0.05</math>; <sup>b</sup> significance level <math>p &lt; 0.001</math>; <sup>c</sup> significance level <math>p &lt; 0.01</math></p> <p><b>Structural equation model fits criteria:</b> <math>CMIN/DF \leq 3</math>; <math>NFI \geq 0.900</math>, <math>RFI \geq 0.900</math> <math>TLI \geq 0.900</math>, <math>CFI \geq 0.900</math>; <math>IFI \geq 0.900</math>, <math>RMSEA \leq 0.08</math></p>		

Source: own source

#### **4.8.4 Discussion of the results**

Considering the pleasant empirical model fit discovery, this study was poised to progress with the analysis of the hypothesis relationships, with focused interest on the results presented in Table 4.10 and Figure 4.8, wherein all the hypothesis coefficient displayed a significant level of either  $p < 0.001$  or  $p < 0.05$ .

The first hypothesis (**H1**) proposition was that buyer-supplier communication has a positive and significant influence on buyer-supplier commitment. Empirical evidence from Table 4.10 and

Figure 4.8 above confirms that buyer-supplier communication has a significant positive impact on buyer-supplier commitment at a significant level of beta ( $\beta = 0.282$ ,  $p < 0.001$ ). This evidence may well suggest that in any given relationship, whether an inter-firm or intra-firm relation, the ability of the cooperating partners to communicate with one another is important for them to establish strong bonds and commitment to one another. This result was initially epitomised in the early work of Varona (1996:134), who noted that communication satisfaction within intra-firm settings is significant in enhancing partners' relationship commitment. However, the regression coefficient value representing the communication and commitment synergy in this study represents the second lowest value in relationships measurement. This scenario exemplifies the difficulties firms encounter in fostering credible commitment through constant communication. Leonidou *et al.* (2014:34) support that communication is positively related to commitment and summarises their assertion using an export-import exchange relationship wherein buyer-supplier communication helps to improve partners' cooperation, trust and commitment, thereby strengthening their performance. Theron *et al.* (2008:999) also hypothesised direct positive relationship between communication and relationship commitment and found empirical evidence to support their theory. These results maintained that communication is an important construct for the development of relationship commitment within the SMEs buyer-supplier. This study, therefore, holds that SMEs' partners should consider establishing credible communication links between their cooperating partners as it has the combined effects of helping them to resolve relationship issues and maintain resilient engagement (Kaynak & Sert 2012:222). The first hypothesis is therefore supported.

However, in hypothesis (H2), it was proposed that in an exchange relationship, communication will have a positive and significant influence on buyer-supplier product quality. This hypothesis was supported with regression coefficient and significant level at ( $\beta = 0.735$ ,  $p < 0.001$ ), although the relationship existing between the two constructs exhibited stronger cohesion in comparison with that of hypothesis (H1). This, therefore, suggests that the flow of information across the supply chain partners or in this case SMEs' buyer and supplier, has tremendous impact on their product quality as it helps buyers and suppliers in the SME sector to manage and maintain the loyalty of their customers, leading to improved profit (Shin, Park & Lee 2016:739). However, studies on the impacts of communication on product quality has been relatively scarce. Espinosa, Nan and Carmel (2015:165) uncovered that in an exchange interaction, higher levels of convergence communication can have a significant influence on higher task product quality. The findings of this study therefore highlight the need for partners, (whether in buyer-supplier exchanges, supply chain exchanges, services exchanges or any other transactional engagements)

to communicate with each other in order to improve their product offerings, which leads to maximum benefits. Importantly, in the service industries, communication frequency is significant for inspiring functional service quality by promoting trust and confidence within the system (Park, Lee & Lee 2014:325). This, in other words, pinpoints the roles the communication plays in promoting exchange partners' product quality. Therefore, hypothesis (**H2**) was supported.

In hypothesis (**H3**), it was stated that in an exchange relationship involving SMEs buyer-supplier, product quality will have a positive and significant influence on buyer-supplier commitment. This hypothesis was again supported with a path regression coefficient and significant level at ( $\beta = 0.335$ ,  $p < 0.001$ ). Although, the path regression coefficient of this correlation showed positive improvement compared to that of **H1** above, it counts third in ranking among the weakest in the structural equation model analysis presented in Table 4.13. This may well portray the difficulties organisations (or in the case of this study, buyers and suppliers in the SME sector) encounter in their struggle to maintain higher product quality. However, this finding is consistent with Dunk (2002:719) and Prajogo (2007:71), that product quality is significant in helping SMEs to achieve long-term competitive advantage through improved customer loyalty. SME practitioners are thereby required to pay increased attention to their product quality because of its significant impact to the organisation's effectiveness. Thus hypothesis (**H3**) was supported and accepted.

Hypothesis (**H4**) posits that in an exchange relationship, buyer-supplier product quality will have a significant influence on buyer-supplier flexibility. This conceptualisation was supported through empirical evidence with path regression coefficient and correlations significant level at ( $\beta = 0.709$ ,  $p = < 0.001$ ). Importantly, as observed from the SEM model analysis, the correlation between BPQ and BSF exhibited higher relationship and thereby suggesting the impeccable bond between the two constructs. This may well mean that SMEs within the focus area of this study are aware of the role of product quality in their effort to institutionalise flexibility, which enables them to reap their presumed relationships benefits. Unfortunately, the association between these two constructs has received little conceptualisation in literature. However, the relationship findings are consistent with Schroeder, Shah and Peng (2011:4892) that a positive relationship exists between BPQ and BSF. Therefore, hypotheses (**H4**) is supported and accepted.

**H5** posits that in exchange relationships, buyer-supplier flexibility will have a positive and significant impact on buyer-supplier commitment. This conceptualisation was supported by empirical evidence, with path regression coefficient and correlations significance level at ( $\beta = 0.193$ ,  $p = < 0.05$ ). However, in comparison with other correlational values presented in Table 4.10, the correlation coefficient of BSF and COM portrayed the lowest correlation in the model.

However, a 5% significant level suggests strong support for the relationship. This result may further reveal that SMEs' buyers and suppliers are not disposed to allow full operationalisation of the principles of flexibility in their individual firms. SMEs should therefore understand that modern business dynamics such as new products developments, improved customers order, improved delivery requirements and responsiveness to market demands, requires good understanding and implementation of flexible operation to gain competitive advantage (Yung & Chan 2003:302).

However, the evidence from this study found close support from Kandemir and Acur (2012:613) that commitment and flexibility have a positive and significant correlation. Though their study was based within single organisational settings with focus on strategic planning, the findings highlight the importance of the fusion of flexibility and commitment in firms' ability to meet modern day business demand. In Rašković *et al.* (2015:10), it was found that relationship commitment is significant for partners to achieve relationship flexibility. This study extends the argument by stating that flexible operations is important for partners achieving relationship commitment. Therefore, hypothesis **(H5)** which states that buyer-supplier flexibility has a positive and significant influence on buyer-supplier commitment was supported and accepted.

Finally, hypothesis **(H6)** states that in an exchange relationship between buyer and supplier, commitment will have a positive and significant impact on SMEs competitive performance. The relationship was supported with a path coefficient value of 0.890 and  $p < 0.001$ , thereby indicating that the said relationship existing between the determining factors was supported and accepted. The implication of this evidence is that buyer-supplier commitment can effectively and efficiently mediate between buyer-supplier communications, buyer-supplier product quality and buyer-supplier flexibility to enable SMEs achieve higher competitive performances. Importantly, the higher correlational value between COM and SCP showed that SMEs understand very well what relationship commitment means to their business success and long-term benefit. It also highlights the level of emphasis SMEs place on relationship commitment, since lack of relationship commitment may perhaps represent a loss of partnership engagement and competitive performance.

However, the findings of this study support the research conducted by Duhan and Sandwik (2009:905), which conceptualised a positive and significant relationship between commitment and competitive performance. This result is also consistent with Mafini *et al.* (2016:624), that buyer-supplier commitment is an enabler of SMEs' competitive performance. Therefore, hypothesis **(H6)** is supported and accepted.

## 4.9 CONCLUSION

Chapter 4 started with a brief explanation of the previous chapter 3, with the contextualisation of the various goodness of fit measures utilised in the present study. A highlight of the 2-phased screening procedures utilised in the study was made in section 4.1. This was followed with a tabular presentation of the results of the pilot study and the analysis thereof in Section 4.2. The section 4.2 was ensued by demographic description of the samples, occasioned in seven (7) domains, namely: years in business operation, business annual sales, physical assets, number of employees, types of industry, job positions and academic qualification.

However, participants' perceptions of the factors influencing buyer-supplier commitment and SMEs' competitive performances was examined with reference to the study variables and their various corresponding measuring scales. The analysis of these perceptions was made accordingly, followed by the various resultant tables. This chapter also examined perceptions regarding the likely associations between the various research constructs through frequencies and percentages. The perceptions analysis was based on 5-point Likert scaling, measured from (1-strongly disagree to 5-strongly agree) to further understand the respondents' level(s) of appreciation of the construct's relationships.

The chapter further analysed the convergent validity, discriminant validity and the conceptual model fit assessment. The CFA, SEM were presented together with their corresponding criteria, as recommended by He, Zhu and Zheng (2014:689). Chapter 4 culminated in testing of hypotheses and the discussion of the results.

## **CHAPTER 5**

### **CONCLUSION AND RECOMMENDATION OF THE STUDY**

#### **5.1 INTRODUCTION**

The present chapter represents the final chapter of the study. Its focus brings to conclusion the factors influencing buyer-supplier commitment and SMEs' competitive performance. The chapter is grouped into five segments. The first segment aims to present the conclusions regarding the progress made in accordance with the study's objectives. The second segment is concerned with the presentation of recommendations based on the empirical observations of the study, which SMEs' supply chain partners may wish to implement for the purpose of ensuring the full realisation of their presumed relationships benefits. The third segment seeks to bring into focus the inherent limitations of the study. This helps the reader to understand the study challenges before operationalising the recommendations. The next segment deals with presumed future research directions, based on observations from the current study to paint a clear picture of what may be required to add to the knowledge presented in this study. This section is followed with the overall conclusion of the study.

#### **5.2 ACHIEVEMENT OF THE RESEARCH OBJECTIVES**

The chief purpose of this study is the examination of the factors influencing buyer-supplier commitment and SMEs' competitive performance. The purpose was grouped into two, namely: theoretical and empirical purposes or objectives. The objectives are presented below:

##### **5.2.1 The theoretical objectives**

- to review literature on SMEs' overview and contribution;
- to conduct literature on the Social Exchange Theory;
- to conduct a literature review on buyer-supplier communication;
- to carry out a literature review on buyer-supplier product quality;
- to generate insight from the literature on buyer-supplier flexibility;
- to review the literature focusing on buyer-supplier commitment; and
- to provide an overview of the literature on SMEs competitive performance.

### **5.2.1.1 Achievement of theoretical objective 1**

The SMEs' overview and its impact on the South African economy was extensively discussed in chapter two of this study. SMEs' definitions (local and international), challenges, and mechanisms for improvement were among the issues discussed. In an effort towards exploring the first objective of this study, several sources and search engines such as books, periodicals, peer reviewed articles, and government publications were constantly visited. Through the help of the search engines such as Emerald, EBSCOhost, and a host of others, the study was able to develop meaningful discussions on the first theoretical objective. The SMEs' definition presented in the South African Small Business Amendment Act of 2003 and 2004, was adopted in Fatoki and Garwe (2010:731). It defines SMEs as "a separate and distinct business entity, including cooperative enterprises and non-governmental organisations, managed by one owner or more, including its branches or subsidiaries, if any, is predominantly carried on in any sector or sub sector of the economy and which can be classified as a very small, a small or a micro enterprise," which was adopted for this study.

Importantly, SMEs have made and will continue to make significant contributions to the growth and development of the South African economy through massive job creation and infrastructural development. In Abor and Quartey (2010:219) it was observed that SMEs account for over 91 per cent of the total business in South Africa, thereby generating over 52-57 per cent of the country's GDP, with estimated 61 per cent of employment generation, covering the areas agriculture, hunting, forestry or fishing, mining and quarrying, manufacturing, storage or transportation or communication, electricity, gas or water supply, construction, wholesale and retail trade (repair of motor vehicles, motor cycles, personal and household goods, hotels and restaurants), community, social and personal services.

However, at the hub of these contributions, SMEs are faced with challenges of inadequate skilled workforce, gruesome regulations, and unpleasant economic conditions, together with lack of access to business financing mechanisms (SBP Alert 2014:1). These constraints have limiting effects on SMEs competitiveness. Apart from these challenges, SMEs are hereby encouraged to embrace learning as a way of facilitating their managerial competence and hence reduce the number of business failures. Moreover, commitment to relationships is significant for them to manage their product portfolio and create more jobs in the economy.

### **5.2.1.2 Achievement of theoretical objective 2**

This theoretical objective was detailed in Chapter 2, Section 2.7 of this study, based on principles of social exchange theory. The theory holds that firms' ability to achieve competitive performance rests on shared commitment and reciprocated exchange behaviours among cooperating partners (Lai 2009:243). The theory highlights the importance of trust and communication among exchange partners. Hence through frequent communication, partners can bridge relationship gaps, which would lead to partner's opportunistic behaviour. However, the tendency for opportunistic behaviour arise in exchange relations as a result of the lack of trust among partners. Trust issues in relationships gives rise to concerns about the exchange partner's reliability to deliver consistently higher quality goods and services when needed by the other party. The SET principles encourage partners to show trust and commitment to the terms and conditions governing their relationship agreement whether written or oral.

In Chapter 2, Section 2.7, this study reviewed the association between social exchange theory and the study variables. Of note is the link with communication. This association helps partners strengthen their relationship by making available accurate and timely information which would be helpful for the partners' continued relationship. Also, communication helps them become aware of what the market wants in terms of product quality, and act accordingly towards boosting it. The association of social exchange theory and commitment portrays the significance of asset-specific investment in partners' continued relationship. This therefore makes it difficult for partners to withdraw from relationships as long as its benefits endures.

### **5.2.1.3 Achievement of theoretical objective 3**

The theoretical objective 3 was reviewed in Chapter 2 Section 2.11.1 to 2.11.3. Its purpose was to aggregate information relating to buyer-supplier communication, the benefits of buyer-supplier communication, its antecedents, methods of communication and communication dimensions. Communication is a meaning-making activity which aims to improve and consolidate information flow between the buyer and the supplier. Successful relationships are built on the principles of communication, which avails the partners the opportunity to smooth out issues that may threaten the existence of the given relationship. However, challenges arise in communication when parties are not in congruence with information being shared, which results in information distortion around the communication channel. This, therefore, calls for partners to constantly review their communication channels and seek to align such with their partnership objectives. Importantly, an efficient and effective means of communication encourages the collaborative efforts of the partners in the designing of the information systems as well as sharing of information to enable

the establishment of mutual understanding. However, central to this theoretical objective is the operational and strategic communication dimension which SMEs' buyers and suppliers should be more acquainted with. Whereas the strategic dimensions fosters progressive views resulting to continued relationship, the operational communication dimension encourages the complete dissemination of information needed for the relationship partners to achieve full relational packages.

#### **5.2.1.4 Achievement of theoretical objective 4**

This theoretical objective was based on buyer-supplier product quality, and was reviewed extensively in Chapter 2 Section 2.11.2 to 2.11.2.3. Issues examined in this objective are: definitions of product quality, the significance of product quality to a partner's performance, antecedents of product quality and product quality dimensions. Product quality was seen as the ability of the product to fulfill the expectations and needs of the customer through various attributes and shapes that appeal to them. Hence, SMEs' buyers and suppliers are encouraged to ensure that their products meet or exceed customers' demands. This is so important for partners' continued business relationships which may be based on the business ability to deliver the presumed relationship benefits.

However, it is believed that organisational challenges such as inadequate capital or the additional cost of quality is an impediment to a firm's ability towards providing quality products for customers. This study notes that the extra cost of quality can be overhauled through customers' improved patronage. Partners are encouraged, therefore, to always provide higher quality products. Additionally, SMEs' partners should ensure that their products are available, dependable, reliable and tangible. These dimensions are critical for promoting firms' competitive outlook.

#### **5.2.1.5 Achievement of theoretical objective 5**

This theoretical objective was examined in Chapter 2 Section 2.11.3 to 2.11.3.3.3, its focus is on buyer-supplier flexibility. The concept of flexibility has received varying conceptualisations and definitions across disciplines. Among these, the message of responsiveness to business dynamics have continued to resurface over time. This, therefore, strengthens the argument for the implementation of flexible structures and systems by supply chain partners to ensure maximum operational benefits for cooperating partners. However, flexibility refers to the degree to which supply chain partners respond to modern business dynamics thereby avoiding any stereotyped market condition (Gosatn, Malhotra & El Sawy 2005:10). This is important as it helps firms to

meet their customers' varying demand and maintain competitive relevance. This study discovered that partners with flexible structures and systems offer quicker and unique response to market uncertainties through the expansion of a conducive culture of learning.

Additionally, achieving flexibility requires that partners understand and operationalise long-term orientation, strategic planning, internal commitment, innovative climate and proactive strategy. These dimensions help firms maintain competitiveness through alliances, innovation, reconfiguration and realignment of business models to suit market demands. On this note, SME partners are called upon to allow maximum flexibility with regards to customer demand to improve market share.

#### **5.2.1.6 Achievement of theoretical objective 6**

This theoretical objective was based on buyer-supplier commitment, in Chapter 2 Sections 2.8 to 2.11. Issues examined within the context of this objective includes the various commitment definitions, the importance of buyer-supplier commitment, the nature of buyer-supplier commitment and the factors influencing buyer-supplier commitment. Commitment is defined as the force that binds buyers and suppliers into those activities that are of significant to their shared values (Lapointe & Vandenberghe 2018:101). This means that partners are willing to commit to a relationship when they perceive that their interests will be served. However, this study aligns with the definition of commitment as the desire to create a stable relationship, the willingness to make short-term sacrifices in order to maintain the relationship, and the confidence the partners have in the stability of the relationship (Tungjitjarurn *et al.* 2012:184). When a given relationship is stable, partners therefore engage in a strategic investment, which makes exiting the relationship difficult. According to Lee (2016:329), when SMEs show stronger commitment in the tenets of their relationship, their business performances improve in line with their perception concerning the reliability of their cooperating partner. Buyers and suppliers are therefore encouraged to show stronger commitment in their business relationship in order to reap the benefits of improved performance.

#### **5.2.1.7 Achievement of theoretical objective 7**

This objective was based on SMEs competitive performance discussed in chapter 2 sections 2.12 to 2.12.3.3. Issues examined include but are not limited to the importance of firms achieving competitive performance, attributes of a competitively performing firm and dimensions. However, a competitively performing organisation seeks to effectively and efficiently satisfy its customers' wants and demands through the combination of existing in-house resources and external

competences (Ibrahim & Shariff 2016:475; Umrani, Johl & Ibrahim 2017:397). Thus, competitively performing organisations create competitive approaches that enable them to maintain their profit position in the competitive industry (Herzallah *et al.* 2014:637). As observed in Torugsa *et al.* (2012:485), the competitive approaches are summarised in the ease at which these organisations adapt to modern business dynamics. Hence, SMEs are encouraged to leverage the opportunities provided in technology to better align with business demands. Additionally, achieving competitive performance requires the firms' proactive responses to consumers' demand, adequate attention to producing high quality products in a cost efficient manner within an innovative culture that is built around the organisations workforce.

## **5.2.2 Conclusions to empirical objectives**

This section discussed conclusions drawn from the study's empirical objectives, which were converted into a conceptual framework, detailing the proposed relationship among the various research constructs considered as a hypothesis statement. The relationships were ascertained through structural equation modelling. The empirical objectives are based on the hypothesised relationship between the research variables examined in this study. The first empirical objective is:

### **To examine the influence of buyer-supplier communication on buyer-supplier commitment**

**H1:** Buyer-supplier communication have a positive and significant influence on SMEs' buyer-supplier commitment.

Communication is important for the establishment of credible relationship commitment among SMEs buyers and suppliers. The lack of communication or communication inadequacy in a buyer-supplier relationship would, among other things, result to the partners' inability to meet customers improved demand. It is also capable of increasing the business operational cost. Most of the SMEs that participated in the survey understand very well the influence of buyer-supplier communication on buyer-supplier commitment. This is reflected in the p-value significant level of  $p < 0.001$ , signifying a strong relationship between the constructs. The positive relationship between communication and commitment was supported by the early work of Varona (1996:134), noting that communication has a significant impact on partners' relationship commitment. Leonidou *et al.* (2014:34) also supported the study's finding by stating that buyer-supplier communication helps to improve commitment, thereby resulting to improved performance. This study, therefore, concludes that buyer-supplier communication has a positive and significant influence on buyer-supplier commitment.

## **To examine the influence of buyer-supplier communication on buyer-supplier product quality**

**H2:** Buyer-supplier communication has a significantly positive influence on buyer-supplier product quality.

From the empirical results, the SMEs in this study graded the relationship between communication and product quality as very high. The impact of this relationship was empirically examined at  $p < 0.001$  with the coefficient relationship of ( $\beta = 0.735$ ) indicating a stronger relationship. This shows that SMEs which are able to frequently communicate efficiently and effectively will be able to strengthen and safeguard the quality of the products they have on offer. Shin, *et al.* (2016:739) corroborate that the link between communication and product quality enables buyers and supplier to control the loyalty of their customers in a way that benefits their business relationship. This study therefore concludes that buyer-supplier communication has a significantly positive influence on buyer-supplier product quality.

## **To investigate the influence of product quality on buyer-supplier commitment**

**H3:** Product quality has a significant and positive influence on buyer-supplier commitment

The SMEs in this study showed their support in the hypotheses that buyer-supplier product quality has a positive and significant influence on buyer-supplier commitment. This was empirically examined with a p-value of  $< 0.001$ . It shows that supply chain partners who are able to improve and sustain the quality of their product can enjoy the long-term commitment of their collaborating partners. However, this relationship was supported in studies conducted by Dunk (2002:719) and Prajogo (2007:71), stating that product quality helps firms achieve competitive advantage through improved customers commitment. This study therefore concludes that product quality has a significant and positive influence on buyer-supplier commitment.

## **To investigate the influence of product quality on buyer-supplier flexibility**

**H4:** Buyer-supplier product quality has a significant and positive influence on buyer-supplier flexibility

The influence of product quality on buyer-supplier flexibility was rated higher from the lens of the participated SMEs, evidenced from the coefficient of regression and p-value at the level of ( $p < 0.001$ ;  $\beta = 0.709$ ). The relationship between the two constructs is among the highest in the SEM model. The implication of this scenario is that when the products on offer are of the highest

quality, they will enable supply chain partners to respond swiftly to market demands thereby increasing their profit potentials. SMEs with higher product quality will as well compete better than their rivals in the competitive market. This result was supported by Schroeder, *et al.* (2011:4892). Regrettably, this relationship which would impact greatly on the SMEs has not been sufficiently examined in the literature. This study concludes that buyer-supplier product quality has a positive and significant influence on buyer-supplier flexibility.

### **To explore the influence of buyer-supplier flexibility on buyer-supplier commitment**

**H5:** Buyer-supplier flexibility has a positive and significant influence on buyer-supplier commitment.

The findings of this study indicate that buyer-supplier flexibility is an important construct in measuring buyer-supplier commitment. This may be linked to the ability of the partners to respond speedily and seamlessly to customers' demands. This relationship is supported with a p-value of  $p < 0.05$  and path coefficient value of 0.193. However, the path coefficient of the relationship between the two constructs represents the lowest correlation in the model. This highlights the difficulties SME partners encounter in their efforts towards operationalising flexibility systems. Additionally, the positive relationship between the measuring constructs was supported by Rašković *et al.* (2015:10), stating that buyer-supplier commitment enables the attainment of buyers-supplier flexibility. In this regard, this study concludes that buyer-supplier flexibility has a positive and significant influence on buyer-supplier commitment.

### **To assess the influence of buyer-supplier commitment on SMEs' competitive performance**

**H6:** Buyer-supplier commitment has a positive and significant influence on buyer-supplier competitive performance

This study positioned buyer-supplier commitment as the focal construct of the study's relationship model. It serves as the link between communication, product quality, buyer-supplier flexibility and SMEs' competitive performance. This means that the efficacy and effectiveness of the buyer-supplier commitment variable is dependent on the efficacy and effectiveness of the first three variables. By implication, this study reveals that SMEs' strategies and objectives executed through the influencing factors of buyer-supplier commitment enables firms to achieve competitive performance. This relationship was supported empirically with the path coefficient value of 0.890 and a p-value of  $p < 0.001$ , indicating positive a relationship between the measuring variables. The relationship between commitment and competitive performance found support from studies conducted by Duhan and Sandwik (2009:905) and Mafini *et al.* (2016:624), stating that buyer-

supplier commitment is positively related to small and medium scales enterprises competitive performance. This study therefore concludes that buyer-supplier commitment has a positive and significant influence on SMEs' competitive performance.

### **5.3 RECOMMENDATIONS**

The strength of every economy is dependent on the growth and progress of the SMEs. Therefore, for them to live up to the huge expectations the economy has placed on them requires that the SMEs understand and appreciate the importance of building and maintaining relationship across supply chain partners. The findings of this study offer recommendations which may be useful to SME owners, managers and other stakeholders. The results showed that SMEs' buyers and suppliers wishing to achieve competitive performance within a given supply chain block or across the chain should build their relationship on communication, product quality and flexibility on commitment in order to achieve competitive performance.

The following recommendations are hereby made based on the findings of the study:

#### **5.3.1 Buyer-supplier communication and buyer-supplier commitment**

The results of this study showed that buyer-supplier communication is positively and significantly related to buyer-supplier commitment. However, the study also shows that establishing buyer-supplier relationship among SMEs would have its unique difficulties with path coefficient ( $\beta = 0.282$ ). This is because SMEs often compete acrimoniously among themselves, leaving little room for efficient and effective communication which would help them build stronger ties. However, in order to enhance SMEs' buyer-supplier relationship through communication and commitment linkages, they are encouraged to continually seek for strategic ways of reaching out to their cooperating partners. SMEs can operationalise the use of social media for the purposes of informing their partners regularly about their product offerings and services. Kadam and Ayarekar (2014:5) note that social media represents a favourable means of communicating brand values and attributes as a result of its ability to facilitate open dialogue. SMEs can explore the opportunities presented in the social media platforms like Facebook and Instagram to strengthen their interactions in a way that fosters mutual benefits. Stronger ties are built through healthy exchange of information and peer gathering like gala nights and braai parties designed to help the parties establish strong collaborative mind-sets and further enhance their commitment to the on-going relationship.

### **5.3.2 Buyer-supplier communication and product quality**

The findings of this study showed that buyer-supplier communication is an important construct for the establishment of buyer-supplier product quality. They further highlight the need for the SMEs to improve and strengthen their communication linkages across their cooperating partners. The model revealed that communication and product quality are essential business strategies which SMEs should be conversant with as it enables partners to commit into ongoing relationships. However, SME communication should be seen as a collaborative effort that helps the SMEs to address issues regarding their relationship. Kaynak and Sert (2012:225) note that partners that institutionalise good communication structures will have little or no ethical concerns to worry about. Communication helps them to improve relationships by allowing the understanding of their bonding factors, which helps to facilitate the integration of objectives that promotes cost reduction.

### **5.3.3 Buyer-supplier product quality and buyer-supplier flexibility**

The association of buyer-supplier product quality and buyer-supplier flexibility as portrayed in the results, indicate that product quality is an important enabler of SME buyer-supplier flexibility. This suggests that SMEs' ability to respond speedily to market dynamics can be improved if the products they have on offer for their customers are of the best quality. It is therefore recommended that SMEs remodel their business competitive strategies in relation to products they have on offer to ensure that attributes which enhance product qualities are incorporated into the products design. Establishing collaborative relationship is equally important for SMEs since knowledge and skilled competencies can be sourced across the collaboration and implemented to achieve good product design. Investment in research and development can help SMEs enrich their knowledge base on best designs and qualities that meet or exceed customers' expectations. Moreover, implementation of the quality standards criteria and the operationalisation of the principles of total quality management represent steps SME firms can adopt to improve their product quality outlook.

### **5.3.4 Recommendations based on buyer-supplier commitment influencing factors**

The study showed that there is a significant and positive association between the three factors of buyer-supplier commitment, namely: communication, product quality, flexibility and buyer-supplier commitment. This would suggest that buyer-supplier commitment may be significantly enhanced if SMEs build upon these top three factors. To foster effective communication among exchange partners, it is important to employ people with good interpersonal ability and accord them the freedom to work with the team. Moreover, this team should be tasked with the development of good strategies that would enable the firm to reach its target customers effectively

and efficiently. Achieving this objective may require the establishment of a separate funding plan that would enable the team to acquire the needed technologies which will help foster the firm's ability to communicate effectively across the supply chain. Additionally, efforts to boost product quality which SMEs may consider includes pre-production inspections and occasional post-production inspections. Importantly, the principles of total quality management may as well be examined to ensure that the product on offer meets the various quality standards of the various cooperating firms.

The study also revealed that a partner's flexibility is significant for buyer-supplier commitment. However, the path regression coefficient of 0.193 is low when compared to the rest in the model. This means that the understanding of flexibility systems and its impact on relationship commitment are not highly revered by SMEs. This prompts the need for increased awareness and exposure of the SMEs on the benefits of flexibility operations to their cooperative goals and competitive performance. SMEs' operational strategies should incorporate flexibility which is fundamental to firms achieving competitive performance and overcoming market unpredictability (Omoruyi 2015:152).

### **5.3.5 Recommendations based on the relationship between buyer-supplier commitment and SMEs' competitive performance**

The findings of this study showed that buyer-supplier commitment represents essential business strategic components towards achieving competitive performance. SMEs strategies should therefore be anchored in commitment for partners to achieve competitive performance. The model showed that commitment has a stronger influence on competitive performance with a high path coefficient regression of 0.890. However, considering that South African SMEs have not lived up to the huge expectations the economy has placed on them with regards to job creation and economic development, may be due to the alarming rate of start-up failures (Olawale & Garwe 2010), SMEs' strategy with focus on commitment will help efforts to boost job creation and human empowerment. It is recommended that partners exhibit greater commitment to building stronger ties with key partners in their given industry.

## **5.4 IMPLICATIONS OF THE STUDY**

Implications based on the findings of the study are offered in this section. The implications were examined in two perspectives, namely: the theoretical perspective and practical perspective.

#### **5.4.1 Theoretical implications**

The results of this study showed that through buyer-supplier communication, buyer-supplier product quality and buyer-supplier flexibility have positive relationships with buyer-supplier commitment. According to the result, the association is weak when compared to the relationships between the study commitments baseline factors (communication, product quality and flexibility). However, the relationship between SMEs' buyer-supplier product quality and commitment is seemingly higher when compared to the relationship existing between communication and commitment, and flexibility and commitment. This may suggest that buyer-supplier product quality has a greater relational value with buyer-supplier commitment than the other two variables (communication and flexibility). Importantly, the study further revealed that there is greater synergy between communications and product quality. This means that partners that wish to improve the quality of their products should at all times leverage the various communication modes to furnish themselves with information that will enhance business growth.

#### **5.4.2 Practical implications**

The study revealed that achieving flexibility is dependent on the quality of the firms' product offering. It is therefore suggested that SMEs that wish to improve on their flexibility strategies in order to match customers' expectations should ensure that the products they have on offer are of the highest quality. This view is in accordance with Homburg, *et al.* (2005:5), which noted that product quality can help develop a stronger image for SMEs.

Importantly, the study as exemplified in the model suggest that SMEs' commitment is integral for the attainment of competitive performance, which measures among the core objectives of the business. It is important that SMEs develop an attainable commitment action plan anchored in communication, quality of products and services to ensure the attainment of their relationship benefits. Omoruyi (2015:156) discovered that the lack of commitment (resources, relational values, information and networking) is limiting the SMEs' ability to build stronger ties which can enable improved performance benefits.

Additionally, among the issues the government is interested in is how to ensure that South African SMEs survive and grow in order to create jobs to enhance the economy. This study has created a management model with clear directions that may help both the government and SMEs to achieve performance improvements and also create jobs for the economy if implemented.

## **5.5 LIMITATIONS OF THE STUDY**

The focus of this study was based on the factors influencing buyer-supplier commitment and competitive performance among SMEs. Notwithstanding the impact of these factors on buyer-supplier commitment, more studies are required to understand to what extent these factors can directly impact on organisational performance. This is particularly important because organisations' performance has either a positive or negative bearing on the strength of the South African economy.

However, the data for this study was collected from both buyers and suppliers using the same questionnaire design. This was because the study assumed that buyers and suppliers are intertwined since a given organisational supplier at one end can also be a buyer at the other end of the supply chain. This view may perhaps impact on the responses generated from the questionnaires. Further research may be needed wherein the scope of the questionnaire (buyer-supplier) can be separated and data collection area broadened to include other provinces outside the Gauteng region of South Africa. Subsequently, the findings of the study do not reflect the opinion of all SMEs in South Africa and hence cannot be generalised to all SMEs.

Moreover, because this study is constrained by time, a cross-sectional survey approach to data collection was implemented. This could impact the quality of the data because the respondents are not given sufficient windows to express their detailed views about the variables under consideration.

## **5.6 FUTURE RESEARCH DIRECTIONS**

It is important that future studies on the factors influencing buyer-supplier commitment and competitive performance adopt a longitudinal approach in data collection, which will enable clearer understanding of the impact of these influencing factors on commitment and SMEs' performance. Additionally, a mixed method approach to data collect can also be examined by future research. This is important because some business operating conditions can well be examined and predicted through proper balancing of the outcomes of the mixed method technique.

Further study is needed to cover a broad range of the SMEs in South Africa in order to present a clearer view of the extent to which the implementation of the model proposed in this study can help SMEs achieve performance improvement. Additionally, a study of this nature can also be conducted within South Africa with the view to integrating more than two provinces in the survey and as well as other African countries as part of the effort towards ensuring SMEs' growth and economic improvement on the African continent.

This study is cross-sectional; further research should be conducted on the study variables to understand the efficacy of the measuring constructs and instruments in predicting SMEs buyer-supplier commitment and competitive performance. A mixed method approach can be used to enable respondents provide their detailed beliefs on the influence of communication, product quality and flexibility on commitment and SMEs' performance. Importantly, a cross country approach in data collection can be applied on the study model in Africa to examine whether the three baseline factors (communication, product quality and flexibility) are significant for supply chain commitment. This can add to the body of knowledge by establishing baseline factors for supply chain commitment.

Furthermore, this study's conceptual framework was empirically examined within SMEs. Future research is welcomed to examine this same model with data separately collected from both small enterprises and large organisations in order to examine to what extent the findings emanating from the small organisations can be compared to those of the larger organisations. This can add to the body of knowledge by establishing a comparable and competitive supply chain commitment framework for both small scale and big scale companies.

This study has empirically shown that communication, product quality and flexibility have a significant positive influence on buyer-supplier commitment, and that the latter also influences SMEs' performance. The findings can further be improved and confirmed through a single organisational context.

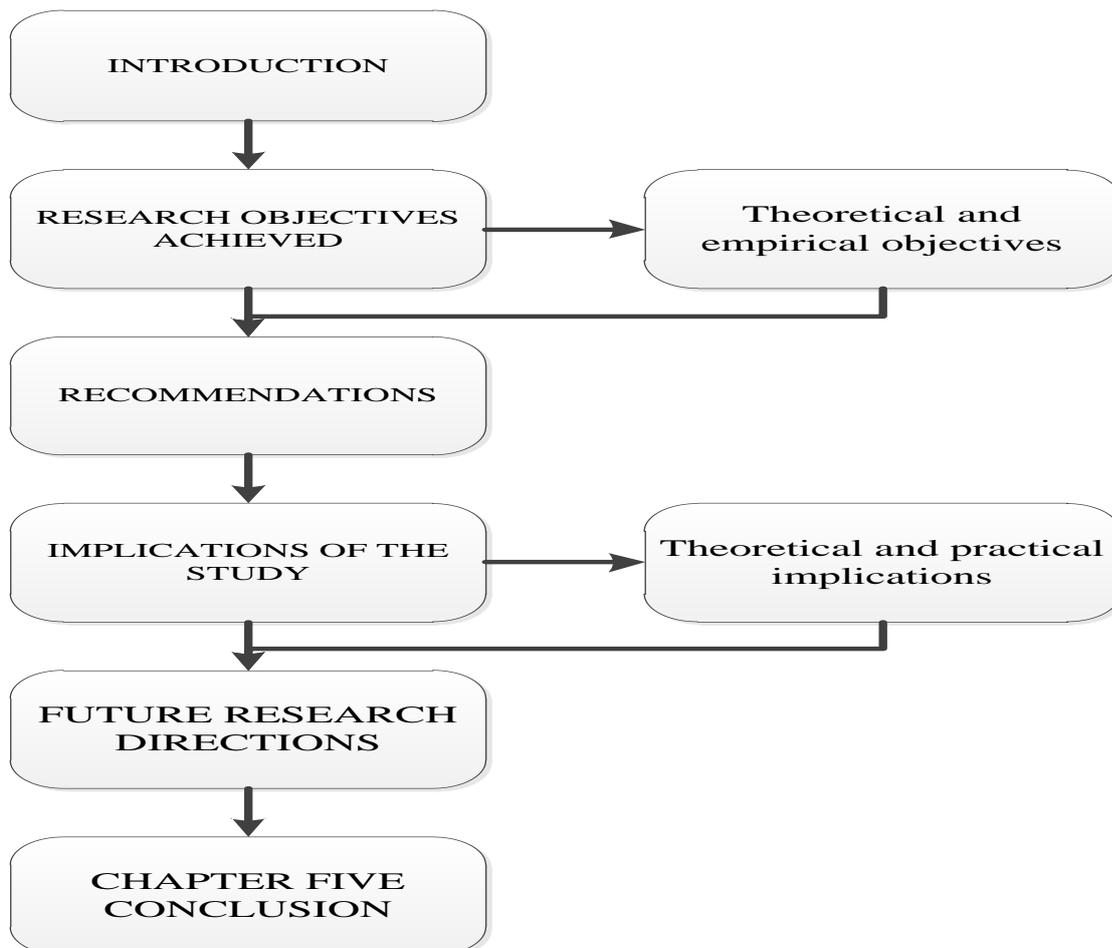
## **5.7 CONCLUSION**

The present chapter started with a brief introduction, followed with the study's objectives achieved through the lens of both the theoretical and empirical objectives. It progressed with recommendations, presentation of the implications and the study limitations, after which it drew conclusions with a general breakdown of the research.

The literature review helps to indicate the relative importance of the research baseline constructs to buyer-supplier commitment and SMEs' competitive performance. The study utilised the theory of social exchange in stressing its relational significance through an extensive literature review, which helps to enhance the knowledge of the behaviours of the variables. To this end, it was revealed that success in the SMEs' buyer-supplier context is dependent on the application of the correct strategies and good business principles, which hinge squarely on the establishment and maintenance of collaborative relationship. This view helps to guide the development of a research model for SMEs' buyer-supplier commitment factors and competitive performance. The model

helps explain the relational significance of the variables through the establishment of the study's hypotheses and the chosen methodology of the study. Importantly, the hypothesised relationship of the variables was meticulously developed through the widespread theoretical review of various relationship-based literature with a buyer-supplier commitment undertone. The hypotheses were contextually based on buyer-supply communication, product quality and flexibility as predictive variables, buyer-supplier commitment as the mediating variables and SMEs' competitive performance as the outcome variables.

Following the empirical objectives of the study, the conceptualised model was empirically examined. The findings suggest a direct positive relationship of the baseline factors of buyer-supplier commitment (communication, product quality and flexibility) and their positive influences on buyer-supplier commitment, which also impacts positively on SMEs' competitive performances. The role of commitment to SMEs performance in this model may well appeal to SMEs and other stakeholders on the need to show greater commitment to business relational values. Figure 5.1 below is a diagrammatic representation of Chapter 5.



**Figure 5.1: Diagram of Chapter 5 (own source)**

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## APPENDIX A: QUESTIONNAIRE

VAAL UNIVERSITY OF TECHNOLOGY



FACULTY OF MANAGEMENT SCIENCES

### QUESTIONNAIRE

Thank you for paying attention to this academic questionnaire. The purpose of this questionnaire is to gather information on the **FACTORS INFLUENCING BUYER-SUPPLIER COMMITMENT AND COMPETITIVE PERFORMANCE AMONG SMALL AND MEDIUM ENTERPRISES IN GAUTENG PROVINCE**. I am therefore, requesting for your assistance to complete the questionnaire below. The research is purely for academic purposes and the information will be kept confidential. Duration of the research is 5 minutes. Participants are requested to kindly complete the questionnaire independently and honestly within the allocated timeframe. By completing the questionnaire it is assumed that the participants are aware of the purpose of the study and have given their consent to participate in the study.

**Researcher: Uju Kingsley Nwele.**

Please answer the following questions by marking the appropriate answer(s) with an [x].  
This questionnaire is strictly for research purpose only.

## SECTION A: COMPANY PROFILE

**A.1.** Please indicate the number of years operating in this business

2 to 4		5 to 7		8 to 10		11 or more	
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**A.2.** Please indicate the business annual sales (R)

Less than R1 million	R1m to less than R5 million	R5m to less than R10	R10m to less than R20 million	R20m or more

**A.3.** Please indicate the physical assets in (R)

Less than R4 million	R4m to less than R8 million	R8m to less than R12 million	R12m to less than R16 million	R16m or more

**A.4.** Please indicate the number of employees for the business

Fewer than 50		50-99		100-199		200 or more	
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**A.5.** Please indicate the type of industry the business operates

A.5.1	Agriculture, hunting, forestry or fishing	
A.5.2	Mining and quarrying	
A.5.3	Manufacturing, storage or transportation or communication	
A.5.4	Electricity, gas or water supply	
A.5.5	Construction	
A.5.6	Wholesale and retail trade (repair of motor vehicles, motor cycles, personal and household goods, hotels and restaurants)	
A.5.7	Community, social and personal services	
A.5.8	Others (please specify)	

**A.6** Please indicate your position/ job title.

Manager		Owner		Marketing/sales person		Senior staff	
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**A.7** Please indicate your highest academic qualification

Junior Certificate	Senior Certificate	National Diploma	Degree	Postgraduate qualification	Others (specify)

**SECTION B: BUYER-SUPPLIER COMMUNICATION (BSC)**

Please indicate to what extent you agree or disagree with each statement as the statements relate to communication in buyer-supplier relationships.						
		Strongly disagree	Disagree	Slightly agree	Agree	Strongly agree
Bsc-1	We exchange information frequently with our buyer/supplier	1	2	3	4	5
Bsc-2	We communicate any information that might be helpful to our partners	1	2	3	4	5
Bsc-3	Both parties keep each other informed about events or changes that may affect the other party	1	2	3	4	5
Bsc-4	Both parties in the relationship will provide privately-owned information if it can help the other party	1	2	3	4	5
Bsc-5	We communicate well with this buyer/supplier	1	2	3	4	5
Bsc-6	We communicate with this buyer/supplier quite often	1	2	3	4	5
Bsc-7	We discuss various issues related to this buyer/supplier	1	2	3	4	5
Bsc-8	This buyer/supplier is straightforward in the relationship with us	1	2	3	4	5

**SECTION C: BUYER-SUPPLIER PRODUCT QUALITY (BPQ)**

Please indicate to what extent you agree or disagree with each statement as the statements relate to product quality in buyer-supplier relationships.						
		Strongly disagree	Disagree	Slightly agree	Agree	Strongly agree
Bpq-1	The quality of our products compares well with competitors' products	1	2	3	4	5
Bpq-2	Our products are perceived by customers as being more reliable than competitors	1	2	3	4	5
Bpq-3	Our products are of higher quality than our competitors' products	1	2	3	4	5
Bpq-4	Our products quality does what it is supposed to do for the user	1	2	3	4	5
Bpq-5	the quality of the product we offer to our customers' is highly durable	1	2	3	4	5

**SECTION D: BUYER-SUPPLIER FLEXIBILITY (BSF)**

Please indicate to what extent you agree or disagree with each statement as the statements relate to flexibility in buyer-supplier relationships.						
		Strongly disagree	Disagree	Slightly agree	Agree	Strongly agree
Bsf-1	This buyer/supplier is flexible enough to handle unforeseen problems.	1	2	3	4	5
Bsf-2	This buyer/supplier handles changes well.	1	2	3	4	5
Bsf-3	This buyer/supplier can readily adjust its inventories to meet changes in our needs.	1	2	3	4	5
Bsf-4	This buyer/supplier is flexible in response to requests we make.	1	2	3	4	5
Bsf-5	Our products conforms to its engineering specifications	1	2	3	4	5

## SECTION E: BUYER-SUPPLIER COMMITMENT (BSC)

Please indicate to what extent you agree or disagree with each statement as the statements relate to buyer-supplier commitment in relationships.						
		Strongly disagree	Disagree	Slightly agree	Agree	Strongly agree
Com-1	The relationship with our buyer/supplier is something to which we are very committed	1	2	3	4	5
Com-2	The relationship with our buyer/supplier is very important to our business	1	2	3	4	5
Com-3	The relationship with our buyer/supplier is something our business intends to maintain indefinitely	1	2	3	4	5
Com-4	The relationship with our buyer/supplier is very much like being family	1	2	3	4	5
Com-5	The relationship with our buyer/supplier is something our business really cares about	1	2	3	4	5
Com-6	The relationship with our buyer/supplier deserves our business maximum effort to maintain	1	2	3	4	5

## SECTION F: SMEs COMPETITIVE PERFORMANCE (SCP)

Please indicate to what extent you agree or disagree with each statement as the statements relate to buyer-supplier competitive performance.						
		Strongly disagree	Disagree	Slightly agree	agree	strongly agree
Scp-1	There is a high level of improvement in this company	1	2	3	4	5
Scp-2	Employees in this company are happy and motivated	1	2	3	4	5
Scp-3	Our customers are satisfied with our services	1	2	3	4	5
Scp-4	Our performance in the last appraisal exceeded expectations	1	2	3	4	5
Scp-5	The level of opportunity to improve our performance is high	1	2	3	4	5

**Thank you for participating in this study.**

## APPENDIX B: CFA RESULTS

### Model Fit Summary

#### CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	65	340.232	124	.000	2.744
Saturated model	189	.000	0		
Independence model	36	3854.215	153	.000	25.191

### Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.912	.891	.942	.928	.942
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

### Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.810	.739	.763
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

### NCP

Model	NCP	LO 90	HI 90
Default model	216.232	165.143	274.979
Saturated model	.000	.000	.000
Independence model	3701.215	3502.586	3907.131

**FMIN**

Model	FMIN	F0	LO 90	HI 90
Default model	.861	.547	.418	.696
Saturated model	.000	.000	.000	.000
Independence model	9.758	9.370	8.867	9.891

**RMSEA**

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.066	.058	.075	.001
Independence model	.247	.241	.254	.000

**AIC**

Model	AIC	BCC	BIC	CAIC
Default model	470.232	476.801		
Saturated model	378.000	397.101		
Independence model	3926.215	3929.853		

**ECVI**

Model	ECVI	LO 90	HI 90	MECVI
Default model	1.190	1.061	1.339	1.207
Saturated model	.957	.957	.957	1.005
Independence model	9.940	9.437	10.461	9.949

**HOELTER**

Model	HOELTER .05	HOELTER .01
Default model	176	190
Independence model	19	21

## Scalar Estimates (Group number 1 - Default model)

### Maximum Likelihood Estimates

### Standardized Regression Weights: (Group number 1 - Default model)

	Estimate
BSC4 <--- Communication	.598
BSC3 <--- Communication	.760
BSC2 <--- Communication	.745
BSC1 <--- Communication	.801
BPQ4 <--- Product_Quality	.712
BPQ3 <--- Product_Quality	.799
BPQ2 <--- Product_Quality	.754
BPQ1 <--- Product_Quality	.660
BSF4 <--- Flexibility	.680
BSF3 <--- Flexibility	.761
BSF2 <--- Flexibility	.853
BSF1 <--- Flexibility	.763
COM5 <--- Commitment	.605
COM2 <--- Commitment	.757
COM1 <--- Commitment	.847
SCP3 <--- Competitive_performance	.739
SCP2 <--- Competitive_performance	.873
SCP1 <--- Competitive_performance	.831

## APPENDIX C: SEM AND PATH ANALYSIS

### Model Fit Summary

#### CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	61	389.415	128	.000	3.042
Saturated model	189	.000	0		
Independence model	36	3854.215	153	.000	25.191

#### Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.899	.879	.930	.916	.929
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

#### Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.837	.752	.778
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

#### NCP

Model	NCP	LO 90	HI 90
Default model	261.415	205.842	324.615
Saturated model	.000	.000	.000
Independence model	3701.215	3502.586	3907.131

**FMIN**

Model	FMIN	F0	LO 90	HI 90
Default model	.986	.662	.521	.822
Saturated model	.000	.000	.000	.000
Independence model	9.758	9.370	8.867	9.891

**RMSEA**

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.072	.064	.080	.000
Independence model	.247	.241	.254	.000

**AIC**

Model	AIC	BCC	BIC	CAIC
Default model	511.415	517.580		
Saturated model	378.000	397.101		
Independence model	3926.215	3929.853		

**ECVI**

Model	ECVI	LO 90	HI 90	MECVI
Default model	1.295	1.154	1.455	1.310
Saturated model	.957	.957	.957	1.005
Independence model	9.940	9.437	10.461	9.949

**HOELTER**

Model	HOELTER .05	HOELTER .01
Default model	158	171
Independence model	19	21

## HYPOTHESIS

### Scalar Estimates (Group number 1 - Default model)

#### Maximum Likelihood Estimates

### Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
Product quality	<---	Communication	.735	.083	8.901	***	Accepted at p <0.001
Flexibility	<---	Product quality	.709	.073	9.754	***	Accepted at p <0.001
Commitment	<---	Communication	.282	.073	3.861	***	Accepted at p <0.001
Commitment	<---	Product quality	.335	.093	3.624	***	Accepted at p <0.001
Commitment	<---	Flexibility	.193	.065	2.983	.003	Accepted at p < 0.05
Competitive performance	<---	Commitment	.890	.095	9.358	***	Accepted at p <0.001
BSC4	<---	Communication	1.000				

## **APPENDIX D: ARTICLE PUBLICATION AND CONFERENCE PRESENTATION**

**Appendix D include the following:**

1. 31st Southern African Institute of Management Scientist (SAIMS) Conference Confirmation of attendance and presentation of Master Dissertation.
2. NRF Search Confirmation
3. Turnitin (Evidence of Plagiarism Check)