

**THE CONTRIBUTIONS OF ORGANISATIONAL AGILITY TOWARDS BUSINESS
PERFORMANCE WITHIN SMALL AND MEDIUM SCALE ENTERPRISES IN
GAUTENG PROVINCE**



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DEDICATION

I dedicate this research work to my Heavenly Father, the Almighty God, Jesus Christ my personal Saviour and the Holy Ghost my Counsellor.

I also dedicate this research work to my late beloved father (Malangeni), my beloved mother, (Nontsizi), my late beloved daughter (Mfumakazi,) my beloved son (Sandile), all of my brothers, all of my sisters and the entire Govuzela family as well as the Ndzondo family. You are the best to me. I appreciate your endurance and for being there for me throughout the entire doctoral programme.

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ABSTRACT

Only one in ten newly established business enterprises survive for longer than ten years in the business environment. The reasons behind the failures of these small enterprises include the lack of access to financing, lack of financial and managerial skills, lack of expertise, as well as economic factors such as poor sales and weak growth prospects. The new norm in industry requires organisations to have a remarkable amount of agility to survive and succeed. This is important in South African SMEs given their significant contributions to the national economy. A major research gap exists, which pertains to the scant evidence of studies that focus on the influence of organisational agility on business performance of small to medium enterprises in South Africa. The purpose of this study is to investigate the influence of organisational agility on business performance in small to medium enterprises in the Gauteng province.

Using a quantitative approach and a cross-sectional survey research design, a structured questionnaire was administered to 564 randomly selected owner-managers of small to medium enterprises in the Gauteng province. Questionnaire items were adapted from previously validated scales. Simple descriptive statistics in the form of percentages and mean scores were utilised in testing the perceptions of respondents towards organisational agility, its sub-elements and business performance. Hypotheses were tested using the structural equation modelling approach, which was conducted after implementing a confirmatory factor analysis to test the psychometric properties of the measurement scales.

The results of the study show that owners and managers of small and medium enterprises perceived that the performance of their organisations was satisfactory in terms of technology capability, collaborative innovation, organisational learning, internal alignment, organisational agility and business performance. Upon testing the hypotheses, positive and significant relationships were observed between organisational agility and its four dimensions, namely technology capability, collaborative innovation, organisational learning and internal alignment. In turn, organisational agility exerted a significant and positive influence on business performance. The results of the study imply that the performance of small to medium enterprises can be improved significantly through adjustments to organisational agility and its sub-dimensions. This study is important in that its results can be applied to assist small to medium enterprises to survive and succeed in today's turbulent and tomorrow's dynamic operational environments, where agile organisational abilities are required.

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CHAPTER 1

INTRODUCTION AND BACKGROUND

1.1 INTRODUCTION AND BACKGROUND OF THE STUDY

Small and medium enterprises (SMEs) perform a strategic role in the economic performance of any country. This strategic role in the economy revolves around the production of products and services, innovation, the aiding of big business and job creation (Bosch, Tait & Venter, 2006:29). According to the World Bank (2005:1), SMEs have a high labour absorption capacity, as they account for between 60 to 70 percent of employment in most developing countries. Nieman and Niewenhuizen (2009:3) acknowledge that economic development can be directly attributed to the level of entrepreneurial activity in a country, which is indexed by the number of operational SMEs. SMEs have been responsible for most of the innovation throughout the world, with statistics showing that many scientific breakthroughs originated with small organisations and not in the laboratories of large businesses (Erasmus, Strydom & Rudansky-Klopper, 2013:53). SMEs are also viewed as a mechanism to narrow the gap between rich and poor and to reduce the backlog of the previously disadvantaged (Bolton, 2006:194). SMEs can play a significant role in the economy of a country by introducing groundbreaking products and services, thereby improving the quality of life of the people (Mbedzi, 2011:4). Therefore, SMEs have become an important driver of economic growth in most countries throughout the world.

In the South African economy, SMEs perform four critical roles: 1) accounting for 98 percent of all businesses; 2) generating up to 35 percent of the gross domestic product; 3) contributing to 43 percent of the total salaries and wages paid; and 4) employing at least 55 percent of all formal private sector employees (Nieman & Niewenhuizen, 2009:3; Strydom, 2011:356). Mutezo (2005:10) opines that South African SMEs minimise income inequality, encourage competition between firms, ensure innovation in new product and service development, contribute to black economic empowerment (BEE) and provide employees with comprehensive learning experiences and higher levels of job satisfaction (Meggison, Byrd & Meggison, 2006:9). The importance of SMEs within South Africa becomes even more critical for the achievement of social stability by creating jobs to solve the high unemployment rate, which was purportedly at 24 percent by January 2015 (StatsOnline, 2015:1). Thus, the South African economy, like any other, is largely driven by the SME sector.

There is no single, universally accepted definition of what constitutes SMEs since numerous definitions exist, each one being valid in its environment (Anderson, 2011:200). The differences in defining the term are sometimes attributed to different levels of development between countries (Mahadea & Pillay, 2008:433). According to Abor and Quartey (2010:219), the European Commission (EC) defines small enterprises as firms employing between 10 and 99 employees while medium enterprises are those that employ between 100 and 499 employees. In contrast, within South Africa, small enterprises are businesses that have an upper limit of 50 employees, are generally more established and exhibit more complex business practices (DTI, 2008:2). Medium enterprises are those that employ between 100 or 200 employees and are often characterised by the decentralisation of power to an additional management layer (Chalera, 2007:79). A notable view is that compared to developed country standards, South African thresholds on SMEs are lower, such that many businesses, which Americans or Europeans regard as small or medium enterprises would be regarded as large enterprises in South Africa (DTI, 2008:2).

SMEs are the brainchild of entrepreneurs. Entrepreneurship can be defined as the process of creating and building something of value from practically nothing in the midst of uncertainty and risk and having the determination to succeed at all odds (Erasmus *et al.*, 2013:53). Van Aardt and Bezuidenhout (2014:4) argue that entrepreneurs who successfully start their own businesses are vital to the economic well-being as well as the technological growth of any economy, which makes entrepreneurship the root of national development. Moreover, Erasmus *et al.* (2013:53) acknowledge that in most economies, the entrepreneur is recognised as a key factor in the process of economic development. In South Africa, entrepreneurship ensures economic growth as entrepreneurs intend to grow their businesses and are responsible for job creation in the economy. In the same country, the overall entrepreneurial activity is seven percent, indicating the percentage of economically active adults who are entrepreneurs (Erasmus *et al.*, 2013:53). Strydom (2011:10) adds that in South Africa, SMEs are one example of how promising entrepreneurs can fulfil their dreams of being independent and creating wealth. Abor and Quartey (2010:223) are of the view that developing countries such as South Africa could achieve the goals of improving economic growth, development, the creation of wealth and employment if the SME sector is adequately prepared to improve business performance. Therefore, entrepreneurship can reduce unemployment and poverty through job creation and improve economic growth and income creation.

Despite the unanimous view concerning the significance of SMEs to all economies, questions arise regarding the reasons why entrepreneurship seems to be difficult, as manifested through the high failure rates of most SMEs (Niewenhuizen & Rossouw, 2008:1). For instance, as observed by Mahadea and Pillay (2008:437), only one in ten newly established business enterprises survive for

longer than ten years in the business environment. The reasons behind the failures of these small enterprises include the lack of access to financing, lack of financial and managerial skills, lack of expertise as well as economic factors such as poor sales and weak growth prospects. The World Bank (2005:7) reports that in addition to the standard challenges faced by SMEs, the global economy is slowly recovering from the global economic slowdown that began in 2008. During the period of the economic slowdown, firms struggled to access funds from banks due to tightening credit, and there was a decrease in the production of goods and services due to the lack of demand thereof. Such developments placed serious constraints on the operations of many SMEs, leading to their demise (Tshabalala, 2007:1). There are several possible reasons for the failure of SMEs, and there is no 'one size fits all' solution to the struggles involved in establishing an entrepreneurial venture that can survive economic turbulence. These authors further state that what is true for any entrepreneur in any country is that one's awareness of the entrepreneurial process as well as the environment in which one will function increase the chances of succeeding. Therefore, challenges facing SMEs should be investigated contextually, and SMEs face the challenge of adapting to different and difficult economic conditions if they are to survive (Van Aardt & Bezuidenhout, 2014:4).

As a possible solution to the scourge of SME business failure, a need arises to investigate how best practice in management can be used as a tool to assist the streamlining of the operations of such enterprises. The list of available best practices in management could plausibly be inexhaustible and beyond the scope of a single study, although two possible areas of interest are organisational agility and business performance. Organisational agility refers to the ability of companies to stay competitive in their businesses by adjusting and adapting to new innovative ideas and using these ideas to create new products and services as well as new business models (Mavengere, 2013:8). Organisational agility itself has various sub-components such as collaborative innovation, technological capability, organisational learning and internal alignment (Chen, 2013:2599). Business performance is a subjective measure of the results of a firm's policies and operations in both monetary and non-monetary terms (Fasanya & Onakoya, 2013:23). Business performance is important since it is arguably one of the major barometers used to measure the success of a business enterprise (Chugh, Meador & Meador, 2010:6). This demonstrates that a business enterprise can only be successful to the extent that it is sound in both financial and non-financial areas. It would be interesting to investigate the linkage between organisational agility and business performance within the SME context to ascertain whether the former could contribute to the latter and how this relationship is structured.

1.2 PROBLEM STATEMENT

Business executives are struggling to design firms that are efficient enough to drive performance in the short run and flexible enough to sustain business performance over the long run. The new norm in industry requires organisations to have a remarkable amount of agility in order to survive. This is important in South African SMEs since their contribution to the national economy in terms of employment and productivity is widely acknowledged. As an example, more than 80 percent of all businesses in South Africa are described as SMEs, contributing about 40 percent to all economic activity in the country, which makes their survival essential (Tshabalala, 2007:1). However, most SMEs in South Africa are failing to either break-even or survive. As shown by a research study conducted by Bowler, Dawood and Page (2007:7), 30 percent of new business ventures fail in their first year, 60 percent in their second year, and 90 percent in their first 10 years of existence, with the pattern set to continue in the next two decades unless serious interventions are initiated. Bosch *et al.* (2006:663) observe that the SME failure rate in South Africa is very high, with 80 percent failing within their first five years of existence. Another report by Chimucheka and Rungani (2011:5510), mentions that the number of SME failures in South Africa by the fifth year vary between 50 percent and 95 percent, which culminates in an average 71 percent of all SMEs either going into self-liquidation or filing for bankruptcy within just five years of existence. Besides depicting a high failure rate, these statistics demonstrate that SMEs in South Africa are overwhelmed by certain challenges in their operations. In order to generate solutions, it is necessary to employ scientific research methods first to identify these challenges. Management solutions are one way of mitigating these failures. The proposed study will examine whether organisational agility could be one of the underlying factors that could be manipulated in order to stimulate better growth of and business performance of SMEs in the Gauteng province in South Africa.

Despite the availability of previous research studies focusing on small enterprises in South Africa (for example, Abor & Quartey, 2010:218-220; Herrington, Kew & Kew, 2010:113; Timm, 2011:11), one major research gap still exists, which creates a need for further research in the area. This gap pertains to the scant evidence of studies that focus on the influence of organisational agility to the business performance of small to medium enterprises in the context of South Africa. The few empirical studies that are an available focus on specific categories of challenges faced by SMEs and completely disregard the dimensions proposed in this study. For instance, a study by Cant (2012:1109) directs its exclusive attention to marketing challenges only, while Manzani and Fatoki (2012:31) exclusively focus solely on the mobilisation of finance. Thus, the proposed study is intended to address these manifest gaps by investigating how various facets of organisational agility can be harnessed to

improve the business performance of SMEs in the Gauteng province, thereby boosting their chances of survival in the unpredictable operational climate of today.

In addition to the abovementioned aspects, it is necessary to conduct this study because it is significant in a number of areas. To future researchers on similar topics, this study may serve as an important source of literature on management challenges faced by SMEs in South Africa and information on research methodologies that may be employed when investigating similar issues. Given the well-known contributions of SMEs to the economy of South Africa, this study will serve as an important source of information on the management challenges faced by small and medium enterprises and how to address them. Government as well as industry authorities and other relevant bodies interested in SMEs may also refer to the findings of this study as they seek approaches to enhance the sustainability of SMEs. With reference to managerial implications of the study, managers in SMEs will be provided valuable insights that may be applied in the management of SME operations, thereby ensuring their survival and viability. The study, therefore, has several important theoretical, economic and management implications attached to it.

1.3 RESEARCH OBJECTIVES

For the purposes of this study, research objectives were classified into three categories, which are the primary objective, theoretical objectives, and empirical objectives.

1.3.1 Primary objective

The primary objective of this study was to investigate the contributions of organisational agility towards the business performance of SMEs in the Gauteng province in South Africa.

1.3.2 Theoretical objectives

In order to achieve the primary objective, the following theoretical objectives were set for the study:

- to conduct a literature review on SMEs;
- to explore literature on organisational agility and its sub-elements such as technology capability, collaborative innovation, organisational learning and internal alignment; and
- to analyse literature on business performance.

1.3.3 Empirical objectives

The theoretical objectives stated in Section 1.3.2 were supported by the following empirical objectives:

- to determine perceptions of owners and managers of SMEs towards organisational agility and business performance in their businesses;
- to investigate the influence of organisational agility on the technological capability of SMEs in the Gauteng province;
- to establish the influence of organisational agility on the collaborative innovation of SMEs in the Gauteng province;
- to establish the influence of organisational agility on the organisational learning of SMEs in the Gauteng province;
- to establish the influence of organisational agility on the internal alignment of SMEs in the Gauteng province; and
- to determine the influence of organisational agility on the business performance of SMEs in the Gauteng province.

1.4 CONCEPTUAL FRAMEWORK AND SUMMARY OF HYPOTHESES

The study tested the conceptual framework illustrated below, which shows that technology capability, collaborative innovation, organisational learning and internal alignment are the drivers of organisational agility. In turn, organisational agility exerts an influence on business performance of SMEs.

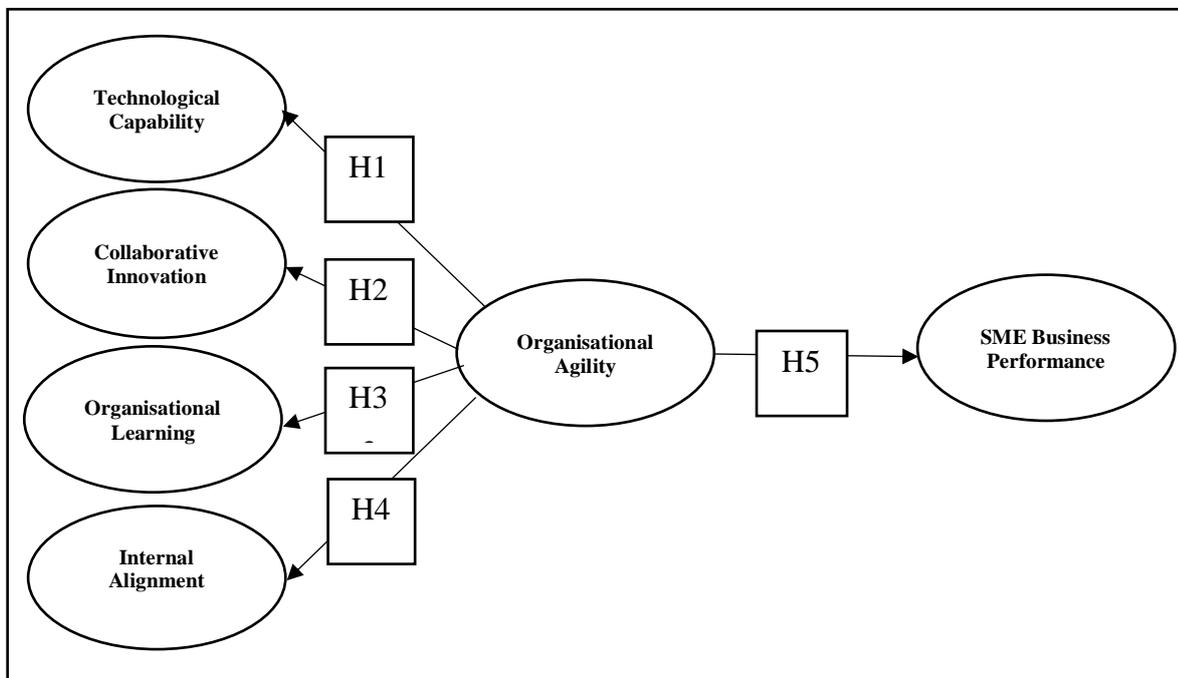


Figure1.1: Conceptual framework of the study

The study also focused on testing the following hypotheses, as indicated in the conceptual framework:

H1: Organisational agility positively influences technological capability of SMEs in the province of Gauteng.

H2: Organisational agility positively influences collaborative innovation of SMEs in the province of Gauteng.

H3: Organisational agility positively influences organisational learning of SMEs in the province of Gauteng.

H4: Organisational agility positively influences internal alignment of SMEs in the province of Gauteng.

H5: Organisational agility positively influences the business performance of SMEs in the Gauteng province.

1.5 LITERATURE REVIEW

1.5.1 Organisational agility

Organisational agility can be defined as a firm-level ability to continuously adjust and adapt key decisions to the challenging circumstances of the external environment and thus nurture value creation (Winby & Worley, 2014:1). A strategically agile firm can contemporarily maintain commitment and preservation of the momentum towards ambitious objectives, while at the same time is flexible enough to quickly and cost-effectively respond to external changes and capture new business opportunities (Doz & Kosonen, 2010:1). At its very heart, agility's main goal is that of integrating diverging strategic objectives, i.e. focus and adaptability, commitment and flexibility, operational excellence and responsiveness to breakthrough innovation opportunities (Di Minin, Frattini & Bianchi, 2014:1). The new business environment favours innovation and agility, which means that companies must not only execute novel ideas once but also do so repeatedly (Alvesson & Sandberg, 2011:251). Therefore, the ability to generate novel ideas, develop viable products, services, or processes, and drive new value for the corporation is an important condition for the sustenance of organisations.

1.5.2 Technological capability

Technological capability is the ability to make effective use of technological knowledge in assimilating, using, adapting, and changing existing technologies (Zhou & Wu, 2010:549). Technological capability through innovation is critical in allowing firms to learn and adapt to turbulent environments and achieve a sustainable competitive advantage (Noh, Kim & Jang, 2014:5). Both product and process technologies are often emphasised to pursue changeover flexibility, an ability to replace obsolete products and processes with new ones quickly. Advanced manufacturing

processes and information technologies are essential for agile manufacturing (Shin, Lee Kim & Rhim, 2015:184).

A firm's technological capability is developed over time and accumulated through its experience. It reflects the firm's abilities to employ various technical resources (Noh *et al.*, 2014:5). Firms with a superior technology capability in a particular field are more likely to search more local neighbourhood information and elicit their existing knowledge stores to achieve immediate advantage manufacturing (Shin *et al.*, 2015:184). SME ventures with strong technological capabilities tend to engage in more exploitation alliances to gain access to complementary assets such as manufacturing and marketing resources to commercialise its new products (Zhou & Wu, 2010:549).

1.5.3 Collaborative innovation

Collaborative innovation refers to all the relevant activities necessary to design and implement new processes or to improve the existing process – a firm's ability to reconfigure an effective sequence of tasks to meet internal and external requirements (Camarinha-Matos, Afsarmanesh, Galeano & Molina, 2009:46). Participation in networks has nowadays become very important for any organisation that strives to achieve a differentiated competitive advantage, especially if the company is small or medium-sized (Shin *et al.*, 2015:185). Collaboration is a key issue to rapidly answer market demands in a manufacturing company through sharing competencies and resources (DeGroote & Marx, 2013:909).

Collaboration is increasingly recognised as an important source of competitive advantage as firms are required to work together more closely to meet the challenges of uncertain and volatile markets (Camarinha-Matos *et al.*, 2009:46). It enables a firm to achieve a level of agility that is not obtainable on its own by leveraging the entire supply chain to respond more effectively to market changes (Shin *et al.*, 2015:185). By collaborating with its external stakeholders, a firm can improve its ability to align supply and demand while ensuring costs are under control (DeGroote & Marx, 2013:909).

1.5.4 Organisational learning

Organisational learning encompasses the creation, adaptation, and replication of knowledge and leads to accumulation of knowledge over time. Knowledge-intensive organisations are those that are repeatedly creative, versatile, and excellent in problem-solving (Shin *et al.*, 2015:185). Contrary to the planning school, the 'learning school' prescribes avoiding prediction as much as possible, but focuses rather on responding to change events as they emerge. This strand emphasises quick adaptation: it suggests that firms maximise their profits by minimising the use of predictive rationality, and by experimenting instead, to be able to move quickly to capture emerging

opportunities (Vecchiato, 2014:1). Learning theory focuses on how a firm builds its knowledge base over time and deploys its stock of knowledge to achieve success, including creating wealth (Ketchen, Ireland & Snow, 2007:371).

1.5.5 Internal alignment

Internal alignment offers a multidimensional view of the intricate complexities of internal networks, processes and connections to the external environment. For example, alignment identifies opportunities for creating synergy between different functions, processes, products and customer groups (Alagaraja & Shuck, 2015:18). Alignment also highlights the importance of recognising the existing fit between goals and objectives with individuals, work teams, departments and the whole organisation (Alagaraja & Shuck, 2015:18). Internal alignment is important both vertically, that is, from the CEO level to the factory floor, and horizontally, that is, across departmental silos (Sisco & Wong, 2008:5). Alignment in a broad sense can translate into the issue of strategic congruence, which is the degree to which a firm's goals, objectives, needs, and structure are consistent with one another. Proper internal and external fits have the effect of strengthening a firm's ability to understand the environment and react in time to permit necessary organisational adjustments (UK Essays, 2013:1). Internal alignment aims for an idealistic stage in which the leadership and the functional units demonstrate a high level of unity and agreement concerning the strategic importance of competing priorities. Internal alignment is imperative, especially for SMEs because most SMEs are owner-controlled (Shin *et al.*, 2015:185).

1.5.6 Business performance

Generally, the concept of performance describes how individuals, as well as groups, conclude to achieve an aim (Wales, Plarida & Patel, 2013:622). The notion of business performance is demonstrated through the fulfilment of tasks by an organisation's prominent employees (Shin *et al.*, 2015:165). This explains why organisational success is directly proportional to collective employee performance (Ledwith & O'Dwyer, 2014:53). Business performance describes the level of fulfilled tasks of the business's aims or targets as determined by outputs obtained at the end of a particular business period (Yıldız, 2010:180). Business performance can be measured by either subjective or objective scales (Darwish & Singh, 2013:678). However, in most previous studies, both subjective and objective methods are used in combination to offset the shortcomings of either method (Muduli, 2015:243). It has become evident that while profitability, sales and market share are the most used criteria in subjective methods, Return on Assets (ROA) and Return on Earnings (ROE) are the most frequently used in the objective method (Yıldız & Karakaş, 2012:1094). Although scholars and

practitioners have developed various measurement methods of business performance, there is still no single universal valid method that is applicable in all contexts.

1.6 RESEARCH DESIGN AND METHODOLOGY

1.6.1 Research design

The research design involves planning, preparation and execution of a research project (Saunders, Lewis & Thornhill, 2003:389). It encompasses the activities of collecting and analysing data, developing and modifying the theory, elaborating or refocusing the research questions, identifying and addressing validity threats (Remenyi, Williams, Money & Swartz, 2005:15). This indicates that the research design process covers all issues from theoretical reading, methodology, empirical data gathering, analysis and the writing process (Creswell & Miller, 2000:124).

This study adopted a quantitative research design. Remenyi (2013:213) defines quantitative research as research, which employs mathematical and statistical techniques. Mustafa (2010:252) states that quantitative research is based on the measurement of quantity. According to Adams, Khan and Raeside (2014:7), quantitative research refers to the type of research that is based on the methodological principles of positivism and neo-positivism, and adheres to the standards of a strict research design developed prior to the actual research. Quantitative research is used in almost every sphere of life, such as in clinical, biological, sociological and business research. In this study, the research design consists of a literature review and an empirical study.

1.6.2 Literature review

The literature review serves to inform whether the problem identified has been researched previously, provides ideas on how to proceed, assists in designing the study, points out methodological problems that may be encountered, and identifies appropriate data collection instruments (Zikmund, 2008:302). For the purposes of this study, literature related to SMEs was reviewed and was sourced from various journal articles, textbooks, magazines, newspapers, and the Internet. Electronic Databases such as Emerald, Science Direct, EBSCO-Host, Nexus, Sabinet and SAGE were also used as sources of literature.

1.6.3 Empirical study

The empirical study entailed application of the following procedures:

1.6.3.1 Selection of respondents

Respondents were employees, managers and owners of SMEs based in the Gauteng province in South Africa. To determine the sample size, the historical reference technique was used. Several previous studies (Chae, Koh & Prybutok, 2014; Leitner & Guldenberg, 2010; Yildiz, 2010) that focused on factors determining business performance, used sample sizes ranging between 400 and 600 respondents. In view of this, it was envisaged that a total of $n = 600$ respondents was sufficient for this study. The probability sampling approach, using the simple random technique was used in order to select the respondents from the target population (SMEs in the Gauteng province).

1.6.3.2 Data collection methods

For the purposes of this study, data was collected using a structured questionnaire. Remenyi (2013:92) states that in academic research, a questionnaire is a data or evidence collecting device that consists of a list or series of specific questions, which when answered by an appropriate informant or group of informants, will lead a researcher to a greater understanding of the research objectives and provide insight into possible answers. Graziano and Raulin (2010:289) indicate that questionnaires begin with an introduction, which explains the purpose of the survey and gives instructions to the respondent. The questions fell into two main categories: demographic and content questions. Demographic questions sought descriptive information about the respondents, such as age, gender, occupation, marital status, amongst others. Most items on the questionnaire were content items, which asked about the respondents' opinions, attitudes, knowledge, and behaviour.

Content questions focusing on technology capability were adapted from Choi and Harley (1996), Lee, Lee and Pennings (2001), Liker and Choi (2004), Choi and Krause (2006) and Kitapci and Celik (2014). Questions on collaborative innovation were adapted from studies conducted by Burges (1994), Ahuja (2000), Liker and Choi (2004), Narasimhan, Swink and Kim (2006), Swafford, Ghosh and Murthy (2006a), Inman, Sale and Green, (2011), Krause, Schutte and Du Preez (2012), and Bukhamsin (2015). Questions focusing on organisational learning were adapted from studies conducted by Senge (1990), Alvesson (1995), Gold, Malhotra and Segars (2001), Fugate, Stank and Mentzer (2008), Braunscheidel and Suresh (2009), and Kitapci and Celik (2014). Questions focusing on internal alignment were adapted from studies by Boyer and McDermott (1999), Pett and Wolff (2007), Robinson and Stern (1998), Zahra and George (1999), and Hung, Yang, Lien, McLean and Kuo (2010). Organisational agility was measured using questions adapted from Gerwin (1993), Goodman, Fichman, Lerch and Snyder (1995), Anderson and Narus (2003), and Khoddami (2016). SME business performance was measured using five questions adapted from Avlontis and Gounaris

(1997), Narver and Slater (1990) as well as Santos and Brito (2012). Content questions were arranged on a five-point Likert Scale anchored by 1= strongly disagree, and 5= strongly agree.

1.6.3.4 Data analysis and statistical approach

Data were collected using self-administered questionnaires, which were distributed in person by the researcher. The cross-sectional survey approach was preferred, in which eight weeks was set aside to administer the questionnaire. The collected data was analysed using a combination of descriptive and inferential statistics. The Statistical Package for the Social Sciences (SPSS) and the Analysis of Moment Structures (AMOS) software was used in the data analysis. Descriptive statistics were used to analyse the respondents' demographic information as well as the frequencies about perceptions of respondents. A confirmatory factor analysis (CFA) was conducted to test the psychometric properties of the measurement scales. Hypotheses or relationships between variables were tested using structural equation modelling (SEM).

1.7 VALIDITY AND RELIABILITY

Reliability of quantitative data is defined as a measure of stability or consistency in a measurement instrument (Graziano & Raulin, 2010:78). It can be established by administering an instrument more than once and comparing the results or by using a statistical process that indicates the degree of consistency (Mertens, 2009:234). In this study, the reliability was determined using the composite reliability index and the Cronbach Alpha coefficient. Sources of evidence will support the findings of the questionnaire (Remenyi, 2013:128). Validity is the quality of the data-gathering instrument, which enables it to measure what it is supposed to measure (Mustafa, 2010:240). In this study, validity was established through an in-depth review of the instruments, including an examination of the instrument's items to be certain that they were accurately measuring the content or objectives being tested, and by relating scores on the instrument to other measures (Adams *et al.*, 2014:247).

1.8 ETHICAL CONSIDERATIONS

Ethical considerations are required in research to remove misconduct in scientific research (Wilson, 2010:79). Unethical activities include *among other things*, violating non-disclosure agreements, breaking participants' confidentiality, misrepresenting reports, deceiving people, using invoice irregularities and avoiding legal liabilities (Cooper & Schindler, 2008:34). In this study, the following ethical considerations were followed:

- Permission was obtained from participants who are owners and managers of SMEs in the Gauteng province to conduct interviews.

- Participants were under no obligation to complete the questionnaire. A potential participant who refused to participate in the research was excused, and the next qualifying individual was approached to participate. This ensured that the participants' right to non-participation was observed.
- All participants were adequately informed about the purpose of the study to secure their informed consent.
- The questionnaire did not contain any questions that were detrimental to the self-interest of the participants.
- The anonymity and confidentiality of the participants were protected throughout the study. Anything learnt about the participants during their involvement in the study will be maintained in confidence.
- Participants were treated with fairness and equity during all steps of the research.
- The research was conducted in a manner that ensured its academic integrity and scientific validity. Unethical practices such as fabrication and plagiarism were precluded in the process of compiling the research report.
- Permission was requested to conduct the study with the right to non-participation and protection from harm.
- The principle of benevolence was adhered to in which the researcher attempted to maximise the benefits that the research afforded to participants of SMEs by ensuring that the findings of the research will be shared with participants.

1.9 CHAPTER OUTLINE

The final thesis is divided into the following chapters:

CHAPTER ONE: Introduction and background of the study

This chapter comprises the introduction and background of the study. It highlights the problem statement, the research objectives, research methodology and the scope of the study.

CHAPTER TWO: Literature review on small and medium enterprises

This chapter discusses literature focusing on SMEs.

CHAPTER THREE: Literature review on organisational agility

This is a literature review chapter that analyses the theory behind the concepts of organisational agility and its various sub-elements such as technological capability, collaborative innovation, organisational learning and internal alignment.

CHAPTER FOUR: Literature review on business performance

This chapter analyses literature that focuses on business performance

CHAPTER FIVE: Research design and methodology

The emphasis in this chapter is on the design and research methods used in the research. The discussion focuses on the methods of sample and data collection as well as the analysis, interpretation and evaluation of the research findings.

CHAPTER SIX: Data collection, analysis and interpretation

This chapter deals with the analysis of data as well as the interpretation and evaluation of the research results.

CHAPTER SEVEN: Findings, conclusions and recommendations

This chapter concludes the study by giving an overview, suggesting some recommendations and specifying its limitations and implications for further research.

CHAPTER 2

THE NATURE OF SMALL AND MEDIUM ENTERPRISES

2.1 INTRODUCTION

The purpose of this chapter is to analyse literature on small and medium enterprises (SMEs). It starts by focusing on the definitions of SMEs globally, contributions of SMEs and challenges faced by SMEs worldwide. This is succeeded by a discussion of SMEs in Europe, with the discourse emphasizing issues such as definitions of SMEs, including contributions and challenges faced by SMEs on that continent. After that, the chapter dwells on literature on SMEs in America, discussing definitions of SMEs, with contributions and challenges faced by SMEs there. This is followed by the definitions of SMEs in Africa, including contributions and challenges faced by SMEs in Africa. The literature goes further to focus on the definitions of SMEs in South Africa, with contributions and challenges faced by SMEs in South Africa. The chapter ends with the conclusion made from the literature review on small and medium enterprises, as indicated above.

These discussions in this chapter are important because the study is conducted within the context of the SME sector. It is important for the researcher to understand the nature and structure of SMEs in different environments to undertake and complete the study successfully. Hence, this chapter was dedicated to unpacking such issues regarding SMEs globally in Europe, America, Africa and South Africa.

2.2 SMALL AND MEDIUM ENTERPRISES FROM A GLOBAL PERSPECTIVE

This section explores literature on SMEs from a global perspective. The section focuses on issues such as definitions of SMEs globally, together with their contribution and challenges faced globally.

2.2.1 Definitions of small and medium enterprises globally

The term “SMEs” encompasses a broad spectrum of definitions. Different organisations and countries set their guidelines for defining SMEs, often based on headcount, sales or assets. While Egypt defines SMEs as having more than five and fewer than 50 employees, Vietnam considers SMEs to have between ten and 300 employees. The World Bank defines SMEs as those enterprises with a maximum of 300 employees, USD15 million in annual revenue, and USD15 million in assets. The Inter-American Development Bank, meanwhile, describes SMEs as having a maximum of 100 employees and less than USD3 million in revenue (Dalberg, 2011:6). The Kenya Government Baseline Survey

defines SMEs as enterprises in both formal and informal sectors employing 10-100 workers. Small-scale enterprises are those that employ 11 to 50 workers. Medium enterprises employ 51 to 100 workers (Kedogo, 2013:3). In Malaysia, the definition of SMEs is mainly based on annual sales turnover and the total number of full time employees. SMEs in Malaysia can be segregated into three main sectors, such as general business, manufacturing, and agriculture. In Malaysia, according to the Small and Medium Enterprises Corporation (SMECORP), enterprises that employ between 50-150 full time employees are considered as medium while those that employ 5-50 are called small and less than five are considered as micro enterprises (Khalique, Isa, Shaari & Ageel, 2011:398).

Smit (2012:152) points out that although the terms SME or SMME are used interchangeably worldwide, there is no common definition of these terms. SMEs encompass a broad range of organisational entities, from family businesses employing over a hundred employees (termed medium enterprises), to survivalist, self-employed entities, that is, informal micro-enterprises. Nishantha and Padmasiri (2010:45) state that in Sri Lanka, different government agencies and other organisations use different criteria to identify SMEs. Among these criteria are the number of employees, the size of fixed investment, energy consumption, and the nature of the business and the sector (i.e. formal or informal), in which the industry operates. According to AlMaimani and Johari (2015:682-683), the definition of SMEs in Oman is given as follows:

- Small enterprises are those which employ 5-9 workers and their annual sales turnover is between USD 6,500 and USD 650,000,
- Medium enterprises are those that employ 10-99 workers, and their annual sales turnover is between USD 650,000 and USD 3,900,000.

According to Katua (2014:463), in 2005, the National SME Development Council (NSDC) in Malaysia approved the use of common definitions for SMEs in the manufacturing, agriculture and services sector by all government ministries and agencies involved in SME development, as well as by the financial institutions. Rachagan and Satkunasingam (2009:469) state that the National SME Development Council (NSDC) in Malaysia has adopted two criteria to define SMEs: number of employees and annual sales turnover. Overall, companies with less than 50 employees or with an annual turnover of up to RM25 million can be classified as SMEs. In Singapore, according to Chew and Chew (2008:334), SMEs are analysed in terms of tiny firms (less than 10 workers), small firms (less than 50 workers) and medium firms (with a workforce of 50-99).

Inyang (2013:125) points out that the European Union Standard definition for an SME is any business with fewer than 250 employees, a turnover of up to 50 million Euros and a balance sheet of about 43 million Euros. This definition may not apply to all countries since SMEs considered large in one

country may not be so in another. Karadag (2015:180) states that in the UK (United Kingdom) sections 382 and 465 of the Companies Act 2006 define an SME as “one that has a turnover of not more than 6.5 million pounds, a balance sheet total of not more than 3,26 million pounds and not more than 50 employees,” where “a medium-sized company has a turnover of not more than 25.9 million pounds, a balance sheet total of not more than 12.9 million pounds and not more than 250 employees.”

SMEs have been identified differently by various individuals and organisations, such that an enterprise that is considered small and medium in one country is viewed differently in another country. Some common indicators employed in the various definitions include total assets, size of the labour force employed, and annual turnover and capital investment (Bouazza, Ardlouman & Abada, 2015:102). In the Australian context, a small business or enterprise is one that employs up to 20 staff while an SME is a business that employs up to 200 staff. By this definition, more than 99 per cent of all actively trading businesses in Australia are SMEs (Walker, Redmond, Sheridan, Wang & Goeft, 2008:4).

Karedza, Nyamazana, Mpofu and Makurumidze (2014:39) indicate that the Ministry of Small and Medium Enterprises and Cooperative Development’s (MoSME & CD) policy document has defined an SME in Zimbabwe as a legal business entity, which considers the following factors:

- has a turnover of less than USD 800,000;
- is not a subsidiary or branch or associate of a large business organisation; and
- has a maximum number of full-time permanent employees given as follows:

Table 2.1: Sectors of the economy

| Sector/sub-sector of the economy | Size | Maximum total number of full-time employees |
|--|-----------------|---|
| Agriculture, manufacturing and mining | Small Medium | 50 100 |
| Construction, transport, retail, tourism catering, arts and crafts, wholesale, and fisheries | Small Medium | 30 50 |

Source: Karedza *et al.* (2014:39)

2.2.2 Contributions of small and medium enterprises globally

The potential benefits of SMEs to any economy include: a contribution to the economy in terms of output of goods and services; creation of jobs at a relatively low capital cost; provision of a vehicle for reducing income disparities and development of a pool of skilled and semi-skilled workers as a basis for future industrial expansion (Gwangwava, Manuere, Kudakwashe, Tough & Rangarirai, 2010:7). SMEs provide employment opportunities to help generate dynamism by enabling the entrepreneurial capability to be realised while using locally produced raw materials. As such, SMEs can provide relief from the vicious circle of poverty. Small businesses furthermore contribute many innovative ideas and technological breakthroughs to society (Wijesinghe, Elijido-Ten & Foreman, 2012:245). They are now considered the major source of dynamism, innovation and flexibility in emerging and developing countries, as well as to the economies of most industrialised nations. They subsequently contribute substantially to economic development and employment generation (Chin, Hamid, Rasli & Baharun, 2012:614).

Dube (2013:371) states that small and medium scale enterprises are considered important in both developed and developing countries. They produce goods and services, which help to increase economic growth and contribute significantly to employment creation. Bayarcelik, Tasel and Apak (2014:202) point out that SMEs are essential elements of an economy, which is responsible for driving innovation and competition in many economic sectors. Smit (2012:156) indicates that SMEs in Canada, the United States of America and various European countries play a major role in employment creation, therefore contributing to social stability. In East Asian countries, especially Japan, Taiwan and Korea, SMEs have a significant influence on the economy. Research has shown that where SMEs play a major role in the economy, both growth and income distribution performance are positively influenced.

According to Liu, Li and Zhang (2012:372-373), in Italy, Japan and France, the number of SMEs account for 99 per cent of the total number of enterprises. In the United States, there are more than 2000 million SMEs, accounting for 98 per cent of the total number of enterprises and they have a significant number of large enterprises. In Germany, SME-related export values account for over 60 per cent of the economy. Smit (2012:157-158) indicates that SMEs can make an important contribution to a country's performance, whether it is in the United States of America, Japan, developing East Asia, Africa, or Latin America. The important role in a country's economy is attributed to SME flexibility and ability to innovate and has the potential to provide employment opportunities and support large-scale manufacturing enterprises. Smit (2012:161) states that internationally, the economic potential for wealth distribution, economic growth and employment

opportunities are recognised as value-adding capabilities of SMEs. Governments have been and are in the process of assisting SMEs for various reasons such as:

- SMEs can absorb labour, which is usually drawn from an unskilled workforce.
- SMEs provide an opportunity and testing basis for the development of entrepreneurial traits such as entrepreneurship and innovation.
- SMEs employ local technology and accommodate the needs of poor people, arguably to a greater extent than the output delivered by larger enterprises using foreign technology.
- SMEs' profits are not tied to long production runs, and as a result, they can produce smaller quantities of goods to regional or local markets.
- SMEs are geographically dispersed across the country, ensuring a distribution of employment opportunities.
- Local resources such as technology, raw material, equipment, etc. are more likely to be used by SMEs, reducing the demand for foreign exchange.
- Scarce resources such as capital and managerial skills are used to a lesser extent by SMEs than larger enterprises. However, even though SMEs require less managerial resources, they do need competent management to survive.

Katua (2014:465) indicates that economic growth in developed countries such as Japan, Korea, Taiwan and many others, was significantly generated by SME activities. The percentage contribution of SMEs to the Gross Domestic Product (GDP) total value-added, ranges from 60 percent in China, 57 percent in Germany, 55 percent in Japan and 50 percent in Korea, compared to 47 percent attained in Malaysia. Katua (2014:465) further indicates that the contribution of SMEs' output in Japan is 65 percent, Germany 48 percent while USA is 45 percent. SMEs in the USA generate more than half of the nation's gross domestic product.

According to Singh, Garg and Deshmukh (2010:54), SMEs are considered as the backbone of economic growth in all countries because they account for 80 percent of global economic growth. SMEs generally employ the largest percentage of the workforce and are responsible for income generation opportunities. These enterprises can also be described as one of the main drivers for poverty alleviation. Rachagan and Satkunasingam (2009:468) state that small and medium enterprises are an important part of the Malaysian economy as they represent 99 percent of total business establishment in Malaysia and account for about 65 percent of the total employment in the labour market. SMEs' contribution makes up 18 percent of the total export value and 32 percent of the gross domestic product.

Chew and Chew (2008:334) indicate that in Singapore in 2005, small firms accounted for 52 percent of the total number of establishments but contributed to only 4 percent of total employment in the manufacturing sector, about 5 percent of total value added and less than 2 percent of direct exports. From this perspective, it can be seen that even though entrepreneurship is strong in the manufacturing sector, the economic contribution is small. Inyang (2013:125-126) points out that SMEs make a significant contribution to the economies of both developed and developing nations in terms of employment generation and development impacts. SMEs comprise approximately 90 percent of Canadian business and employ almost half of the Canadian workforce. The National Development Reform Commission of China reports that SMEs contribute considerably to income growth, employment growth, export expansion and economic structure optimisation. It further states that until 2006, SMEs provided 45 percent of employment in townships and contributed to 60 percent of the Gross Domestic Product of China.

According to Inyang (2013:125-126), the Asian Association of Management Organisation in its report of 2007, notes that SMEs in the Asia-Pacific region remain a critical source of employment and income creation, providing more than 60 percent of jobs. The Australian Bureau of Statistics 2007 notes that SMEs, which are made up of firms with less than 200 employees, account for 95 percent of all Australian commercial organisations. Karadag (2015:179) states that in Eurozone, 98 percent of all enterprises fall into small and medium enterprise categories and supply 67 percent of total employment and 58 percent of gross value added.

Inyang (2013:125-126) indicates that SMEs constitute 90 percent of enterprises and account for at least half of the employment in developing countries. Overall, SMEs are known to constitute more than 90 percent of business worldwide and account for between 50 and 60 percent of employment and more than half of gross domestic product. Rodriguez-Gutierrez, Moreno and Tejada (2015:194-195) state that between 90 and 99 percent of firms worldwide are SMEs, of which, the majority are very small or even micro-enterprise firms. Emerging business practices, such as flexible production, downsizing, outsourcing and franchising, support the trend towards SMEs, and as a result, they play an increasingly significant role in stability, job creation and economic development of a nation.

Karadag (2015:179) indicates that SMEs are not only vitally important for the developing economies but also crucial with their large share in advanced economies. Within the Organisation for Economic Co-operation and Development (OECD), more than 95 percent of all registered enterprises are SMEs, which in economic units account for more than half of the total private sector employment. Nurrachmi, Samad and Foughali (2012:5) point out that according to findings of the Turkish Statistical Institute for 2008, there are 3,449,795 small and medium enterprises, and 2,968 large-scale

enterprises. Ninety-nine percent of all businesses are SMEs, which make up 81 percent of employment, 58 percent of value added and 60 percent of total production value.

Data from the developed and developing countries has revealed that the SMEs' sector is an active and vibrant force for economic growth, innovation and job creation. Specifically, in developing countries, SMEs are not only important because they create jobs but also because they create employment for the unskilled workforce, who happens to be overly abundant (Ngek, 2014:253). Micro enterprises contributed to 58 percent of total employment growth in the European Union between 2002 and 2010. On average, employment growth in the EU amounted to 0.9 percent annually. In both large (0.5 percent) and medium (0.7 percent) enterprises, job growth was below average, while small enterprises contributed on a par with the overall average. Micro enterprises in particular experienced above average employment growth (De Kok, Vroonhof, Verhoeven, Timmermans, Kwaak. Snijders & Westhof, 2011:7).

SMEs contribute considerably to job creation, social stability, economic welfare and the improvement in the quality of people's lives across the globe. In Japan, the SME sector accounts for the bulk of the country's business establishment, providing vital support for employment, regional economies and the extension of the day-to-day life of the Japanese people. In Taiwan, the SME sector generates approximately 98 percent of the economy's GDP (Aigbavboa & Thwala, 2014:771). SMEs make up 95 percent of all corporations in Asia, employing up to 80 percent of the labour force and constitute almost 60 percent of the Gross Domestic Product (Luiz & Mariotti, 2011:49).

In the case of Spain, according to the Ministry of Industry, Energy and Tourism, SMEs represent 99 percent of the total number of enterprises (78.1 percent concentrated in the services industry) and are responsible for 64 percent of total Spanish employment and 66 percent of the GDP (Rodríguez-Gutiérrez *et al.*, 2015:194-195). There is evidence that the contribution made by SMEs is more pronounced in developing than in developed countries. Under the right conditions, a robust SME community has the capacity to be a dynamic, transformational force since, in the words of the World Bank, "relative to larger firms, SMEs enhance competition, entrepreneurship, job growth and spur economy-wide efficiency, innovation growth and poverty alleviation" (SBP Alert, 2013:1-2).

2.2.3 Challenges faced by small and medium enterprises globally

Although SMEs play a crucial role in economic growth and employment, their operations are often crippled by lack of adequate financing from financial institutions. For the economy to grow, there is a need for firms to operate efficiently in production. This can be achieved when firms have enough funds for investment in productive new technologies (Dube, 2013:372-373). New SMEs face many difficulties accessing alternative funding, which have increased over the past five years. Banks have

been less willing than normal to provide loans to new companies as a result of the financial crisis that started in 2007. Nowadays, access to finance represents one of the most significant challenges for SMEs (Rupeika-Apoga, 2014:513-514). In general, when businesses fail, the focus is on the financial skills issue rather than on other issues. It is mostly assumed that businesses fail due to cash flow, or not enough revenue without thinking of the other contributing aspects to such a specific situation (Cant, 2012:1108).

SMEs in developing countries, however, face significant barriers to finance. Financial constraints are higher in developing countries in general, but SMEs are particularly constrained by gaps in the financial system such as high administrative costs, high collateral requirements and lack of experience within financial intermediaries (Dalberg, 2011:9). SMEs should mainly focus on overcoming challenges, which include, among others, recession, barriers from global sourcing, low productivity, lack of managerial capabilities, lack of financing, difficulty in accessing management, technology and a heavy regulatory burden (Khalique *et al.*, 2011:399). The obstacles hindering the development of SMEs are currently a topical issue, especially in developing countries as governments seek ways to improve the efficiency in the operating environment of SMEs (Karedza *et al.*, 2014:38).

It is of interest to note that inequalities do exist among SMEs with some SMEs flourishing in the current economic climate, while others are struggling to survive. Furthermore, growth rates for smaller enterprises are higher, although their probability of survival is lower (Smit, 2012:156). SMEs face unique problems of uncertainty, innovation and evolution. The most important problems are political instability, the law and order situation, financial constraints, energy crisis, taxation problems, labour issues, lack of coordination and regular information exchange mechanisms among institutions (Katua, 2014:467). SMEs lack research capacity and the ability to take substantial risks or any other advantage of expansion. Most SMEs cannot also take insurance cover to cushion them against risks. Furthermore, due to their small size, they lack a sound financial position and experience and are less capable of adjusting and carrying on successful businesses (Katua, 2014:467).

Smit (2012:171) indicates that entrepreneurs usually experience difficulty in identifying factors, which impede their enterprise growth. Problems experienced by SMEs can be categorised as follows:

- Economic problems: problems relating to the state of the economy, e.g. employment opportunities.
- Industrial-related problems: problems relating to the type of industry in which the enterprise operates, which may include demand and supply factors, obstacles to entry and level of competitiveness in the industry.

- Enterprise-based problems: problems relating to internal difficulties experienced by the enterprise such as resource availability, i.e. finance, entrepreneurship and the effective use of these resources.

Banks and financial institutions are reluctant to provide credit lending to SME sectors due to the riskiness of early-stage venture regarding insufficient assets, having no proven track record and low capitalisation (Wonglimpiyarat, 2015:296-297). The Turkish Industrial Strategy Document stated that SMEs have difficulty in acquiring access to finance due to four main reasons: problems arising from the credit limit given by the banking sector due to the financial revamp in 2001; insufficient development of the capital market; weaknesses of SME structure; and administrative and legal obstacles to access finance (Nurrachmi *et al.*, 2012:7). Within the growing but fragile Turkish economy, SMEs continue to experience serious challenges, particularly due to the severe economic crisis of the last three decades, which seriously impaired the economy and forced the Turkish government to take radical steps towards attaining a more stable economy and sustainable growth (Karadag, 2015:179).

Constraints on Chinese SMEs include low levels of technology, a lack of skilled workers, the low level of management expertise, the lack of access to international markets, unsupportive legislation, ineffective incentive policies and lack of financing, and are constant headaches for SME managers (Singh *et al.*, 2010:56). In India, managers of SMEs face major pressure to reduce costs, improve product quality, and deliver goods and services on time. Moreover, Indian SMEs operate generally in an unsupportive environment (Singh *et al.*, 2010:56). In Algeria, SMEs face numerous and serious challenges to their growth, such as the cumbersome legal and regulatory constraints; lack of access to external financing; low human resources capacities; lack of management skills and training; and low technological capacities (Bouazza *et al.*, 2015:102).

This section discussed literature on SMEs from a global perspective. It emerged that internationally, the economic potential for wealth distribution, economic growth and employment opportunities are recognised as value-adding capabilities of SMEs. However, the major challenge faced by SMEs is the lack of adequate financing, as most financial institutions are unwilling to extend loans to SMEs, since the beginning of the global economic crises in the mid-2000s. Consequently, inequalities exist amongst SMEs, with some SMEs flourishing in the current economic climate, while others are struggling to survive. The next section discusses literature on SMEs in Europe.

2.3 SMALL AND MEDIUM ENTERPRISES IN EUROPE

This section analyses literature on SMEs in Europe. Issues that include the definitions of SMEs in Europe, their contribution to the economy, as well as challenges they face on that continent, are discussed.

2.3.1 Definition of small and medium enterprises in Europe

Companies are classified as SMEs by the European Union (EU) if the number of their employees does not exceed 250 and if they are independent from large companies. In addition, their annual turnover may not be beyond 50 million euro, or their annual balance sheet beyond 43 million euro. (Braun & Hadwiger, 2011:S90). The European Union definition is: “The category of micro, small and medium-sized enterprises is made up of enterprises which employ fewer than 250 persons and which have an annual turnover not exceeding 50 million euro, and/or an annual balance sheet total cost not exceeding 43 million euro” (Dalberg, 2011:6). SMEs are further subdivided into micro, small and medium-sized enterprises (50 to 249 employees). Larger enterprises are defined as those with 250 or more employees (D’Imperio, 2012:37).

The European Union’s Director General (DGXXIII), on the other hand, defines businesses as follows: micro (0 to 9 employees), small (10 to 99 employees), medium (100 to 499 employees), and large (500+ employees) (Anderson, 2011:200). The Department of Trade and Industry in the UK and governments all around the EU usually use the following definitions: micro firm: 0 to 9 employees; small firm: 10 to 49 employees; medium firm: 50 to 249 employees and large firms: over 250 employees (Katua, 2014:464).

In the SME definition of the European Union (EU) enforced on 1 January 2005, there is an “independence” dimension, together with the criteria of annual turnover and stated number of employees, where an independent SME is described as “the one where 25 percent or more of the enterprise’s capital (or equity) is not undertaken by an enterprise or that its capital is not owned by enterprises that are not defined as SMEs” (Karadag, 2015:180). SMEs also include people who are self-employed (with or without employees) and family businesses, irrespective of their legal form, as long as they engage in economic activity and can be considered an autonomous/independent entity (Eurofound, 2013:7).

2.3.2 Contributions of small and medium enterprises in Europe

SMEs are the backbone of Europe’s economy: there are 23 million SMEs in Europe representing around 99 percent of all undertakings, and 57 percent of them are sole proprietorships. They provide two thirds of the total private-sector employment, represent 80 percent of the total job creation and

produce more than half of the European Union added value (Lopriore, 2009:31). SMEs in Europe account for 99 percent of all enterprises, employ 67 percent of all workers and contribute 58 percent of gross value added (GVA) (D’Imperio, 2012:7). According to 27 EU member states, SMEs are responsible for 62 percent of the workforce, and 59 percent of gross value added. It is essential to notice that its gross value-added share into the gross domestic product (GDP) accounts for almost 51 percent (AlMaimani & Johari, 2015:678).

In the European Union, SMEs are economically important with 98 percent of an estimated 19.3 million enterprises defined as SMEs, providing around 65 million jobs. The average European business employs four people, including the owner/manager. SMEs account for roughly two-thirds (66 percent) of employment within the EU (Katau, 2014:466). There are 20.5 million enterprises in the European Economic Area (EEA) and Switzerland, employing 122 million people (Katau, 2014:466).

Ninety-nine (99) percent of all European Union enterprises are SMEs, employing almost 100 million people. This strong SME base, through its taxation on profit and wages, provides support (through their monetary contributions) to the social needs of European countries (Smit, 2012:156). The European Union Commission Report of 2005 notes that SMEs contribute greatly to the economy of Europe; 99 percent of all companies are SMEs, which provide around 75 million jobs and in some industries like textile, construction and furniture, they provide around 80 percent of jobs (Inyang, 2013:125).

Between 2002 and 2010, the net employment in the EU rose substantially, by an average of 1.1 million jobs (or 0.9 percent) each year. Eighty-five percent (85 percent) of this net employment growth was registered as employment growth in the SME size class. This share is considerably higher than the share of the SME size class in total employment, which was 67 percent in 2010 (De Kok *et al.*, 2011:6). SMEs play an even more prominent role in Italy, Portugal and Spain, where they account for 20 percent more employment than the European average. Sustained economic recovery in Europe thus hinges on restoring the health of SMEs across the EU (Tran & Ott, 2013:1).

2.3.3 Challenges faced by small and medium enterprises in Europe

Eurozone firms perceive that their clients have the least difficulty dealing with regulation and licensing in their home country, with 33 percent saying that this is not a problem. The same group, however, see their clients as having a major challenge in dealing with regulators and licensing in other countries – 34 percent doing so – more than the countries in the rest of Europe and the rest of the world (D’Imperio, 2012:25). According to a 2008 study by the European Commission, most difficulties encountered by SMEs are related to the amount of administrative burden, the access to

sufficient finance, the level of taxation and access to public procurement (Lopriore, 2009:31). Financing of SMEs is limited, particularly when compared to commercial debt for large firms and microfinance. When asked to name the most severe obstacle to growth, SMEs worldwide listed financing constraints as the second-most-severe obstacle, while large firms placed it only fourth (Dalberg, 2011:9).

SMEs in many member states have experienced an increasing reluctance from private banks to lend them money. Between 2007 and 2010, the share of unsuccessful loan applications of SMEs rose in 19 of the 20 Member States. In 2010, the highest shares of unsuccessful applications were found in Bulgaria (36 percent), Ireland (27 percent), Latvia (26 percent), the Netherlands (23 percent), Lithuania and the UK (21 percent each), while the lowest shares were in Finland, Malta, Cyprus, Poland and Italy (up to 5 percent each) (Eurofound, 2013:58). SMEs in the euro area experienced a further deterioration in the availability of bank loans and overdrafts between April and September 2012, even if the level was better than in 2009. Some 15 percent of SMEs reported that their loan application was rejected (compared to 13 percent in the same period of 2011), being the highest level since 2009. The highest rejection rates were found in Greece, Ireland, the Netherlands and Portugal, while acceptance was high in Austria, Finland and Germany (Eurofound, 2013:58).

This section discussed literature on SMEs from a European perspective. It emerged that definitions of SMEs differ in different European countries, depending on issues such as the type of organisation, headcount, sales and assets. The literature also showed that SMEs are an important contributor to the European economy through their creation of employment opportunities, improvement of local technology, output diversification and development of entrepreneurship. The literature further revealed that most difficulties encountered by SMEs in Europe are related to the level of administrative burden, the access to sufficient finance, the level of taxation and access to public procurement. The next section discusses literature on SMEs in America.

2.4 SMALL AND MEDIUM ENTERPRISES IN AMERICA

This section focuses on SMEs in American countries. The section assesses issues such as definitions of SMEs in America, their contribution and challenges they face.

2.4.1 Definitions of small and medium enterprises in America

The Inter-American Development Bank describes SMEs as having a maximum of 100 employees and less than USD3 million in revenue (Dalberg, 2011:6). In America, small enterprises have fewer than 100 employees, and medium enterprises have fewer than 500 employees (D'Imperio, 2012:9). SMEs in the United States comprise firms with fewer than 500 employees (Gwangwava *et al.*, 2010:7).

Companies from 1 to 500 employees are defined as small to medium-sized enterprises (SMEs) and represent the vast majority of United States' businesses (Ghosh, Lucy & Lepage, 2012:3).

2.4.2 Contributions of small and medium enterprises in America

SMEs play a major role in the USA (United States of America), account for 98 percent of all enterprises and employ 50 percent of the workforce (AlMaimani & Johari, 2015:678). There are more than 2000 million SMEs, accounting for 98 percent of the total number of enterprises, although America is famous for its large enterprises (Liu *et al.*, 2012:372). The SME sector is the backbone of the economy in high-income countries. Researchers and practitioners agree that SMEs are crucial contributors to job creation and economic growth in both high and low-income countries (Dalberg, 2011:7).

SMEs represent 50 percent of the jobs in the United States (excluding the non-farm private sector). These non-farm sector SMEs with fewer than 100 employees totalled 36 percent of non-farm employment in the USA and 71 percent of total SME employment. Consequently, the vast majority of jobs are generated by SMEs (Ghosh *et al.*, 2012:3). Small firms employ half of the private sector workforce – about 120 million people. Since 1995, small employers have created about two out of every three net new jobs – 65 percent of total net job creation. Small businesses in the US are also instrumental to its innovation economy; produce 13 times more patents per employee than larger firms produce and employ more than 40 percent of high technology workers (Mills & McCarthy, 2014:10).

Entrepreneurs in the US are respected for their role in creating new jobs, providing competition to existing businesses, improving product quality, reducing prices and introducing new goods and services through innovation and technology advancement (Katua, 2014:466). Small businesses represent more than 99 percent of all employees, engaging 52 percent of private sector employees (Inyang, 2013:125). This history of the explosion of job creation by SMEs is directly linked to important initiatives taken to promote entrepreneurship in the US. Creating jobs and fighting unemployment was a direct result of the promotion of centres and institutions of entrepreneurship, and ultimately the training of entrepreneurs (Ndedi, 2009:466).

According to Smit (2012:157), in Latin America, SME performance over the next two decades will be crucial to improve the current economic performance. The importance of the SME sector in Latin America is due to:

- The high-income inequality in most of the countries in Latin America coupled with a disproportionate share of capital invested in the large-scale sector with minimum employment

created by this sector, while the rest of the labour force has a lower capital-labour ratio to work with.

- Slow economic growth that has characterised the economy over the last few years.
- Greater market openness and a greater role for the market in the allocation of resources.
- A higher degree of fiscal prudence to keep inflation within target levels.

A higher degree of similarity exists between South Africa and Latin America, and as a result, the same level of importance can be attributed to South African SMEs in the local economy (Smit, 2012:157). In the United States of America (USA), SMEs have introduced innovative products and services, created new jobs, opened foreign markets, and in the process given the USA's economy a competitive edge in the global economy (Aigbavboa & Thwala, 2014:771). The Obama administration singled out the promotion of high growth and innovative entrepreneurship as the key elements of the USA's Innovation Strategy for achieving sustainable growth and quality jobs (Tustin, 2015:90). A recent study of SMEs in the US reports a growing number of SMEs are exporting, along with a rising interest in doing so on the part of many that are not (SBP Alert, 2013:7).

2.4.3 Challenges faced by small and medium enterprises in America

Ghosh *et al.* (2012:8) indicate that SMEs in the US face key export barriers when conducting business with BRIC (Brazil, Russia, India & China) countries. Expanding the US SME international business, in general, is impeded by some variables. The most frequently reported barriers to US SMEs exporting to foreign markets relate to:

- Inadequate national policies and bureaucracies, both US and export countries.
- Trade agreements and treaties to promote international trade.
- Long-term capital financing and investment.
- Lack of intellectual property rights protection.
- Lack of international trade knowledge and experience.
- Bribery and corruption.
- Inadequate technology and e-commerce knowledge.
- Lack of or ineffective local partnerships.
- The misconception that international markets are suited for existing products and services, rather than re-engineering, distributing and packaging to fit the various cultural settings of the emerging markets.

Trade and investment policies can affect the internalisation of SMEs both directly and indirectly. SME exporters suffer from relatively higher costs and challenges than larger exporters due to less human resources and capital. These barriers include tariffs, quotas and stringent rules of origin

(Cernat, Norman-Lopez & T-Figueras, 2014:10). Differences in standard-related measures remain one of the main obstacles to deepening the participation of SMEs in international trade in the United States. In addition, the costs of meeting technical regulations and other requirements are often very high because in many cases they are required to perform extra tests, which are more time consuming for SMEs (Cernat *et al.*, 2014:10). Bank loans have historically been critical for small businesses. Unlike large firms, small businesses lack access to public institutional debt and equity capital markets, and the vicissitudes of small business profits make retained earnings a necessarily less stable source of capital (Mills & McCarthy 2014:4).

This section discussed literature on SMEs from an American perspective. The literature showed that in America, SMEs are considered to be those enterprises that have a maximum of 500 employees and less than USD3 million in revenue. SMEs also represent the vast majority of all enterprises in the region. The SME sector is the backbone of the economy in high-income countries, contributing extensively to job creation and economic growth in both high and low-income countries. Moreover, entrepreneurs in the US region are respected for their role in creating new jobs, providing competition to existing business, improving product quality, reducing prices, introducing new goods and services through innovation and technology advancement. However, a host of challenges remain that act as barriers to the establishment and growth of SMEs in the region. SMEs lack access to public institutional debt and equity capital markets and the fluctuations of small business profits make retained earnings a necessarily less stable source of capital. The next section discusses literature on SMEs in Africa.

2.5 SMALL AND MEDIUM ENTERPRISES IN AFRICA

This section analyses literature on SMEs from an African perspective. It directs attention to issues such as definitions of SMEs in Africa, the contribution they make and challenges they face.

2.5.1 Definitions of small and medium enterprises in Africa

In Tanzania, SMEs have been categorised into micro (up to four employees and up to 5 million shillings), small (between 4 and 49 employees and up to 200 million shillings), and medium enterprises (from 50 to 99 employees or between 200 and 800 million shillings) (Anderson, 2011:200). In Kenya's manufacturing sector, SMEs are defined as enterprises with full-time employees not exceeding 100 or annual sales turnover not exceeding Ksh150 million (Kedogo, 2013:2).

From a Zimbabwean perspective, the Ministry of Small to Medium Enterprises Policy and Strategy Framework has defined SMEs as those that are "registered in terms of their legal 'status', and

employing anywhere between six (6) to 100 workers” (Gwangwava *et al.*, 2010:7). Still, the Ministry of Small to Medium Enterprises defines a small enterprise as one that employs not more than 50 people and acts as a registered entity. Medium enterprises are firms employing up to 75 and 100 people. The Small Enterprise Development Corporation defines an SME as a firm that has not more than 100 employees with maximum annual sales of up to USD830 000 (Gwangwava *et al.*, 2010:7). According to Morenikeji and Oluchukwu (2012:113), the National Council of Industries in Nigeria defines SMEs as follows:

Micro-scale industry: this is an industry with total capital employed of not more than N15 million working capital but excluding the cost of land and a labour size of not more than 10 workers.

Small-scale industry: this is an industry with total capital employed of over N1.5 million but not more than N50 million, including working capital but excluding the cost of land and labour size of 11 to 100 workers.

Medium-scale industry: this is an industry with a total capital employed of over N50 million but not more than N200 million, including working capital but excluding the cost of land and labour size of 101 to 300 workers.

Large-scale industry: this is an industry with a total capital employed of over N200 million, including working capital but excluding the cost of land and labour size of over 300 workers.

In Egypt, microenterprises have one to four (1 to 4) employees, small enterprises have five (5) to 14 employees, and medium enterprises have 15 to 49 employees with \$1m annual turnover. In Ghana, microenterprises have one to five (1 to 5) employees and \$10K annual turnover, small enterprises have six (6) to 29 employees and \$100K annual turnover, and medium enterprises have 30 to 39 employees with \$1M annual turnover (D’Imperio, 2012:9). The Ghana Statistical Service (GSS) considers firms with less than 10 employees as small-scale enterprises and their counterparts with more than 10 employees as medium and large-scale enterprises (Ocloo, Akaba & Worwui-Brown, 2014:289). However, the National Board of Small Scale Industries (NBSSI) in Ghana applies both the fixed asset and number of employees’ criteria. It defines a small-scale enterprise as one with not more than nine (9) workers and has plant and machinery not exceeding 1 000 Ghana Cedis (Ocloo *et al.*, 2014:289).

2.5.2 Contributions of small and medium enterprises in Africa

SMEs have benefited the macro-economy of several developing countries through creating employment, motivating people in entrepreneurship, generating income, and providing encouragement for social and political stability (UK Essays, 2015:1). SMEs cover about 90 percent

of African business operations and contribute to over 50 percent of African employment and GDP. They are increasingly recognised as a leading vehicle for economic development, a prime source of employment, revenue generation, innovation and technological advancement in both developed and developing nations (Neneh & Van Zyl, 2011:119).

In Kenya, SMEs contribute to 18 percent of the national GDP, while in Morocco, the SME sector accounts for 93 percent of the industrial firms and provides 46 percent of the employment. Some of the less developed SMEs can mainly be found in Zimbabwe, Tanzania, Kenya, South Africa and Nigeria (UK Essays, 2015:3). In the context of the developing world, SMEs in Africa constitute the larger proportion of businesses and employ a significant portion of the population. In Ghana, official statistics indicate that about 70 percent of enterprises are micro and small-sized and that about 40 percent of Ghana's Gross National Income is contributed by the private sector, which is dominated by SMEs (Anane, Cobbinah & Manu, 2013:1004).

The activities of SME enterprises in Africa are of vital importance to the promotion of economic growth, job creation and the mitigation of poverty. It has long been debated that SMEs are pivotal to employment creation and economic growth, particularly in countries with a high unemployment rate, such as South Africa, estimated at up to 40 percent (Smit, 2012:158). In Kenya, 90 percent of all enterprises are SMEs, employing over 60 percent of the total employed population. In Zimbabwe, 15 percent of the total formal employment is in the SME sector (Katua, 2014:467). SMEs in Ghana have been crucial in mobilising funds, which otherwise would have been idle. SMEs have been recognised as a seed-bed for indigenous entrepreneurship, are labour intensive, employing more labour per unit of capital than large enterprises and promoting indigenous technological know-how (Ocloo *et al.*, 2014:289).

Furthermore, due to their regional dispersion and their labour intensity, the argument can be made that small-scale production units can promote a more equitable distribution of income than large firms in Ghana can. They also improve the efficiency of domestic markets and make productive use of scarce resources, thus facilitating long-term economic growth (Ocloo *et al.*, 2014:289). SMEs in Ghana continue to contribute significantly to economic development, especially in the areas of employment creation, income generation and diffusion of intermediate technology. The 2010 Population and Housing Census in Ghana suggests that about 86 percent are in the private informal sector, which is dominated by SMEs. Ninety-two (92) percent of businesses in Ghana are SMEs, which provide about 85 percent of manufacturing employment, contributing about 70 percent to Ghana's gross domestic product (GDP) (Anane *et al.*, 2013:1005).

It is estimated that SMEs account for 70 percent of Ghana's GDP and 92 percent of its business. They also make up 98 percent of formalised business in South Africa and 70 percent of the manufacturing sector in Nigeria (Aigbavboa & Thwala, 2014:771). Studies conducted on SMEs in Nigeria have noted the promotion of entrepreneurship among SMEs by contributing significantly to tackling unemployment. They help drive national development as in developed economies. SMEs have gained prominence as seedbeds of innovation, inventions and employment generation (Inyang, 2013:126). The introduction of enterprise training in educational institutions in the Niger Delta region of Nigeria has enhanced the development of entrepreneurship and entrepreneurial skills and helped change the mindset of youths to venture into SME operations after graduation rather than hostage-taking or kidnapping to extract ransoms (Inyang, 2013:126).

The United Nations Industrial Development Organisation (UNIDO) estimates that SMEs represent over 90 percent of private business and contribute to more than 50 percent of employment and of GDP in most African countries. (Mahembe, 2011:7). They comprise over 90 percent of African business operations and contribute to over 50 percent of African employment and GDP (Ramukumba, 2014:19). Unemployment is most severe among Africans, especially women and those with educational qualifications below matriculation. If employed, however, people from these groups are disproportionately likely to be employed in SMEs. In particular, those without matriculation qualifications are statistically far more likely – some 19 percent more likely – to be employed by SMEs than those holding higher qualifications (SBP Alert, 2013:5).

2.5.3 Challenges faced by small and medium enterprises in Africa

Despite the potential role of SMEs to accelerate growth and job creation in developing countries, some bottlenecks affect their ability to realise their potential. SME development is hampered by some factors, including finance, lack of managerial skills, equipment and technology, regulatory issues, and access to international markets (Abor & Quartey, 2010:224). Growth opportunities in Sub-Saharan Africa are severely hampered by access to finance and a stable supply of electricity. Business owners consider access to electricity and finance as the most important challenges when operating and developing businesses in Africa (Fjose, Grunfeld & Green, 2010:3). Micro and very small businesses in South Africa provided more than 55 percent of total employment and 22 percent of GDP in 2003.

SMEs are weak in Africa because of small local markets, undeveloped regional integration and very difficult business conditions, which include cumbersome official procedures, poor infrastructure, dubious legal systems, inadequate financial systems and unattractive tax regimes (Kauffmann, 2005:1). That is, many firms stay small and informal and use simple technology that does not require

great use of national infrastructure. This is a fact that hinders them from becoming competitive in the marketplace (Ocloo *et al.*, 2014:289).

SMEs in developing countries face challenges that most SMEs in developed countries do not have, such as lack of government support, burdensome regulations and responsibility for job creation, coupled with a lack of skills and infrastructure, the absence of safety nets and representative bodies (Vivier, 2013:69). Electricity and access to finance are considered by far the most important hindrances by businesses in Sub-Saharan Africa. While electricity is considered the most important by close to 25 percent, access to finance is ranked as the second most important hindrance by about 18 percent. Africa is the only region where electricity is considered the most important hindrance (Fjose *et al.*, 2010:20). A number of developments and long-standing issues have combined to endanger the ability of small firms in Africa to survive in today's global economic system. Some of the key challenges include globalisation of markets and production; lack of financial support; poor infrastructure; international expansion issues; and government assistance and support (Ekeledo & Bewayo, 2009:2).

This section discussed literature on SMEs from an African perspective. Like in other continents, the definitions of SMEs vary depending on the environment and other factors. The literature also shows that SMEs benefit the macro-economy of several developing countries through creating employment, motivating people in entrepreneurship, generating income, and providing encouragement to social and political stability. The activities of SMEs in Africa are of vital importance to the promotion of economic growth, job creation and the mitigation of poverty. The literature further reveals that some of the key challenges faced by SMEs in Africa include globalisation of markets and production, lack of financial support, poor infrastructure, international expansion issues, and government assistance and support. The next section discusses literature on SMEs in South Africa.

2.6 SMALL AND MEDIUM ENTERPRISES IN SOUTH AFRICA

This section examines the literature on SMEs in South Africa. The section focuses on issues that include definitions of SMEs in South Africa, the contribution of SMEs in South Africa and challenges faced by SMEs in South Africa.

2.6.1 Definitions of small and medium enterprises in South Africa

The Small Business Act of South Africa of 1995 and the National Small Business Amendment Act of 2003 set out criteria according to business size in each sector of the industry. Businesses are defined as micro-businesses if they have five or fewer employees and a turnover of up to R100 000 per year. Very small businesses employ between six (6) and 20 employees, and small businesses employ

between 21 and 50 employees (Strydom, 2011: 365-366). The upper limit for turnover in a small business varies from R1 million in the agricultural sector to R32 million in the wholesale trade sector. Medium sized businesses usually employ up to 200 people (100 in the agricultural sector), and the maximum turnover varies from R5 million in the agricultural sector to R51 million in the manufacturing sector and R64 million in the “wholesale trade, commercial agents and allied services” sector (Strydom, 2011: 365-366).

In South Africa, a ‘small business’ is officially defined in section one (1) of the National Small Business Act of 1996 as amended by the National Small Business Amendment Act of 2003 and 2004 (NSB Act) as: “... a 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 1 of the Schedule ...” (Mahembe, 2011:24). Small enterprises comprise between five (5) and 100 formally employed persons. Employees are employed on a full-time basis. According to the Department of Trade and Industry, a small business is owner managed, registered with local authorities and business activities are conducted from fixed premises (Dlodlo & Dhurup, 2010:165).

The National Small Business Act, Act 102 of 1996 amended by Act 29 of 2004, classifies small organisations into four categories, namely: micro-enterprises, including survivalist enterprises; very small enterprises; small enterprises; and medium enterprises. The differentiating factor between these categories, excluding micro-enterprises, is the number of employees. For micro-enterprises, the criterion is turnover level (Smit 2012:153). According to Abor and Quartey (2010:221), the most widely used framework in South Africa is the definition of the National Small Business Act 102 Of 1996, which defines five categories of businesses in South Africa. The definition uses the number of employees per enterprise size category combined with the annual turnover categories and the gross assets excluding fixed property. The definitions for the various enterprise categories are given as follows:

- **Survivalist enterprise:** the income generated is less than the minimum income standard or the poverty line. This category is considered pre-entrepreneurial and includes hawkers, vendors and subsistence farmers. In practice, survivalist enterprises are often categorised as part of the micro-enterprise sector.
- **Micro enterprise:** the turnover is less than the VAT registration limit (that is R150 000 per year). These enterprises usually lack formality regarding registration. They include, for example, spaza shops, mini-bus taxis and household industries. They employ not more than five (5) people.

- **Very small enterprise:** These are enterprises employing fewer than ten (10) paid employees, except mining, electricity, manufacturing and construction sectors, in which the figure is 20 employees. These enterprises operate in the formal market and have access to technology.
- **Small enterprise:** The upper limit is 50 employees. Small enterprises are generally more established than very small enterprises and exhibit more complex business practices.
- **Medium enterprise:** The maximum number of employees is 100, or 200 for the mining, electricity, manufacturing and construction sectors. The decentralisation of power often characterises these enterprises to an additional management layer.

The National Small Business Act's definitions of the different categories of business may be summarised as set out in the table below (Abor & Quartey, 2010:222):

Table 2.2: Enterprise size, number of employees, annual turnover and gross assets

| Enterprise size | Number of employees | Annual turnover | Gross assets, excluding fixed property |
|-----------------|---------------------|-----------------|--|
| Medium | <100-200 | < R4m-R50m | <R2m-R18m |
| Small | <50 | <R2m-R25m | <R2m-R4.5m |
| Very small | <10 to 20 | <R200k-R500k | <R150k-R500k |
| Micro | <5 | <R150k | <R100k |

Source: Abor and Quartey (2010:222)

As shown in Table 2.2, a medium enterprise is one with between 100 and 200 employees, has an annual turnover of between R4m and R50m, and has gross assets totalling between R2m and R18m. The table also shows that a small enterprise has less than 50 employees, has an annual turnover of between R2m and R25m, and has gross assets totalling between R2m and R4.5m. A very small enterprise has employees between 10 and 20, has an annual turnover of between R200k and R500k, and has gross assets totalling between R150k and R500k while a microenterprise has less than five employees, has an annual turnover of under R150k, and has gross assets totalling R100k.

Table 2.3 further illustrates the classification of SMEs in South Africa in terms of number of employees, turnover and balance sheet.

Table 2.3: Type of entity, number of employees, turnover and balance sheet

| Type of entity | Number of employees | turnover | balance sheet |
|----------------|---------------------|--------------|---------------|
| Small | 1 – 50 | Maximum R13m | Maximum R5m |
| Medium | 51 – 200 | Maximum R51m | Maximum R19m |

Source: Cant, Erdis and Sephapo (2014:566)

As revealed in Table 2.3, small enterprises in South Africa can be classified as those with employees between one (1) and 49 with a maximum turnover of R13m and maximum balance sheet of R5m. Medium enterprises are those with employees between 51 and 200 with a maximum turnover of R51m and a maximum balance sheet of R19m.

In a closer exploration of the meaning of small firms, in particular, it was evident that there is no single, uniformly accepted definition for ‘small’ firm. A further complicating factor is that both the terms ‘small business’ and ‘SMME’ are frequently used synonymously (Tustin, 2015:79-80). The use of the term ‘SMME’ in South Africa has become a common descriptor for small, medium and micro-enterprises, with the term ‘SME’ used interchangeably. Elsewhere in Africa, the acronym MSME is used for micro, small and medium enterprises (Tustin, 2015:79-80).

2.6.2 Contributions of small and medium enterprises in South Africa

In South Africa, there are an estimated 2.8 million SMEs contributing to the GDP and providing nearly 61 percent of employment. In the light of the current unemployment crisis, poverty and inequality, an SME sector that contributes substantially to growth and employment in the country could play a significant role in alleviating these problems (Ryan, 2012:5). In the South African context, the social impact of SME hiring is underappreciated. This is because small firms employ people whose labour market characteristics make them most likely to be unemployed and marginalised (Ramukumba, 2014:22). It is estimated that the small business undertaking creates about 80 percent of all new job opportunities and more than 70 percent of all South Africans are employed in the small business sector. The government has identified small businesses as the way forward to create jobs and to stimulate economic growth to combat the huge number of unemployed youth in the country (Cant, 2012:1107).

Given South Africa’s legacy of big business domination, constrained competition and unequal distribution of income and wealth, the smaller business sector is seen as important in generating employment and more equitable income distribution. It is also important in activating competition, exploiting both local and international niche markets and enhancing productivity and technical

change (Masocha & Charamba, 2014:60). SMEs account for about 91 percent of the formal business entities in South Africa, contributing to between 52 percent and 57 percent of the GDP and providing about 61 percent of employment (Abor & Quartey, 2010:223). SMEs are considered the “lifeblood of modern economies”, creating far more jobs than those created by large businesses, contributing 37 percent to employment in South Africa. SMEs provide personalised services and make a positive contribution to wealth creation in the South African economy (Dlodlo & Dhurup, 2010:165).

In 1995, SMEs contributed 33 percent to the South African GDP and 44 percent to employment. This increased to a 36 percent GDP contribution in 2001, and a 54 percent employment contribution. The SME is not only seen as an employment creator but also acts as an absorbent of retrenched people coming from the private and public sectors (Smit, 2012:159). In South Africa, SMEs account for about 91 percent of formal business entities, contributing to about 57 percent of GDP and providing 60 percent of employment (Inyang, 2013:126). A study by World Wide Worx in 2012 observed that SMEs in South Africa create around 7.8 million jobs and play a vital role in reducing wealth inequalities and improving the economic growth (Ngek, 2014:253).

The contribution of the SME sector cannot be sustained without the creation and subsistence of new SMEs. New SMEs are seen as a significant component of the solution to South Africa’s development issues, which include poverty, income inequality and unemployment (Fatoki & Odeyemi, 2010:128). It has been greatly debated that SMEs are pivotal to employment creation and economic growth, particularly in countries such as South Africa that have a high rate of unemployment. The SME sector has an estimated 5.6 million SMEs operating in South Africa, creating a total of 11.6 million employment opportunities (Cant *et al.*, 2014:568-569).

According to Cant *et al.* (2014:568-569), the importance of SMEs in a South African perspective includes that:

- SMEs are the engine of growth of the economy;
- SMEs are essential for a competitive and efficient market which will contribute to more competitive prices;
- SMEs are critical for poverty reduction; and
- SMEs play a particularly important role in developing countries as a mainstream business can create only a certain number of jobs and in selected sectors.

The new South African government saw the promotion of entrepreneurship and small business development in 1994 as a way of addressing the following generic development goals in the country: job or employment creation, poverty alleviation, equity and participation, social stability, economic growth and development, contribution of SMEs to sustainable development, contribution of SMEs to

economic growth, and contribution of SMEs to employment (Chimucheka, 2013:784-786). Other potential benefits directly accruing to local governments because of the activities of the SME sector, include the empowerment of local citizens, competition among developing businesses in tandem with the positive benefits of quality by the suppliers as well as providing a broader base and choice for the consumer. It also includes a reduction in crime rates, since instead of being idle, citizens are productively engaged (Chimucheka, 2013:784-786).

In South Africa, SMEs account for nearly 91 percent of formal business entities and 61 percent of employment. It is also estimated that SMEs provide 90 percent of jobs created between 1998 and 2005. This prominent role of SMEs has been recognised in the National Development Plan, which sets out the long-term vision for the country (Vivier, 2013:69). SMEs are an important source of employment and economic growth in most countries, and South Africa is lagging on this front. In South Africa, SMEs employ 47 percent of the economically active population and constitute close to 45 percent of GDP (Luiz & Mariotti, 2011:49).

SMEs are an essential panacea for improving the standard of living in a society and the stability of a country. More specifically, this sector is believed to contribute to economic development. It is generally accepted that the small business sector serves as an incubator for growth and employment (Tustin, 2015:80). With good reason, SMEs are viewed as the lynchpins of successful employment strategies. They tend to be labour rather than capital intensive. In fact, in the South African context, the social impact of SME hiring is underappreciated. This is because small firms employ people whose labour market characteristics make them most likely to be unemployed and marginalised (SBP Alert, 2013:4-5).

2.6.3 Challenges faced by small and medium enterprises in South Africa

Although democracy has long been established in South Africa and despite vast improvements in the extension of infrastructure and basic services to poor and marginalised communities, socio-economic and spatial inequalities remain (Vivier, 2013:69). The SME sector is routinely hailed as an indispensable ingredient for addressing these challenges. This is not only true for South Africa but for much of the developing world, where unemployment, corruption and poverty persist (Vivier, 2013:69). The challenges faced by SMEs in South Africa include lack of training and education, limited access to financial resources, inaccessibility to markets, lack of support structures, inaccessibility of appropriate technology and lack of access to other resources like human resources (Chimucheka, 2013:786).

The inaccessibility of bank finances is a serious constraint during the formation of new ventures as well as at later stages, as the business requires additional inflows of capital to support expansion and

growth. Inadequate bookkeeping and lack of financial management knowledge are also challenges that have negative impacts on SMEs (Chimucheka & Rungani, 2011:5509-5510). Small firms face problems in getting access to funding due to their peculiar characteristics, which are being relatively young, lacking credit histories, lack of adequate information, high-risk perceptions, among others. Lenders may be reluctant to fund small firms, especially those with new and innovative products, which are most likely difficult to evaluate (Manzani & Fatoki, 2012:31). In South Africa, SMEs have constrained access to external funds, more importantly as a result of the perceived risk and information asymmetries between the providers of funds and the SME economy (Manzani & Fatoki, 2012:31).

SMEs across the whole world and in South Africa in particular, are still faced with numerous challenges that inhibit entrepreneurial growth. Apart from SME funding and access to finance, the Global Entrepreneurship Monitor (GEM) Reports (2001-2010) noted that South African SMEs also suffer from poor management skills, which is as a result of a lack of adequate training and education (Mahembe, 2011:7). The South African Government has identified the SME sector as the means to achieve accelerated economic growth. As SME growth depends to a larger extent on macroeconomic growth, the obvious analogy can be drawn that the limited micro-economic growth of the past few years has inhibited SMEs from developing to their full growth potential (Smit, 2012:160-161). SME owner-managers believe that the primary obstacles to their survival are external to the enterprise. In contrast to these beliefs, research on technology upgrading of SMEs in South Africa suggest that SMEs should devote more attention to internal weaknesses by improving their internal operations (Smit, 2012:17).

SMEs face numerous challenges regarding access to finance, market access, skills and networks, and the enabling environment. Many businesses face financial constraints and cash flow uncertainty. They often lack the collateral and financial records required for loans from commercial banks. Application processes tend to be bureaucratic. There are high transaction costs and lack of awareness about the procedures involved in gaining financing (Qureshi, Mwangi, Oshry & Addae, 2012:4). The creation of successful SMEs in South Africa is one of the lowest in the world, as most do not move from the first stage of growth to other stages such as survival, success, take off and resource maturity. The number of SME failures in year five varies between 50 percent and 95 percent, and about 75 percent of new SMEs do not become established firms (Ngek, 2014:253).

The creation rate of new SMEs in South Africa as measured by the total early-stage entrepreneurial activity is one of the lowest in the world. Also, 75 percent of new SMEs created in South Africa fail within the first two years of operation (Fatoki & Odeyemi, 2010:128). The probability of a new SME surviving beyond 24 months and becoming an established firm is less likely in South Africa than in

any other GEM participating country. Various challenges and impediments prevent the creation of new SMEs as well as cause high failure rates of new enterprises in South Africa. One of these is the non-availability of formal sector financing (Fatoki & Odeyemi, 2010:128).

Many factors hinder the achieving of success by small businesses. The lack of managerial skills places significant constraints on SME development while regulatory constraints also pose serious challenges to their development. Moreover, the high start-up costs for firms, including licensing and registration requirements, can impose excessive, unnecessary burdens on them (Cant *et al.*, 2014:566). SMEs frequently lack the collateral and financial records, such as financial statements that are mandatory for loan applications from commercial banks or financial services providers, thereby affecting their ability to obtain funding (Cant *et al.*, 2014:566).

SMEs in South Africa face a number of challenges, the most important of which have been reported by a number of organisations to be: a lack of managerial skills, finance and obtaining credit, access to markets and developing relationships with customers, appropriate technology and low production capacity, quality products, and support for the role that they play in economic development (Ramukumba, 2014:24). Even with the recognition that SMEs are vital to stimulating entrepreneurship and thus economic growth, some obstacles inhibit them from realising their full potential (Snyman, Kennon, Schutte & Von Leipzig, 2014:167). Implementing marketing activities is a challenge for SMEs due to the high costs of establishing and running a business. Due to these factors, SMEs are bound to experience marketing skills shortages and often fail to implement marketing in their businesses, which poses a risk to the survival of the business in future (Hlatshwayo, 2015:30).

The SME sector continues to confront a difficult economic and labour environment, including policies that favour large corporations, financial constraints, and burdensome labour legislation. Furthermore, South African SMEs must also negotiate the legacies of apartheid, notably high levels of inequality and skewed ownership and control, as well as the oversupply of a largely unskilled, under-utilised and alienated labour force (Vivier, 2013:69). Numerous SMEs within the informal settlements of South Africa struggle to obtain capital and a guaranteed income. These SMEs end up with poor credit records, which leads to poor cash flow, often resulting in the SME entrepreneur not receiving the financing needed to start the business in the first place. Crime and theft are ranked as the third highest obstacle to growth for business owners (Cant *et al.*, 2014:566).

Reliable and comprehensive knowledge accumulation on the state of the SME sector of South Africa is widespread but mostly uncoordinated and unparalleled. These limitations pose serious barriers to effective policy formulation and support initiatives aimed at developing SMEs (Tustin, 2015:78). A

heavy regulatory burden weighs on SMEs more than on their larger counterparts. For this reason, an environment nurturing to SMEs will be one in which regulations are prudently thought through with regard for their impact on business performance, and in which they are administered competently (SBP Alert, 2013:9).

This section discussed literature on SMEs from a South African perspective. The literature revealed that in South Africa, SMEs are those businesses that are categorised in terms of their employment provision. The literature also showed that in South Africa an estimated 2.8 million SMEs are contributing to GDP and providing nearly 61 percent of employment opportunities. SMEs in South Africa face a number of challenges, the most important of which have been reported by a number of organisations to be: a lack of managerial skills, finance and obtaining credit, access to markets and developing relationships with customers, appropriate technology and low production capacity. The next section discusses literature on the legislation of SMEs in South Africa.

2.7 LEGISLATION OF SMALL AND MEDIUM ENTERPRISES IN SOUTH AFRICA

For the past number of years, the South African Government has invested in a plethora of initiatives aimed at supporting and growing the SME sector. The 1995 “White Paper principally informed South Africa's small business policy on a national strategy on the development and promotion of small business in South Africa” (Mahembe, 2011:27). The 1995 White Paper outlined, among other things, the need for the government to create an enabling legal framework, facilitate access to information and advice, boost procurement from small firms and to improve access to finance and affordable physical infrastructure (Mahembe, 2011:27).

The role of government in South Africa appears to be of critical importance in shaping the present and future of the SME sector. There has been a shift, since 1994, in the national policy environment surrounding small enterprises in South Africa. Post-apartheid South Africa has seen the emergence of a changed institutional and policy context, which governs the operations of the SME sector (Manzani & Fatoki, 2012:31). Enterprise development (ED), which is the support and growth of SMEs, has been introduced as a component of the broad-based black economic empowerment (BBBEE) policy in South Africa. Since 2007, the compliance target in the area of BBBEE ED for large companies has been to spend three (3) percent of net profits after tax on establishing and growing sustainable SMEs. This entails the public and private sectors supporting SME development, financially and non-financially. BEE policy invariably guides the private sector’s engagement with SME development in South Africa (Ryan, 2012:5).

The 2008 GEM report notes that South Africa’s restrictive employment laws are seen as one of the biggest regulatory obstacles to business growth. Policies not directly related to the business sector,

but which have a marked impact on business efficiency were also mentioned (Herrington, Kew & Kew, 2010:48). The government's key focus with regard to small business has been on supporting black entrepreneurs, which the 1995 White Paper pointed out were the most marginalised group during apartheid (Timm, 2011:21).

Two policies aimed at helping more black people to become active in the economy and to aid small business owners have been developed: the 2000 Preferential Procurement Policy Framework Act and the Black Economic Empowerment (BEE) codes of good conduct (Timm, 2011:21). The BEE codes, which came into effect in 2008, award points to businesses based on seven elements, namely, the percentage of black ownership, black management, black staff, black staff trained, procurement from black suppliers, business or financial assistance to small black businesses, and corporate business investment. Companies with high BEE scores can win business with the government (Timm, 2011:21).

Upgrading the role of the SME sector in the South African economy to improve growth through increasing competitiveness, generating employment and redistributing income have been the focus of new development policies since the democratic transition (Smit, 2012:159). The South African Government tabled the National Small Business Act of 1996, amended by the Act of 2004, to provide equal standing for SME enterprises in South Africa's economy. The vital role played by the SME sector in the South African economy in addressing sustainable development, was highlighted by the 2003 Human Development Report for South Africa (Smit, 2012:159). Support from government is important through legislation although other incentives are often preferred by governments, researchers and SMEs over legislation. Researchers support education, information initiatives and technology assistance, while SMEs generally support education and local initiatives over legislation (Walker *et al.*, 2008:22).

The South African post-apartheid government, being fully aware of the significance of SMEs in its economic growth, has since produced a framework for SMEs' support and growth in the country (Aigbavboa & Thwala, 2014:772). The SME sector of South African is actively promoted by a number of initiatives such as the National Small Business Act of 1996, which defines SME activities in the country and likewise provides for the establishment of the National Small Business Council and the Ntsika Enterprise Promotion Agency (Aigbavboa & Thwala, 2014:772).

Also, bodies like Khula Enterprise Finance was set up with a mandate to improve the SME sector's access to finance, primarily through the provision of 'wholesale finance' or guarantees to retail financial intermediaries, which, in turn, finance the SME sector (Aigbavboa & Thwala, 2014:772). Another initiative of the post-apartheid government is the creation of the Skills Development

Programme, which was launched by the government in 1998. Through this initiative, SMEs are able to obtain assistance with two of the challenges that they face most, i.e. “a lack of management skills” and “developing relationships with customers” (Aigbavboa & Thwala, 2014:772).

In 2011, Finance Minister Pravin Gordhan stated that government support to businesses would include R600 million for enterprise investment incentives. Support for small businesses would be provided through the South African Micro-Finance Apex Fund and Khula Enterprise (Qureshi *et al.*, 2012:4). Political support for SMEs has set the tone for legislation, policy and strategy direction and has resulted in South Africa’s legislation setting forth the national objectives for the SME economy. Various pieces of legislation give evidence of the South African government’s commitment to create a supportive environment within which SMEs can prosper (Malefane, 2013:675). Institutional infrastructure support for SME development has been articulated in legislative, policy and strategy pronouncements through the reconfiguration of public sector institutions’ mandates to enable them to deliver on their new SME mandate (Maia, 2006:16).

The Companies and Intellectual Property Registration Office (CIPRO), an institution established to develop and maintain a register of SMEs in South Africa, supports the DTI (Department of Trade and Industry) in keeping abreast of the gradual development of SMEs and their ownership (Biekpe, 2006:1). The National Development Agency (NDA), the Centre for Small Business Promotion (CSBP) in the Department of Trade and Industry (DTI), Ntsika Enterprise Promotion Agency, Khula, the Land and Agricultural Development Bank of South Africa and the Industrial Development Corporation (IDC) all play a crucial role as development financing institutions (DFIs) for SME development countrywide (Biekpe, 2006:1).

In addition, to supporting sourced from national departments, government agencies and provincially-based economic development corporations also provide resources and support for SME development (Malefane, 2011:992). The primary focus of these corporations is to promote investment, project facilitation and assist local businesses within their province to diversify and to become exporters of goods and services; they also improve competitiveness and assist exporters in accessing new international markets (Malefane, 2011:992).

Law reform and affirmative action measures established since the transition to democracy aim to protect and uplift the disempowered, as well as address some of these more ‘intangible’ and even ethical challenges (Vivier, 2013:69). These law reforms include, among others, the Labour Relations Act of 1995, the Basic Conditions of Employment Act of 1997, the Employment Equity Act of 1999, the Skills Development Act of 1998 and the Broad-Based Black Economic Empowerment Act of

2003. Together, these aim “to achieve greater social justice and equality and to redress past unfair discrimination and unearned privilege” (Vivier, 2013:69).

South Africa’s regulatory environment has been a matter of concern for years. In 1994, the RDP White Paper promised “favourable amendments to legislative and regulatory conditions” for SMEs’ development. This has not transpired. Some years ago, Minister Gordhan described South Africa’s effort to assist SMEs as “pathetic” (SBP Alert, 2013:9). However, the South African government has recognised the valuable contribution made by SMEs to the economy and thus established the Small Business Development Ministry in 2014 to focus on SMEs and centralise the tools that may be used to develop SMEs (Hlatshwayo, 2015:18).

2.8 CONCLUSION

The purpose of this chapter was to analyse literature on SMEs. The literature acknowledged the lack of unanimity regarding the definitions of SMEs, as these differ from country to country. However, there was a consensus in the literature regarding the contributions of SMEs to economic development through the creation of employment and contribution to the GDP of the country. The literature further reveals that despite their importance, SMEs in most countries face considerable challenges that inhibit their growth and business performance, which include limited access to finance, the lack of skills, as well as the low adoption of technology, amongst others. In South Africa, the available SME business policies are seen as some of the biggest regulatory obstacles to business growth and business performance. These policies have achieved little in creating effective support agencies to assist business owners to start up and grow their businesses. Thus, the government has a big task in ensuring that there are policy changes to increase the levels of support available to SMEs. The next chapter analyses literature on organisational agility.

CHAPTER 3

ORGANISATIONAL AGILITY

3.1 INTRODUCTION

This chapter explores literature on the nature and role of organisational agility as a strategic intent and its contributions to business performance. This is a literature review chapter that analyses the theory behind the concept of organisational agility and its various sub-elements such as technological capability, collaborative innovation, organisational learning and internal alignment. With regard to organisational agility, issues that are discussed include its contextualisation, key capabilities and benefits and how SMEs could develop organisational agility to keep up with change. In terms of technological capability, the chapter discusses its conceptualisation, importance to organisations and measurement. With respect to collaborative innovation, the types, benefits and associated challenges are discussed. Regarding organisational learning and internal alignment, the chapter discusses the definitions as well as the benefits of these concepts. As the definitions of organisational agility and its sub-elements (technological capability, collaborative innovation, organisational learning and internal alignment) are discussed, a number of viewpoints are presented, followed by views on how to create and develop these dimensions in SMEs.

3.2 ORGANISATIONAL AGILITY

This section discusses the definitions of organisational agility from different literature perspectives, contextualisation of organisational agility, key capabilities enabling organisational agility, and benefits of organisational agility

3.2.1 Organisational agility defined

Organisational agility means the ability to dynamically revise or reinvent the company and its strategy as the business environment changes. This is achieved by continuous anticipation as well as adjusting to trends and customer needs without giving up on the company's vision (Santala, 2009:34). Organisational agility means the ability to modify and rebuild the dynamics of a company's strategy when the business environment and jobs change. Organisational agility means to learn and be able to change direction quickly and be able to transform and revive the organisation without losing momentum (Dabiri & Gholami, 2015:197).

Strategically directed agility has also been defined as change management proficiency. Change proficiency is a competency that allows an organisation to apply knowledge effectively. A change proficient organisation can accommodate eight dimensions of change efficiently (Murungi, 2015:3).

Change proficiency serves two purposes; on the one hand, it ensures viability while on the other hand, it helps achieve market leadership as it allows a firm to manage and apply knowledge effectively. Thus, organisational agility is a dynamic capability derived from knowledge generating strategies that help firms cope better with managing change (Murungi, 2015:3). It is viewed as an ability to develop strategic alternatives and make well-grounded, thoughtful decisions promptly (Shin *et al.*, 2015:184). It is described as flexibility and speed that gives organisations the ability to change the business to respond to changes in their markets and face substantial risk (Idris & Al-Rubaie, 2013:71).

3.2.2 Contextualisation of organisational agility

Organisational agility is part of a discussion on how companies should be organised to execute effective business in a dynamic business environment. It is important to note that efficiency and agility have to be balanced (Tikkanen, 2014:36). Arguably, one cannot have both of these elements in full flow simultaneously. Investment in efficiency is normally likely to make a company less agile, which often happens as companies grow (Tikkanen, 2014:36). Strategically agile firms utilise strategies aimed at being responsive and flexible to consumer needs, while the risks of supply shortages or disruptions are hedged by pooling inventory or other capacity resources (Abu-Radi, 2013:12). Shin *et al.* (2015:193) have established logical and theoretical ties between organisational agility and its four dimensions (technological capability, collaborative innovation, organisational learning and internal alignment) through an extensive review of literature in various disciplines.

Firms that can be responsive to the changing, diverse and unpredictable demands of customers on the front end, while minimising the back end risks to supply disruptions can be seen as strategically agile. If the company disregards the importance of agility, the consequences can be disastrous (Abu-Radi, 2013:12). Traditional long-term strategic planning and the strategies that would not be altered are typically not sources of a competitive advantage anymore because in most industries there is no certainty about the evolution of the business environment and what it would be like a year from now (Murungi, 2015:1). Companies that want to thrive in this constantly evolving business environment need the ability to change quickly – and they need agile business leaders who can learn, develop and adapt quickly (Kelly, 2012:2).

An essential leadership attribute is the ability to remain open to new ways of thinking and continuously learn new skills. We have long known that a major difference between successful people and those whose careers falter is the ability to make meaning from their experiences (Mitchinson & Morris, 2014:2). The Centre for Creative Leadership's (CCL) research shows us that leaders who refuse to let go of entrenched patterns of behaviour or who do not recognise the nuances in different situations tend to derail, whereas successful leaders continue to develop on the job. It is now known

that these successful leaders are learning agile; that is, they show the willingness and ability to learn throughout their careers, if not their entire lives (Mitchinson & Morris, 2014:2).

Agile organisations are those that can identify and adapt quickly to changing circumstances in their environment. There is a widespread acceptance that organisational agility is not only a necessity for survival in the short term, but it is critical for profitability into the future (Chandler Macleod Group Limited, 2011:4). The agile organisation in terms of structure and culture has elements that differentiate it from a traditional organisation. Table 3.1 below summarises these elements. Table 3.1 shows that an agile organisation is at the platform of an ecosystem of partnerships. An agile company balances different forms of organisational structure but favours the forms, which tend to be more decentralised, connected and multidisciplinary. Finally, an agile company fights the inertia of bureaucracy with a culture of creativity, teamwork and autonomy (Abu-Radi, 2013:17).

Table 3.1: Differences between an agile organisation and a traditional organisation

| | Agile organisation | Traditional organisation |
|---------------------------------------|---|----------------------------------|
| Organisational structure | Network, platform, horizontal, flat | Pyramidal, vertical |
| Competence of team units | Multidisciplinary | Expertise |
| Information flows and decision making | Decentralised | Centralised |
| Roles of managers | Coordination | Control |
| Quality of individuals | Adaptive, responsible, autonomous, creative | Efficient, respectful, compliant |

Source: Abu-Radi (2013:17)

Organisational agility is the ability of the organisation to achieve lower production costs, greater market share, supply more customers, facilitate the rapid introduction of new products or services, eliminate non-value-added activities and increase the competitive power of the company (Dehaghi & Navabakhsh, 2014:315). It involves the ability to seize significant opportunities such as entering a new market or capitalising on new technology. An organisation with true organisational agility can reposition its customer value proposition to drive success in a changed world (Chandler Macleod Group Limited, 2011:7). Organisational agility is learning to make fast turns and being able to transform and renew the organisation without losing momentum. It is the ability to continuously and adequately adjust and adapt in appropriate time the strategic direction of the core business in relation

to changing circumstances. This may include creating new products and services or creating new business models and innovative ways to create value for the company (Murungi, 2015:2).

Organisational agility is the ability to leverage value-chain-wide resources to turn on a dime, providing the right product at the right price anywhere. This kind of agility requires a company to transcend manufacturing boundaries to develop ‘fluid operations’ (Abu-Radi, 2013:20). Agility is the result of recognising the need for change, and then mustering the willingness to make it happen. Change is hard and to thrive in an uncertain business world: organisations must create a culture that promotes responsiveness and improves outcomes. A culture of agility requires rethinking the basic assumptions of management (Langley, 2015:2-4). Organisational agility does not mean not having a strategy, but rather emphasises strategic thinking and a clear vision instead of strategic planning, as well as a joint concept of strategy development and implementation instead of separating the two. How organisational agility differs from the traditional strategic management can be seen in Figure 3.1.

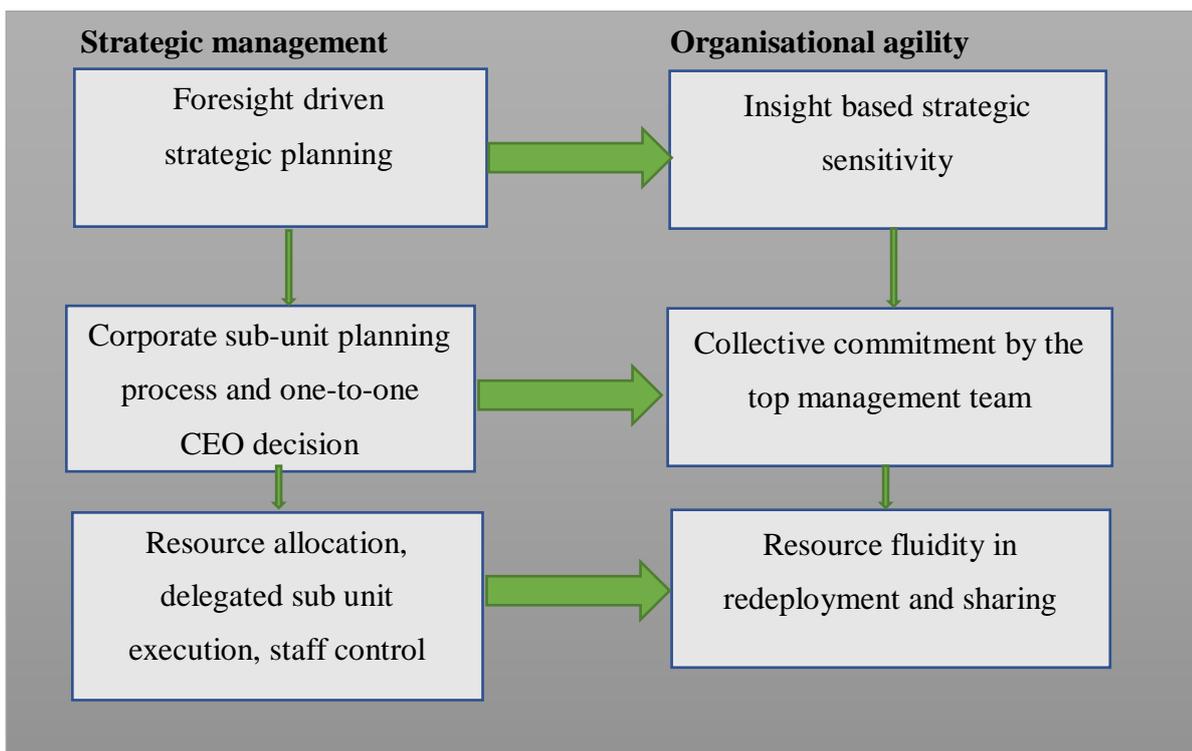


Figure 3.1: Path diagram for organisational agility and business performance

Source: Santala (2009:36)

Figure 3.1 indicates that strategic management encompasses foresight-driven strategic planning, a corporate sub-unit planning process and one-to-one CEO decisions whereas organisational agility

encompasses insight strategic sensitivity, a collective commitment by the top management and resource fluidity in redeployment and sharing.

Agility is discussed from a perspective of strategy and strategic decision-making. The term organisational agility comprises dimensions that focus on making the strategy and strategic decision more agile rather than focusing on agility as a performance capability itself (Pesonen, 2009:13). These three dimensions of organisational agility are strategic sensitivity, resource fluidity, and collective commitment. The following definition is therefore suggested: “Organisational agility is the enterprise’s continuous ability to make real-time and accurate interpretations of the environment, to reallocate resources fast and in sufficient scale, and to commit collectively to the objectives” (Pesonen, 2009:13).

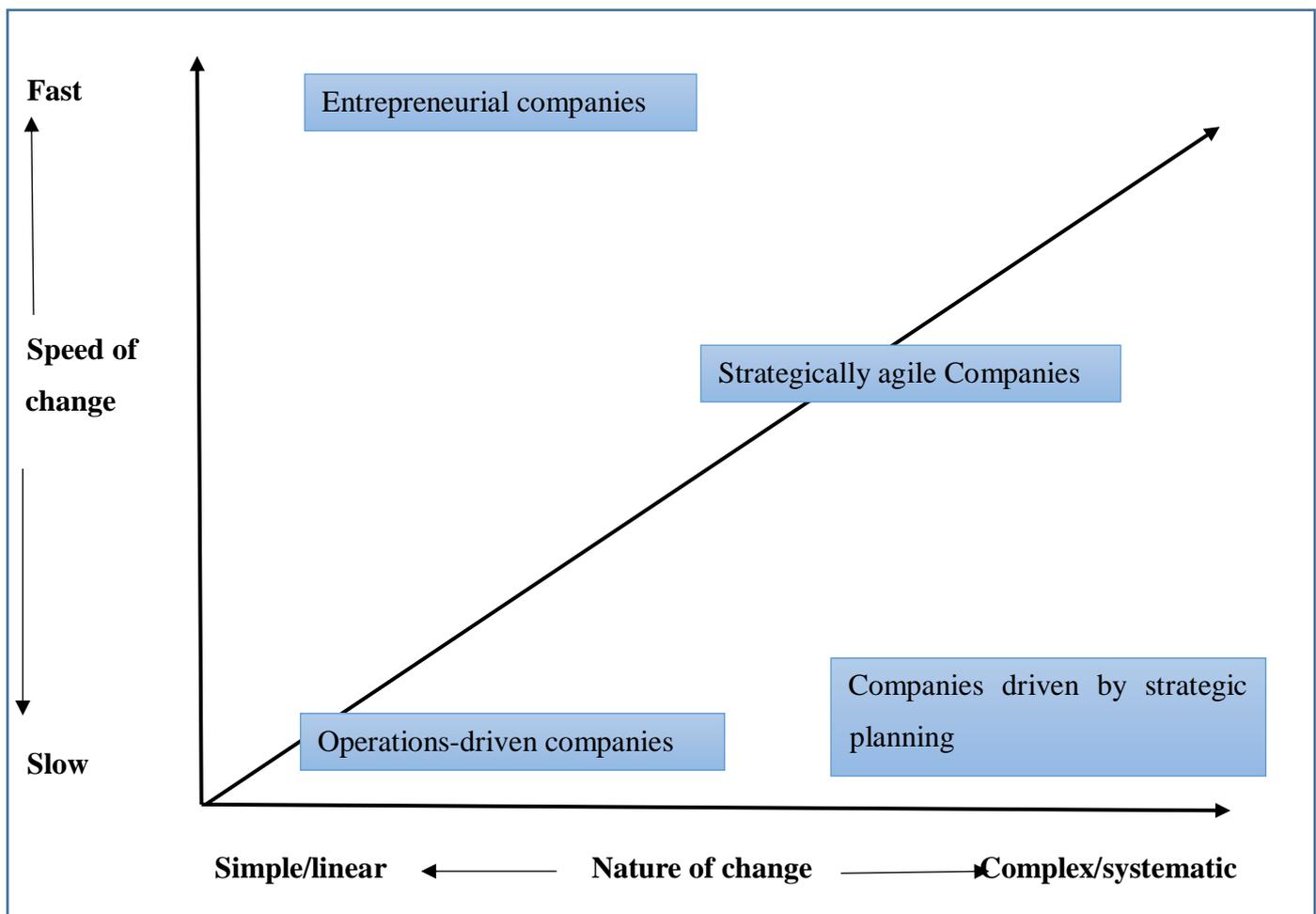


Figure 3.2: Organisational agility as a response to faster and more complex change

Source: Audran (2011:48)

Figure 3.2 shows the path companies must undertake to evolve from “operations-driven” to “strategically agile” organisations and keep growing under complex and fast change. Typically,

entrepreneurial companies are fit to thrive in the fast-paced environment, but as they usually focus on few oriented outputs, they do not experience the degree of complexity in which large conglomerates operate (Audran, 2011:48-49). However, they will inevitably shift to operations-focus when successful outcomes put them on the growth path. Accordingly, they will need to balance a high level of flexibility in their core business with the standardisation of their procedures to harness the complexity driven by their growth. Only companies operating in mature sectors with long-range stability can rely on traditional strategic planning alone to achieve sustainable growth (Audran, 2011:48-49).

3.2.3 Key capabilities enabling organisational agility

Three main dimensions in organisational agility are strategic sensitivity, leadership unity and resource fluidity (Mukerjee, 2014:57). Strategic sensitivity includes leadership actions such as anticipating with foresight, experimenting and corporate venturing, distancing to gain perspective, abstracting to concepts and models and reframing to imagine and generate new business models. Leadership unity encompasses actions designed to create a bond and trust within the leadership team (Mukerjee, 2014:57). Resource fluidity is a company’s ability to reform business models and reallocate resources rapidly, and it is divided into three main clusters of tools: mobilising capital resources, mobilising people and knowledge and creating a modular structure (Pesonen, 2009:14-16).

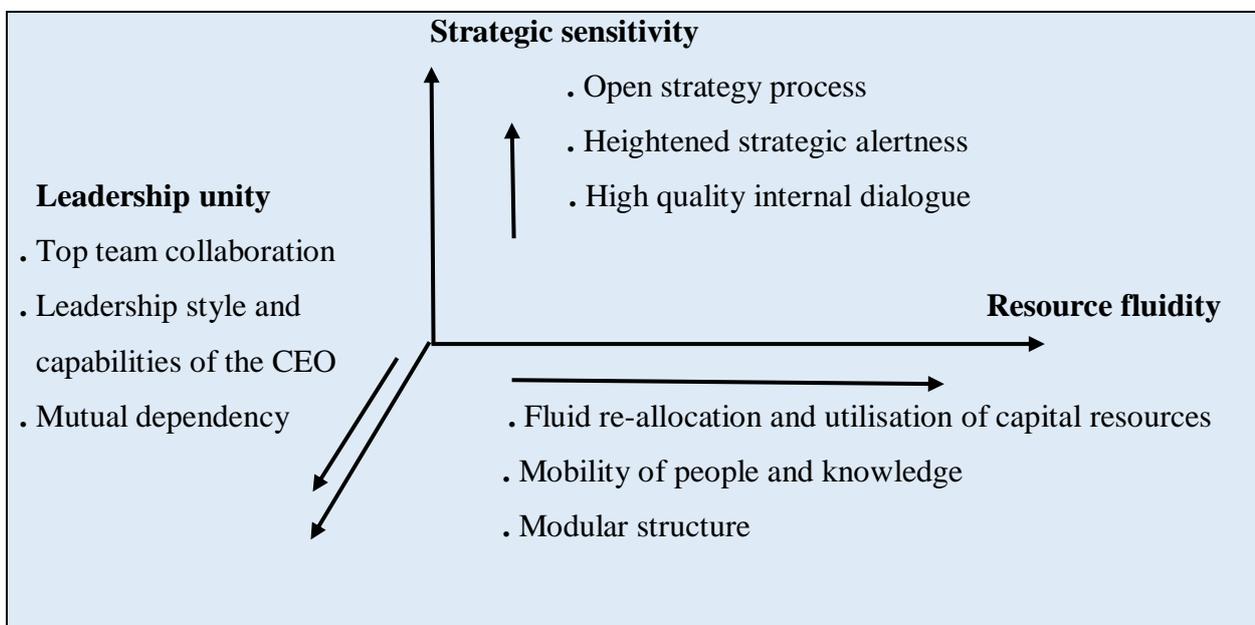


Figure 3.3: Key capabilities enabling organisational agility

Source: Doz (2011:3)

As reported in Figure 3.3, three key capabilities facilitate strategic ability, namely, leadership unity, strategic sensitivity and resource fluidity. Leadership unity involves issues such as top team

collaboration, leadership style, capabilities of the chief executive officer and mutual dependency. Strategic sensitivity involves issues such as open strategy process, heightened strategic awareness and high-quality internal dialogue. Resource fluidity refers to issues such as fluid re-allocation and utilisation of capital resources, the mobility of people and knowledge, and modular structure. These three issues combine to enable high levels of organisational agility in organisations.

According to Dabiri and Gholami (2015:197), organisational agility includes strategic sensitivity, collective commitment/leadership union and mental resources/resource fluidity, which makes it possible for companies to quickly understand, quickly make decisions and attack with power and speed. Hamalainen, Kosonen and Doz (2011:13-21) indicate that strategic sensitivity is the ability to observe and interpret the changes in the environment constantly and precisely and is divided into three elements: open strategy process, heightened strategic alertness, and high-quality internal dialogue. Hamalainen *et al.* (2011:13-21) further state that strategic sensitivity requires early recognition of emerging environmental and social trends, high-quality dialogue with internal and external key stakeholders, and an ability to frame strategic issues in a fresh and insightful way.

3.2.4 Benefits of organisational agility

The benefits of enhanced agility include higher revenues, more satisfied customers and employees, improved operational efficiency and a faster time to market (Sull, 2010:1). Organisational agility can bring about organisations that can produce the right products and services at the right place at the right time at the right price and for the right customers (Murungi, 2015:2). Manufacturing firms and indeed all organisations that are strategically agile can contribute immensely to the achievement of the millennium development goals by contributing to economic growth. Building organisational agility in firms is a way to manage unforeseen changes and risks faced by firms (Murungi, 2015:2). Organisational agility is especially important for the most knowledge-intensive companies in a rapidly changing world of digitalisation, globalisation and deregulation (Santala, 2009:37).

Organisational agility is most important for companies in which the business environment is rapidly changing, and this change has a complex nature (Dabiri & Gholami, 2015:197). Agility may also be linked to profitable growth: research conducted at the Massachusetts Institute of Technology (MIT) suggests that agile firms grow revenue 37 percent faster and generate percent profits higher than non-agile companies (Glenn, 2009:2-3). In turbulent markets, organisational agility, which is defined as the capacity to identify and capture opportunities more quickly than rivals do, is invaluable. A recent McKinsey survey found that nine out of ten executives ranked organisational agility both as critical to business success and as growing in importance over time (Chandler Macleod Group Limited, 2011:4).

Organisational agility is both important and achievable. There is a clear consensus that in today's environment, organisational agility is a vital capability and that most organisations have much to do to become agile (Voss & Wang, 2009:14-15). Organisational agility is an applied methodology that yields business performance (Salih & Alnaji, 2014:1880). Organisational agility is most obviously a keynote to having the ability to transform and renew business models (Doz & Kosonen, 2010:381). Organisational agility improves both financial and operational performance. The largest performance impact is on customer satisfaction, which in turn, contributes to improved bottom line financial performance (DeGroot & Marx, 2013:914).

Organisational agility is a core differentiator in today's rapidly changing business environment. Nearly 90 percent of executives surveyed by the Economist Intelligence Unit believes that organisational agility is critical for business success (Glenn, 2009:2-3). One-half of all chief executive officers (CEOs) and chief information officers (CIOs) polled agree that rapid decision-making and execution are not only important but also essential to a company's competitive standing (Glenn, 2009:2-3).

The literature shows that organisational agility does not mean not having a strategy, but rather emphasises strategic thinking and a clear vision instead of strategic planning, as well as a joint concept of strategy development and implementation instead of separating the two. Firms that can be responsive to the changing, diverse and unpredictable demands of customers on the front end, while minimising the back end risks to supply disruptions can be seen as strategically agile.

The benefits of enhanced agility include higher revenues, more satisfied customers and employees, improved operational efficiency and a faster time to market. The literature also confirms the logical and theoretical ties between organisational agility and its four dimensions, namely, technological capability, collaborative innovation, organisational learning, and internal alignment. This implies that organisational agility and its four dimensions contribute positively to the business performance of SMEs. The following section discusses technological capability.

3.3 TECHNOLOGICAL CAPABILITY

This section discusses technological capability from various literature perspectives. It covers the definition of technological capability, the concept of technological capability, the importance of technological capability, and the measurement of technological capabilities.

3.3.1 Technological capability defined

Technological capability is defined as the ability of firms to manage and generate technological changes. It is the ability to innovate (Diyamett & Mutambla, 2014:402), and to make effective use of

technological knowledge in assimilating, using, adapting, and changing existing technologies (Noh *et al.*, 2014:5). Following the definition outlined above, technological capabilities are the result of interactive learning and linkages between a number of actors (Szogs, 2010:37). Technological capability affects process innovation and product innovation and thus can be a basis for competitive advantage. Firms have different levels of capabilities, which are determined by their levels of technological knowledge (Lee & Lee, 2016:23). As technological capability can be acquired through the complex process of technological learning, it must be understood structurally from a multi-faceted perspective rather than from one perspective (Lee & Lee, 2016:23). Firms have different levels of capabilities, which are determined by their levels of technological knowledge (Lee & Lee, 2016:23). As technological capability can be acquired through the complex process of technological learning, it must be understood structurally from a multi-faceted perspective rather than from one perspective (Lee & Lee, 2016:23).

Technological capability also refers to a firm's ability to employ various technologies (Zhou & Wu, 2010:548). It refers to a firm's ability to develop and use substantial technological resources. It concerns new product development, manufacturing processes, technology development, and forecasting technological change in the industry (Su, Peng, Shen & Xiao, 2013:119). Technological capabilities can be defined as the capabilities to develop and design new products, new processes and more effectively operate the equipment or resources needed to produce managerial technique revolution, which includes skills, knowledge and experiences as well as institutional structures and ties (Guifu & Hongjia, 2009:452). It is defined as the effective use of technological knowledge and skills required to improve and develop products and processes; improve existing technology; and generate new knowledge and skills in response to the competitive business environment (Sobanke, Ilori & Adegbite, 2012:177).

Technological capability can be defined as the capability to use intensive knowledge to mobilise jointly different resources to enable the firm to develop innovative products of success through the implementation of competitive strategies and value creation in a given environment (Guerra & Camargo, 2016: 55). Conceptually, technological capability is defined as the resources needed to generate and manage technological change, including skills, knowledge and experience, and institutional structures and linkages. From an operational perspective, technological capability means being able to develop and design products and processes, and operate facilities effectively (Aeron & Jain, 2015:336).

From the conceptual distinction between resource and capability, technological capability is defined as any general power of the firm, knowledge-intensive, to jointly mobilise different scientific resources and individual technicians, which allows the development of products and/or innovative

and successful production processes, serving the implementation of competitive strategies that create value in view of certain environmental conditions (Acosta, Bueno & Long, 2014:19). Technological capability can make effective use of technological knowledge in efforts to assimilate, use, adapt and change the existing technologies, which may result in the development of technology and development of new products and processes in response to the changing economic environment (Lopez-Salazar, Lopez-Mateo & Molina-Sanchez, 2014:48-49). It is defined as the accumulated knowledge, skill expertise and organisational base, which enables a firm to acquire, develop and use technology to achieve competitive advantage (Lopez-Salazar *et al.*, 2014:48-49).

3.3.2 The concept technological capability

According to Jirayuth, Nabi and Dornberger (2013:18), technological capability is the ability to make effective use of technological knowledge in order to assimilate, use, adapt and change existing technologies as well as being able to create new technologies and develop new products and processes in response to the changing economic environment to the advantage of SMEs. Sobanke *et al.* (2012:177) state that the focus of technological capability in developing countries is on the relationship between the Firm-level Technological Capability (FTC) and the National-level Technological Capability (NTC). Sobanke *et al.* (2012:177) indicate that this focus at the firm level is on equipment, skills, knowledge, attitudes and aptitudes needed to choose, install, operate, maintain, understand, adapt, improve and develop technologies. At the national level, the focus is on the collection of individual firm-level technological capabilities together with various linkages available in the National Innovation System (NIS).

Guifu and Hongjia (2009:452) have classified firm-level technological capability (TC) into three distinctive levels: TAC – technological acquiring capability; TOC – technological operating capability; and TUC – technological upgrading capability. Guifu and Hongjia (2009:452) indicate that TAC ascribes to capabilities to acquire new knowledge through formal, informal, internal and external channels. TOC refers to capabilities to operate, use and sustain production equipment and facilities. TUC concerns capabilities, which improve greatly on products and processes depending on a firm's strength and on changing market demands. The upgrading results will allow the firms to reach higher TC levels.

Sobanke *et al.* (2012:177) indicate that technological capability is composed of two broad elements, namely, embodied and disembodied. The embodied elements of technological capability are those that involve the human aspect. They include skills, knowledge, attitude and aptitude. The second is the non-embodied/disembodied elements. These are the part of the technological capabilities that are codified and can easily be transferred among users, which include equipment and software. According

to Diyamett and Mutambla (2014:402), technological capability is categorised into three major levels depending on the complexity of the knowledge and therefore ease of achievement. Specific technological activities belonging to the different levels of capabilities for both products and processes are defined below:

Basic technological capabilities: activities for developing basic product technological capabilities, include introducing minor adaptations to product technology, conducting regular quality control to maintain standards and specifications and modifying designs.

Intermediate technological capabilities: at the intermediate level, activities pertaining to product technological capabilities include the introduction of new designs for manufacturing and improvement of product quality.

Advanced technological capabilities: at the advanced level of product technological capabilities, companies should be able to conduct R&D (Research and Development) for new product generations and develop entirely new products or components.

Szogs (2010:38) indicates that it is possible to classify technological capabilities (TCs) according to the following different functions (i.e. investment capabilities, production capabilities and linkage capabilities) that the technological capabilities perform as well as their degree of complexity (i.e. basic technological capabilities, intermediate technological capabilities and advanced technological capabilities), described below:

Investment capabilities refer to skills needed before an investment is made. This includes the capability to assess the feasibility and profitability of a project, define specifications, what technology is required, negotiations of the purchase, recruitment and training of skilled personnel, designing the basic process and supplying the equipment. According to Sobanke *et al.* (2012:178), investment capability is described as the skills and information needed to identify feasible investment projects; prepare, locate and purchase technologies, staff, design and manage construction, commission and start-up. Sobanke *et al.* (2012:178) further indicate that the economic viability and technical feasibility of the new project must be critically analysed to determine the best combination of options for the project.

Production capabilities refer to the skills that are necessary to efficiently operate a plant with a given technology and the improvement of the technology over time. This includes process, product and engineering capabilities. Sobanke *et al.* (2012:178) refer to production capability as the skills and knowledge required for the operation of the production facilities.

Linkage capabilities refer to the ability to link up with other role-players in the company and are grouped as supporting activities, while investment and production capabilities are specified as primary activities. Sobanke *et al.* (2012:178) indicate that linkage capability is conceived as those skills required for transmitting information, skills and technology and to receive them from component/raw material suppliers, customers, subcontractors, consultants, service firms and technology institutions. Other observed forms of linkages as highlighted by Egbetokun (2009:18) include licensing, management and marketing agreements, joint ventures, interaction with local and foreign competitors, government policy and regulations, interactions with domestic and international finance institutions.

The fourth function of technological capability, which is innovation, was added by Sobanke *et al.* (2012:178-179) and is explained below:

Technological innovation: innovation is the creation of value. It is an economic phenomenon involving the commercial use of a new idea. Innovation represents the important connection between an idea and its exploitation or commercialisation. Egbetokun (2009:18) indicates that innovation is a complex phenomenon and like entrepreneurship, it appears in many fields of study.

Innovation capability: innovation capability is the knowledge and skills needed to find new ways of carrying out the firm's activities such as investment, production, marketing and organisational as well as their implementation. Innovation can also be defined as the skills and knowledge needed to effectively absorb, master and improve existing technologies and create new ones. Innovation capability has always been used for various organisational activities, which cover the ability to invent, innovate and improve existing technology beyond the original design parameters. Egbetokun (2009:18) describes innovation capability as 'search' capabilities and the capacity to actualise the outcome of the searching process. He further observes that the search for new routines is likely to create new patterns of human resource development, R&D (Research and Development), technological information, technological adaptations and market research.

3.3.3 The importance of technological capability

Technological capability through innovation is critical in allowing firms to learn and adapt to turbulent environments and achieve a sustainable competitive advantage. The accumulation of technological knowledge increases the firm's ability to evaluate and use new technologies and skills in product innovation throughout the knowledge management process, allowing it to access new technological capabilities and advantages (Noh *et al.*, 2014:5). Technological capability promotes organisational learning and generates product innovations. It not only fosters new product creativity

but also facilitates product development speed. Therefore, technological capability plays a central role in product innovation and warrants special examination (Zhou & Wu, 2010:548).

Technological capability plays a critical role in determining the success of new ventures, both in domestic and international marketplaces. It is regarded as an important strategic resource, enabling new ventures to gain market acceptance and achieve a long-term competitive advantage through continuous innovation and the introduction of new products (Zou, Liu & Ghauri, 2010:100). Technological capability enables a firm to develop new technology, products or processes in response to changing environments by understanding and utilising technological knowledge, which is an essential role of technological knowledge at the firm level (Lee & Lee, 2016:23).

The development of technological capability (TC) by SMEs is crucial for firms to overcome fast-changing and fiercely competitive global markets (Jirayuth *et al.*, 2013:16-17). Technology capability is a prime candidate that helps in commercialisation in a technology-based start-up and therefore is a source of competitive advantage (Aeron & Jain, 2015:360). The development of technological capabilities is a fundamental pillar for the economic and social development of a country, because it raises productivity levels, quality, and efficiency in the use of resources, generating improvements in products and processes, and expanding into new markets with more value-added products and services, all of which enhance the competitive edge of the organisation (Lopez-Salazar *et al.*, 2014:47).

TC has been observed as an important element in the economic growth of a nation since the development of an enterprise depends on the capability to introduce new products over time (Guerra & Camargo, 2016:49-50). It contributes to the achievement of higher levels of economic performance for firms since it allows incremental improvements from the use of new technologies, which is key to gaining a competitive advantage (Guerra & Camargo, 2016:49-50). TC is widely known as a strategic source of growth and wealth at the national and the firm levels (Monopoloulos, Dimitratos, Young & Lioukas 2009: 43).

The firm's TC level has been regarded as an important resource, enabling firms to achieve a competitive advantage within their industry. Those firms with superior TC can secure greater efficiency gains by pioneering process innovations and achieve higher differentiation by innovating products in response to the changing market environment (Jirayuth *et al.*, 2013:16-17). Technological capability is one of the foundations of a firm's competitive capability. It helps to increase the ability to apply technical knowledge in creating and delivering innovative products that consumers may value, which affects the firm's overall business performance and new product development performance (Latip, Salleh, Habidin & Sapengin, 2014:18-19).

Technological capability is one of the critical success factors for firms in emerging economies. It allows firms to reduce costs, increase efficiency, develop new knowledge and technology rapidly, reconfigure firm structure, and to upgrade its products and processes (Jirayuth *et al.*, 2013:18). The literature reveals that superior technological capability allows firms to apply new knowledge that will enhance its competency development, thus resulting in great business performance. On the other hand, technological capability also enables firms to produce new innovative products. (Latip *et al.*, 2014:21). Researchers believe that superior technological capability can increase efficiency and higher differentiation through improved processes and product innovations and thus improve a firm's capability in new product development (Latip *et al.*, 2014:21).

Technological capability is one of the factors that enable a country and its enterprises to perform some functions that are critical to its economic development and international competitiveness. At the firm level, technological capabilities facilitate innovation, which, in turn, drives productivity growth (Sobanke, Adegbite, Ilori & Egbetokum, 2014:992). Consequently, for a nation to improve its competitiveness or experience, improved productivity and economic growth, it needs to pay attention to the accumulation of technological capability by firms (Sobanke *et al.*, 2014:992).

Technological capabilities are crucial to effectively use technologies that have been developed elsewhere (i.e. other countries or other organisations) as well as be able to adapt, improve and create new technologies of its own (Szogs, 2010:38). According to Hamid and Tasmin (2013:122), an entrepreneur with a strong technological capability tends to engage in more exploitation alliances to gain access to complementary assets such as manufacturing and marketing resources to commercialise its new products. Thus, SMEs that have technological capabilities have the following four basic advantages:

- the accumulation of technical expertise;
- more competence in assimilating external knowledge in similar fields and more efficiency in integrating additional skill;
- greater exploitation of existing know-how; and
- engagement in search activities that improve efficiency and produce reliable outcomes.

3.3.4 Measurement of technological capabilities

Technology measurement is a term for the process of collecting, interpreting and evaluating information that offers suggestions about different technology options to invest, strategise or make policy (Khamseh & Noori, 2014:101). Technology can be measured in several ways. One solution is to look at the input of the technological processes such as the R&D expenditure or personnel, or their effects, as in changes in Total Factor Productivity (Frattini, Nicolli & Prodi, 2014:6). At the firm

level, there are many indicators for measuring capabilities. These are based on the level of complexity and functionality of the four main categories of technological capabilities, namely, investment, production, innovation and linkage capabilities (Sobanke *et al.*, 2012:177-178).

Despite the rich literature on the subject of technological capabilities, there is very little that talks of proxies for measuring such capabilities. Technological capability is the ability to use technological knowledge to effect some technological changes (Diyamett & Mutambla, 2014:402-403). Here the keywords and what should be measured are the abilities and knowledge. Developing proxies for measuring such variables is a necessary but daunting task (Diyamett & Mutambla, 2014:402-403). Technological capabilities assessment, also known as technology assessment or technology auditing is an essential part of technology management and is considered as a crucial factor for profitability and development of the firm in today's competitive world (Salami, Taghavifard & Majidifar, 2015:106).

Technological assessment for managers of firms has always been a major challenge. The use of models and methods for technology assessment is not working for long in organisations (Khamseh & Mohagheghi, 2013:1730). In other words, managers and technical experts of companies and factories, due to their experience, are mentally able to determine the ability of companies in various fields of technology. It seems that technological capability models are the right tools to confirm and authenticate a mental estimate (Khamseh & Mohagheghi, 2013:1730). Technology capability assessment is a process in which the present technological capabilities and abilities of the organisation are measured to identify both the shortcomings and strong points of its technology and to compare its organisational capabilities to its rivals in ideal levels and compensate for deficiencies (Salami *et al.*, 2105:106).

A technological needs assessment not only identifies the deficient and problematic sections of the firm but also considers and determines its relative advantages. Technological capability assessment is of crucial significance to any firm or business aspiring to its strategic aims (Salami *et al.*, 2015:106). Technological capability assessment is a process in which the current level of capabilities and technological abilities of the organisation are measured to identify the strengths and improvable points and also to compare the technological capabilities of competitors, or ideal level/ technological gap (Khamseh & Mohagheghi, 2013:1731). Since different models have been developed, models that are used in the company should have two basic properties. Firstly, they should be simple and understandable. Secondly, they should offer results in a short and acceptable time. The models to evaluate the technological capabilities to other categories are shown in Table 3.2 (Khamseh & Mohagheghi, 2013:1731):

Table 3.2: Classification of models of firm-level technological capability assessment

| Models to determine the technological gap | Models to assess the causes of the technological gap | Models to provide a mechanism to compensate for the technological gap |
|---|--|---|
| Atlas of Technology Model | Ford Model | Ford Model |
| Porter’s Model | Lindsay Model | Lindsay Model |
| Panda and Ramanatan Model | Atlas Technology Model | Phaal Model |
| Floyd Model | Floyd Model | Garcia-Arreola Model |
| Management Technology Needs Model | Management Technology Needs Model | Lin Model |
| Technology Assessment Content Model | Model of Technological Capabilities | Technology Needs Assessment Model |
| Technology Status Assessment Model | | Science and Technology Management Information System Model |
| Economic Value-Added Model | | Management Technology Needs Model |

Source: Khamseh and Mohagheghi (2013:1731)

Table 3.2 shows that models to evaluate the technological capabilities of a firm can be classified as models to determine the technological gap, models to assess the causes of the technological gap and models to provide a mechanism to compensate for the technological gap.

The literature review shows that technological capability is an important element in the economic growth of a nation since the development of an enterprise depends on the capability to introduce new products over time. Technological capability contributes to the achievement of higher levels of economic performance for firms, since it allows incremental improvements from the use of new technologies, and is key to gaining competitive advantage. This indicates that technological capability contributes positively to the business performance of SMEs. The next section discusses collaborative innovation.

3.4 COLLABORATIVE INNOVATION

This section analyses previous literature on collaborative innovation. It covers the definitions of collaborative innovation, the concept of technological capability, types of collaborative innovation, and the benefits associated with collaborative innovation.

3.4.1 The definitions of collaborative innovation

The definition of collaborative innovation is “a distributed innovation process based on purposively managed knowledge flows across organisational boundaries, using pecuniary and non-pecuniary mechanisms in line with each organisation’s business model” (Chesbrough & Bogers, 2014:3). Collaborative innovation is a two-way process in which companies have an inbound process in which they bring in ideas, technologies, or other resources needed to develop their own business and an outbound process in which they out-licence or sell their ideas, technologies, and other resources (Lindegaard, 2011:1). Collaborative innovation is defined as “the use of purposive inflows and outflows of knowledge to accelerate internal innovation and to expand the markets for external use of innovation respectively” (Jean-Claude, 2015:4).

3.4.2 The concept of collaborative innovation

Collaboration innovation is an emerging concept that has recently attracted a lot of attention, both in practice (among industries) and in academia (among researchers). One of the main reasons could be that the concept fits very well with many trends in the broader management arena (Rahman, Acilar & Ramos, 2013:249). Since the early works of Chesbrough in 2003 almost a decade ago, this field has gained much on the content, context and process of collaborative innovation. Nonetheless, it has been observed that much more research is needed to learn about the insight of the practical aspects of it (Poot, Faems & Vanhaverbeke, 2009:177). The collaborative innovation paradigm describes a new cognitive framework for a firm’s strategy to profit from innovation. It supports the firm to use inflows purposely and outflows of knowledge to accelerate internal innovation and to expand markets for external use of innovation, respectively (Brunswicker & Ehrenmann, 2013:34).

Traditionally, new technologies were mostly developed in-house. As they became more complex and requested a broad portfolio of relevant knowledge that a single firm could not have, collaboration with external partners (suppliers, customers, and competitors) gained the upper hand (Lee, Park, Yoon & Park, 2010:290). Consequently, the idea of testing out the concept of collaborative innovation to overcome SMEs’ difficulties arose from the mid-2000s because it seemed to be a promising challenge for SMEs struggling with the shortage of their resources (Lee *et al.*, 2010:290). It could now allow them to develop new technological combinations of previously disconnected knowledge and capacities as well as address or take advantage of a wider range of market opportunities (Parida, Westerberg & Frishammar, 2012:283).

As collaborative innovation was initially designed for large firms, SMEs’ practices need further investigation in order to understand them better as well as the challenges that SMEs have to face in their implementation (Lichtenthaler, 2011:47). Collaborative innovation is an effective way to

enhance the capability of independent innovation in SMEs (Han & Wang, 2015:439). It was first implemented and studied in high tech or multinational enterprises. Recent researches show that SMEs are also practising collaborative innovation activities and that they are increasingly doing so (Lee *et al.*, 2010:290). In SMEs, innovation activities are often integrated into daily business, development work or experimentations. Innovation processes are even hidden by people involved in these functions (Forsman, 2011:739).

To overcome disadvantages linked to their relative lack of resources and scale, as well as gaps in business expertise, innovative SMEs often engage with entities that have complementary assets. SMEs and bigger firms alike benefit from flows of expertise resulting from formal and informal interactions, which can accelerate product development, improve the innovative process, and hasten the commercialisation of new solutions (Brant & Lohse, 2013:7). Successful collaborative, or ‘open’, collaboration innovation is underpinned by judicious management of IP (Intellectual Property) to prevent unanticipated free riding by partners or potential rivals. Collaborative innovation is particularly important for SMEs as they may benefit from the following activities (Brant & Lohse, 2013:7):

- **Joint R&D with universities or research institutes:** cooperative on research and in the search for commercial applications for new research.
- **Work with larger firms:** leverage complementarity of resources, skills, and technology solutions to develop and commercialise new offerings.
- **Partner with other SMEs:** work together to offset larger firms’ size advantages, cross-licensing patents and expertise.
- **In-license:** obtain needed technology without the cost of developing it in-house.
- **Out-license:** access marketing channels, marketing skills, manufacturing expertise, or other complementary assets needed to bring an innovative product to market.

3.4.3 Types of collaborative innovation

There are some practices for applying a collaborative business model in a firm. These are categorised into three different types (Ghalamzan, Sadreddin & Schiffauerova, 2015:3). The first type is inside-out (outbound) practice, which allows the firm to allow unused and unutilised ideas and technologies to be used by other firms and companies for their businesses. The second type is outside-in (inbound) practice, which involves opening up the company’s innovation to other companies for any contribution. The last type of practice is combined knowledge inflows and outflows between role players in the innovation process (Ghalamzan *et al.*, 2015:3). Dahlander and Gann (2010:699) categorise them into two different types: pecuniary and non-pecuniary.

Most research on collaborative innovation differentiates between two concepts: external organisations can acquire "inbound" where new ideas flow into an organisation and "outbound" where internally developed technologies and ideas with business models that are better suited to commercialise a given technology idea (Dahlander & Gann, 2010:699). For example, in-licensing and acquiring of external technologies represent pecuniary inbound practices whereas crowd-sourcing and informal networking are rather non-pecuniary inbound collaborative innovation modes. Free revealing of knowledge and donations (e.g. to creative commons) represent non-pecuniary outbound activities (Brunswicker & Ehrenmann, 2013:34).

Table 3.3: Collaborative innovation practices

| Outside-in pecuniary | Inside-out pecuniary |
|--|--|
| Buying licence (P1) | Joint venture agreement (P7) |
| Contract with other companies for R&D services (P2) | Selling new knowledge developed in R&D to another company (P8) |
| Buying any innovative ideas from start-up companies (P3) | Participating in a business incubator programme (P9) |
| Consulting with any specialised collaborative innovation companies (P4) | Selling R&D market ready by-products (P10) |
| Collaborating with students in a research agreement with a university (P5) | Selling licences of innovation (P11) |
| Assigning a research fund to an academic institute (P6) | |

Source: Ghalamzan *et al.* (2015:4)

Table 3.3 shows that collaborative innovation practices fall under the two categories, namely, outside-in pecuniary and inside-out pecuniary. Outside-in pecuniary is involved with buying licences, contracting with other companies for R&D services, buying any innovative ideas from start-up companies, consulting with any specialised collaborative innovation companies, collaborating with students in a research agreement with a university and assigning a research fund to an academic institute. Inside-out pecuniary is involved with joint venture agreements, selling new knowledge

developed in R&D to another company, participating in a business incubator programme, selling R&D market ready by-products and selling licences of innovation.

Krause *et al.* (2012:3) identify the following three core collaborative innovation processes:

- **Outside-in:** aims to increase the company’s innovativeness by enriching its knowledge base through the integration of suppliers, customers, and other external knowledge sources.
- **Inside-out:** focuses on externalising the company’s knowledge and innovation. Companies that choose the inside-out approach generate profits by bringing ideas to market, selling IP (Intellectual Property) and multiplying technology by transferring ideas to the outside environment.
- **Coupled:** combines outside-in with inside-out processes. Companies co-operate with other companies in strategic networks, joint ventures and alliances.

Collaboration innovation is often divided into two core processes (Jean-Claude, 2015:5). Inbound collaborative innovation is “the practice of leveraging the discoveries of others: companies need not and indeed should not rely exclusively on their R&D. Outbound collaborative innovation suggests “that rather than relying entirely on internal paths to market; companies can look for external organisations with business models that are better suited to commercialise a given technology” (Jean-Claude, 2015:5). Some authors consider a third process (Mazzola, Bruccoleri & Perrone, 2012:27). Coupled innovation is co-innovation with complementary partners that combines the inbound with the outbound processes to bring ideas to market and in doing so jointly develop and commercialise innovation. Linking both technology exploration and exploitation increases the global value orchestration (Lindgreen, Hingley, Gant & Morgan, 2012:207).

The following Table 3.4 summarises the main characteristics of inbound, outbound and coupled collaborative innovation (Chiaroni, Chiesa & Frattini, 2011:36):

Table 3.4: Inbound, outbound and coupled collaborative innovation

| Collaborative innovation | Inbound | Outbound | Coupled |
|---------------------------------|---|---|--|
| Synonym | -Technology acquisition -Inward technology transfer -Outside-in | -Technology exploitation -Outward technology transfer -Inside-out | -Technology acquisition and exploitation |

| Collaborative innovation | Inbound | Outbound | Coupled |
|------------------------------|--|--|--|
| Characteristics | <ul style="list-style-type: none"> -Low tech industry for similar technology acquisition -Act as knowledge brokers and knowledge creators -High modular products -High knowledge intensity | <ul style="list-style-type: none"> -(Basic) research-driven company -Objectives like decreasing the fixed costs of R&D, branding, setting standards via spill-overs | <ul style="list-style-type: none"> -Standard setting -Increasing returns -Complementary products with critical interfaces -A relational view of the firm |
| Main practices/ activities | <ul style="list-style-type: none"> -Integration of customers, suppliers and external knowledge sourcing -External networking -Inward IP licensing -Funding research | <ul style="list-style-type: none"> -Bringing ideas to market -Technology commercialisation -Selling IP -Divesting, spin-off, venturing -Multiplying technology different applications | <ul style="list-style-type: none"> -Co-patenting -Joint-venture -Alliances with mainly complementary partners in R&D, manufacturing |
| Associated capability needed | -Absorptive capacity | -Multiplicative capability | -Relational capacity |

Source: Chiaroni *et al.* (2011:36)

3.4.4 Benefits of collaborative innovation

Enriching the company's knowledge base by integrating suppliers, customers, and external knowledge sources can increase a company's innovativeness (Enkel & Gassmann, 2010:256). Over the last decade, collaborative innovation has grown in popularity and success to increase innovation effectiveness and speed, especially within larger organisations. Further benefits of collaborative innovation include bringing more diversity to innovation, diversifying the risk of innovation, pooling of resources and exploiting synergies (Lindegaard, 2011:1).

A need, however, exists within the SME sector to improve how they as organisations innovate and reduce cost and turnaround times for innovation to be more competitive. By utilising best practice collaborative innovation models, similar benefits should be possible that are being experienced by larger organisations (Krause *et al.*, 2012:2). Especially in the South African context, this could be vital to provide a competitive advantage and provide access to global input into the innovation process through collaboration and social innovation (Krause *et al.*, 2012:2). Rahman and Ramos (2010:1) observe that to provide innovative services or products to the outer periphery of the customer chain, SMEs play an important role and that focusing innovation for SMEs would lead to a newer dimension of innovation research for better business and economic growth.

Mazzola *et al.* (2012:27) indicate that collaboration with parties tends to be beneficial for firm performance. Parida *et al.* (2012:283) point out that a collaborative innovation approach is relevant in large firms in cases of high product modularity or high industry speed. Dahlander and Gann (2010:699) state that studies should also pay attention to the disadvantages of collaborative innovation. Huizingh (2011:2) states that establishing partnerships is essential but is also a time-consuming issue with possible negative effects on long-term profits. According to Knudsen and Mortensen (2011:54), collaboration may lead to slower and more costly development projects compared to projects with less collaboration.

Before the emergence of a collaborative innovation concept, authors had already investigated the value of inter-organisational relationships (Jean-Claude, 2015:6). The potential advantages are access to particular resources or markets, economies of scale, risk and cost sharing, learning, speed to market, and flexibility. The potential disadvantages may be a loss of proprietary information, management complexities, financial and organisational risk, becoming dependant on a partner, partial loss of decision autonomy, the clash of cultures, and loss of organisational flexibility (Jean-Claude, 2015:6). Studies on collaborative innovation reiterate these arguments but also provide new ones, seen in the following Table 3.5 (Frishammar, Lichtenthaler & Rundquist, 2012:573):

Table 3.5: Benefits and limits of inbound and outbound collaborative innovation for SMEs

| |
|---|
| <p>Benefits</p> <ul style="list-style-type: none"> • Fuel internal innovation process and shorten innovation time. • Allow the development of complex products through integration of tested and proven technologies. • Improve the pre-emptive advantage of the already developed technology. • Use almost-ready technology to address the merging gaps in the market. • Provide revenues and access to knowledge. • Benefit by commercialising inventions by selling or licensing-out data. • Freedom to operate cross-licensing agreements with other organisations. • Set industry standards. • Limit a competitor's first-mover advantages. |
| <p>Limits</p> <ul style="list-style-type: none"> • Difficulty in exploiting technology developed elsewhere. • Expertise required in searching for and evaluating external ideas. • Inadequate or insufficient absorptive capacity to benefit from the external knowledge. • Organisational and cultural issues due to numerous external contacts. • Difficult transfer of expertise if a high level of tacit knowledge associated with the technology. • Reduction of the ability to develop in-house core competencies if too much sourcing. • Costs of coordination to bridge organisational boundaries. • Costs of protecting ideas to which others have access. • Free riding behaviour, partner's opportunistic acts. • Inventors' reluctance to reveal their developments. • Fear to sell corporate crown jewels. |

- Lock-in problems due to too much or not enough proximity (cognitive, organisational, social, institutional or geographical).
- Increase on short-term profit may weaken specific R&D capabilities.

Source: Jean-Claude (2015:7)

Brunswicker (2009:1) states that collaborative innovation has its unique opportunities but also very specific challenges, as summarised in Table 3.6.

Table 3.6: Challenges and opportunities for collaborative innovation in SMEs

| Challenges | Opportunities |
|---|--|
| Limited financial resources for R&D | Decision-making speed and flexibility |
| Restricted market influence | Entrepreneurial in nature |
| Lower standing as an innovation partner | The high value of personal networks |
| Cost of securing and enforcing IP | Strategic flexibility and adaptiveness |
| Less systematic management capability | Business specialisation |

Source: Krause *et al.* (2012:4)

Bianchi Campodall’Orto, Frattini and Vercesi (2010:427) confirm these challenges, by stating that collaborative innovation can be particularly challenging for SMEs because of their focused business portfolio, specialised knowledge basis, and limited financial resources that can be devoted to innovation activities and further cites the following challenges for SMEs:

- The lack of resources and capabilities in manufacturing, distribution and marketing, which are the key to transforming inventions into new products and processes.
- Identification of promising applications when to exploit commercially a proprietary technology is usually in completely different industries from the firm’s own product business.

Often, innovative SMEs display proficiency in a specific niche field, whereas they generally lack expertise in crucial areas outside of their core offerings. Collaboration, therefore, can be instrumental in bridging gaps in competence that may otherwise hinder an SME’s success (Lee *et al.*, 2010:290; Revilla & Fernandez, 2012:609). SMEs use collaboration to shorten innovation time, gain complementary experience and resources, reduce risk and cost, and increase the flexibility of their operations (Lee *et al.*, 2010:290). They may collaborate to get access to market and sales channels at the commercialisation stage, thus relying on established firms to help bring new solutions to market. Larger firms also benefit from collaboration R&D and, in some sectors, innovative SMEs are an increasingly central part of the innovation pipeline of established players (Brant & Lohse, 2013:7).

Networking among SMEs can help achieve economies of scale and merge and integrate diverse and complementary technologies and competencies (Williamson & De Meyer, 2012:24). In many places,

including Korea and China, localised networks have been found to help innovative SMEs to offset the size-related advantages of larger firms (Lee *et al.*, 2010:291; Zeng, Xie & Tam, 2010:181). Within a network of several firms with complementary knowledge and expertise, an SME can benefit from the strengths of its partner firms, and the network can generate a greater total surplus than what each partner could generate separately (Brant & Lohse, 2013:8).

Working with other firms is associated with certain risks, such as technology and knowledge leakage to potential rivals, although this risk can be lessened with judicious intellectual asset management. Overall, for SMEs, the advantages of partnership tend to outweigh the costs, including investments in IP management (Hsieh, Lee & Ho, 2012:430; Tomlinson & Fai, 2013:316). In later stages of product development, as technology becomes more complex and cannot be realised completely within one firm, the ability to successfully engage in collaborative innovation (also called ‘open’ innovation) becomes a more important factor of success (Lee *et al.*, 2010:291). SMEs involved in multiple collaboration have been found to be more innovative (Brant & Lohse, 2013:8).

In the context of collaborative innovation, attracting foreign technology partners can be highly valuable for SMEs. Export orientation, together with active engagement in innovation networks, is a key factor associated with rapid growth and success of innovative technology SMEs (Filatochev, Liu, Buck & Wright, 2009:1005). Exposure to the more intense competition in international markets can stimulate innovation among SMEs (Neuhausler, 2012:681). International orientation for smaller firms is also positively associated with the movement of people and therefore of tacit knowledge. Expertise moves with individual entrepreneurs, who can be powerful accelerators of internationalisation and innovation (Filatochev *et al.*, 2009:1005). However, internationalisation also introduces challenges for innovative SMEs, such as the need to develop more sophisticated and often costly strategies for protecting intellectual assets across borders (Brant & Lohse, 2013:8).

Geographic proximity – for instance, through participation in clusters – can support SMEs’ interaction with other firms, positively impacting productivity and the capacity to innovate. Local concentration of quality human resources, needed inputs, and related services facilitate partnership and the formation of new firms (OECD, 2010:1; Hsieh *et al.*, 2012:430). Even informal interactions among entrepreneurs, resulting from physical proximity, can enhance the sharing of knowledge and spur innovation (Lee *et al.*, 2010:292). Governments can catalyse innovation interactions and the sharing of knowledge by supporting the creation of incubators, innovation networks, and clusters (Brant & Lohse, 2013:8).

Collaboration with customers is also particularly useful for innovative SMEs. This type of collaboration can provide SMEs with access to advanced technology, as well as access to knowledge

from downstream customers, such as insights about standards, best practices, and lean operating strategies (Brant & Lohse, 2013:8; Tomlinson & Fai, 2013:317). Integrating customers' competences and their feedback into the innovation process can provide valuable input and feedback, enabling an innovative SME to fine-tune its offerings and ensure that products developed in the most strategic direction (Grant *et al.*, 2013:317). It can also help an SME integrate process innovations that enhance operational efficiency and productivity. Close relations with their clients and suppliers can help innovative SMEs combine and share resources, adapt and improve offerings and processes, and enhance knowledge flows, contributing to organisational learning for all involved (Tomlinson & Fai, 2013:318).

Cooperation with research centres and universities is similarly advantageous for innovative SMEs, particularly in the initial stages of technology development (Zeng *et al.*, 2010:182). Such interaction is also valuable in enabling academic research to be exploited and commercialised (Geissler, Jahn, Kaminski & Zanger 2009:1). Faculty involvement in spin-offs helps to ensure the sharing of tacit knowledge with a new firm (OECD, 2010:2; Williams, 2013:1). To engage with SMEs and other private companies, public universities and research institutes require adequate incentives and structures, as well as adequate funding for research, recruitment, and the establishment and operation of technology transfer offices (TTOs). Legislation that provides for the patenting and licensing of public universities' intellectual property can facilitate engagement with firms (Zeng *et al.*, 2010:183).

Innovative SMEs' commercial success is often enhanced by collaboration with a range of public and private entities; collaboration can reduce the time to innovate, increase the scope of innovation, and promote its diffusion in products and processes risks (Brant & Lohse, 2013:9). The benefits of collaborative efforts are maximised when the parties can widely share information. However, the exchange of knowledge is not without considerable risk. This is particularly true for SMEs collaborating with parties with significantly more resources at their disposal, and which can more readily commercialise the results of joint work. IP management strategies can help innovative SMEs to manage such risks (Brant & Lohse, 2013:9).

The literature revealed that collaborative innovation has its advantages and disadvantages. One of the advantages is that collaboration with parties tends to be beneficial for the firm's performance. One of the disadvantages is that working with other firms is associated with certain risks, such as technology and knowledge leakage to potential rivals, but this risk can be lessened with judicious intellectual asset management. The literature clearly shows that collaborative innovation contributes positively to the business performance of SMEs. The next section focuses on organisational learning.

3.5 ORGANISATIONAL LEARNING

This section explores previous literature on organisational learning, covering issues such as the definitions of organisational learning, the concept of organisational learning, and its benefits.

3.5.1 Organisational learning defined

Organisational learning is defined as a process of inquiry through which members of the organisation develop shared values and knowledge based on their own experience and that of others. Organisational learning means creating, acquiring, interpreting, transferring and retaining knowledge (Herstein, 2011:455). It is defined as the process of improving actions through better knowledge and understanding (Ranjbar & Absalan, 2015:169).

Organisational learning is a process of creating and transferring knowledge within an organisation. It is a process of creating, transferring the knowledge and attitude of the company that reflects the learning outcomes of the company (Zafar, Hafeez & Shariff, 2016:44). The definition of organisational learning is “the intentional use of learning processes at the individual, group and system level to continuously transform the organisation in a direction that is increasingly satisfying to its stakeholders” (Herstein, 2011:455). It is the ability to develop both new knowledge and to improve current knowledge (Kitapci & Celik, 2014:829).

Fang, Chang and Chen (2011:1864) indicate that scholars from varying perspectives have defined organisational learning. They further indicate that there is no common definition of organisational learning, which commands wide acceptance. However, some researchers specified that it is an ability that increases the firm’s performance with time. Abiola (2013:180) defines organisational learning as a conscious or unconscious process affecting the organisational action that contains its factors using knowledge acquisition, reaching knowledge and evaluating it with the help of organisational memory.

According to Leavitt (2011:5), organisational learning is defined as the capacity or process within an organisation to maintain or improve performance. Argote (2011:440) states that most researchers would agree with defining organisational learning as a change in the organisation’s knowledge that occurs as a function of experience. Giniuniene and Jurksiene (2015:987) say that organisational learning might be defined as the operational process of obtaining information and converting it into knowledge as detection and correction of error where the error is conflicting between what is aimed to be achieved what is achieved.

In defining organisational learning, many scholars emphasised “proper learning” leading to specified results such as the increase in the organisation’s intelligence, the improvement of its knowledge base, the increase in shareholders’ satisfaction, the increase in long-term organisation’s adaption ability,

the improvement of organisational productivity, the more effective activities for customers and partners, and the development of the competitive advantage (Zgrzywa-Ziemak, 2015:100). Organisational learning is defined as a specific process that underlies all dynamic capabilities, which bring about changes in the processes applied by the firm, while operational capabilities are those relating to the way it functions or operates (Bustinza, Molina & Arias-Aranda, 2010:4067-4068). From this point of view, organisational learning is the motor that drives the dynamic capabilities of the firm to structure and guide its operational capabilities towards obtaining competitive advantage (Bustinza *et al.*, 2010:4067-4068).

Organisational learning is defined as the process of enquiring and applying knowledge, skills, value and beliefs to survive and improve organisational growth (Malik, Khan, Bhutto & Ghouri, 2011:62). Halim, Ahmad, Ramayah, Hanifah, Taghizadeh and Mohamad (2015:87) define organisational learning as continuous testing of experience and its transformation into knowledge available to the whole organisation and relevant to their mission.

3.5.2 The concept of organisational learning

The concept of organisational learning has been cited in the managerial literature since the early 1980s. It describes the internal capacity of organisations to learn from experience, to examine and adopt new ideas and transform them into policy and action plans to obtain competitive advantage (Herstein, 2011:455). Organisational learning, or organisational learning capability, is about the ability of one organisation to apply accurate and appropriate management practices, its structures as well as the procedures to enhance, facilitate and encourage learning (Shoid & Kassim, 2012:2).

Organisational learning refers to the ability of the company to adapt to environmental changes and develop a company's competitive advantage. Learning is a process in which individuals gain skills, knowledge and insight that can affect their behaviour and skills. It is a process whereby knowledge is created through the transformation of experience (Ismail, Saud & Isa, 2016:56). When the members of the organisation respond to environmental changes, identify errors, correct them and act as learning agents, then organisational learning occurs (Zafar *et al.*, 2016:44). The application of organisational learning theories in SMEs helps to explain those that are "innovative" compared to those that are not stable. To be successful, entrepreneurs must be able to learn from decisions, from mistakes, from experience and their network (Onyema, 2014:95). It is a process that is characterised by significant and critical learning events. The ability of entrepreneurs to learn is crucial to their behaviour and ability to succeed (Onyema, 2014:95).

Organisational learning is a dynamic process, which enables firms to adapt quickly to the changing environment. It includes the application of new knowledge and skills in innovative approaches

(Wang, Hermens, Huang & Chelliah, 2015:66). It refers to the development of new knowledge, which is a complex process that has the potential to change behaviour. It is operationalised into three categories, namely, information acquisition, information interpretation, and behavioural and cognitive information (Halim *et al.*, 2015:87). Organisational learning can be accounted for using two dimensions: what is learned (knowledge), and how it is learned (learning process). On what has been learned; organisational learning includes descriptions of individual understanding, interpersonal communication and group decision-making (Abiola, 2013:180).

Organisational learning occurs when people continually expand their capacity to create the results they truly desire, when new and expansive patterns of thinking are nurtured when collective aspirations are set free, and when people are continually learning how to learn together (Herstein, 2011:455). Organisational learning can be conceived as having three sub-processes: creating, retaining, and transferring knowledge. When organisations learn from experience, new knowledge is created in the organisation (Argote, 2011:440). The knowledge can then be retained so that it exhibits some persistence over time. Knowledge can also be transferred within and between units. Through knowledge transfer, one unit is affected by the experience of another or learns vicariously from the experience of other units (Argote, 2011:440).

Prior research suggests that organisational learning involves organisational activities such as knowledge acquisition and information sharing that consciously influences a firm's innovation performance (Saki, Shakiba & Savari, 2013:1). Organisational learning consists largely of individuals involved in learning activities, so it is easy to conclude that it is simply the aggregate of the individual learning process. Thus, the process of individual learning has a significant impact on the concept and practices of organisational learning (Abiola, 2013:180).

Organisational learning occurs as organisations acquire experience. Another current theme in research on organisational learning is the importance of the context in which learning occurs (Argote, 2011:441). Studies show, for example, that organisational learning is affected by whether the organisation has learning or performing orientation, whether organisational members perceive that they are psychologically safe, whether members share a superordinate identity and power relationships within the organisation. Thus, the context moderates the relationship between experience and learning processes and outcomes (Argote, 2011:441). Organisational learning is the process of acquiring, interpreting and creating knowledge among organisational members. Processes in organisational learning can be modelled after individual human learning (Wang, Wang & Horng, 2010:184).

Organisational learning is a knowledge creation process largely related to the acquisition, dissemination and interpretation of customer and competitor related information. It is an effort that strives to harness intellectual and social capital of organisational members through which it boosts their competence (Beyene, Shi & Wu, 2016:128). Organisational learning represents the processes by which an organisation changes and can be changed (Farrukh & Waheed, 2015:75). Its learning processes are directly responsible for the development of different kinds of organisational routines, some operational and some dynamic, in which the latter are responsible for the process of modification of the former. From this perspective, dynamic capabilities are behaviour patterns with which the firm systematically adjusts its operational routines to increase its effectiveness (Bustinza *et al.*, 2010:4068).

The learning process can, therefore, be categorised as part of a firm's dynamic capabilities. Organisational learning can be approached from various perspectives, such as the resource-based view, the dynamic capabilities theory or theories based on knowledge management (Bustinza *et al.*, 2010:4068). It is not just the total of individual learning but also the organisation's ability to continuously augment, the collective capacity to reflect, to learn how to learn, to unlearn traditional ways of doing things and renounce old habits (Fernandes, Sanyal, & Ramanathan, 2016:274).

Organisational learning includes both the processes whereby organisations adjust themselves defensively to reality and the processes whereby knowledge is used offensively to improve the fit between organisations and their environments (Herstein, 2011:455). According to Ismail *et al.* (2016:56), the organisational learning process consists of the following steps:

- Identification of information to create new knowledge.
- Exchange and diffusion of knowledge.
- Integration of knowledge.
- Transformation of new knowledge into the application of organisational routines.

Organisational learning has come to assume critical importance in modern management literature. It has indeed come to be one of the most promising concepts in strategic management since the late 1980s and has been linked with other key constructs such as innovation (Onyema, 2014:97). Organisational learning focuses on the procedure and proficiencies of knowledge development. It focuses on the personality and knowledge residing in the individual learner. It is considered as a learning process when learning happens logically in organisations. Organisational learning emerges from the descriptive and academic investigation (Emami, Moradi, Idrus & Almutairi, 2012:9-10).

Learning encompasses two activities: acquisition of skills or expertise, which implies the ability to produce some action; and acquisition of know-why, which implies the ability to articulate a

conceptual understanding of an experience (Ismail *et al.*, 2016). Organisational learning responds to changes in both internal and external environments. Learning in organisations is a routine based activity that is embedded in a particular institutional setting (Saka-Helmhout, 2010:41). Firms need to unlearn existing routines and learn new ones for learning to be highly effective (Ismail, 2013:158).

Many researchers endorsed that to meet the needs of organisational learning, managers should promote learning opportunities, and growth talents among staff members (Malik *et al.*, 2011:62). Learning is the outcome of the process of knowledge acquisition and the integration of this knowledge into organisational practice (Kreiser, 2011:1042). The essential element of organisational learning is the willingness to apply new knowledge. Entrepreneurship involves the learning process and an ability to cope with problems and to learn from those problems (Onyema, 2014:97). The ability to learn from experience involves the concept of double loop learning. It is a process of learning “how to learn”. Learning better from experience implies bringing knowledge, skills, values and attitudes together to interact upon the learning process, which, therefore, fundamentally demands an action learning approach (Onyema, 2014:97).

According to Malik *et al.* (2011: 63), the following five key skills are needed to build and enhance organisational learning:

Systems thinking: is a conceptual framework, which assists to scrutinise general patterns and facilitates learning that can spot and manage planned or unplanned changes.

Mental models: refer to the perception regarding the event. This model emphasises studying and exploring inner perceptions and then recording them, which ultimately are the foundation of mental models.

Self-directed learning: relates to an individual who accentuates learning about himself/herself. It helps to get awareness about an individual learning style and evaluates self-competencies and needs, which relate to business goals, which are requirements of the situation.

Personal competencies: refers to a high level of professionalism in a particular field or skill. It requires long-term consistency and commitment to learning and leads to that professionalism which is required in fulfilling a specific skill, task or responsibility.

Dialogue: means elevated the level of communication among employees. This instrument facilitates, creates and coordinates learning and practice in all aspects of the organisation. This promotes to exploit social intelligence and motivates positive thinking and collaborative interactions.

Learning can be seen as the process through which an individual acquires knowledge, skills, attitudes and opinions. Learning is a key activity for organisational development and innovation. The

capability to learn is a critical factor for organisations to grow and innovate. Learning capability is any change in the organisation's model that maintains or improves performance and then enables the organisation to innovate (Fang *et al.*, 2011:1864). According to Kamyra (2012:227), two types of organisational learning were established: adaptive learning (single-loop learning) and generative learning (double-loop learning). Adaptive learning is about improving the existing rules, enhancing efficiency and improving the existing strategies without tampering with the norms and beliefs of the organisations. Generative learning (double-loop learning) promotes inquiry, challenges current assumptions and causes new theories to be used. It redefines the current values, beliefs and norms, focusing on enabling strategic renewal and transformation.

Salim and Sulaiman (2011:119) indicate that adaptive learning and generative learning are complementary processes. Generative learning may lead the company to identify new customers and markets and offer new products and services to them as well as to existing customers. Adaptive learning may lead the company to identify ways to deliver these new products and services to all customers more efficiently and effectively. Malik *et al.* (2011: 63) suggest a four-step approach in the learning process cycle:

Acquire learning: gained with the attainment of knowledge of the organisation, knowledge grows by controlling environment through research implementation, information systems to memorise and recycle data, training, etc.

Dissemination: is a process through which information is shared. Knowledge can be communal and spread in formal or informal notes, articles and reports and in the form of skills.

Interpretation: this refers to how information is analysed and interpreted before sharing. This step works like a brain, which shares an understanding of information in the organisation.

Organisational memory: refers to a centre where knowledge will be memorised. This plays a vital role in organisational learning.

Kitapci and Celik (2014:829) indicate that organisational learning can be improved by focusing on system orientation, a climate for learning orientation, knowledge acquisition and utilisation orientation, information sharing and finally, dissemination orientation, described as follows:

- **System orientation** is knowledge integration and has been developed in the past fifty years. It may be defined as seeing the big picture. This means the relationships between parts should be analysed.
- **Climate for learning** orientation is a measure that encourages learning in the organisation. It reveals the unimportant ideas in organisational culture.

- **Knowledge acquisition and utilisation orientation** is the ability of innovativeness, technology and continuous improvement. In this context, acquiring the knowledge and its usage is part of the learning culture, and they should be thought of together.

Information sharing and dissemination orientation are defined as the degree of reaching the organisation's knowledge. Communication with other departments is necessary for generating this knowledge, which is also one of the most important dimensions of learning capacity (Kitapci & Celik, 2014:829).

3.5.3 Benefits of organisational learning

Organisational learning is a necessary and fundamental source of competitive advantage in the field of strategic management (Ranjbar & Absalan, 2015:169). Organisational learning helps organisations achieve success in future. It is the key to business performance and helps gain a sustainable competitive advantage. Organisations that adopt strategies relating to organisational learning achieve better performance. Organisational learning significantly affects business's performance. It influences the innovative performance of the business and improves market-oriented behaviour (Zafar *et al.*, 2016:45).

Organisations that have adopted organisational learning can better sense events, trends and changes of market that can help in adopting more responsive structures than competitors adopt, to respond to challenges (Martinez-Costa & Jimenez-Jimenez, 2009:98). Organisational learning influences interpersonal relationships positively. Organisations that are more committed to organisational learning show superior business performance (Martinez-Costa & Jimenez-Jimenez, 2009:98). The organisational learning literature exhibits that firms always learn from customers and that if knowledge is acquired from diverse geographic locations, then it can be an effective resource for generating novel knowledge combinations, which lead to innovation (Wilson & Doz, 2011:6). Organisational learning is a continuous process of generation, acquisition and integration of knowledge aimed at the development of resources and abilities that contribute to better organisational effectiveness and improvement (Fernandes *et al.*, 2016:274).

An enterprise that is keen on entrepreneurship by learning discovers, learns and applies the knowledge learnt, which enables it to adapt to changing circumstances. It is through such knowledge and ability to adapt that helps enterprises discover opportunities for success and take advantage of them (Onyema, 2014:96). Learning helps organisations to continually acquire, assimilate, and renew their knowledge in addressing environmental changes. Hence, for there to be a long-term effect, learning is essential (Ismail, 2013:158). Environmental changes include shifting partner expectations that are critical to long-term relationship survival within a trusting environment. Learning orientation

influences knowledge sharing between partners in inter-firm relationships (Lai, Pai, Yang & Lin, 2009:166). Empirical evidence suggests that many authors and theorists see organisational learning as the basis for sustainable competitive advantage. It is considered a mechanism, which triggers the conditions for developing a knowledge-based economy (Onyema, 2014:97).

Zgrzywa-Ziemak (2015:99-101) states that empirical studies confirm the positive relationship between organisational learning and business performance. The dominant ones are studies, which confirm the positive influence of organisational learning on:

- general organisational results (including financial);
- the organisation's innovation;
- strategy effectiveness and strategic flexibility;
- the results of projects;
- employees' satisfaction; and
- the results of human resources management.

Organisational learning emphasises developing and applying new knowledge that has the potential to change employees' behaviour, which, by implication, will strengthen the organisation to achieve improved results, ensure adaptability to change, grow through innovation and create result-oriented employees (Aydin & Ceylan, 2009:184). It enhances the organisation's capacity to develop the capabilities to acquire new information and convert that information into knowledge, which are vital ingredients for a business to remain competitive. Organisations need to develop their productive learning capacity, which will position them for survival in business competition globally (Aydin & Ceylan, 2009:184).

Organisations with a strong learning culture are good at creating, acquiring and transferring knowledge, as well as at modifying behaviour to reflect new knowledge and insight, which may lead to improved performance (Darvish & Nazari, 2013:1). Therefore, organisational learning encourages organisations to acquire information, interpret information understandably, and transform information into knowledge among the stakeholders (Darvish & Nazari, 2013:1). It enhances a firm's innovative capabilities by improving the level of its competitiveness and performance. An organisation's creative innovations depend on their learning (Chen & Chen, 2010:3191). A firm's innovativeness is determined by its learning orientation, while organisational learning capacity has a key role in increasing performance, and should be developed to increase firm performance (Abiola, 2013:179).

Organisational learning has become a key resource for improving organisational performance, as companies with the capacity to learn faster are likely to respond to market challenges better than

competitors (Jyothibabu, Farooq, & Pradhan, 2010:303). The benefits of organisational learning are expected to be embedded and manifested in the products and services offered whereby customers' value is tested in the marketplace in terms of customer reaction (Bui & Baruch, 2010:208). From a historical perspective, organisational learning is well recognised as an essential element in the models of sustained competitiveness (Giniuniene & Jurksiene, 2015:987). It is denoted by the academic literature that organisational learning is the antecedent of innovation (Jimenez-Jimenez & Sanz-Valle, 2011:408).

Prior research suggests that organisational learning influences firms' innovation performance. Innovation can be seen as an organisational learning process, which directs them towards innovation effectiveness and efficiency (Wang *et al.*, 2015:66). Researchers (Franco & Haase, 2009:628) have found that organisational learning has positive outcomes on a firm's performance, both financial and non-financial. In their study, Kitapci, Aydin and Celik (2012: 2341) conclude that organisational learning capacity affects innovativeness as well as financial performance.

From the literature reviewed in this section, it was discovered that organisational learning enables organisations to achieve success in the future. It is the key to business performance and facilitates gains in sustainable competitive advantage. Organisations that adopt strategies relating to organisational learning can achieve better performance. Organisational learning influences the innovative performance of the business and improves market-oriented behaviour. The next section focuses on internal alignment.

3.6 INTERNAL ALIGNMENT

This section examines the literature on internal alignment, covering issues that include the definitions of internal alignment, the concept of internal alignment and its benefits.

3.6.1 Internal alignment defined

Alignment in a broad sense can translate into the issue of strategic congruence, the degree to which a firm's goals, objectives, needs and structure are consistent with one another (Shin *et al.*, 2015:185). Alignment is defined as the process of achieving unity of effort among the various subsystems in the accomplishment of the organisation's tasks and deals with specifying how harmoniously the different departments of an organisation work together and how tightly their activities are coordinated (Pardo, Ivens & Wilson, 2013:1076). Internal alignment in work teams is a group process related to the shared comprehension among team members of the strategies defined to attain work goals (Puentes-Palacios, Moreira, Puentes & Lira, 2015:1).

Internal alignment is defined as the set of commitments, policies, strategies, procedures, behaviours and systems that support integrated customer decision-making based on suppliers' commercial and ethical commitment and performance (Sisco & Wong, 2008:1). According to Ahmmed and Noor (2014:113), strategic consensus or internal alignment is an agreement of employees of various levels on the organisation's most important goals. They define strategic consensus or internal alignment in relation to the relative significance of quality, delivery, flexibility and cost to the organisation's operational goals.

Ahmmed and Noor (2014:113) relate strategic consensus or internal alignment with interdepartmental connectedness that ensures a level of prescribed and casual direct contact among personnel across different divisions, and in turn, ensures more exchange of market intelligence and response to it in a concerted fashion. According to Mirzaei, Fredriksson and Winroth (2016:432), strategic consensus can be defined through some key aspects: shared understanding, commitment, agreement, and shared perspective. Mirzaei *et al.* (2016:432) prefer to define strategic consensus as for the level of agreement within an organisation regarding the relative importance of cost, quality, delivery and flexibility to the organisation's operational goals, as well as the relationships between these competitive priorities and operational policies.

Consensus is defined as the degree to which individual mental models of strategy overlap. The term strategic consensus represents shared cognitions among team members. It is the extent to which managers from a strategic business unit share similar perceptions of strategic priorities. They understand consensus as shared understanding (Ramos-Garza, 2009:855). At its most basic level, a consensus has been described as simply "the agreement of all parties to a group decision." In the context of corporate strategy, a consensus has been labelled as "agreement among strategy makers on a firm's goals and the competitive methods appropriate for achieving them" (Gonzalez-Benito, Aguinis, Boyd & Suarez-Gonzalez, 2012:1686).

Strategic consensus is also described as "the shared understanding of strategic priorities among managers" (Gonzalez-Benit *et al.*, 2012:1686). Internal alignment (strategic consensus) refers to the arrangements of various parts in a company so that they work together harmoniously to pursue common organisational goals, to enhance business performance and sustain competitive advantage (Hung *et al.*, 2010:287). Internal alignment is the quality or state of collaborations that exist among departments that are required to achieve unity of effort by the demands of the environment. It refers to the cross-functional team orientation reflecting the linkages between organisational functions and teams, which are also known as horizontal linkages (Teixeira, Koufteros & Peng, 2012:73).

Internal alignment is defined as a process by which key organisational components – strategies, culture, processes, people, leadership and systems are linked to best accomplish the needs of the organisation. Other scholars have described internal alignment as an adaptive dynamic capability, an integrative capacity that is a “source of sustainable competitive advantage” to help organisations achieve their strategic potential (Alagaraja & Shuck, 2015:21). Internal alignment is defined as an adaptive, dynamic resource capability achieved by developing a shared understanding of interdependent systems, practices, and routines of the organisation (Alagaraja & Shuck, 2015:21).

3.6.2 The concept of internal alignment

When reviewing the literature that discusses how different organisational entities – companies or sub-systems like departments or functions – can work harmoniously together, several concepts can be found: fit, alignment and integration are used in a relatively interchangeable way (Corsaro & Snehota, 2011:1042). The concept of alignment is “ambiguous” as there is little agreement on how alignment should be conceptualised (Corsaro & Snehota, 2011:1042). Several authors have reviewed the origins of alignment, matching, integration or fit concepts, and have all stressed that these concepts occupy a central place in the strategy literature. Some believe strategy as a field is rooted in the concept of “matching” or “aligning” organisational resources with environmental opportunities or threats (Pardo *et al.*, 2013:1076).

Shin *et al.* (2015:185) found that Korean professionals’ understanding of alignment is closely related to internal fit or “strategic consensus” concerned with how to move fast and together in a harmonised fashion. Pardo *et al.* (2013:1076) indicate that the alignment concept is also considered a central concept in organisational theory with “structural contingency theory” focusing on the fit between environment and structure, rather than on the fit between environment and strategy as in the strategy field. Ahmmed and Noor (2014:113) mention that executive commitment and support, integrated policies, strategy and structure, steady in-house communication, important information, metrics and reporting, and motivations and accountability for expected behaviour are the key components to ensure internal alignment.

Internal alignment development is a core component of the strategy compass, providing a general framework for employees at all levels of the organisation to make operating decisions. The internal alignment concept builds on the underlying hypothesis that “higher degrees of internal alignment is associated positively with coordination and cooperation in the implementation of the strategy, and hence, with organisational performance (Mirzaei *et al.*, 2016:432). Prior studies have conceptualised internal alignment broadly as the fit between a firm’s external environment and its strategic

orientation, organisational structure, and processes, or a combination of the above (Ravasi & Phillips, 2011:103).

The logic for a positive relationship between internal alignment and business performance continues to be compelling and has been corroborated by a recent meta-analysis (Kellermanns, Walter, Floyd, Lechner & Shaw, 2011:126). This logic stipulates that higher levels of internal alignment are positively associated with coordination and cooperation in the implementation of strategy and, hence, with organisational performance (Walter, Kellermanns, Floyd, Veiga & Matherne, 2013:306). Underlying this logic is the assumption that the coordination needed to implement strategy requires not only an action plan but also a shared grasp of the logic behind the action plan, as manifest in higher levels of agreement on specific elements of the strategy, that is, internal alignment (Walter *et al.*, 2013:306).

Internal alignment focuses on the similarities and differences among jobs within an organisation and the relative contribution of jobs to company objectives and tries to make a strategic fit among various layers (Kathuria, Joshi & Porth, 2007:503). Pardo *et al.* (2013:1077) distinguish between different types of internal integration, internal functions and internal operational integration. Both concepts concern the alignment of activities and processes. Operational integration concerns the integration of successive stages within the primary process chain of a firm, while functional alignment is concerned with the integration of administrative or support activities of the process chain of the company.

Kathuria *et al.* (2007:505) distinguish between two types of organisational alignment: vertical and horizontal or lateral. Vertical alignment refers to the coordination of activities and priorities across the three levels of a company: corporate, business and functional, and within each function. Kathuria *et al.* (2007:505) further indicate that vertical organisational alignment refers to the consistency between lower level decisions and the decisions at the upper levels. Horizontal alignment is concerned primarily with the functional level of an organisation. It is concerned with the consistency of decisions and activities between functions. Horizontal alignment is defined in terms of both cross-functional and intra-functional integration. According to Ahmmed and Noor (2014:113), vertical alignment shows the lines of reporting and accountability from the chief executive officer (CEO) level to the factory floor whereas horizontal alignment refers to coordination across organisational boundaries.

Corsaro and Snehota (2011:1042) state that are globally speaking, the concept is described as referring to aspects of fit, match and congruency. The authors distinguish between “cognitive alignment”, “alignment of practices” and “alignment in goals”. The first refers to alignment between cognitive representations and perceptions. The second refers to processes and competencies. Four types of alignment practices are identified by Pardo *et al.* (2013:1077): bridging, amplifying,

extending and transforming. Thirdly, alignment in goals refers to “consistency” and “compatibility” between customers and supplier’s goals. As in the previous studies, the perspective by Corsaro and Snehota (2011:1042), is an inter-organisational one as they focus on alignment/misalignment in the interpretation of a problem and its solution between a supplier and its customers.

Pardo *et al.* (2013:1077) state that the above alignment typologies allow for identifying more precise alignment challenges and hence provide a basis for the development of more concrete managerial activities to foster alignment. Storbacka and Harald (2007:27) suggest that development of skills and capabilities and availability of management processes and systems, as well as the organisational matrix, ensure the achievement of internal alignment.

Increased competition in today’s market has forced senior managers to constantly evaluate each of their key functional domains and its contribution to firm competitiveness and business performance. This closely relates to the exercise of identifying “best practices” within an organisation and integration across functions (Sardana, Terziovski & Gupta, 2010:131). Skinner initially conceptualised the idea of and need for "strategic consensus" or "internal alignment" of competitive priorities among various functions in a manufacturing organisation in 1974. Since then, the strategic alignment of manufacturing operations and marketing functions is one of “best practice” that has been widely suggested to provide a much needed competitive advantage to firms in the marketplace (Sardan *et al.*, 2010:132).

Strategic consensus (internal alignment) is a construct that refers to the degree of agreement among managers on organisational priorities. Research in this area has focused on both the determinants of consensus and the implications of consensus for performance (Gonzalez-Benito *et al.*, 2012:1686). Early studies on consensus parsed the consensus construct into two distinct components: (1) how the firm chooses to compete and (2) the initiatives it chooses to undertake. How a firm chooses to compete has been described variously as competitive methods or means. The initiatives that a firm chooses to pursue have been labelled as objectives or goals (Gonzalez-Benito *et al.*, 2012:1689).

A firm discovers and establishes its sources of advantage in a given context by establishing a synergy between strategy, marketing, organisational resources and technological capabilities. Such strategic alignment then contributes to a firm’s external and internal fit (Sardan *et al.*, 2010:132). However, it is input from the market (i.e. market-orientation) that helps align firms with their external environments and match and realign their competencies to market opportunities. In fact, market-orientation is intrinsically linked to a “learning organisation” that is continuously realigning its strategy and resources and creating “superior customer value”. Manufacturing delivers this

realignment by building market responsive capabilities in its set of functions (Sardan *et al.*, 2010:132).

Organisations must design their structures and systems to align the competencies of the environment, strategy, technology and so on for survival and success (Hung *et al.*, 2010:287). The conceptualisation of internal alignment suggests that the extent of internal alignment results from skill rather than luck. This perspective is especially useful for organisational leaders as it posits an institutional orientation of internal alignment. Furthermore, this perspective positions internal alignment as a resource that has a “higher order of integrative capacity”, which characterises high-performing organisations (Alagaraja & Shuck, 2015:21).

Strategic alignment is particularly assessed to measure the following items (Kheirandish, 2014:126):

- the degree of compatibility between personal and organisational goals;
- the level of trust within an organisation;
- the extent to which an organisation highlights trust-building values; and
- the level of employees’ cooperation.

3.6.3 Benefits of internal alignment

Proper internal and external fit strengthens a firm’s ability to understand the environment and react in time to permit necessary organisational adjustments (Shin *et al.*, 2015:185). Strategic consensus as internal alignment aims for an idealistic state in which the leadership and the functional units demonstrate a high level of unity and agreement concerning the strategic importance of competitive priorities (Doz & Kosonen, 2008:95). Internal alignment is imperative, especially for SMEs because most SMEs are owner-controlled and usually managed by owners’ interests or management policies closely aligned with those interests (Pett & Wolff, 2007:1). Thus, we view internal alignment as an important underlying dimension of organisational agility (Shin *et al.*, 2015:185).

Internal alignment is necessary among the people participating in the key account management programme and can influence the performance of the key account management strategy (Guesalaga & Johnson, 2010:1063). When sound internal alignment is present, having multiple relationships and a suitable alignment with the firm’s strategy and market environment may contribute to internal alignment in key account management and can influence the level of management performance (Guesalaga & Johnson, 2010:1063). Organisational performance will be at higher level when alignment is ensured between the generic capabilities of the organisation and its strategic planning (Ahmmed & Noor, 2014:113).

The presence of internal alignment among the organisation's members about organisational goals is a major determinant of the customers' perception of the organisation's conduct in its external environment. The awareness of goals acts as a normative guide for the behaviour of organisational employees (Mahto & Davis, 2012:1). Employees who are either uninformed or uncommitted to the organisation's goals exhibit inconsistent behaviour, which may result in substantial damage to its cause. This is especially true in the context of middle and lower level managers who generally do not participate in the organisation's strategic planning. On the other hand, the CEO (Chief Executive Officer) and the members of TMT (Top Management Team) possess the knowledge of strategic goals and are generally committed to them because of their participation in shaping the final strategic goal for the organisation (Mahto & Davis, 2012:1).

Strategic alignment of marketing and operations opens up important two-way communications: marketing will know more about operations, and can furthermore communicate credibly with operations about its needs (such as new product development and range of product offering) (Sardan *et al.*, 2010:132). Communication and the exchange of ideas between different functional departments will engender a dynamic learning and knowledge-creation environment. This will facilitate the strategic alignment of manufacturing, marketing and other functions leading to superior performance (Sardan *et al.*, 2010:132).

Previous studies have confirmed that internal alignment positively influences business performance. Furthermore, internal strategic alignment of a firm promotes a more dynamic platform and enhances strategic capabilities (Hung *et al.*, 2010:287). From the dynamic capabilities perspective, scholars suggest that internal alignment and business performance are positively related, especially in situations of environmental turbulence (Hung *et al.*, 2010:287). A high degree of cross-functional integration (internal alignment) implies richness in a collaboration and communication environment among people and departments, which increases mutual feedback and the probability of solving problems (Teixeira *et al.*, 2012:73).

Internal integration/alignment through the use of cross-functional teams is commonly used by organisations interested in achieving better performance in terms of quality, innovation and new product development (Teixeira *et al.*, 2012:73). Better internal alignment increases the chance of accomplishment of missions and decreases the costs via organisational and process efficiency. When an organisation is aligned, everybody knows the role and tries to fulfil it (Kheirandish, 2014:126).

Internal alignment is the optimum condition in which strategy, employees, customers and central career processes are aligned in such a way that results in profits and growth (Alagaraja & Shuck, 2015:21). It is essential for effective decision-making and strategic fit and is an important construct

in the strategy process. It is also positively and significantly associated with business performance, especially the agreement involving strategic priorities (Mirzaei, 2015:6). Alignment brings attention to both internal and external attributes of the organisation with clear performance consequences. This linkage to performance is important as it suggests alignment as a deliberate approach towards enhancing organisational outcomes (Alagaraja & Shuck, 2015:21).

In aligned companies, workers and customers get deeper satisfaction, while higher profit is delivered to stakeholders. The aligned companies focus on the job carried out by workers to achieve organisational goals, avoiding mere attention to hierarchy (Kheirandish, 2014:126). They also involve employees in the process of management via delegation, entrusting responsibilities and sharing information and knowledge. In such a company, not only every individual, from managers to low-ranking employees, know the primary goals of the organisation, but they are also aware of what effects each of their actions can have on the goals (Kheirandish, 2014:126). Internal alignment will positively influence outcomes as it prevents self-interest and political behaviour and constrains other undesirable actions like information filtering and foot-dragging (Kellermanns *et al.*, 2011:127).

By achieving internal alignment through free and open information exchange, which ensures high decision quality, internal alignment should lead to greater efficiency, better implementation, paired with higher levels of commitment and enhanced business performance (Kellermanns *et al.*, 2011:127). Several previous studies have empirically shown that it positively affects business performance (Hung *et al.*, 2010:287). The literature generally assumes that higher levels of internal alignment are associated with higher organisational performance. Although operationalised differently in terms of content, scope, and measurement, internal alignment is argued to improve coordination and cooperation after a decision is made, which leads to more efficient strategy implementation and hence enhanced business performance (Kellermanns *et al.*, 2011:127).

Alignment is important for several other fields such as production/operations management, logistics and information systems through indicating that in such field, alignment parallels the perspective in strategy (Pardo *et al.*, 2013:1077). Alignment and similar concepts have been discussed in various streams of literature, and their relevance for firm performance has been highlighted by numerous authors (Pardo *et al.*, 2013:1077). Generally, it can be concluded that internal alignment influences an organisation to be more customer-focused and sensitive, and responsive to key customer needs and requirements (Ahmmed & Noor, 2014:113).

Through the literature study, it was discovered that organisational performance is likely to be at a higher level when alignment is ensured between generic capabilities of the organisation and its strategic planning. It was also found that several previous studies have empirically shown that internal

alignment positively affects business performance. This indicates that internal alignment has a positive contribution to SMEs' performance.

3.7 CONCLUSION

The purpose of this chapter was to review the literature on organisational ability and its sub-dimensions, namely technological capability, collaborative innovation, organisational learning and internal alignment. The literature review has shown the benefits of organisational agility towards business performance, which include higher revenues, more satisfied customers and employees, improved operational efficiency and a faster time to market. The literature review also showed that technological capability is as an important element in the economic growth of a nation since the development of an enterprise depends on the capability to introduce new products over time. It also emerged that although collaboration with parties tends to be beneficial for firm performance, there is a disadvantage in that working with other firms is associated with certain risks, such as technology and knowledge leakage to potential rivals. Regarding organisational learning, it was observed that this practice influences the innovative performance of a business and improves market-oriented behaviour. The literature study further reveals that organisational performance is likely to be at a higher level when alignment is ensured between generic capabilities of the organisation and its strategic planning. One can, therefore, conclude that therefore, organisational agility and its four dimensions, namely, technological capability, collaborative innovation, organisational learning, and internal alignment contribute positively towards business performance within SMEs. The next chapter discusses the concept of business performance.

CHAPTER 4

BUSINESS PERFORMANCE

4.1 INTRODUCTION

This literature review chapter analyses the theory behind the concept of business performance. It will look into how SMEs can create and improve their business performance for their survival and sustainable competitiveness. Definitions of business performance from a number of viewpoints are presented. The concepts of business performance measurement, balanced scorecard, the importance of business performance, as well as business performance management from different literature studies are also addressed. The chapter ends with a discussion on business performance management and the balanced scorecard. These concepts are discussed since business performance is the outcome variable in this study, which presents the need to provide adequate literature perspectives before testing the primary data.

4.2 BUSINESS PERFORMANCE

This section discusses the definition of business performance, the concept of business performance, business performance measurement, business performance measurement systems, the balanced scorecard, the importance of business performance measurement, business performance management and the balanced scorecard from various literature reviews.

4.2.1 Business performance defined

Business performance has not been frequently defined and has been used differently according to the context, as well as being difficult to define and measure. A general definition noted that it is the product of interactions of different parts or units in the organisation (Hussein, Mohamad, Noordin & Ishak, 2013:300). The definition of business performance and its measurement continues to challenge scholars due to its complexity (Santos & Brito, 2012:99). Irrespective of the differences among researchers on the definition, they agree that it is mostly tied in with arithmetic measures of success (Eniola & Entebang, 2015:239).

Although the concept of business performance is very common in the academic literature, its definition is difficult because of its many meanings. For this reason, there is not a universally accepted definition of this concept (Gavrea, Ilies & Stegorean, 2011:287). In the 1950s, business performance was defined as the extent to which organisations, viewed as social systems, fulfilled their objectives. Later in the 1960s and 1970s, it was defined as an organisation's ability to exploit its environment for accessing and using limited resources (Gavrea *et al.*, 2011:287). The 1980s and 1990s were

marked by the realisation that the identification of organisational objectives is more complex than initially considered. Thus, the organisational theories that followed supported the idea of an organisation that achieves its performance objectives based on the constraints imposed by limited resources. In this context, profit became one of the many indicators of business performance (Gavrea *et al.*, 2011:287).

The definition of business performance is a surprisingly open question with few studies using consistent definitions and measures. Performance is so common in management research that its structure and definition are rarely explicitly justified; instead, its appropriateness, in no matter what form, is unquestionably assumed (Richard, Devinney, Yip & Johnson, 2008:1). Different researchers have different thoughts about performance. Mostly, researchers use the term performance to express the range of measurements of transactional efficiency and input and output efficiency (Shahzad, Luqman, Khan & Shabbir, 2012:979). Business performance is defined as the operational ability to satisfy the desires of the company's major shareholders, which must be assessed to measure an organisation's accomplishment (Zulkifli & Perera, 2011:1). It is the ability of the organisation to utilise its resources (e.g. knowledge, people, and raw materials) to achieve organisational goals in an effective and efficient way (Draft, 2010:9).

Business performance can be defined as the way the organisation carries its objectives into effect (Sosiawani, Ramli, Mustafa & Yussof, 2015:202). The level of goal accomplishment generally defines a firm's performance (Rosli & Sidek, 2013:3). Business performance is the organisation's ability to attain its goals by using resources in an efficient and effective manner (Mgeni, 2015:3). It refers to the outcomes of various organisational processes, which occur in the course of its daily operations (Hussein *et al.*, 2013:300). Business performance is the comparison of the value, which a firm creates with the value an owner expects to receive from the firm (Hussain, Ismail & Akhtar, 2015:2).

Business performance refers to the level of success of a firm (Sulaiman, Yusoff & Chelliah, 2010:33). It is a quality an organisation achieves by valuable outcomes such as higher returns (Memon & Tahir, 2012:40). It is concerned with the degree of achievement of the mission in the workplace to build up an employee's job (Shahzad *et al.*, 2012:979). Lebars and Euske (2006:71) provide a set of definitions to illustrate the concept of business performance:

- Business performance is a set of financial and non-financial indicators, which offer information on the degree of achievement of objectives and results.
- Business performance is dynamic, requiring judgement and interpretation.

- Business performance may be illustrated by using a causal model that describes how current actions may affect future results.
- Business performance may be understood differently depending on the person involved in the assessment of the business performance (e.g. business performance can be understood differently from a person within the organisation compared to one from outside).
- To define the concept of business performance, it is necessary to know its characteristics in each area of responsibility.
- To report an organisation's performance level, it is necessary to be able to quantify the results.

4.2.2 Conceptualising business performance

Nowadays, the performance of companies is the first to be evaluated by investors around the world as currently, the world has become smaller in a sense that businesses can be conducted anywhere (Al-Matari, Al-Swidi & Fadzil, 2014:24). The performance of the company is the most important to encourage people to utilise it. Therefore, people who are responsible for running firms must improve business performance through new plans and procedures to improve their operations and transactions during their life cycle (Al-Matari *et al.*, 2014:24). The term performance is ambiguous and lacks agreement on basic terminology, and there is no simple definition and measurement to evaluate the performance of the firm (Eniola & Entebang, 2015:239). Business performance is one of the most important constructs in management research. Reviewing past studies reveal a multidimensional conceptual of business performance, which is related predominately to stakeholders, heterogeneous product market circumstances and time (Richard *et al.*, 2008:1).

Scholars have studied different variables, which have an impact on business performance, and have found that there are many variables, which affect business performance such as entrepreneurial orientation, information technology, strategy and others (Guo & Cao, 2012:53). Even if there are various variables affecting business performance, leadership style and innovative factors, have a considerable effect on it (Erdem, Gokdeniz & Met, 2011:77). Rubera and Kirca (2012:130) have examined the relationship between firm innovativeness and performance for meta-analytic evidence. According to their study, firm innovativeness indirectly affects firm value through its effect on the market and financial position. Yildiz, Basturk and Boz (2014:786) state that businesses, which resist innovation, have been confronted by the problem of a performance decrease. At this point, leadership approaches that increase business performance and manage processes of business change and innovation become a need.

Attempts to examine the relationship between strategy and performance have been made for more than 20 years; many current studies also focus on this aspect. Scholars have examined the importance

of performance evaluation and practices for an organisation (Gruber, Heinemann, Brettel & Hungeling, 2010:1337). Much research also focuses on the performance of small firms, and more recently, medium firms as well (Alasadi & Abdelrahim, 2008:50). Business performance is an important variable in business research (Rosenbusch, Rauch & Unger, 2007:1). Regular indicators used in measuring business performance are profit, return on investment (ROI), turnover or number of customers, design quality and product development. However, some authors recommend measuring business performance through the business performance measurement (BPM) system as it is an important tool within many research areas, particularly in business and social science studies (Zulkiffli & Persea, 2011:1-2). This system analyses and investigates each quality that affects a firm's business performance and categorises it into two broad areas: operational business performance (OBP) and strategic business performance (SBP). The major function of the system is to focus on investigating all the organisation's functions at high and low levels of activity. It is appropriately applied to measuring the performance of SMEs (Zulkiffli & Persea, 2011:2).

Faced with increasing competition and dynamic conditions, many SMEs in South Africa and other countries are increasing their effort to understand how they can improve their performance. To be competitive, some strategic management scholars and policymakers have advocated for more strategic planning practices (Sandada, Pooe & Dhurup, 2014:659). In the strategic management field, business performance has been studied repeatedly, and the importance of assessing the performance has been widely recognised. Evidence from the literature suggests that strategic planning is one of the factors that can improve the performance of the business (Sosiawani *et al.*, 2015:201). The effective role of strategic planning to improve business performance is well documented in the strategic management literature. It is believed that through proper strategic planning, businesses will achieve better performance (Sosiawani *et al.*, 2015:201). The relationship between strategic planning and a firm's performance has been broadly studied in previous research studies (Suklev & Debarliev, 2012:63). Some of the studies have proven that strategic planning has a relationship with business performance (Aldehayyat & Twaissi, 2011:255).

The link between strategy and performance among SMEs has been widely researched and assumed that there is a clear link between strategy, business performance and competitive advantage to generate above-average returns. The positive effect of strategy on a firm's performance has been highlighted by different scholars (Lonbani, Sofian & Baroto, 2015:93). For instance, according to Carraresi, Mamaqi, Albisu-Aguado and Banterle (2011:7), there are significant and positive direct relationships between a firm's strategic choices (innovation, product positioning and relationship development) and performance. Another study conducted by Lechner and Gudmundsson (2014:57) showed that there is a positive influence of generic strategies on a small firm's performance.

Similarly, Singh and Mahmood (2014:50) conducted their study to find whether there is a relationship between manufacturing strategy and export performance of SMEs in Malaysia. Based on the results, they reveal that there is a significant and positive relationship between manufacturing strategy and export performance of SMEs.

Business performance is the ultimate dependent variable of interest for researchers concerned with just about any area of management. This broad construct is essential in allowing researchers and managers to evaluate firms over time and compare them to rivals. In short, business performance is the most important criterion in evaluating organisations, their actions, and environments (Richard *et al.*, 2008:1). Business performance is related to the ability of the firm to gain profit and growth to achieve its general strategic objectives. It is a consequence of the interaction between actions taken in relation to competitive forces that allow the firm to adapt to the external environment, thereby integrating competence and usefulness (Olughor, 2015:91). Business performance or firm performance is a subset of organisational effectiveness that covers operational and financial outcomes (Santos & Brito, 2012:98). It is determined by the business strategy that the enterprise adopts. Many researchers have associated business strategies with business performance, distinguishing between strategies associated with high and low business performance. Strategies, which result in high business performance, are identified with activities that generally lead to success in the industry (Pushpakumari & Watanabe, 2008:64). According to Richard *et al.* (2008:3), business performance encompasses three specific areas of firm outcomes:

- Financial performance (profits, return on assets, return on investment, etc.)
- Market performance (sales, market share, etc.)
- Shareholder return (total shareholder return, economic value added, etc.)

Outsiders normally evaluate a firm's ability based on its performance. This implies why performance is like a mirror to a firm. Business performance is the outcomes achieved in meeting its internal and external goals (Lin, Peng & Kao, 2008:752). Performance has several names including growth, survival, success and competitiveness. The neo-classical economic theory perceives a firm's growth as a process of attaining the minimum point average cost. In other words, the process of a firm's growth is similar to the process of profit optimisation (Rosli & Sidek, 2013:3). Adoption of various strategies by firms also determines business performance. Different firms use different strategies of performance; hence, a firm's performance is concentrated in its strategy (Short, Ketchen, Palmer & Hult, 2007:147).

The narrower domain of business performance provides the useful potential to make meaningful comparisons across firms and industries. However, what is evident is that even with a narrower

domain business performance is not a one-dimensional theoretical construct, nor is it likely to be characterised with a single operational measure (Richard *et al.*, 2008:4). Although the multi-dimensionality of business performance is recognised in accounting and finance and discussed theoretically in the management literature, the empirical lack of consistency in the measurement of business performance in management research has revealed a surprising lack of researchers “walking the talk” (Richard *et al.*, 2008:4). Business performance does not only mean to define the problem but also to find a solution to the problem. The organisation can accomplish its goals effectively and efficiently using resources. Achieving organisational goals and objectives are known as business performance (Shahzad *et al.*, 2012:979). Organisations’ success shows a high return on equity, which becomes possible due to the establishment of a good performance management system of employees (Shahzad *et al.*, 2012:979).

Business performance cannot be viewed as a simple sum of individual performances. Although the research results of many studies suggest the existence of a positive correlation between job satisfaction and individual performance, the relationship between job satisfaction and business performance is more complex. Business performance is influenced by various factors, both internal, which the company can influence, and external, which are beyond the company’s influence (Bakotic, 2016:2). Business performance is measured in terms of ROA (Return on Assets) and Sales Growth Ratio as these ratios are financial performance measuring ratios (Majeed, 2011:191). For public institutions of higher education (PIHEs), it is proposed that business performance is represented by various dimensions such as school reputation, quality of students, research results and social responsibility (Hussein *et al.*, 2013:300).

Although business performance dominates the strategic management literature, not to mention economics, finance and accounting, it is not unchallenged. Performance is one type of effectiveness indicator, with some advantages and disadvantages (Richard *et al.*, 2008:3). In theory, the concept of performance forms the core of strategic management, and empirically, most strategy studies make use of the construct of business performance in their attempt to examine various strategy content and process issues. In management, the significance of performance is clear through many prescriptions provided for performance enhancement (Al-Matari *et al.*, 2014:26). The ability to generate change in management by perceiving market opportunities, adapting to the environment, and possessing certain managerial factors, product innovations, creativity, pro-activeness, technological change, networking, are all factors that can bring about strategic improvements in business performance (Soriano, 2010:463). Continuous performance is the focus of any organisation because only through performance can organisations grow and progress. Thus, business performance is one of the most

important variables in management research and arguably the most important indicator of it (Gavrea *et al.*, 2011:286-287).

Business performance of SMEs is regulated by the lucky outcome of firms in the estimation that the enterprise is performing against its set targets. Performance is commonly employed as an index of a firm's health over a dedicated period of the fourth dimension. This puts the performance as one of the central issues of SMEs (Eniola & Entebang, 2015:239). Business performance encompasses three specific areas of firm outcomes: (a) financial performance (profits, return on assets, return on investment, etc.); (b) product market performance (sales, market share, etc.) and (c) shareholder return (total shareholder return, economic value added, etc.) (Ozer & Tinaztepe, 2014:780). Business performance is the result of activities of the business entity as a whole: its strategy and operational activities, management of all segments of business (human resources, finance, production, and marketing) in a given period is affected by many factors, including luck (Dragnic, 2014:123). It moreover needs to be measured along multiple levels: the organisational level, the key process level, and the work unit level, requiring complementary dimensions (Anthony & Bhattacharyya, 2010:4).

The company's performance can be viewed from the financial statements reported by the company. Consequently, a superior performing company will reinforce management for quality disclosure. Its performance basically explains the firm's success over a certain period (Al-Matari *et al.*, 2014:25). Business performance is the strategic outcome that an organisation uses to realise its goals, success or not. It can be characterised as the firm's ability to create acceptable outcomes and actions (Eniola & Entebang, 2015:239). The importance of business performance in strategic management can be categorised into three dimensions: theoretical, empirical, and managerial dimensions (Al-Matari *et al.*, 2014:26).

4.2.3 Business performance measurement

Business performance measurement and assessment of complex processes or systems are indeed of vital importance. In a globalising world, business performance measurement should be regarded as a must, rather than as an option. Performance measurement models are studied in many areas also in an academic environment (Baynal & Ozkan, 2014:937-938). Despite the growing use of performance measurement and management systems, different problems cause companies to experience difficulties in implementing such systems, with the consequent risk of partial benefits or total goal failure (Taticchi, Cagnazzo & Botarelli, 2008:1). An increasing competitive environment, the proneness to grow in dimension, the evolution of quality concept, the increased focus on continuous improvement and the significant developments in information and communication technologies are the most important changes in recent years that have created a favourable context for the

implementation of performance measurement systems in small and medium enterprises (Garengo, Biazzo & Bititci, 2005:25). Although substantial research has been carried out to investigate the needs and characteristics of performance measurement systems in large organisations, the situation appears different in small and medium enterprises, where there is a distinct lack of published research on these issues (Taticchi *et al.*, 2008:2).

However, from the literature available it is possible to collect information regarding how SMEs manage and measure the business performance process. There is evidence that many SMEs already have some kind of accounting system in place, which represent the base of their monitoring (Taticchi *et al.*, 2008:3). The limits of traditional accounting systems have been largely discussed and SMEs seem to perceive such limits and see the value of performance management systems, but today there are still significant barriers in the implementation of these systems in the context of SMEs (Manville, 2006:167). It is not surprising that studies on the use of business performance measurement typically state that operational measures in SMEs are *ad hoc* and informal with no real understanding of key business performance drivers (Taticchi *et al.*, 2008:3).

Since the middle of the 1980s, in fact, companies manifested the growing need for controlling production processes and more business in general. Companies have understood that for competing in continuously changing environments, it is necessary to monitor and understand business performance (Taticchi *et al.*, 2008:2). Business performance measurement is defined as the process of quantifying the efficiency and effectiveness of action; a metric used to quantify the efficiency and effectiveness of action, and the set of metrics used to quantify it (Okwo & Marire, 2012:49). Business performance measurement refers to the process of measuring the action's efficiency and effectiveness. It is the transference of the complex reality of business performance in organised symbols that can be related and relayed under the same circumstances (Al-Matari *et al.*, 2014:25). It is very important for organisations to make performance management systems evaluate the performance of their employees, which is most helpful to evaluate the achievement of the organisational goals and develop their strategic plans (Shahzad *et al.*, 2012:979).

Previous researchers have used various concepts for measuring business performance such as operating efficiencies, profitability, financial returns, presence in international markets, export share, innovation and new product development (Hussain *et al.*, 2015:2). Differences like businesses and ways of earning profits made it difficult to rely on a single indicator of business performance. There should then, be multiple indicators for measuring business performance (Bing & Zhengping, 2011:109), as its measurement is affected by the environment, objectives and strategies for accomplishing the objectives. A unanimous factor cannot be used as a measure of business performance for all types of organisations (Bing & Zhengping, 2011:109). The study of Hussain *et*

al. (2015:2) identifies four types of performance outcomes of market orientation, namely, organisational (financial) performance, customer related outcomes (customer satisfaction), innovative outcomes (innovation), and employee-related outcomes (employee satisfaction).

Business performance measurement refers to the use of a multi-dimensional set of business performance measures as it includes both financial and non-financial measures of internal and external measures of business performance, which quantify what has been achieved as well as a measure that which predicts the future (Okwo & Marire, 2012:49). Business performance measuring is usually carried out by subjective evaluation of the business entities themselves, either by evaluating their satisfaction with the achieved indicators of effectiveness and efficiency (meeting expectations, i.e. plans) or by benchmarking themselves against their competition (Dragnic, 2014:124). Research on business performance measurement has gone through many phases in the last 30 years. Initially, it focused mostly on financial indicators, but with time, the complexity of the business performance measurement increased by using both financial and non-financial indicators (Gavrea *et al.*, 2011:290). Since the late 1980s, researchers, consulting firms and practitioners have stressed the need to put an increased emphasis on non-financial indicators in the business performance management process. Thus, we expect that organisations, especially those in manufacturing, to use both financial and non-financial indicators in measuring their business performance (Gavrea *et al.*, 2011:290).

Business performance measurement is a process for collecting and reporting information regarding the business performance of an organisation. It involves looking at process strategies in place, as well as whether outcomes are in line with what was intended or should have been achieved (Okwo & Marire, 2012:49). A business performance measure can be defined as a metric used to quantify the efficiency and effectiveness of an action (Kairu, Wafula, Okaka, Odera & Akerele, 2013:83). Business performance measures can be characterised as financial or non-financial depending on whether the business performance is measured in monetary or non-monetary terms. Financial measures are typically based on profit and return on capital employed (Aliabadi, Dorestani & Balsara, 2013:23).

Business performance measurement includes information on the efficiency with which resources are transformed into goods and services, the quality of those goods and services, and outcomes, and the effectiveness of the company operations, regarding their specific contribution to creating value for stakeholders (Kairu *et al.*, 2013:83). A business performance index system requires a relationship between inputs, processes, outputs and outcomes and should be conducted with the following objectives: are we managing the things right; and are we doing the right things? (Eniola & Entebang, 2015:240). Business performance measurement is the most important activity of a management's control function. It can be done systematically for the entire organisation, and it might be done

temporarily or for a particular purpose. Each organisation has its own distinctive reason to do business performance measurement (Ozturk & Coskun, 2014:151). The driving factors in business performance measurement should be learning rather than control (Davenport, Harris, & Morison, 2010:1).

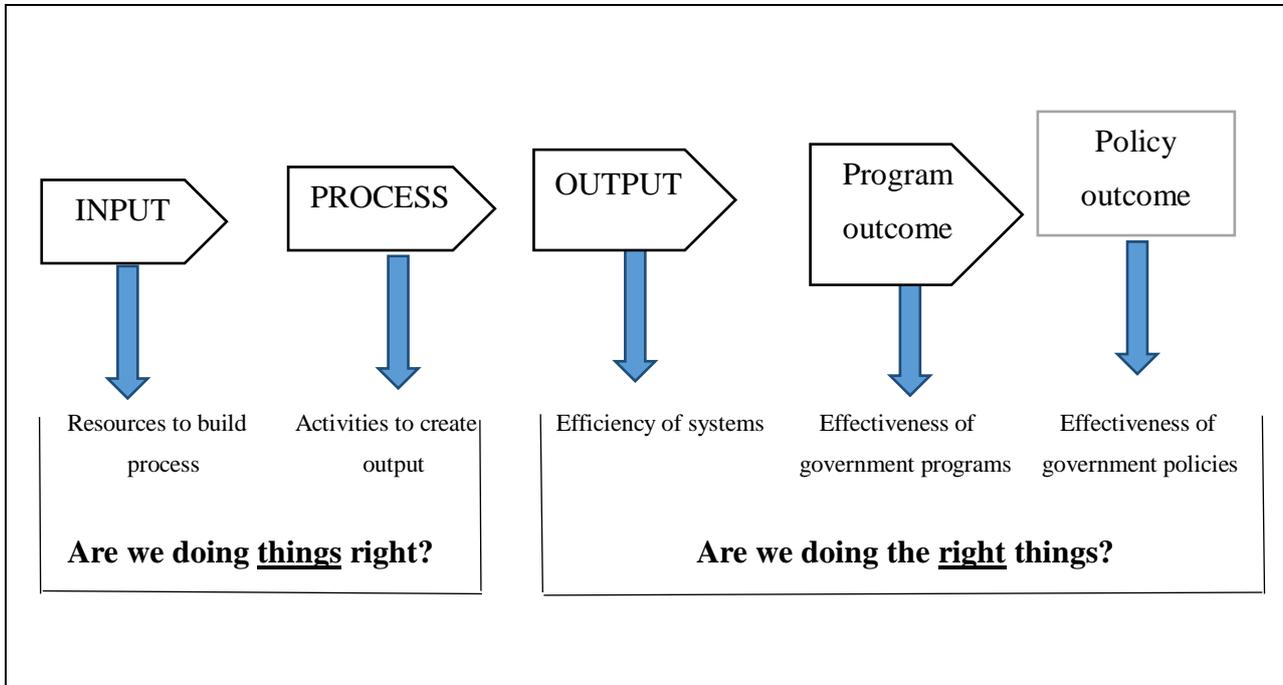


Figure 4.1: Components of performance measurement

Source: Mihaiu (2014:45)

Figure 4.1 illustrates the components of performance management, which are as follows:

1. Input, which are resources to build process.
2. Process, which are activities to create output.
3. Output, which is the efficiency of systems.
4. Program outcome, which is the effectiveness of government programs.
5. Policy outcome, which is the effectiveness of government policies.

Business performance measurement has been viewed from both objective and subjective dimensions. The reasons for business performance are to improve the existing performance in the concept of pursuing new opportunities, internally or externally, to redesign better strategies or action plans, to obtain overall business performance and capability improvements, and to acquire sustainable growth in the long run (Eniola & Entebang, 2015:240). Although the concept of business performance has a variety of meanings, in the literature it is broadly viewed from two perspectives - subjective and objective methods. The subjective method is primarily concerned with the performance of firms

relative to their expectations or assessments or relative to the competition (Protcko & Dornberger, 2014:225-226). The objective concept is based on absolute measures of performance. Objective measures relate to financial measures, e.g. return on assets (ROA), return on equity (ROE), return on investment (ROI), growth in sales, growth in profit and other indicators (Protcko & Dornberger, 2014:225-226).

How to measure business performance remains a contentious subject to business practitioners and academic communities alike (Sandada *et al.*, 2014:660). However, several researchers tend to agree that organisations can generally use objective rather than subjective measures to assess their success, provided accurate information is given (Panigyrakis & Theodoridis, 2009:600). Critics of objective measures report that objective measures are inaccessible, confidential, incomplete, and often, inaccurate (Chong, 2008:1). Profit figures are subject to manipulations, which make comparisons among different sectors difficult. Objectives measures are unreliable because they are too aggregated and backward looking rather than forward-looking, stressing the short-term future of the organisation instead of the long-term benefits (Sandada *et al.*, 2014:660).

Researchers rely on subjective measures because of the difficulty in obtaining performance data. With regard to subjective measures, performance information is provided in non-monetary terms, for example, market share, customer satisfaction, employee turnover and new product development, which are relevant to survive in competitive environments (Verbeen & Boons, 2009:113). With subjective measures, managers (owners) are willing to provide their perceptions about business performance, even if the information required is of a sensitive or confidential nature as they need to survive in a rapidly changing competitive environment (Sandada *et al.*, 2014:661). Many studies rely on subjective measures that are evaluated by respondents. Scholars have discussed the necessity of using subjective performance measures as a substitute for objective measures. Table 4.1 below distinguishes the use of subjective and objective measures according to the three aspects: indicators, measurement standard, and scale indicator (Zulkiffli, 2014:374).

Table 4.1: Differences between subjective and objective measures of business performance

| Differentiation aspect | Subjective measure | Objective measure |
|-------------------------------|---|--|
| 1. Indicators | Focus on overall performance | Focus on actual financial indicators |
| 2. Measurement standard | Key informants are asked to rate performance relative to their competitors (and industry) | Key informants report absolute data (e.g. profit per employee) |

| Differentiation aspect | Subjective measure | Objective measure |
|------------------------|--|---------------------|
| 3. Scale anchors | Scales ranges from “very poor” to “very good”, or “much lower” to “much higher”, or “worst in industry” to “best in industry” etc. | Scales are not used |

Source: Zulkifli (2014:375)

Table 4.1 indicates that in subjective measures, the focus is on overall performance. The key informants are asked to rate performance relative to their competitors and industry, and the scales range from “very poor” to “very good”, or “much lower” to “much higher”, or “worst in the industry” to “best in the industry” etc. In objective measures, the focus is on actual financial indicators; the key informants report absolute data (e.g. profit per employee) and scales are not used.

In the real business world, there are many obstacles to small and medium firms revealing their actual financial performance to the public. Scholars deliberate on the necessity of subjective measures for evaluating business performance (Zulkifli, 2014:375). Subjective measures allow comparisons across firms and contexts, such as industry types, time horizon, culture or economic condition (Song, Droge, Hanvanich & Calantone, 2005:266). It can be a good alternative if the measures focus on the firm’s current condition and the objective data may not be compatible with the intended level of analysis (Wall, Michie, Patterson, Wood, Sheehan, Clegg & West, 2004:116). The evaluation of performance through subjective measures is necessary to attain flexibility and consistency of performance, as objective measures can vary based on industry and can obscure the relationship between independent variables and business performance as a dependent variable (Zulkifli, 2014:375).

Referring to this issue, managers can use the relative performance of their industry as a benchmark when providing a response (Zulkifli, 2014:376), and these subjective measures can also be cost-effective for the researcher when data can be collected through questionnaire and/or interview methods that simultaneously elicit information on practices (Wall *et al.*, 2004:116). Zulkifli, (2014:376) claims that it is legal for small firms’ managers to manipulate some data and to control such manipulation through subjectively adjusting measures. In fact, many managers of small and private firms consider objective performance measures to be confidential and guard them against public scrutiny (Gruber *et al.*, 2010:1340). Many study topics cannot be comprehensively addressed, and result in inaccuracy of objective financial data. Other issues in researching small firms are misinterpretations during the attempts to compare directly objective measures, including in different industries (Zulkifli, 2014:376).

Depending on organisational goals, different methods are adopted by different firms to measure their performance. This performance indicator can be measured in financial or non-financial terms (Bagorogoza & Waal, 2010:310). Most firms, however, prefer to adopt financial indicators to measure their performance (Rosli & Sidek, 2013:3). Return on assets (ROA), average annual occupancy rate, net profit after tax and return on investment (ROI) are the most commonly used financial or accounting indicators by firms (Tavitiyaman, Zhang & Qu, 2012:55). Some other common measures are profitability, productivity, growth, stakeholder satisfaction, market share and competitive position (Bagorogoza & Waal, 2010:310). These measures serve as precursors for the course of action (Chong, 2008:1).

Accounting measures of business performance have been the traditional mainstay of quantitative approaches to business performance measurement. However, over the past two decades, a great deal of attention has been paid to the development and use of non-financial measures of business performance (Okwo & Marire, 2012: 49). Financial elements are not the only indicator for measuring business performance. It needs to combine with non-financial measurement to adapt to the changes in internal and external environments (Rosli & Sidek, 2013:3). Supporting this opinion, Rubio and Aragon (2009:175) divided business performance into four dimensions, which are an internal process, open system, rational goal and human relations, where any changes in its variables measure each dimension. Recognising the limitations of relying solely on either the financial or the non-financial measures, owner-managers of modern SMEs have adopted a hybrid approach to using both financial and non-financial measures.

In strategic research, subjective measures of business performance are frequently used and have been found to be reliable and valid measures. SMEs are difficult and problematic. The reason being that most of the time respondents are hesitant to respond to indicators such as profitability and ROI (Return on Investment) (Hakimpoor, Tat & Arshad, 2011:1017). Small businesses are reluctant to share their financial data due to several reasons, including no financial records, poor financial record keeping or manipulated books for the sake of tax evasion, to mention a few (Rooks, Szirmai & Sserwanga, 2009:9). The subjective approach for measuring business performance in SMEs, therefore, is generally proposed, as SMEs are often reluctant to provide their financial data. Self-assessment of performance by respondents themselves is more relevant and accurate. The perceived or subjective measures are found to be highly correlated with the objective measures in past studies (Khan, Khalique & Nor, 2014:32).

The subjective approach for measuring business performance has been widely used in empirical research (Glaister, Dincer, Tatoglu, Demirbag & Zaim, 2008:365). The owners and managers of SMEs evaluate their business performance by financial measures as well as non-financial measures

and place equal attention on both non-financial and financial measures. The non-financial measures include market share, customers' satisfaction and customers' referral rates, delivery time, waiting for time and employees' turnover while financial measures include profit before tax and turnover (Chong, 2008:7). Even when appropriate measures have been identified, there is still the difficulty of collecting data in SMEs (Simpson, Padmore & Newman, 2012:277).

In evaluating performance among privately held firms, the factors such as overall satisfaction and non-financial goals of the owners need to be weighted more heavily. Researchers testing business performance should include business performance measures such as market share, sales growth and profitability (Simpson *et al.*, 2012:277). Usually, in research, a single convenient one-dimensional measure such as growth (e.g. in employee numbers), profit, turnover, profitability, return on capital employed (ROCE) or return on investment (ROI) are used as dependent variables (Simpson *et al.*, 2012:277). Sales growth is another performance indicator used by many researchers (Khan *et al.*, 2014:33).

The executives' perception of business performance in their organisations is consistent with objective measures (Glaister *et al.*, 2008:365). It is difficult to obtain accurate financial data from small firms, because of the confidential nature of the financial data. Owners are sensitive about the financial matters of their businesses and thus do not provide exact financial data, which is why the financial data from small firms is not accurate (Khan *et al.*, 2014:33). In the context of small enterprises, the financial data is reported to be unreliable (Kraus, Harms & Schwarz, 2006:337). It is impossible or impractical in many research situations to access objective measures of business performance. Even if such measures are available, they do not guarantee the accuracy of the business performance measurement (Allen & Helms, 2006:435).

Business performance measuring is usually carried out by subjective evaluation of the business entities themselves, either by evaluating their satisfaction with the achieved indicators of effectiveness and efficiency or by benchmarking themselves against their competition (Dragnic, 2014:124). The new frameworks in research, measuring business performance of an organisation place emphasis on non-financial, external and future looking business performance measures (Khan *et al.*, 2014:33). Market orientation research relies heavily on subjective or perceptual measures, including subjective performance measures (Haugland, Myrtveit & Nygaard, 2007:1194). Most authors measure business performance by combining conventional indicators of effectiveness and efficiency. These include most often, sales growth/market share increase and profitability and less commonly, liquidity/solvency, employment, reputation/image (Dragnic, 2014:123). Using both financial and non-financial measures, a business organisation could measure its business performance (Chong, 2008:8).

Several authors affirm that non-financial measures have been endorsed by both academics and managers because of the following reasons: (1) Non-financial measures can be better indicators of both present and future financial performance; (2) Non-financial data can provide indirect, quantitative indicators of a firm's intangible assets; and (3) non-financial measures are less susceptible to external 'noise' than accounting measures. Noise means the change in performance measures that cannot be controlled by business owners, such as changes in the economy or even luck (Osunsan, Kinyatta & Baliruno, 2015:190). The strength of non-financial measures lies in their ability to provide insight into business processes and outcomes, which, in the long term, are better predictors of future business performance (Jusoh & Parnell, 2008:10). However, given that business, i.e. its performance, is considered successful if it meets the set of strategic (inclusive of tactical and operational) goals, it is advisable to harmonise measuring indicators for performance with the strategic goals of the specific business entity. The subjective assessment of goal achievement of a business entity, which would make this possible through individualisation of success, is unjustly neglected in measuring performance (Dragnic, 2014:123-124).

Business performance should be measured with both financial and non-financial criteria, employing objective and subjective data. Because of the difficulty in obtaining reliable information and the inherent reluctance of small business people to disclose financial information, researchers asked the respondents to indicate the direction of their companies over the past few years (Pushpakumari & Watanabe, 2008:63). Pushpakumari and Wijewickrama (2008:147) used both financial and non-financial measures such as annual sales, annual profit, number of employees, market share and reinvestment in the business to measure the business performance of SMEs. While determining a firm's performance, one cannot solely rely on quantitative measures and ignore qualitative measures. Performance of a firm is also based on non-financial measures, including customer satisfaction, innovation, reliability, data storing capability, workflow improvement, skills development, etc. (Hafeez, Malak & Abdelmeguid, 2006:1217). According to the literature, there are two main approaches to measure performance. The first is the inclusion of subjective self-assessment financial and non-financial success factors (Khan *et al.*, 2014:32) whereas the second approach is based on financial indicators including profitability or revenue growth, which measures narrower conception of performance. In the case of non-availability of accurate financial data, the researcher might consider using subjective measures such as sales growth and return on assets for measuring business performance (Khan *et al.*, 2014:32).

Measuring business performance of the organisation means a qualitative and quantitative expression of some results by chosen indicators. Selection of appropriate indicators that will be used for

measurement and appraisal of the performance is a very important activity. Besides a control function, indicators of performance also have the following two functions (Stamatovic & Zakic, 2010:157):

- **Developing and guiding function:** presents a base for formulation and implementation of the strategy of the organisation.
- **Motivation function:** induces management to fulfil goals and motivate all stakeholders to realise those goals even on a higher level.

Okwo and Marire (2012:49) indicate that different frameworks for measuring business performance have evolved from a variety of origins. These are approaches to measurement that business has frequently adopted, often with significant diversity in their design and use, which are:

- Balanced scorecard;
- economic value-added;
- activity-based costing;
- customer value analysis; and
- action-profit linkage model.

According to Okwo and Marire (2012:50-52), ratio analysis can be used to measure business performance, which is classified into three broad groups:

- **Loan safety ratios:** these are of interest to the creditors of the firm, and show how liquid and solvent a firm is.
- **Management efficiency ratios:** these seek to measure the efficiency of management. They address how management has been utilising its available resources.
- **Profitability ratios:** these measure the profitability of a firm.

However, when interpreting these ratios, caution or restraint must be exercised to avoid over-generalisation. These ratios must at least be considered alongside those of other firms in the same industry to make proper comparisons of business performance (Okwo & Marire, 2012:52). Gopinathan (2009:7) states that there are no universal margins applicable to all businesses. Instead, the margins tend to vary from industry to industry and product line to product line. The value of profitability ratio analysis lies in:

- the ease with which historical business performance can be compared. Thus, it is possible to compare this year's gross profit margin with last year's;
- the opportunity to compare the business performance of different companies engaged in the same business; and

- comparison against industry averages.

4.3 BUSINESS PERFORMANCE MEASUREMENT SYSTEMS

Businesses have to achieve the growth targets set to survive and increase their profitability. The control of what extent the targets in question are achieved is done by methods called performance measurement systems (Baynal & Ozkan, 2014:938). These are responsible for coordinating indicators across the various functions and for aligning the indicators from the strategic to operational levels (Franceschini, Galetto & Domenico, 2007:77). Performance control methods are utilised to monitor business processes in operation and to keep the deviations identified in performance under control. Beneath their monitoring and control functions, performance measurement systems are further expected to be sensitive to internal and external developments in businesses (Baynal & Ozkan, 2014:939).

A performance measurement system is a balanced and dynamic system that can support decision-making processes by gathering, elaborating and analysing information (Taticchi *et al.*, 2008:2). The concept of “balance” refers to the ability to use different measures and perspectives that are tied together to give a holistic view of the organisation. The concept of “dynamic” refers to the ability to develop a system, which continuously monitors the internal and external context and reviews objectives and priorities (Taticchi *et al.*, 2008:2). The classical approach to business performance measurement, as described by the Sink and Tuttle model claims that the performance of an organisational system is a complex interrelationship between six performance criteria: effectiveness, efficiency, quality, productivity, innovation and profitability (Anthony & Bhattacharyya, 2010:4). Most of these criteria are multidimensional and are context dependent. This poses a problem of finding a common objective measure for all these dimensions. A model that is designed for one situation cannot be applied to another. Sometimes, different performance dimensions may have to be combined to get a balanced and complete view of the situation (Anthony & Bhattacharyya, 2010:4).

Performance measurement systems are designed to provide a set of mutually reinforced signals which direct managers’ attention to strategically important areas that translate to business performance outcomes (Spencer, Joiner & Salmon, 2009:86). Recent theorising on performance measurement systems has an increasingly strategic focus such that they are designed to provide a way of operationalising strategy into a coherent set of business performance measures to guide managers’ behaviour towards key organisational outcomes (Chenhall, 2005:395). There is increasing recognition of the need to develop balanced performance measurement systems that include both financial and non-financial business performance measures (Spencer *et al.*, 2009:86). It is widely recognised that organisation and performance measurement systems are designed to support the

business strategy of the firm to achieve competitive advantage (Gosselin, 2005:410). By concentrating especially on performance measurement systems (PMSs), the management and accounting literature suggests that financial, efficiency-based business performance measures are less relevant while non-financial measures are more relevant for strategies of differentiation (Hoque, 2004:485).

Performance measurement systems represent useful frameworks to drive SMEs' decision-makers in both designing competitive strategies and measuring outcomes. Such systems are focused on the identification of 'results' (i.e. outputs and outcomes) and of their own 'drivers' (Bianchi, Cosenz & Marinkovic, 2015:86). However, traditional performance management systems often lack capturing the dynamic complexity of managerial decision-making. In fact, they may omit some relevant factors influencing business performance. (Bisbe & Malagueno, 2012:296). Therefore, traditional performance management systems may limit decision-makers' strategic learning processes (Bianchi *et al.*, 2015:86). A 'dynamic' perspective in designing and implementing performance management systems implies the identification and analysis of end-results, value drivers and the related strategic resources accumulation/depletion process, according to a cause-and-effect perspective (Pekkola & Rantanen, 2014:23).

To be effective, the design of performance measurement systems in SMEs requires consistency with the key characteristics that differentiate them from larger firms. Some literature points out some recurring SMEs' characteristics as listed below (Howick, 2008:762). There is/are:

- personalised management, with the little devolution of authority;
- severe resource limitations regarding management and workforce, as well as finance;
- reliance on a small number of customers and operating in niche markets;
- flat, flexible organisational structures;
- high innovatory potential;
- reactivity to environment changes and legislative reforms; and
- informal and unstructured strategy design.

As recommended for public and larger-sized organisations, SMEs also need to focus the design of performance management systems on a multidimensional perspective of business performance that may capture both financial and non-financial measures. Business performance refers to three main dimensions (Coda, 2010:33), which are:

- a competitive;
- a financial; and
- a social dimension.

As Figure 4.2 displays, the competitive dimension is respectively oriented to satisfy market needs. The financial dimension aims at increasing a company’s profitability to support both future investments and reward shareholders. The social dimension is addressed to ensure a stable equilibrium between stakeholders’ contributions and the related expected rewards that the company provides (Bianchi *et al.*, 2015:89).

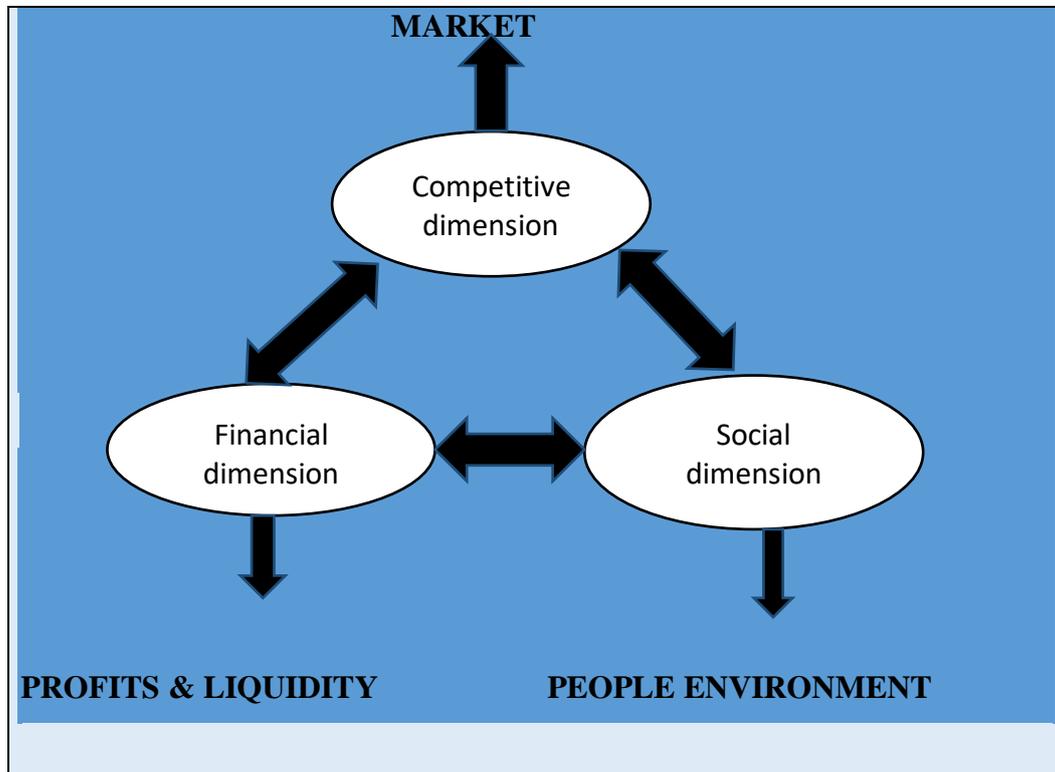


Figure 4.2: A multidimensional perspective of performance dimension

Source: Bianchi *et al.* (2015:89)

Each business performance dimension includes a set of strategic resources whose acquisition and deployment in a synergistic way implies the possibility to generate certain results. For instance, a company’s image refers to the competitive dimension, liquidity to the financial one, and employees’ satisfaction with the social one (Coda, 2010:33). A multidimensional perspective of business performance also highlights close connections among the three mentioned dimensions. (Coda, 2010:33). This means that the success of a firm depends on a consistent balance among these business performance dimensions (Bianchi *et al.*, 2015:89).

Table 4.2: Critical measures of business performance and related range targets tailored for SME management

| Quality | Time | Flexibility | Finance | Customer satisfaction | Human resources |
|-----------------------|--------------------------|-------------------------------|--------------------------|-----------------------------|-------------------------|
| -Product performance | -Lead time | - Manufacturing effectiveness | -Cash flow | -Market share | -Employee relationships |
| -Delivery reliability | -Delivery reliability | -Resource utilisation | -Market share | -Service | -Employee improvement |
| -Waste | -Process throughput time | -Volume flexibility | -Overhead cost reduction | -Image | -Workforce |
| -Dependability | -Process time | -New product introduction | -Inventory performance | -Integration with customers | -Employee skills |
| -Innovation | -Productivity | -Computer systems | -Cost control | -Innovation | -Learning |
| | -Cycle time | -Future growth | -Sales | -Competitiveness | -Labour efficiency |
| | -Delivery speed | -Product innovation | -Profitability | -Delivery reliability | -Quality of work life |
| | -Labour efficiency | | -Efficiency | | -Resource utilisation |
| | -Resource utilisation | | -Product cost reduction | | -Productivity |

Source: Bianchi *et al.* (2015:90)

Based on the characteristics of SMEs in Table 4.2, Bianchi *et al.* (2015:90) outline a set of critical business performance categories that may be referred to as competitive, financial and social dimensions. To identify business performance measures relevant to SMEs management, Bianchi *et al.* (2015:90) suggest that measures must be linked to a few critical success factors. Garengo and Sharma (2012: 220) indicate that as for SMEs, where unstructured decision-making processes are usually adopted, plenty of indexes and indicators may actually outline an unfocused, performance measurement framework and, hence, may divert management attention from those value drivers having a major impact on a company’s results and sustainable development.

Chalmeta, Palomero and Matilla (2012:717) state that evidence from SMEs’ management practice reveals that the use of an excessive volume of indicators may involve ambiguity and conflicting information in measuring business performance. Bianchi *et al.* (2015:92) indicate that due to this, managers could be discouraged to adopt performance measurement frameworks as a diagnostic tool. This negatively affects traditional SMEs’ strategic capabilities. Therefore, a selective approach to business performance measurement design is recommended in small and medium enterprises as an even more stringent professional practice than for larger firms.

Taticchi *et al.* (2008:8) identify the following distinct factors influencing the implementation of business performance measurement within SMEs:

- SMEs have been involved with difficulty in business performance measurement.
- SMEs either do not use any business performance measurement model, or they use models incorrectly.
- Business performance measurement implemented in SMEs rarely has a holistic approach.
- SMEs approach to business performance measurement is informal, not planned and not based on a predefined model.
- SMEs have limited resources for data analysis.

Taticchi *et al.* (2008:8) state that existing literature suggests that SMEs may be differentiated from larger enterprises by some key characteristics that influence the implementation of their business performance measurement as follows:

- personalised management with the little devolution of authority;
- resource limitations regarding management and manpower, R&D, finance, marketing, etc.;
- reliance on a small number of customers and operate in limited markets;
- flat and flexible structures;
- high innovatory potential;
- reactive and fire-fighting mentality;
- informal and dynamic strategies;
- tacit knowledge and little attention is given to the formalisation of processes; and
- a misconception of business performance measurement.

All these factors underline the differences between SMEs and large organisations, and the need for a different approach to business performance measurement in SMEs. Moreover, these factors could be useful to investigate crucial dimensions of their business performance systems. These dimensions, in fact, should be tailored according to the factors described above to emphasise small and medium enterprise pros and valorise limits (Taticchi *et al.*, 2008:8-9).

The limited resources of SMEs require approaches and models that respond to their specific needs and are efficient and easy to implement. Starting from the SME characteristics previously described, the following section describes the principal characteristics and dimensions of an “ideal” SME business performance system to define the bases for business performance system design (Balachandran, Lunghi & Taticchi, 2007:7):

- **Assessment:** due to the fact that SMEs already have some kind of accounting system in place, a new SME business performance system should have an assessment system, able to evaluate the capability of the current system; in order to define a base for implementing eventual lacks identified (Taticchi *et al.*, 2008:8-9).
- **Design:** a business performance measurement system should reflect the business of the company; therefore, there is a need to design a specific architecture and proper measures (Balachandran *et al.*, 2007:7). The design for SMEs must consider strategy linked with a strong focus on operational aspects (Garengo *et al.*, 2005:27). The consideration of a different stakeholders' perspective, that is the ability to meet the needs and expectations of the external stakeholders including the customers, suppliers, competitors; business performance, should be measured based on a holistic approach, which incorporates the financial and non-financial measures as well as time element and the external and internal parameters (Taticchi *et al.*, 2008:10).
- **Implementation:** limited SME managerial skills point out difficulties for successful business performance measurement implementation (Taticchi *et al.*, 2008:10). For this reason, once the framework and measures are designed, accurate indications for successful implementation should be clearly furnished (Balachandran *et al.*, 2007:8). A focused approach to business performance measurement may also have advantages in attracting attention to facilitate and implement the business performance measurement system (Taticchi *et al.*, 2008:10).
- **Communication/alignment:** a business performance measurement system must be designed and implemented in accordance with a company's business strategy to link the strategy to the objectives of functions, groups of people and individuals as well as to operational aspects (Garengo *et al.*, 2005:28). The aim of achieving company alignment should be accomplished with clear guidelines to communicate business performance effectively inside the company. Communication is an important driver to achieve company alignment to strategy but is not the only one (Balachandran *et al.*, 2007:8).
- **Review:** a dynamic business performance measurement system should include a system for reviewing measures and objectives that make it possible to adapt it to a change in the internal and external context, and systematically to access a company's strategy to support continuous improvement. The review should also verify whether the business performance measurement and management system contribute to an overall improvement in business performance (Taticchi *et al.*, 2008:10).

Organisations nowadays focus more on the management of non-financial or intangible assets such as customer links, services, quality and performance, not on the assets, which are financial in nature. A

strategic performance measurement system (SPMS) is a new approach to measure business performance rather than done traditionally (Shahzad *et al.*, 2012:979-980). A SPMS provides a way to translate and measure both financial and non-financial performance. It is the incorporative nature of this measurement technique that provides the potential to increase the strategic competitiveness of the organisation (Chenhall, 2005:395).

Multiple business performance measures consisting of financial and non-financial methods are generally good for the owner and management and are helpful to enhance protection towards the uncontrollable events outside the organisation (Chenhall, 2005:395). The Balanced Scorecard is one of most important SPMS tools, which provides a framework to ensure that the strategy is interpreted into a rational set of business performance measures (Shahzad *et al.*, 2012:979-980). Linked together in a causal relationship it covers four main viewpoints: financial, internal business process, the customer, and learning and growth. It is a cooperative tool that gives focus to the organisation, improves communication, sets organisational goals and gives feedback on strategy (Shahzad *et al.*, 2012:979-980).

4.3.1 The Balanced Scorecard (BSC)

Yu, Guo, Chiang and Tsao (2010:7) developed a business performance evaluation framework that takes account of the dynamical system behaviours for an innovative healthcare service by the interactions in the traditional BSC. Lyell and McDonnell (2007:7) emphasise that health system business performance management is a complex problem and offer a dynamic BSC structure. However, Paranjape, Rossiter and Pantano (2006:4) evaluated the BSC in their study and mentioned the difficulties of implementation into dynamic systems. Ahmadi, Khoddami, Osanlou and Moradi (2012:2267) suggested a model based on the BSC for performance evaluation and conducted a case study through this model.

The BSC is a business performance measurement and strategic management system, which appears suitable for use by all types and sizes of business. The BSC's greatest strength for most businesses comes from its innate ability to integrate financial and non-financial measures together by measuring both strategic and business performance across the interrelated perspectives (Giannopoulos, Holt, Khansalar & Cleanthous, 2013:1). Numerous surveys have provided evidence as to the BSC's popularity and widespread implementation by different types of organisations (Rigby & Bilodeau, 2011:7). One such survey was undertaken for The Chartered Institute of Management Accounting (CIMA) by the International Institute of Banking and Finance Services (IIBS). According to this survey, the BSC continues to be one of the most popular management tools and the most likely to be adopted by companies (CIMA, 2009:1).

A survey of management tools and techniques conducted by Bain and Company in 2011 found that the BSC was one of the 25 most popular tools and its use was projected to keep increasing (Rigby & Bilodeau, 2011:7). It has produced tangible benefits for many of the large organisations who have chosen to implement it. Theorists predict similar benefits for smaller companies and entities who will decide to adapt and implement the BSC (Giannopoulos *et al.*, 2013:1).

The main characteristics of the BSC are that it uses both financial and non-financial measures to establish a complete view regarding the company’s performance. Over the years, the BSC has been improved and advanced into a measurement system but more importantly into a strategic management system (Giannopoulos *et al.*, 2013:3). The BSC translates an organisation’s mission and strategy into a set of business performance measures that provides the framework for implementing its strategy (Okwo & Marire, 2012:49). It is a dynamic tool that can be used to implement a company’s strategy from theory into practice. It includes some measures that allow managers to have a quick but complete view of the company. The BSC can align the management processes of a business and emphasizes the implementation of the long-term strategy (Giannopoulos *et al.*, 2013:3).

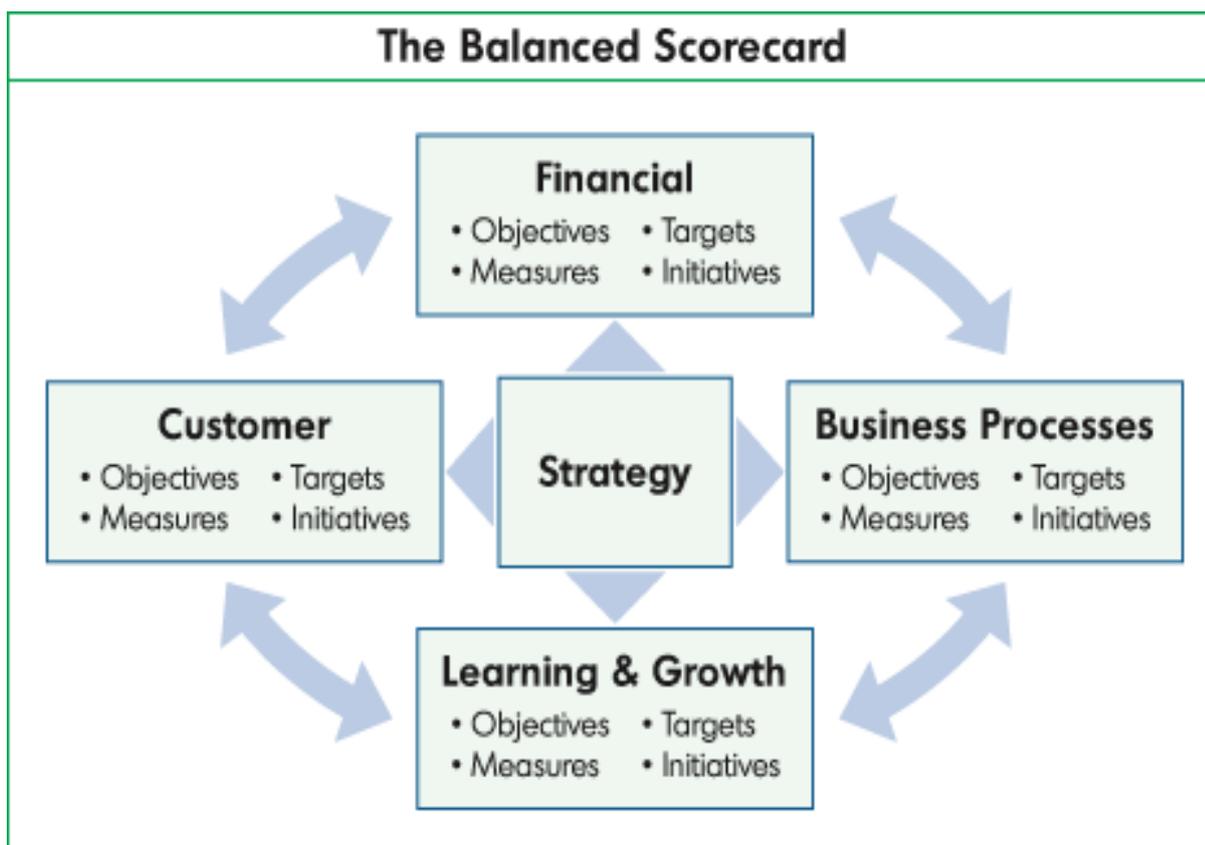


Figure 4.3: The four perspectives of the BSC - translating vision and strategy

Source: Giannopoulos *et al.* (2013:3)

Figure 4.3 indicates that the BSC translates an organisation’s mission and strategy into a set of business performance measures that provides the framework for implementing its strategy. It also

shows the four perspectives of the BSC, namely: financial, business process, learning and growth, and customer.

The BSC model utilises an appropriate combination of leading and lagging performance indicators to measure performance across four interrelated perspectives (Collis, Holt & Hussey, 2012:77). It is a dynamic business performance assessment system or management technique based on non-physical dimensions (values) such as humans, systems, and the development and perfection of incorporating activities in line with future customers' satisfaction, orientation and expectations (Zheng, Lai & Zhang, 2009:853). It is also beneficial in learning and developing the methods to keep up with the change – together with physical (financial) values derived from historical data, the business has in hand. It measures these dimensions using specific indicators that provide strategic feedback to maintain equilibrium and integration between dimensions. Furthermore, it determines applicable strategies of data (Zheng *et al.*, 2009:853).

Construed in a general sense, the BSC performance measurement system aims to achieve a steady and gradual growth of corporate development and corporate life and to bring success to the business in a competitive environment of the recent information age by changing performance (Baynal & Ozkan, 2014:940). Businesses open to innovation use the BSC as the centre and regulatory framework of management processes. They can adapt it at first and establish a scorecard for very limited purposes. The real power of the BSC is demonstrated not only as a measurement system but also in cases when it is used as a management system (Baynal & Ozkan, 2014:940). The BSC is thus a way of measuring organisational, business unit or departmental success; balancing long-term and short-term actions; balancing the following different measures of success: financial, customer, internal operations and human resource systems and development (learning and growth) and tying the firm's strategy to measures of action. Much of the success of the scorecard depends on how the measures are agreed, the way they are implemented and how they are acted upon (Kairu *et al.*, 2013:81). The four perspectives of the scorecard permit a balance between short-term and long-term objectives, between desired outcomes and the performance drivers of those outcomes, and between the objective measures and softer, more subjective measures. Currently, the BSC is a powerful and widely accepted framework for defining business performance measures and communicating objectives and vision to the organisation (Kairu *et al.*, 2013:81).

Drury (2008:77) states that a balanced scorecard translates an organisation's vision and strategy into operational objectives and business performance measures with the following perspectives:

- Internal business perspective. (What must we excel at?)
- Learning and growth/innovation perspective. (Can we continue to improve and create value?)

- Financial perspective. (How do we look to shareholders?)

The BSC is divided into four perspectives: internal business perspective, learning and growth/innovation perspective, customer perspective and financial perspective. To give the full meaning of the BSC as a performance measurement system, the four perspectives are analysed and discussed below (Giannopoulos *et al.*, 2013:5):

Internal business perspective: this perspective focuses on the activities an organisation undertakes to satisfy its customers. For example, in manufacturing organisations, assembly of a product is an internal business process.

Learning and growth/innovation: this perspective focuses on the capabilities and skills that the company must excel at to achieve superior internal business processes that create value for customers and shareholders. Some of the business performance measures that might be used to measure learning and growth/innovation include employee education and skill level, employee satisfaction and retention rates.

Customer perspective: this perspective focuses on the customers' opinion of the company and how the company wants to be viewed by its customers. The satisfaction of customers is a priority to many businesses, especially currently where the business environment is even more competitive and can act as a very important key performance indicator in the efforts of the business to be successful. Customers usually have five main concerns regarding the product or service offered by a business: time, quality, performance, service and cost. Therefore, the company has to align its targets according to these four elements and subsequently transform them into specific measures.

Financial perspective: this perspective, the last perspective of the BSC, refers to the financial view of a company as presented to its shareholders and whether the strategy, implementation and execution of the company are contributing to the bottom-line improvement. The financial performance measures provide information based on company results of the past events. The measures as well as the objectives of the other three perspectives of the BSC focus on the financial targets and objectives, which generally have to do with growth, profitability and shareholder value. However, because the financial indicators do not influence customers' and employees' satisfaction the business should not use them as metrics to direct their strategic vision. As a result, the business should not use only financial data but also strategy models and measurements that emphasise the total business strategy.

A balance of measures across these four perspectives is what gives the BSC its name. However, the measures that make up a scorecard do not exist in isolation from each other. They relate to a set of objectives that are themselves linked, the final link usually relating to financial outcomes of one form or another. Measures in this context can be used to communicate, not only control (Kairu *et al.*,

2013:81). This division into four perspectives has the aim of ensuring that assessment is equally focused on all those factors that have an impact on a company's success (Sinisammal, Belt, Harkonen, Mottonen & Vayrynen, 2012:30). The success of the BSC relies on creating clear cause-and-effect relationships across the four perspectives, creating a balance among the different measures of business performance drivers and results, and communicating strategy and the processes and systems necessary to implement that strategy (Caudle, 2008:2). The BSC is more suitable for top management to obtain a general overview of a company situation rather than being a tool for operational management (Haapasalo, Ingalsuo & Lenkkeri, 2006:707). Fundamentally, the BSC is seen to be more monitoring than a development tool. It must also be emphasised that the object of measurement described in the BSC should not be accepted as it is, but the applicability of each indicator ought to be considered individually to be suitable for each company's vision and strategy (Haapasalo *et al.*, 2006:707).

Soderberg, Kalagnanam, Sheehan and Vaidyanathan (2011:677) provide literature with performance measurement systems on 149 organisations where the BSC is widely applied as a performance measurement and strategy implementation tool. Ozturk and Coskun (2014:154) state that the way of using the BSC influences interactive and personal learning, and commitment of the line managers and employees. The BSC's aim to limit the number of measurement objects is seen as a good trend, while tangible guidelines for implementation have been missing (Sinisamma *et al.*, 2012:31).

Some literature, however, describes goal setting for business performance indicators and the phases of design and implementation, while practical aspects of defining indicators, especially employee participation, are less discussed. Researchers, especially those of Anglo-Saxon origin, almost completely disregard the employee's role in developing business performance indicators (Sinisammal *et al.*, 2012:31). However, Reiman and Vayrynen (2011:57) see employee participation as an important issue. Employees' participation in workplace development projects may improve personnel relations, professional expertise, and commitment to new ways, among many other potential benefits. According to Sinisammal *et al.* (2012:31), employees' participation in building business performance indicators may enable personnel to understand their own role as a part of whole better.

As it became essential to use key non-financial performance measures and integrate financial and non-financial measures, the BSC was developed as a multi-dimensional performance measure to help managers have a complete view of the organisation, and provide them with consistent feedback for controlling goals and evaluating business performance (Lonbani *et al.*, 2015:94). The available literature further clarified its applicability in SMEs. Many studies have highlighted the feasibility of using the BSC in this context (Hongmei & Yujun, 2010:3). There are different reasons why the BSC can be applied in this specific group of companies (Lonbani *et al.*, 2015:94), namely, it:

- helps SMEs plan for short as well as long-term objectives;
- supports SMEs to achieve their goals and be innovative; and
- makes performance management much easier.

Although SMEs have used the BSC for only a short time, they have applied and used the first two generations of the BSC. It has therefore been used as a tool for measuring business performance and also as a strategic management system (Henschel, 2006:555), which highlights the quick implementation of the BSC generations among SMEs. Furthermore, the use of the BSC as a business performance measurement system for SMEs not only focuses on financial performance indicators but also on non-financial ones, which could improve their competitive advantage in a rapidly changing market environment (Lonbani *et al.*, 2015:94). Financial measures are no longer able to provide information that can support dynamic complex management, measurement of intangibles, detection of delays, understanding linkages between short and long-term, and setting proper system boundaries in strategic planning. The BSC has been adopted by many companies to cope with such problems (Bianchi *et al.*, 2015:92). Two main concepts underlying the BSC framework can be synthesised as follows: business performance cannot be managed by only focusing on end-results; and business performance cannot be measured only in terms of finance. Therefore, as stated earlier, the BSC framework also includes the customer, the process and the learning and growth dimensions (Karpagam & Suganthi, 2013:129).

Since its development in 1992, the BSC has been subject to many studies about its adoption and used within larger entities. In contrast, limited empirical evidence is available about its application and use within small entities (Giannopoulos *et al.*, 2013:6). Bain and Company produce an annual survey of ‘Management Tools and Techniques’ that includes data about the popularity and use of the BSC in both large-scale and small-scale entities. The latest survey highlights that larger businesses use on average 30 percent more management tools than smaller businesses, with smaller businesses using an average of nine management tools during 2008 and eight in 2010 (Rigby & Bilodeau, 2011:7). The results also reveal that the BSC was one of the 25 most popular management tools during 2011, and its level of usage increased from 47 percent to 63 percent from 2010 to 2011. Further longitudinal analysis reveals that the BSC has risen from the 13th most popular management tool to sixth most popular during the period 2004-2010 (Rigby & Bilodeau, 2011:7).

Moreover, according to the same survey in 2010, the BSC had a total usage of 48 percent of the participant corporations and overall satisfaction almost four (4) out of five (5), which was the highest satisfaction level (Bain & Company Guide, 2010:12). According to CIMA’s survey conducted in 2009, the BSC is the most popular tool and considered as the most likely to be adopted soon. Additionally, the survey showed that large companies generally use the BSC rather than small

companies (CIMA, 2009:33). It should be noted that the BSC was initially designed to be used by medium and large companies. The managers of these small companies might produce performance management systems that are similar to the BSC. They might use the same structure or some of its perspectives as a performance measure without being aware of it (Giannopoulos *et al.*, 2013:6).

However, in spite of its widely recognised advantages, the BSC presents some conceptual and structural shortcomings. It fails to translate company strategy into a coherent set of measures and objectives because it lacks a rigorous methodology for selecting metrics and for establishing the relationship between metrics and firm strategy (Bianchi *et al.*, 2015:92). One of the potential weaknesses of the BSC is seen as being originally developed for the needs of large North American companies, where the organisational culture and working environment are somewhat different from those of European and Asian companies (Haapasalo *et al.*, 2006:707). Although Kaplan and Norton stress the importance of feedback relationships between the BSC variables for describing the trajectory of a given strategy, the cause-and-effect chain is always conceived as a bottom-up causality, which totally ignores feedback, thereby confining attention only to the effect of variables in the lower perspectives (Bianchi *et al.*, 2015:92). Misperceiving the dynamic relationships between the system's feedback structure and behaviour often leads SME entrepreneurs to make their decisions according to a linear, static and bounded point of view, regarding time horizon and relationships between variables (Bianchi *et al.*, 2015:92).

According to Bianchi (2012:143), the BSC approach does not help one to understand:

- how strategic resource accumulation and depletion processes that are triggered by the use of different policy levers affect business performance drivers;
- how business performance drivers affect outcome indicators;
- how outcomes will affect the strategic-asset accumulation and depletion process; and.
- how to align key business performance measures to strategic objectives.

To provide small and medium enterprise decision-makers with proper lenses for interpreting such phenomena, understanding the feedback-loop structure underlying business performance and identifying alternative strategies to adopt to change the structure for business performance improvement, system dynamic modelling has been used (Warren, 2008:12). System dynamic models can be properly linked to either accounting or financial models to support planning and control and to implement dynamic performance management (Bianchi *et al.*, 2015:92).

4.3.2 Importance of business performance measurement

Business growth performance reflects the achievement of organisational goals related to profitability and growth in sales and market share together with general strategic objectives. Business performance has been measured in accounting terms such as profit, cost, and market share (Al-Ansari, 2014:119). However, it should be measured using both financial and non-financial terms to enable efficient strategic decision-making, where non-financial terms focus on the long-term success of the firm, including customer satisfaction, internal business process efficiency, and innovation (Avci, Madanoglu & Okumus 2011:147). In current business management, business performance measurement is considered to be a more critical role compared to quantification and accounting (Koufopoulos, Zoumbos, Argyropoulou & Motwani 2008:340). By measuring business performance, a company can identify its strengths and weaknesses. Accurate business performance measurement is vital to understanding firm success and failure (Eniola & Entebang, 2015:240). Measurement of business performance can offer significant invaluable information to allow management's monitoring of performance, reporting, improving motivation and communication and pinpointing problems (Al-Matari *et al.*, 2014:26).

Moreover, business performance measurement is critical in business performance management. Through measurement, people can create simplified numerical concepts from complex reality for its easy communication and action (Al-Matari *et al.*, 2014:26). Business performance measurement is at the core of its process and is significant to the effective and efficient workings of business performance management (Al-Matari *et al.*, 2014:26). The following are the key objectives for measuring business performance of SMEs (Shahbaz, Javed, Dar & Sattar, 2014:43):

- to evaluate how efficiently the organisation is performing;
- to ensure the managers that their subordinates are performing their jobs accurately and doing the right things;
- to budget: budgets are the basic tools for business performance improvement;
- to motivate: considerable goals are given to employees to be achieved and then focus on employees' work and philosophy by using business performance measurement tools and at the end reward employees by periodic accomplishments;
- to celebrate: the organisation needs to celebrate their employees' accomplishments and give them a sense of individual and collective relevance;
- to ensure the stakeholders that the organisation is performing well, doing a good job and is in safe hands; and
- to learn the grounds of good or bad business performance.

Business performance measurement is the most important part of business performance management, which focuses on business performance improvement (Shahbaz *et al.*, 2014:43). Success of an organisation is impossible without knowing about: what to improve; where to allocate or re-allocate resources; how to compete with other businesses; whether the organisation is improving or not; and which policies, procedures, or employees are producing desired results that are cost-effective and efficient (Shahbaz *et al.*, 2014:43). Business performance measurement serves as a source of information about financial outcomes and the internal operations reflected in an organisation's financial statements. Effective business performance measurement is a key to ensure that the organisation's strategy is successfully implemented and monitors its own predetermined goals or stakeholder's requirements (Okwo & Marire, 2012:48). Business performance measurement is a very important aspect of business activity: its purpose is not only to know how a business is performing but also to enable it to perform better (Kairu *et al.*, 2013:81).

The ultimate aim of implementing a business performance measurement system is to improve the business performance of an organisation so that it may better serve its customers, employees, owners, and other stakeholders (Kairu *et al.*, 2013:81). Business performance measurement generates data that will inform the users where the business is, how it is doing, and where it is going. A business performance system enables an enterprise to plan, measure and control its business performance according to a pre-defined strategy (Okwo & Marire, 2012:48). Business performance measurement can help organisations define and achieve their strategic objectives, align behaviours and attitudes, and ultimately have a positive impact on business performance (Micheli & Manzoni, 2010:2). Some studies have found that it is generally productive and helpful in improving business performance. Specifically, research has shown that organisations can benefit from it (Micheli & Manzoni, 2010:2) to:

- formulate, implement and review organisational strategy;
- communicate results achieved to stakeholders, thus strengthening corporate brand and reputation; and
- motivate employees at all levels; promote a business performance improvement culture, which fosters organisational learning.

Measuring business performance in today's economic environment is a critical issue for academic scholars and practising managers. Many studies examine the relationship of organisational practice and processes to affect the "bottom line", and vice versa (Zulkiffli & Persea, 2011:1). It can be used in relationships between headquarters and subsidiaries, and between corporate and business unit levels. It is a means by which to establish a dialogue between different functions within an

organisation and between an organisation and its environment (Micheli & Manzoni, 2010:2). External users use business performance measures for investing, financing and benchmarking decisions. They are also used internally by managers and executives to grow, improve, reward and learn (Aliabadi *et al.*, 2013:22).

Business performance measurement plays a vital role in managerial development and small organisations. To measure business performance, organisations establish certain standards to gauge and evaluate their strategies, values, practices and performance against benchmarks (Shahbaz *et al.*, 2014:44). Organisations measure to determine aspects, such as determining the needs of customers and ascertaining whether they can fulfil their requests or not; approving their knowledge and accuracy for the activities done and finding out what they do not know; seeing if they are successful generally; making sure that the taken decisions are made with facts and not with emotions or assumptions; and revealing problems or determining fields with a development possibility (Ozturk & Coskun, 2014:151). Business performance measurement has therefore been recognised as a crucial element to improve business performance (Taticchi *et al.*, 2008:2). Okwo and Marire (2012:49) give eight reasons for adopting business performance measurements:

- to evaluate how well a public agency is performing;
- to control subordinates: as managers allow some freedom in the workforce, some measures are used to control subordinates;
- to budget: budgets are used as tools to improve business performance;
- to motivate: business performance measurement is used to motivate staff performance targets, it may also encourage creativity in developing better ways to achieve goals;
- to celebrate: business performance measurement is used to commemorate accomplishment by achieving specific goals, people gain a sense of personal accomplishment and self-worth;
- to promote: business performance measurement is used to validate success, justify additional resources, earn customers and win recognition inside and outside the organisation.
- to learn: learning involves analysing business performance, and lastly
- to improve business performance.

4.3.3 Business performance management and the Balanced Scorecard

Business performance management is a process wherein the organisation manages its business performance to match its corporate and functional strategies and objectives (Al-Matari *et al.*, 2014:25). It involves the establishment of a shared understanding about what is to be achieved, how is it to be achieved; and an approach to managing people that increases the probability of achieving success within an agreed framework of planned goals, standards and individual and team competence

requirements (Eniola & Ektebang, 2014:78). It is the process whereby an organisation's programmes, investments and acquisitions are attained, by using parameters established by the organisation (Shahbaz *et al.*, 2014:42). Improving the performance and competitiveness of business activities requires the right information at the right time for the right stakeholders to reduce uncertainty and take appropriate decisions (Pidun & Felden, 2013:3427).

The world of business environments in modern economies and cities has changed dramatically in the way business is pursued, and now depends heavily on performance to generate and utilise new knowledge, imagination, creativity, innovation and technologies (Kourtit & Nijkamp, 2011:143). To stay competitive, firms need to measure, monitor, and analyse their performance. Business performance management systems are regularly used as balanced and dynamic solutions requiring considerable human and financial resources, which offer support to the decision-making process by gathering, elaborating on and analysing information (Vuksic, Bach & Popovic, 2013:845). Business performance management systems are being used in a wide number of organisations to support performance planning, measurement and control. They are designed to present managers with financial and non-financial measures covering different perspectives, which in combination provide a way of translating strategy into a coherent set of performance measures (Zamecnik & Rajnoha, 2015:776). Business performance management can be addressed at three levels: organisational (strategic), business process, and employees. Different BSCs are prepared for different levels belonging to an organisation, a group of individuals, or units (Ozturk & Coskun, 2014:154). For instance, a business group called "General Electric Lightning" formed their BSCs for different levels such as corporate scorecard, group scorecard, unit scorecard, factory scorecard and employee scorecard (Ozturk & Coskun, 2014:154).

The BSC is a strategic performance management system used by many companies in the international business environment. It can be used in both large and small businesses if employees are working towards achieving the same targets and strategic goals (Giannopoulos *et al.*, 2013:3). Some businesses have moved beyond using the BSC as a performance measurement system and have identified its value as a strategic management system (Bose & Thomas, 2007:653). Consequently, the concept of the BSC was enhanced, to be also used as a strategic management system (Sinha, 2006:77). The BSC can allow managers to create and introduce four new management processes, which can be used individually or in combination, to relate the long-term strategic objectives with short-term actions (Giannopoulos *et al.*, 2013:4).

Zhang and Li (2009:207) studied the BSC in a commercial bank in the performance management system and stated that the BSC raises the value of a performance management appraisal system based on the introduction of customer factors, internal business processes, employee learning and growth

and financial factors. Caudle (2008:1) states that the BSC as a business performance management system was designed for organisations to manage their strategy. Specifically, the BSC was a way to:

- clarify and translate vision and strategy;
- communicate and link strategic objectives and measures;
- plan set targets and align strategic initiatives; and
- enhance strategic feedback and learning.

This process of the BSC enables managers to ensure that the strategy of the business has been understood from all levels of the business. Specifically, this process offers an efficient structure by which managers can disseminate the long-term vision and business strategy to all employees by communicating and allowing the strategy to be aligned with personal goals (Giannopoulos *et al.*, 2013:5). Moreover, the long-term strategic goals have to be aligned not only with the departmental goals but also with individual goals, which subsequently should be aligned to each other to realise the long-term goals (Sinha, 2006:71). To link the strategy of the business with the individual performances of the employees, this process offers three activities: communicating and educating, setting goals and linking rewards to performance measures (Giannopoulos *et al.*, 2013:5).

Caudle (2008:2) indicates that Kaplan and Norton's books and articles through 2004 evolved the BSC from a set of measurement techniques to a management system, and then to an organisation and framework of change for what they called a strategy-focused organisation, which would follow five principles to:

- translate the strategy into operational terms;
- align the organisation to the strategy;
- make the strategy everyone's everyday job;
- make strategy a continuous process; and
- mobilise change through executive leadership.

In subsequent books published in 2006 and 2008, they provided additional guidance on aligning all organisational units to an enterprise's strategy thus establishing strong linkages from strategy to operations (Caudle, 2008:2). They posited that strategy should come from choosing the business's market and customer segments, have critical internal business processes that delivered value to the target customers, and select individual and organisational capabilities in support. Companies could also choose strategy by exploiting their unique capabilities, resources and core competencies (Caudle, 2008:2).

4.4 CONCLUSION

The purpose of this chapter was to examine the literature on business performance. From the literature study, it was found that business performance is a set of financial and non-financial indicators, which offer information on the degree of achievement of objectives and results. Furthermore, business performance measurement is a process for collecting and reporting information regarding the business performance of an organisation. The literature indicated that business performance measurement is the most important part of business performance management since it focuses on business performance improvement. The chapter also identified the Balanced Scorecard as one of the most important tools in the measurement of business performance. The scorecard has four indicators of performance, namely customer satisfaction, financial measures, business processes and learning and growth. It is clear then that business performance must be measured and managed for the survival of SMEs. The next chapter discusses the research methodology applied in this study.

CHAPTER 5

RESEARCH METHODOLOGY

5.1 INTRODUCTION

This chapter provides an outline of the research design and methodology applied in this research, which lies within the quantitative model. It gives a general account of relevant methodological issues and explains the choice of method used for the research. It thus presents the overall research design of the thesis. This chapter aims to present the types of reasoning, research paradigms, research approaches, research strategies, research design, sampling design, data collection methods, data analysis and statistical techniques employed in this study. The concrete processes in the collection of and analysis of the data are described. The chapter ends with a discussion on ethical considerations and a conclusion on the research design and methodology used in this research study.

5.2 TYPES OF REASONING

The reasoning is a kind of thinking that involves making inferences or drawing conclusions. It presents itself through definable patterns that can be symbolised and manipulated by applying formal rules (Rowe, 2014:4-6). Reasoning has value because it moves both ideas and policy. At its best, the power of reasoning is due to the clarity and efficiency it lends to solving problems, discovering new truths, persuading others, and clarifying what we believe and why we believe it (Rowe, 2014:6). During the scientific process, deductive reasoning is used to reach a logical and true conclusion. Another type of reasoning, inductive, is also used. Inductive reasoning is thinking whose premise statements support the conclusion with some degree of probability, presenting an open-ended context of inferences (Bradford, 2015:2). The quality of reasoning in inductive reasoning is based on a scale of weak or strong (Rowe, 2014:18). Often, deductive reasoning and inductive reasoning are confused. It is important to learn the meaning of each type of reasoning so that proper logic can be identified (Bradford, 2015:1).

In this study, deductive reasoning, which is the dominant research model in the organisational sciences, was applied. Under the deductive approach, hypotheses are offered *a priori*, data are collected, and analyses are conducted to determine the degree to which the hypotheses are supported (McAbee, Landis & Burke, 2017:277). Deductive reasoning presents a context of reasoning within which the premises are intended to offer certain and absolute support for the truth of the conclusion. Deductive reasoning involves claiming that if the premise is true, the conclusion is necessarily,

undeniably true (Ketokivi & Mantere, 2010:318). The strongest feature of deductive reasoning is the formal relationship that exists between its premises (Rowe, 2014:19). This was satisfied in this study, which sought to test relationships between organisational agility and business performance. Rather, deduction relies on “testing a single theory for empirical adequacy”. This perspective is in stark contrast to inductive reasoning, wherein the theories are formulated by drawing general inferences from particulars or cases of empirical data (McAbee *et al.*, 2017:278).

5.3 RESEARCH PARADIGMS

A paradigm is defined as a loose collection of logically related assumptions, concepts or propositions that orient thinking and research (Mack, 2010:6). It is considered as a belief system, a worldview in natural science, an application, a perspective in social reality, an overall approach underlying a worthy problem to explore, a methodology, and a knowledge claim that an investigator begins a research project with a certain assumption about how and what can be learned during the entire inquiry (Al-Ansari, 2014:128). These paradigms can be commonly divided into some orientations that include positivist and phenomenological, rationalist and interpretivist, inductive and deductive, and feminist and postmodern (Al-Ansari, 2014:128).

Positivists generally assume that reality is objectively given and can be described by measurable properties, which are independent of the observer (researcher) and his or her instruments. Positivists’ studies generally attempt to test theory in an attempt to increase the predictive understanding of phenomena (Ravarini, 2010:50). Antwi and Hamza (2015:218) state that the positivist paradigm of exploring social reality is based on the philosophical ideas of the French philosopher, August Comte. According to him, observation and reason are the best means of understanding human behaviour; true knowledge is based on the experience of senses and can be obtained by observation and experiments. Antwi and Hamza (2015:218) further state that positivistic thinkers adopt scientific methods and systematise the knowledge-generation process with the help of quantification to enhance precision in the description of parameters and the relationship among them. It is concerned with uncovering the truth and presenting it by empirical means. According to Fard (2012:61), positivism embraces a view of the world guided by scientific rules that explain the behaviour of phenomena through relationships.

Based on these research paradigms, positivism was selected for this study. This is mainly because it allows the investigator to determine “how things really are” and “how things work” (Al-Ansari, 2014:129). Positivist research uses experimental designs to measure effects, especially through group changes. The data collection techniques focus on gathering hard data in the form of numbers to enable evidence to be presented in quantitative form (Antwi & Hamza, 2015:220), which was again the procedure applied in this study. Regarding methodology, truth in positivist inquiry is achieved

through the verification and replication of observable findings, variable manipulations of the research objects and the application of statistical analysis. Positivists, therefore, emphasise the use of valid and reliable methods to describe and explain the events (Antwi & Hamza, 2015:220). The positivist approach maintains that a true explanation or cause of an event or social pattern can be found and tested by scientific standards of verification (Saunila, 2014:32), hence its applicability to this study, where relationships between organisational agility and business performance were sought out.

5.4 RESEARCH APPROACHES

Approaches to social research can be qualitative or quantitative. Philosophical assumptions, strategies of enquiry and specific research methods define the variations between the two. However, these sociological approaches have converged. Certainly, one can be integrated within the other to strengthen research design (Bird, 2009:1309-1310). This mixed methods approach may include sequential procedures whereby a qualitative method is used for exploratory research, followed by a broader quantitative study to produce statistically reliable data more representative of the population. Alternatively, concurrent procedures combine qualitative and quantitative data collection to allow a comprehensive analysis of the research question (Bird, 2009:1309-1310). Various research methods can be appropriate for social research. Quantitative, qualitative and mixed-method approaches offer different kinds of strengths in advancing social research (Fassinger & Morrow, 2013:69). A business research approach, being “a systematic, objective process of gathering, recording, and analysing data for support in making business decisions” is used to identify and evaluate problems and opportunities, diagnose casual factors, explain past difficulties, forecast future conditions, and suggest alternatives (Al-Ansari, 2014:131).

Research approaches are classified into theoretical and methodological approaches. The theoretical approach is inductive or deductive and can be used to build and test a theory, which draws primarily different conclusions (Al-Ansari, 2014:131). The inductive approach (theory building) starts with observations of particular facts and moves towards abstract generalisations and ideas arriving at conclusions. The methodological approach is qualitative, quantitative, or a mixture of both (i.e. triangulation) that is used to conduct research studies (Al-Ansari, 2014:131). To enhance construct validity, it is suggested to mix or integrate different research strategies (qualitative and quantitative) to obtain a methodological triangulation and enhance the confidence in the outcomes of the study (Ravarini, 2010:50).

Quantitative research usually involves collecting and converting data into numerical form so that statistical calculations can be made to draw conclusions (Habib, Pathik & Maryam, 2014:9). Quantitative research is an inquiry into an identified problem, based on testing a theory, measured

with numbers, and analysed using statistical techniques. The goal of quantitative methods is to determine whether the predictive generalisations of theory hold true (Habib *et al.*, 2014:8-9). Quantitative research options have been predetermined, and a large number of respondents are involved. By definition, measurement must be objective, quantitative, and statistically valid. The sample size for a survey is calculated by statisticians using formulae to determine how large sample size will be needed from a given population to achieve findings with an acceptable degree of accuracy (Habib *et al.*, 2014:8-9). The quantitative approach tries to understand the relationships between various constructs and quantify the data collection and analysis procedures that are suitable to measure attitude. The focus is on collecting, analysing, and presenting numerical data in a structured way using statistical techniques and a large representative sample of the population. The process of triangulation looks at cases from a multiple points of view by using a mixed method of qualitative and quantitative research approaches in a single research study (Al-Ansari, 2014:131-132).

Quantitative research methods were originally developed in the natural sciences to study natural phenomena. Examples of quantitative methods, now well accepted in the social sciences, including survey methods, laboratory experiments, formal methods (e.g. econometrics) and numerical methods such as mathematical modelling (Ravarini, 2010:54). Quantitative research refers to counts and measures of things. Research on philosophy, psychology, anthropology, and sociology represents qualitative research, whereas research in business administration and engineering is represented by quantitative research (Habib *et al.*, 2014:9). Contrarily, it may be more concerned with the individual's personal experiences of the problem under study. It is the collection, analysis, and interpretation of data by observing what people do and say. It refers to meanings, concepts, definitions, characteristics, metaphors, symbols, and descriptions of things (Habib *et al.*, 2014:9).

Based on the preceding research paradigms and approaches, a quantitative research approach was adopted for this study. According to Hove (2012:68), quantitative research has the following advantages that the researcher found beneficial:

- it closely follows the original set of research goals, arriving at more objective conclusions, tests hypotheses and determines issues of causality;
- It achieves high levels of reliability of gathered data due to controlled observation.
- it eliminates or minimises subjectivity of judgement.
- it is more highly formalised and more explicitly controlled than a qualitative approach;
- its range is defined more exactly than the qualitative approach; and
- it is relatively close to the physical sciences.

5.5 RESEARCH DESIGN

Research design is defined as “the plan of how to proceed in determining the nature of the relationship between variables” (Creswell, 2013:91). It refers to a framework for conducting a research project. It specifies the details of the procedures necessary for obtaining the information needed to structure and solve research problems (Hove, 2012:67). A research design is also defined as a blueprint for the collection, measurement, and analysis of data, based on the research questions of the study (Sekaran & Bougie, 2010:95). It can initiate the information needed, the conceptual model, selected method, sampling method, sample size, measurement procedure, and data analysis process, which plans and links collected data to the initial research question in the research study (Al-Ansari, 2014:133).

A survey research design was adopted for this study. Survey research is principally associated with quantitative research strategies. In quantitative research, a survey research strategy is normally conducted using questionnaires or, possibly, structured observation (Saunders, Lewis & Thornhill, 2016:168). Experimental strategies posit that experiments are conducted along the lines of natural sciences. That is, in a laboratory, or in a natural setting in a systematic way, which allows causal relationships to be identified (Wilson, 2010:303). Any fully scientific endeavour should have exploratory research, descriptive research and explanatory research as one of the primary objectives (Al-Ansari, 2014:133). Descriptive research presents a picture of the specific details of a situation, social setting or relationship, and focuses on “how and why” questions. Descriptive research can have basic or applied research goals and can be qualitative or quantitative (Cresswell, 2013:92).

There are two types of descriptive surveys, namely, cross-sectional surveys and longitudinal surveys. Surveys carried out at just one point in time are known as cross-sectional in design (Mathers, Fox & Hunn 2009:5), which provide us with a snapshot of what is happening in that group at that particular time. They usually take a descriptive or exploratory form that simply sets out to describe behaviour or attitude (Mathers *et al.*, 2009:5). Alternatively, surveys can be longitudinal. A longitudinal survey, rather than taking a snapshot, paints a picture of events or attitudes over time, which may be a matter of months or years (Mathers *et al.*, 2009:5). A cross-sectional survey, based on the above, was adopted for this research study.

5.5.1 Literature review

The first part of this study included a review of literature, which is discussed in chapters two, three and four of this thesis document. Chapter two discussed literature on SMEs from a global perspective, in Europe, America, Africa and South Africa. Chapter three discussed literature on strategic agility and its four dimensions (technology capability, collaborative innovation, organisational learning and internal alignment). Chapter four discussed literature pertaining to business performance. Issues

covered in Chapter two include definitions and contributions as well as challenges of SMEs globally in Europe, America, Africa and South Africa. Legislation of SMEs in South Africa was also covered in Chapter two. Issues covered in Chapter three include definitions, contextualisation and benefits of organisational agility as well as key capabilities enabling organisational agility. Issues covered in Chapter four include definitions, conceptualisation and measurement of business performance. It also covers business performance measurement systems and the importance of business performance measurement. Literature was sourced from various journal articles, textbooks, magazines, newspapers, and the Internet. Electronic Databases such as Emerald, Science Direct, EBSCO-Host, Nexus, Sabinet and SAGE are also used as sources of literature.

5.5.2 Empirical study

The second part of this study encompasses the empirical portion, which includes the sampling design, measurement instruments, procedures for data collection and data analysis. These are discussed in sections 5.5.3 to 5.5.3.4.

5.5.3 Sampling design

The sampling design consists of a number of steps: defining the population, selecting the sample frame and unit, choosing the sampling technique, deciding on the sample plan, and determining the sample size (Al-Ansari, 2014:139).

5.5.3.1 Population

The population is the research object and may consist of individuals, groups, organisations, products, events or conditions to which previously mentioned objects are exposed (Smit, 2012:212). It is the total collection of elements about which some inferences can be made. For example, all workers in the firm comprise a population of interest; all 4,000 files define a population of interest (Cooper & Schindler, 2011:364). A population is a body of people or collection of items under consideration for statistical purpose (Collis & Hussey, 2014:197). The population for this study comprised all SMEs operating in South Africa.

5.5.3.2 Target population

The target population consists of the institutions, persons, problems, and systems to which or to whom a study's findings are to be applied or generalised (Fink, 2010:89). The target population for this study comprised SMEs operating in the Gauteng province, South Africa. The Gauteng province was selected as it has the highest number of SMEs in South Africa and is widely regarded as the business hub of the country.

5.5.3.3 Sampling frame

The sampling frame is a (physical) representation of all the elements in the population from which the sample is drawn. Although the sampling frame is useful in providing a listing of each element in the population, it may not always be a current, up-to-date document (Sekaran & Bougie, 2010:267). The sample frame for this research study was the list of SMEs maintained by the Gauteng Enterprise Propeller.

5.5.3.4 Sample size

A sample is a part of the target population carefully selected to represent the population (Smit, 2012:207). In some instances, the sample for a study may be the same as the population under investigation (Mathers *et al.*, 2009:11). In many quantitative research situations, it is not feasible to involve all members of the population being studied so a subset of the population, a sample, usually is randomly selected. The random selection is to ensure that the characteristics of the subjects in the study appear in the same proportion, as they exist in the total population (Castellan, 2010:6).

Sample size is the number of observations included in the research study and the “absolute size of the sample that is important, not its size relative to the population”. The best sample size depends on the degree of accuracy required, the degree of variability and diversity in the population and the number of different constructs examined simultaneously when analysing data (Al-Ansari, 2014:142). Precision and confidence can determine sample size. Precision is how close the research study estimate is to the true population as a function of the range of variability in the sampling distribution of the mean, while confidence is how true the research study estimate is to the population, that is, the greater the precision required, the larger the sample size needed. To select an optimum sample size, between 30 and 500 is suitable for most research studies (Al-Ansari, 2014:142). The historical referencing technique was used to determine the sample size in this study. Previous studies conducted by Chae *et al.* (2014); Leitner and Güldenbergl (2010) and Yıldız (2010) were used as the reference. Based on these, the sample size for this study was pegged at n=600. Respondents consisted of employees, managers and owners of SMEs based in the Gauteng province.

5.5.4 Sampling approach

Sampling techniques have various considerations, which are necessity, effectiveness, and time and cost limitations, divided into probability sampling and non-probability sampling (Al-Ansari, 2014:140). The sampling technique will determine how representative the sample is of the population of interest. In addition to reflecting the population’s characteristics such as age, socio-economic

status, education, gender and marital status, a representative sample is one where every member of a population has a statistically equal chance of being selected (Bird, 2009:1314-1315).

Probability sampling is best for obtaining a representative sample, which allows researchers to make statistical generalisations about a wider population (Bird, 2009:1314-1315). Non-probability sampling does not allow researchers to make statistical generalisations. Probability sampling is typically associated with quantitative research, while non-probability sampling is associated with qualitative research (Bird, 2009:1315). For these reasons, the probability sampling approach, using the simple random technique was used in this study to select the sampling elements from the target population (SMEs in the Gauteng province).

5.5.5 Sampling technique

According to Saunders *et al.* (2016:284), the following are five main techniques that can be used to select a probability sample:

- Simple random
- Systematic random
- Stratified random
- Cluster
- Multi-stage

Out of these, the simple random sampling technique was used. In simple random sampling, population members are selected directly at random (like drawing names from a hat) (Blair & Blair, 2015:12). Simple random sampling is the best method for selecting a sample because chance and chance alone determines who or what gets into the sample. Each element has the same known, non-zero probability of selection (Ruel, Wagner III, & Gillespie, 2016:134). This technique was chosen because it gives the equal probability of selection to all population members (Blair, Czaja, & Blair, 2014:91).

5.6 MEASUREMENT INSTRUMENTS

A structured questionnaire was used to gather data for this study. It was divided into eight sections eliciting information on demographic characteristics of individual respondents, the profile of participating SMEs, technology capability, collaborative innovation, organisational learning, internal alignment, organisational agility and business performance respectively.

Section A consists of five questions focusing on the demographic profile of the respondents. The questions relate to the respondents' gender, age group, highest qualification, ethnicity and work experience.

Section B elicits general information on the background of the SMEs. The section consists of four questions that request respondents to indicate the number of employees, type of industry, turnover per annum and years in existence.

Section C consists of five questions focused on technology capability measured on a five-point Likert-type scale that is anchored by 1 = strongly disagree to 5 = strongly agree, to express the degree of agreement. These five questions were adapted from Choi and Harley (1996), Lee *et al.* (2001), Liker and Choi (2004), Choi and Krause (2006) and Kitapci and Celik (2014).

Section D consists of six questions focused on collaborative innovation measured on a five-point Likert-type scale that is anchored by 1 = strongly disagree to 5 = strongly agree, to express the degree of agreement. These six questions were adapted from Burges (1994), Ahuja (2000), Liker and Choi (2004), Narasimhan *et al.* (2006), Swafford *et al.* (2006), Inman *et al.* (2011), Krause *et al.* (2012) and Bukhamsin (2015).

Section E consists of six questions focusing on organisational learning measured on a five-point Likert-type scale that is anchored by 1 = strongly disagree to 5 = strongly agree, to express the degree of agreement. Organisational learning is measured using six questions adapted from Senge (1990), Alvesson (1995), Gold *et al.* (2001), Fugate *et al.* (2008), Braunscheidel and Suresh (2009) and Kitapci and Celik (2014).

Section F consists of five questions focused on internal alignment measured on a five-point Likert-type scale that is anchored by 1 = strongly disagree to 5 = strongly agree, to express the degree of agreement. Internal alignment is measured using five questions adapted from Boyer and McDermott (1999), Pett and Wolff (2007), Robinson and Stern (1998), Zahra and George (1999) and Hung *et al.* (2010).

Section G consists of six questions focused on organisational agility, which is measured on a five-point Likert-type scale that is anchored by one = strongly disagree to 5 = strongly agree, to express the degree of agreement. Organisational agility is measured using six questions adapted from Gerwin (1993), Goodman *et al.* (1995), Anderson and Narus (2003) and Khoddami (2016).

Section H consists of five questions focused on business performance, measured on a five-point Likert-type scale that is anchored by 1 = much worse than industry average to 5 = much better than the industry average. Business performance is measured using five questions adapted from Avlontis and Gounaris (1997), Narver and Slater (1990) as well as Santos and Brito (2012).

In survey questionnaire research, the Likert-type scale is used, in which respondents express their attitudes and responses to propositions and the importance they attach to constructs regarding ordinal-

level categories ranked along a continuum (Al-Ansari, 2014:145). A Likert-type scale is faster and easier for the respondent to complete; it eliminates the development of response bias among the respondents; makes the response items standard and comparable; can be used to assess respondents' characteristics such as attitudes, beliefs, opinions and perceptions; the questions are easy to code and analyse as each answer has value attached to it; interview bias is reduced, and questions can be administered more quickly (Creswell, 2013:99). Also, a Likert-type scale is simple to administer and code offers more options for respondents (with less skewed distribution) and is adaptable to varied statistical analysis (Al-Ansari, 2014:145). For these reasons, response options in questionnaires were presented using the Likert-type scale.

5.6.1 Data collection methods and procedures

This research study made use of a structured self-administered survey questionnaire to collect data. The physical distribution of the questionnaires using the drop and collect method, which refers to the researcher's ability to distribute the questionnaires physically by dropping and collecting them once completed, was employed to collect data. This method was helpful as it increased the response rate.

The researcher distributed the questionnaires personally during December 2016 and January 2017. Respondents were given two weeks to complete the questionnaires. The Higher Degrees Office at the Vaal University of Technology provided funds for the preparation and administration of the questionnaires. A total number of 950 questionnaires were distributed to the respondents, and 583 were received back as the researcher was personally involved in the controlling, management, distribution and collection of the questionnaires. Respondents properly completed five hundred and sixty-four (564) questionnaires and 19 questionnaires were eliminated, as they were unusable and were deemed improper for statistical analysis. This culminated in a response rate of 59.36 percent.

5.6.2 Data analysis and statistical approach

The first step in analysing the collected data was to screen the questionnaires and eliminate the unusable ones. The following step was to code the data on an Excel spreadsheet. This was followed by cleaning the data to identify and rectify missing entries. The next step was to import the data into the Statistical Package for Social Sciences (SPSS) format. Thereafter, descriptive statistics were employed to analyse data pertaining to the demographic profiles of both small and medium enterprises and the respondents. This was followed by conducting the final stages of data analysis, which included the Confirmatory Factor Analysis (CFA) and Path Modelling using the Analysis of Moment Structures (AMOS) statistical software.

5.6.3 Descriptive statistics

Descriptive statistics are a group of statistical methods used to summarise, describe or display quantitative data. They are used to summarise the data in a more compact form and can be presented in tables, charts and other graphical forms. This allows patterns to be discerned that are not apparent in the raw data and ‘positively aids subsequent hypothesis detection/confirmation’ (Collis & Hussey, 2014:226). A researcher can use descriptive statistics to describe a phenomenon of interest in quantitative terms. Statistical summaries that are widely used in descriptive analyses are the frequency of data, with their measures of central tendency, and measures of dispersion (Yunus & Tambi, 2013:59-60).

Frequency, as a descriptive statistic, refers to the number of times various subcategories of a certain phenomenon occur, from which its percentage and the cumulative percentage can be easily calculated (Yunus & Tambi, 2013:60-63). Measures of central tendency include mean, median, and mode. There are three measures of dispersion connected with the mean, namely, the range, variance, and standard deviation (Yunus & Tambi, 2013:60-63). In this research, the demographic profiles of SMEs and respondents were analysed using frequency tables and percentages.

5.6.4 Confirmatory factor analysis (CFA)

CFA is a multivariate method for testing measurement models of the relationship between a set of observed variables and a hypothesised set of latent variables (Easterby, Thorpe & Jackson, 2012:340). It is widely used to assess invariance or equivalence across groups (Wicherts & Dolan, 2010:2). Many researchers in psychology and social science are faced with the problem of comparing latent constructs (i.e. mathematic ability, extraversion) that are not directly observable between different groups (languages, ethnic groups), or points in time. Usually, these latent constructs are measured by questionnaires, comprised of different scales that reflect different underlying latent variables (Wicherts & Dolan, 2010:2).

CFA has become the de-facto standard to investigate the degree to which measures are invariant across groups (Hirschfeld & Von Brachel, 2014:1). It is used properly when the researcher has some knowledge of some underlying latent variable structure. Based on prior knowledge and empirical research, the researcher proposed relationships (which the researcher called the hypotheses) between the observed measures and underlying factors. The hypothesised relationship between measures is then tested statistically (Byren, 2013:73). CFA involving three distinct phases, namely, the reliability test, assessment of validity and model fit assessment, was employed in this study.

5.6.5 Reliability

Reliability refers to whether a measurement instrument is able to yield consistent results each time it is applied. It is the property of a measurement device that causes it to yield similar outcomes for similar inputs. Statistically, a Cronbach alpha measurement can be used to determine the reliability of a measurement instrument (Nimako, Azumah, Donkor & Adu-Brobbey, 2012:209). Reliability concerns the extent to which the measurement of a phenomenon provides stable and consistent results. It is also concerned with repeatability. Reliability is not sufficient unless combined with validity. For a test to be reliable, it also needs to be valid (Wilson, 2010:116). Reliability generally refers to the consistency of a measurement, that is, whether repeated measurements of the same object/phenomenon provide consistent, stable results. Consistency is a necessary condition for internal validity, but it is not a sufficient condition (Pruzan, 2016:132). Cronbach's alpha coefficient and composite reliability were used to assess the reliability of the instrument of this study.

5.6.6 Cronbach's alpha coefficient

Cronbach's coefficient alpha is an index of the internal consistency of a composite variable formed by combining a set of items; a common measure of reliability (Easterby *et al.*, 2012:340). A Cronbach's coefficient alpha, which is the average of all the correlations between each item and the total score, is often calculated to determine the extent of homogeneity (Fink, 2010:116). A correlation is a measure of the linear relationship between two measurements made on the same subject. Homogeneity refers to the extent to which all items or questions assess the same skill, characteristics, or quality. Sometimes, this type of reliability is referred to as internal consistency (Fink, 2010:116).

Cronbach's alpha coefficient is the most widely used method for measuring internal consistency. It measures how well a set of variables or items measures a single, one-dimensional latent response in a questionnaire with a higher value indicating a higher degree of internal consistency or reliability (Andrew, Pedersen & McEvoy, 2011:202; Gravetter & Forzano, 2012:480). This coefficient varies from zero to one, and a value of 0.7 or less generally indicates unsatisfactory internal consistency reliability. This, therefore, indicates that the closer the value of alpha to one, the better the reliability (Coussement, Demoulin & Charry, 2011:88; Tappen, 2011:131). This study uses the Cronbach's alpha coefficient value to assess the internal consistency of the measuring constructs. In other words, the items of the measuring scale should measure the same thing and should correlate with one another. This is computed using SPSS version 22.0.

5.6.7 Composite reliability (CR)

Composite reliability index is one method that is collectively used to check the internal consistency of the measurement model. It is recommended that the threshold for the composite reliability value be 0.7 (Hair, Babin, Anderson & Tatham, 2010:22). Composite reliability represents the shared variance among a set of observed variables that measures an underlying construct. The result of composite reliability is similar to that of Cronbach's alpha (Bauer, 2009:81).

Composite reliability is computed from the $(\text{square of the summation of the factor loadings}) / (\text{square of the summation of the factor loadings}) + (\text{summation of error variances})$ (Hatcher & O'Rourke, 2013:236). A higher reliability value of 0.7 and above indicates a good reliability and suggests that the variable scales are consistently measuring the measurement model (Vinzi, Chin, Henseler & Wang, 2010:437; Kern, 2011:55). For this study, the internal consistency is assessed using AMOS for CFA and reveals that the composite reliability for all the measuring constructs is higher than the 0.7 threshold, which, therefore, suggests that each measuring construct has excellent reliability.

5.6.8 Validity

Mustafa (2010:220-222) states that validity is the quality of a data gathering instrument, which enables it to measure what it is supposed to measure. Basic to the validity of a tool is to measure the right thing or ask the right questions. The items of a questionnaire and inventory must appropriately sample a significant aspect of the purpose of the investigation. Sometimes validity is also thought of as a utility. There are many kinds of validity depending on the purpose of the tool in the research. They are:

- Content validity
- Construct validity
- Criterion-related validity (predictive validity and concurrent validity)

Content validity of a measuring instrument is the extent to which it provides adequate coverage of the investigative questions guiding the study. If the instrument contains a representative sample of the universe or subject matter of interest, then the content validity is good. To evaluate the content validity of an instrument, one must first agree on what elements constitute adequate coverage (Cooper & Schindler, 2011:281). Some consider face validity to be a basic and minimum index of content validity. Face validity indicates that the items that are intended to measure a concept do, on the face of it, look like they measure the concept. Some researchers do not see fit to treat face validity as a valid component of content validity (Sekaran & Bougie, 2010:159).

This study focused exclusively on content and construct validity. In this study, content validity was ascertained and assessed using simple, direct and non-technical terms to formulate the questions. The questionnaire was kept short and to the point to avoid respondent boredom, which may result in unanswered questions. Content validity was also established through a pilot study involving a convenience sample of 40 conveniently selected SMEs. Feedback from the pilot study was used to effect minor changes to the questionnaire to improve its content validity.

Construct validity testifies to how well the results obtained from the use of the measure fit the theories around which the test is designed. This is assessed through convergent and discriminant validity. Convergent validity is established when the scores obtained with two different instruments measuring the same concepts are highly correlated. Discriminant validity is established when based on theory, two variables are predicted to be uncorrelated, and the scores obtained by measuring them are indeed, empirically found to be so (Sekaran & Bougie, 2010:160). In this study, convergent validity was assessed through the CFA focusing on the research composite reliability and model fit factor-loading results. Discriminant validity was assessed through factor analysis using the correlation matrix. The square root of average variance values (AVE) and shared variance values were also used to examine discriminant validity.

Criterion related validity is shown when a magnitude increase in the value of one variable can be used to predict a magnitude increase of another variable (Yunus & Tambi, 2013:145). It is made up of two sub-categories: predictive and concurrent validity. Predictive validity refers to the extent to which a measure forecasts future performance. Concurrent validity is demonstrated when two assessments agree or a new measure compares favourably with one that is already considered valid (Fink, 2010:117).

5.6.9 Research model fit assessment

Determining the extent to which the model best represents the research data depends on several model fit criteria called fit indices. It is recommended that various model fit criteria be used in combination to assess model fit as global fit measures (Mayfield & Mayfield, 2008:48). The model fit criteria indices used to assess this study's model fit, as well as their recommended acceptable fit level, are discussed below:

- **CMIN/DF (Normed Chi-Square):** In AMOS, statistical value is called CMIN. If chi-square is considered non-statistically significant, the mode is regarded as significant and acceptable. This may indicate that the observed covariance matrix is similar to the predicted covariance matrix by the model. The chi-square is deemed unacceptable when the chi-square is significant by the model (Blunch, 2008:113). However, the chi-square is sensitive to sample

size exceeding 200 or so, assuming that if the sample size is large, the model is rejected and when the assumption of multivariate normality is violated, the chi-square fit index is inaccurate. As such, most researchers disregard chi-square value (Schumacker & Lomax, 2010:82-83). To reduce the sensitivity of chi-square to sample size, the chi-square value is divided by three degrees of freedom (CMIN/DF), which generally results in a lower value called the normed chi-square. However, the criteria for CMIN/DF acceptance still vary across researchers. Values ranging from 2.0 to 3.0 have been correct for the influence of sample size (Schumacker & Lomax, 2010:82-83; Byren, 2013:75).

- **Root Mean Square Error of Approximation (RMSEA):** The RMSEA is one of the most informative fit indices that helps to determine how well the model, with unknown but optimally chosen parameter estimates, would fit the population covariance matrix (Hooper *et al.*, 2008:54). The discrepancy, as measured by RMSEA, is expressed in per degree of freedom, thus making the index sensitive to the number of estimated parameters in the model. It is recommended that a good model fit is considered adequate if RMSEA is less than or equal to 0.08 (Hooper, Coughlan & Mullen, 2008:55).
- **Goodness-of-Fit Index (GFI):** GFI measures the proportion of variance that is accounted for by the estimated population covariance. It deals with an error in reproducing the variance-covariance matrix. GFI shows how the model closely replicates the observed covariance matrix (Hooper *et al.*, 2008:54). The GFI statistics range from zero to one but theoretically can yield meaningless negative values. Large sample size increases the GFI value. However, the GFI cut-off point for an acceptable model should be equal to or greater than 0.90 (Tabachnick & Fidell, 2007:718).
- **Incremental Fit Index (IFI), Norm Fit Index (NFI) and Tucker-Lewis index (TLI):** The IFI, NFI and TLI statistics measure the relative improvement of the researcher model fit compared with a null model also called baseline model or independence model. For example, NFI=0.60 means that the researcher's model improves fit by 60 compared to the null model. These indices assume zero population covariance among the observed variables and ranges from zero to one, with one equal to perfect fit. It is recommended that IFI, NFI and TLI be equal to or greater than 0.90 to be considered a perfect fit for the model. This implies that NFI, TLI and IFI values below 0.90 indicate a need to re-specify the model. These indices are relatively sensitive to sample size, for example, in the case where the sample size is small, the value of NFI may indicate poor fit (Tabachnick & Fidell, 2007:716).
- **The Comparative Fit Index (CFI):** CFI, also referred to as the Bentler comparative fit index, is a revised form of NFI that takes into account sample size that performs well even when the sample size is small. CFI assumes that the latent variable is uncorrelated and compares the

existing model fit or sample covariance matrix with a null model. CFI values of the statistic ranges from zero to one, with CFI value close to one indicating a very good fit. A cut off criterion for CFI should be equal to or greater than 0.90 to accept the model, indicating that 90 percent of the covariation in the data can be reproduced by the given model (Hooper *et al.*, 2008:55).

5.6.10 Path analysis

The path analysis procedure involves the estimation of presumed causal relations among observed variables. The overall goal of the path analysis is to assess how well the model accounts for the data, that is, the observed correlations or co-variances (Hove, 2012:83). In path analysis, the researcher specifies a model that attempts to explain why X and Y are correlated. Part of this explanation may include presumed causal effects (e.g. X causes Y), or presumed non-causal relations, such as a spurious association between X and Y (Hove, 2012:83). The statistical estimates of these direct effects are called factor loadings or pattern coefficients, which are sometimes referred to as regression coefficients (Schumacker & Lomax, 2010:3). In this study, the AMOS 22 software was used to assess SEM (Structural Equation Modelling), which provided results of the path modelling and hypotheses testing in the current study. Table 5.5 shows the model fit criteria and their acceptable levels.

Table 5.1: Criteria for assessing model fit

| Model fit index | Acceptance level | Interpretation |
|--|---|---|
| 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 are considered excellent fit. |
| Goodness-of-Fit Index (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 greater than or equal to 0.90 is acceptable | These indices assume zero population co-variances (no co-variances) among the observed variables and ranges from 0 to 1, with 1 equal to perfect fit. |
| Comparative Fit Index (CFI) | Value greater than or equal to 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. |

Source: Hooper *et al.* (2008:55)

Table 5.1 shows several model fit criteria called fit indices that determine the extent to which the model best represents the research data.

5.7 ETHICAL CONSIDERATIONS

According to Smit (2012:202), in the research activity the following ethical considerations are being upheld:

- **Inform participants of the benefits of the research:** SMEs' owner-managers were informed of the purpose and expected benefits of the research study.
- **Maintaining confidentiality and anonymity of participants:** SMEs' owner-managers were informed that no survey data would be made available that may identify the specific business entity, and completed questionnaires will not be made public to any person or institution.
- **Informed consent:** SMEs' owner-managers were informed of the nature of the questionnaire. They were made aware that their participation in the research was of a voluntary nature and that they were under no obligation to answer any questions that they were not comfortable with.
- **Debriefing:** SMEs' owner-managers were offered the option to receive follow-up information about the research results. If this choice was selected by the participants, contact details were provided by the research participant.

In this study, the following ethical considerations are followed:

- Permission was obtained from participants who are owners and managers of SMEs in the Gauteng province to conduct the survey.
- Respondents were under no obligation to complete the questionnaire. A potential respondent who refused to participate in the research was excused, and the next qualifying individual was approached to participate. This ensured that respondent's right to non-participation was observed.
- All respondents were adequately informed about the purpose of the study to secure their informed consent.
- The questionnaire does not contain any questions that are detrimental to the self-interest of participants.
- Anonymity and confidentiality of respondent will be protected throughout the study. Anything learnt about respondents during their involvement in the study will be maintained in confidence.

- Respondents were treated with fairness and equity during all steps of research.
- The research was conducted in a manner that ensured its academic integrity and scientific validity. Unethical practices such as fabrication and plagiarism were avoided in the process of compiling the research report.
- Permission was requested to conduct the study with the right to non-participation and protection from harm.
- The principle of benevolence was adhered to in which the researcher attempted to maximise the benefits that the research afforded to participants of SMEs by ensuring that the findings of the research will be shared with participants.

5.8 CONCLUSION

This chapter delineated the research design and methodology applied in the current study. It covered research paradigms, approach and design. Different research paradigms were discussed and positivism was highly favoured, anchored by the deductive approach to reasoning. A quantitative approach was chosen as the most suitable method for investigation in this research, in order to generalise the results to other SME environments. Under sampling, design topics such as target population, sampling frame and sample size were examined. This was followed by a discussion on data collection methods and techniques as well as ethical considerations. A review of the procedures for data analysis was also conducted in order to provide detailed insights on how the data were going to be analysed as well as the different indicator criteria used to determine the significance of the results. The next chapter discusses the data analysis and interpretation of the results.

CHAPTER 6

DATA ANALYSIS AND INTERPRETATION OF RESULTS

6.1 INTRODUCTION

This chapter outlines the data analysis and interpretation of results. It covers the response rate, demographic details of the respondents, the profile of participating SMEs, perceptions of respondents towards organisational agility and business performance, inferential statistics and the discussion of the results. Inferential statistics are used to test the relationships between organisational agility, technology capability, collaborative innovation, organisational learning, internal alignment and business performance. In the CFA, the psychometric properties of the measurement scales are assessed with the intention to check the reliability, validity and model fit of the measurement scales used in the study. The discussion of results highlights the relationship between organisational agility and its four dimensions (technology capability, collaborative innovation, organisational learning and internal alignment) as well as business performance. A discussion of these results is provided at the end of the chapter.

6.2 RESPONSE RATE

Table 6.1: Response rate

| | |
|--|-------|
| Total number of questionnaires distributed | 950 |
| Total number of questionnaires returned | 583 |
| Unusable responses | 19 |
| Valid questionnaires retained | 564 |
| Usable response rate (percentage) | 59.36 |

Table 6.1 shows that the total number of questionnaires distributed within the participating SMEs in the Gauteng province was 950. A total number of 583 questionnaires were returned, out of which 19 unusable questionnaires were discarded. Thus, the total number of valid questionnaires was 564, and the usable questionnaire response rate was 59 percent. This response rate was acceptable because it is recommended by Saldivar (2012:7), who suggests that in most instances, 20 percent is too low, and 80 percent is a *de facto* standard.

6.3 DEMOGRAPHIC DETAILS OF THE RESPONDENTS

This section discusses the demographic details of the respondents. The respondents were employees, owners and managers of SMEs based in the Gauteng province. Five demographic factors, namely, gender, age group, highest qualifications, racial profile and work experience are analysed.

6.3.1 The gender of respondents

The frequencies and percentages for the respondents' gender are provided in Table 6.2.

Table 6.2: Frequencies and percentages of respondents' gender

| Variable | Categories | N | n | Percentages (%) |
|----------|------------|-----|-----|-----------------|
| Gender | Males | 564 | 388 | 68.8 |
| | Females | 564 | 176 | 31.2 |

Table 6.2 shows the frequencies and percentages for respondents' gender within participating SMEs in the Gauteng province. It shows that 69 percent (n=388) of the respondents were males and the remaining 31 percent (n=176) were females. This result implies that more males than females were willing to participate in the study since the survey was conducted uniformly to people of both genders within all participating SMEs in the Gauteng province. This result may also imply that there is no gender balance within the participating SMEs in the Gauteng province since there are more males than females.

6.3.2 Age groups of respondents

The frequencies and percentages for the respondents' age groups are provided in Table 6.3.

Table 6.3: Frequencies and percentages of the age groups of respondents

| Variable | Categories | N | n | Percentage (%) |
|-----------|-------------------|-----|-----|----------------|
| Age group | 18-25 years | 564 | 96 | 17.0 |
| | 26-33 years | 564 | 215 | 38.1 |
| | 34-41 years | 564 | 142 | 25.2 |
| | 42- 49 years | 564 | 77 | 13.7 |
| | 50 years and over | 564 | 34 | 6.0 |

Table 6.3 shows the frequencies and percentages for the age groups of respondents within participating SMEs in the Gauteng province. It shows that the highest number (38%; n = 215) is those respondents who are aged between 26 and 33 years, followed by the number (25%; n = 142) of the

respondents who are aged between 34 and 41 years. The third highest number (17%; n = 96) is that of the respondents aged between 18 and 25 while the fourth highest number (14%; n = 77) is that of the respondents who are aged between 42 and 49 years. The lowest number (14%; n = 77) is that of the respondents who are aged between 50 years and over. This result shows that more respondents who are aged between 26 and 33 years were willing to participate in the study since the survey was conducted uniformly to people of all ages within all participating SMEs in the Gauteng province. This result also shows that the participating SMEs in the Gauteng province is dominated by employees between the age of 26 and 33 years.

6.3.3 Highest qualifications of respondents

The frequencies and percentages for the respondents' highest qualifications are provided in Table 6.4.

Table 6.4: Frequencies and percentages of the highest qualifications of respondents

| Variable | Categories | N | n | Percentages (%) |
|-------------------------------|----------------|-----|-----|-----------------|
| Highest qualifications | Matriculation | 564 | 356 | 63.1 |
| | Diploma | 564 | 24 | 4.3 |
| | Degree/Honours | 564 | 13 | 2.3 |
| | Masters | 564 | 1 | 0.2 |
| | Other | 564 | 170 | 30.1 |

Table 6.4 shows frequencies and percentages for the highest qualifications of respondents within participating SMEs in the Gauteng province. It shows that the highest number (63%; n = 356) is that of the respondents who have matriculation qualifications. The second highest number (30%; n = 170) is that of the respondents who have other qualifications not listed on the questionnaire. The third highest number (4%; n = 24) is that of the respondents who have diploma qualifications. The fourth highest number (2%; n = 13) is that of the respondents who have degree/honours qualifications. The lowest number (0.2%; n = 1) is that of the respondents who have masters qualifications. This result shows that more respondents who have matriculation qualifications were willing to participate in the study since the survey was conducted uniformly to people of all qualifications within all participating SMEs in the Gauteng province. This result also indicates that more employees within participating SMEs in the Gauteng province have matriculation qualifications.

6.3.4 The racial profile of respondents

The frequencies and percentages for the respondents' racial profile are provided in Table 6.5.

Table 6.5: Frequencies and percentages of respondents' race

| Variable | Categories | N | N | Percentages (%) |
|-------------|--------------|-----|-----|-----------------|
| Race | African | 564 | 521 | 92.4 |
| | White | 564 | 25 | 4.4 |
| | Indian/Asian | 564 | 14 | 2.5 |
| | Coloured | 564 | 4 | 0.7 |
| | Other | 564 | 0 | 0 |

Table 6.5 shows frequencies and percentages for respondents' race within participating SMEs in the Gauteng province. It shows that the highest number (92%; n = 521) is that of the respondents who are African. The second highest number (4%; n = 25) is that of the respondents who are White. The third highest number (3%; n = 14) is that of the respondents who are Indian/Asian. The lowest number (0.7%; n = 4) is that of the respondents who are Coloured. This result shows that more respondents who are African were willing to participate in the study since the survey was conducted uniformly to people of all races within all participating SMEs in the Gauteng province. This result also indicates that more people that are African are employed within participating SMEs in the Gauteng province.

6.3.5 The work experience of respondents

The frequencies and percentages for the respondents' work experience are provided in Table 6.6.

Table 6.6: Frequencies and percentages of the work experience of respondents

| Variable | Categories | N | n | Percentages (%) |
|------------------------|------------------|-----|-----|-----------------|
| Work experience | Less than 1 year | 564 | 131 | 23.2 |
| | 1 to 5 years | 564 | 263 | 46.6 |
| | 5 to 10 years | 564 | 89 | 15.8 |
| | 10 to 15 years | 564 | 43 | 7.6 |
| | 15 years or more | 564 | 38 | 6.7 |

Table 6.6 shows frequencies and percentages for the work experience of respondents within participating SMEs in the Gauteng province. It shows that the highest number (47%; n = 263) is that of the respondents who have between 1 to 5 years work experience. The second highest number (23%; n = 131) is that of the respondents who have less than one (1) year's work experience. The third highest number (16%; n = 89) is that of the respondents who have between 5 to 10 years work

experience. The fourth highest number (8%; n = 43) is that of the respondents who have 10 to 15 years work experience. The lowest number (7%; n = 38) is that of the respondents who have 15 years or more work experience. This result shows that more respondents who have between 1 to 5 years work experience were willing to participate in the study since the survey was conducted uniformly to people of all levels of work experience within the participating SMEs in the Gauteng province. This result also indicates that most of the employees who participated in the study had between 1 to 5 years work experience.

6.4 PROFILES OF THE PARTICIPATING SMALL AND MEDIUM ENTERPRISES

This section discusses the profiles of the SMEs that participated in this study. The profiles include four categories, namely, the number of employees per each SME, type of industry, turnover per annum, and the number of years in existence.

6.4.1 Number of employees in the participating small and medium enterprises

The frequencies and percentages for the number of employees in participating SMEs are provided in Table 6.7.

Table 6.7: Number of employees in SME

| Variable | Categories | N | n | Percentages (%) |
|---------------------|--------------|-----|-----|-----------------|
| Number of Employees | Less than 50 | 564 | 549 | 97.3 |
| | 51 to 100 | 564 | 12 | 2.1 |
| | 101 to 150 | 564 | 1 | 0.2 |
| | 151 to 200 | 564 | 2 | 0.4 |

Table 6.7 shows frequencies and percentages for the number of employees within participating SMEs in the Gauteng province. It shows that the highest number (97%; n = 549) is that of SMEs having less than 50 employees. The second highest number (2%; n = 12) is that of SMEs having between 51 and 100 employees. The third highest number (0.2%; n = 1) is that of SMEs having between 101 and 150 employees. The lowest number (0.4%; n = 2) is that of SMEs having between 151 and 200 employees. This result shows that more SMEs that had less than 50 employees were willing to participate in the study since the survey was conducted uniformly to all participating SMEs in the Gauteng province. This result also indicates that participating SMEs are dominated by those which have less than 50 employees.

6.4.2 Type of industry of the participating small and medium enterprises

The frequencies and percentages for the type of industry of the participating SMEs are provided in Table 6.8.

Table 6.8: Type of Industry

| Variable | Categories | N | n | Percentages (%) |
|-------------------------|---|-----|-----|-----------------|
| Type of industry | Manufacturing | 564 | 86 | 15.3 |
| | Retail, motor trade and repair services | 564 | 135 | 23.9 |
| | Electricity, gas and water | 564 | 61 | 10.8 |
| | Wholesale trade, commercial agents and allied services. | 564 | 92 | 16.3 |
| | Transport, storage and communications | 564 | 77 | 13.7 |
| | Finance and business services | 564 | 17 | 3.0 |
| | Other | 564 | 96 | 17.0 |

Table 6.8 shows frequencies and percentages for the type of industry of participating SMEs in the Gauteng province. It shows that the highest number (23.9%; n = 135) is that of the retail, motor trade and repair services industries. The second highest number (17%; n = 96) is that of other industries not listed in the questionnaire. The third highest number (16.3%; n = 92) is that of the wholesale trade, commercial agents and allied services industries. The fourth highest number (15.3%; n = 86) is that of manufacturing industries. The fifth highest number (13.7%; n = 77) is that of the transport, storage and communications industries. The sixth highest number (61%; n=10.8) is that of the electricity, gas and water industries. The lowest number (3%; n =17) is that of finance and business services. This result shows that more industries that are in retail, motor trade and repair services were willing to participate in the study since the survey was conducted uniformly to people of all participating industries within SMEs in the Gauteng province. This result also indicates that the participating SMEs in the study are dominated by the retail, motor trade and repair services industries.

6.4.3 Turnover per annum of the participating small and medium enterprises

The frequencies and percentages for turnover per annum of participating SMEs are provided in Table 6.9.

Table 6.9: Turnover per annum

| Variable | Categories | N | n | Percentages (%) |
|---------------------------|----------------------|-----|-----|-----------------|
| Turnover per annum | Less than R10m | 564 | 188 | 33.3 |
| | Between R10m to R20m | 564 | 359 | 63.7 |
| | Between R20m to R30m | 564 | 4 | 0.7 |
| | Between R30m to R40m | 564 | 4 | 0.7 |
| | Between R40m to R50m | 564 | 9 | 1.6 |

Table 6.9 shows frequencies and percentages for turnover per annum of participating SMEs in the Gauteng province. It shows that the highest number (64%; n = 359) is that of the SMEs that have between R10m to R20m turnover per annum. The second highest number (33%; n = 188) is that of SMEs that have less than an R10m turnover per annum. The third highest number (1.6%; n = 9) is that of SMEs that have between R40m to R50m turnover per annum. The lowest numbers (1%; n = 4) and (2%; n = 9) are those SMEs that have between R20m to R30m and between R30m to R40m turnover per annum. This result shows that more SMEs that have between R10m to R20m turnover per annum were willing to participate in the study since the survey was conducted uniformly to all participating SMEs in the Gauteng province. This result also indicates that the participating SMEs in the the study is dominated by SMEs that have between R10m to R20m turnover per annum.

6.4.4 Years in the existence of the participating small and medium enterprises

The frequencies and percentages for years in existence of participating SMEs are provided in Table 6.10.

Table 6.10: Years in existence

| Variable | Categories | N | n | Percentages (%) |
|---------------------------|-------------------------|-----|-----|-----------------|
| Years in Existence | Less than 1 year | 564 | 26 | 4.6 |
| | Between 1 and 5 years | 564 | 96 | 17.0 |
| | Between 5 and 10 years | 564 | 29 | 5.1 |
| | Between 10 and 15 years | 564 | 17 | 3.0 |
| | 15 years or more | 564 | 396 | 70.2 |

Table 6.10 shows frequencies and percentages for years in existence of participating SMEs in the Gauteng province. It shows that the highest number (70%; n = 396) is that of SMEs that have 15 years or more in existence. The second highest number (17%; n = 96) is that of SMEs that have between one (1) to 5 years in existence. The third highest number (5%; n = 29) is that of SMEs that have between 5 to 10 years in existence. The fourth highest number (5%; n = 26) is that of SMEs that have less than one (1) year in existence. The lowest number (3%; n = 17) is that of SMEs that have between 10 to 15 years in existence. This result shows that more SMEs that were in existence for 15 years or more were willing to participate in the study since the survey was conducted uniformly to all participating SMEs in the Gauteng province. This study also indicates that participating SMEs were dominated by those that had 15 years and above in existence.

6.5 PERCEPTIONS OF RESPONDENTS TOWARDS ORGANISATIONAL AGILITY AND BUSINESS PERFORMANCE

6.5.1 The frequencies and percentages for technology capability

The views of respondents towards technology capability are reported on in Table 6.11.

Table 6.11: Frequencies and percentages of technology capability

| Item | Description | Strongly disagree (%) | Disagree (%) | Moderately agree (%) | Agree (%) | Strongly agree (%) | Mean score | Standard deviation |
|------------|-----------------------------------|-----------------------|--------------|----------------------|-----------|--------------------|------------|--------------------|
| TC1 | Our firm adopts technology-driven | 26(4.6) | 33(5.9) | 121(21.5) | 119(21.1) | 265(47.0) | 4.00 | 1.156 |

| | | | | | | | | |
|-----|---|---------|---------|----------|-----------|-----------|------|-------|
| | production systems such as Just-in-Time, value analysis, concurrent engineering and modular design systems. | | | | | | | |
| TC2 | Our firm invests in upgrading production, information and inventory management systems. | 15(2.7) | 34(6.0) | 67(11.9) | 106(18.8) | 342(60.6) | 4.29 | 1.061 |
| TC3 | Our firm regularly assesses the potential influence of new technology on its operations. | 16(2.8) | 32(5.7) | 49(8.7) | 139(24.6) | 328(58.2) | 4.30 | 1.032 |
| TC4 | Our firm is susceptible to new technology and/or methods to do business. | 13(2.3) | 36(6.4) | 57(10.1) | 128(22.7) | 330(58.5) | 4.29 | 1.034 |
| TC5 | Our firm has specific mechanisms to do environmental scanning on technology. | 17(3.0) | 40(7.1) | 61(10.8) | 101(17.9) | 345(61.2) | 4.27 | 1.097 |

Table 6.11 shows the perceptions of respondents towards technology capability. An analysis of the results shows that 47 percent (n = 265) of the respondents strongly agreed that their firms adopt technology-driven production systems, such as Just-in-Time, value analysis, concurrent engineering and modular design systems. A total number of 61 percent (n = 342) of the respondents strongly agreed that their firms invest in upgrading production, information and inventory management systems. Fifty-eight (58) percent (n = 328) of the respondents strongly agreed that their firms regularly assess the potential influence of new technology on their operations. The perceptions of those who strongly agreed that their firms are susceptible to new technology and/or methods to do business was 58 percent (n = 330) and those who strongly agreed that their firms have specific mechanisms to do environmental scanning on technology was 61 percent (n = 345). Mean scores for individual items in the technology capability scale ranged from 4.00 to 4.30. This also confirms that

respondents were generally in agreement with the implementation of technology capability within their SMEs.

The results of this study demonstrate that the adoption of technologically driven systems during production is very sound in SMEs in the Gauteng province. The results further imply that these SMEs intensely invest in upgrading production, information and inventory management systems. The study further validates that SMEs most regularly assess the potential influence of new technology on their operations. Furthermore, the results illustrate that SMEs in the Gauteng province are mainly susceptible to new technology and methods of doing business. Also, the results suggest that these SMEs have specific mechanisms with which to implement environmental scanning on technology.

The above results support the results of a study by Shin *et al.* (2015:184), which investigated organisational agility of Korean SMEs and its influence on operational and business performance. The study found that technology capability enabled SMEs to be operationally responsive to customers' requirements and suggested that agile firms must respond to the emergence of new technologies in a cost and time efficient manner. Also, Lu and Ramamurthy (2011:954) examined the link between information technology capability and organisational agility within SMEs in the USA. Their study concluded that there is a logical connection between agility and technology capability as found in information technology (IT) literature. In their study, Lahovnik and Breznik (2013:777) focused on innovation management and technological capabilities as a source of competitive advantage within small exporting firms in Slovenia. Their study confirmed that the development and deployment of technological capability could lead to sustainable, competitive advantages and hence to improved long-run business performance. A study by Pednekar (2015:192) directed its attention to building technological innovation capability in high technology SMEs in India. The results of that study indicate that SMEs might benefit more from technology capability than large firms might. This makes it evident that technology capability is an important factor that contributes positively to business performance within SMEs.

6.5.2 The frequencies and percentages for collaborative innovation

The views of respondents towards collaborative innovation are reported on in Table 6.12

Table 6.12: Frequencies and percentages of collaborative innovation

| Item | Description | Strongly disagree (%) | Disagree (%) | Moderately agree (%) | Agree (%) | Strongly agree (%) | Mean score | Standard deviation |
|------|---|-----------------------|--------------|----------------------|-----------|--------------------|------------|--------------------|
| CI1 | Our firm upgrades process/product design by investigating | 6(1.1) | 10(1.8) | 43(7.6) | 59(10.5) | 446(79.1) | 4.65 | 0.785 |

| | | | | | | | | |
|-----|--|---------|----------|-----------|-----------|-----------|------|-------|
| | customer needs in the product development process. | | | | | | | |
| CI2 | Our firm promotes collaboration among major functions from the planning stage. | 12(2.1) | 68(12.1) | 262(46.5) | 84(14.9) | 138(24.5) | 3.48 | 1.053 |
| CI3 | Our firm collaborates with customers for process development and improvement. | 7(1.2) | 56(9.9) | 181(32.1) | 123(21.8) | 197(34.9) | 3.79 | 1.067 |
| CI4 | Collaborative innovation is a viable innovation method for our firm. | 14(2.5) | 11(2.0) | 195(34.6) | 181(32.1) | 163(28.9) | 3.83 | 0.953 |
| CI5 | The innovation process is considered as a common standard within our firm. | 12(2.1) | 16(2.8) | 202(35.8) | 168(29.8) | 166(29.4) | 3.82 | 0.962 |
| CI6 | Our company opens and maintains physical and virtual channels for information and knowledge sharing. | 11(2.0) | 12(2.1) | 33(5.9) | 85(15.1) | 423(75.0) | 4.59 | 0.850 |

Table 6.12 indicates the perceptions of respondents towards collaborative innovation. An analysis of the results illustrates that 79 percent (n = 446) of the respondents strongly agreed that their firms upgrade process/product design by investigating customer needs in the product development process. A total number of 46 percent (n = 262) of the respondents moderately agreed that their firms promote collaboration among major functions from the planning stage. Thirty-five (35) percent (n = 197) of the respondents strongly agreed that their firms collaborate with customers for process development and improvement and those who moderately agreed that collaborative innovation is a viable innovation method for their firms were 35 percent (n = 195). The perceptions of those who moderately agreed that the innovation process is considered as a common standard within their firms were 36 percent (n = 202) and those who strongly agreed that their companies open and maintain physical and virtual channels for information sharing and knowledge sharing were 75 percent (n = 423). Mean scores for the items in the collaborative innovation scale ranged from 3.48 to 4.65. This indicates that respondents agreed that there were acceptable levels of collaborative innovation in their SMEs.

The results of this study demonstrate that the SMEs in the Gauteng province vigorously upgrade process/product design by investigating customer needs in the product development process. The

results further imply that these SMEs promote collaboration among major functions from the planning stage. It also reveals that these SMEs collaborate with customers for process development and improvement and view collaborative innovation as a viable innovation method. The results also illustrate that SMEs in the Gauteng province consider the innovation process as a common standard. In addition, the results suggest that these SMEs are open and maintain physical and virtual channels for information and knowledge sharing.

Similar to the results above, Krause *et al.* (2012:15) examine open innovation in South African SMEs. Their study concludes that there is indeed an appetite for collaborative innovation. Their results provide a good indication of the collaborative innovation background within SMEs in South Africa. Ghalamzan *et al.* (2015:5) investigate open innovation within the collaboration network of nanotechnology SMEs in Canada. They found that businesses that use collaborative innovation practices are likely to have more collaborative connections with other businesses. In their study, which focused on university-industry collaborations and open innovation within SMEs in the province of Quebec in Canada, Roshani, Lehoux and Frayret (2015:24) found that collaboration innovation, as a new approach for gathering ideas and improving innovation helps businesses to implement inter-organisational linkages. Their results are also supported by Lasagni (2012:333), who investigated how external relationships can enhance innovation in European SMEs. That study found that the use of external relationships is increasingly interpreted as a key factor in enhancing the innovation performance of modern enterprises. It is obvious then that collaborative innovation is vital for business performance within SMEs.

6.5.3 The frequencies and percentages for organisational learning

The views of respondents towards organisational learning are reported on in Table 6.13

Table 6.13: Frequencies and percentages of organisational learning

| Item | Description | Strongly disagree (%) | Disagree (%) | Moderately agree (%) | Agree (%) | Strongly agree (%) | Mean score | Standard deviation |
|------|---|-----------------------|--------------|----------------------|-----------|--------------------|------------|--------------------|
| OL1 | Our firm provides an optimal working environment in which best performance practices can be disseminated. | 12(2.1) | 29(5.1) | 41(7.3) | 67(11.9) | 415(73.6) | 4.50 | 0.980 |
| OL2 | Our firm promotes interdisciplinary training and team-based activities. | 12(2.1) | 7(1.2) | 37(6.6) | 58(10.3) | 450(79.8) | 4.64 | 0.832 |
| OL3 | Our firm empowers employees for individual learning for business environment adaption. | 19(3.4) | 7(1.2) | 22(3.9) | 50(8.9) | 466(82.6) | 4.66 | 0.884 |
| OL4 | Our firm promotes individual and organisational learning for business environment adaption. | 14(2.5) | 13(2.3) | 37(6.6) | 50(8.9) | 450(79.8) | 4.61 | 0.898 |
| OL5 | Learning in our firm is seen as a key to guarantee the firm's existence in its sector. | 16(2.8) | 10(1.8) | 26(4.6) | 52(9.2) | 460(81.6) | 4.65 | 0.876 |
| OL6 | Our basic values of any change in the business process include learning as a key factor. | 18(3.2) | 8(1.4) | 35(6.2) | 47(8.3) | 456(80.9) | 4.62 | 0.910 |

Table 6.13 indicates the perceptions of respondents towards organisational learning. An analysis of the results clarifies that 74 percent (n = 415) of the respondents strongly agree that their firms provide an optimal working environment in which best performance practices can be disseminated. A total number of 79 percent (n = 450) of the respondents strongly agree that their firms promote interdisciplinary training and team-based activities. Eighty-three (83) percent (n = 466) of the respondents strongly agree that their firm empowers employees for individual learning to manage customer contact services, and those who strongly agree that their firm promotes individual and

organisational learning for business environment adaptation are 80 percent (n = 450). The perceptions of those who strongly agree that learning in their firms is seen as a key to guarantee the firm's existence in its sector are 82 percent (n = 460) and those who strongly agree that their basic values of any change in their business process include learning as a key factor are 81 percent (n = 456). Mean scores for individual items in the organisational learning scale range from 4.50 to 4.66. This result depicts that respondents perceive that organisational learning is adequate in their SMEs.

The results of this study demonstrate that the SMEs in the Gauteng province provide an optimal working environment in which best performance practices can be disseminated. The results further imply that these SMEs promote interdisciplinary training and team-based activities. The study also reveals that these SMEs robustly empower employees for individual learning to manage customer contact services. The results also illustrate that SMEs in the Gauteng province sturdily see learning in their firms as a key to guarantee the firm's existence in its sector. In addition, the results suggest that these SMEs highly believe that their basic values of any change in their business process include learning as a key factor.

The results above support the findings of research conducted by Wang *et al.* (2010:188) on entrepreneurial orientation and organisational learning on SME innovation in Australia. Their study discovered that learning at individual and organisational levels is the source of organisational strategic renewal and innovation. Argote (2011:444) explored organisational learning research within SMEs in the USA. That study found that a greater understanding of organisational learning improves the performance of organisations and the prosperity of their members. Similarly, Onyema (2014:102) considered the effect of entrepreneurial orientations on organisational learning in a small manufacturing firm in Nigeria. The results of the study show that organisational learning facilitates the ability of the business to compete effectively and efficiently and by so doing, experience achievement and growth. These results indicate that organisational learning is an important contributor to business performance within SMEs

6.5.4 The frequencies and percentages for internal alignment

The views of respondents towards internal alignment are reported in Table 6.14.

Table 6.14: Frequencies and percentages of internal alignment

| Item | Description | Strongly disagree (%) | Disagree (%) | Moderately agree (%) | Agree (%) | Strongly agree (%) | Mean score | Standard deviation |
|------|--|-----------------------|--------------|----------------------|-----------|--------------------|------------|--------------------|
| IA1 | Our firm aligns functional strategies with business strategy well. | 8(1.4) | 8(1.4) | 37(6.6) | 75(13.3) | 436(77.3) | 4.64 | 0.787 |
| IA2 | Our firm aligns operational strategy with other functional strategies well. | 9(1.6) | 10(1.8) | 42(7.4) | 72(12.8) | 431(76.4) | 4.61 | 0.829 |
| IA3 | Our firm aligns its goals and objectives measures with strategic task performance well. | 5(0.9) | 7(1.2) | 37(6.6) | 73(12.9) | 442(78.4) | 4.67 | 0.732 |
| IA4 | Our firm has well integrated IT systems across functional units. | 15(2.7) | 30(5.3) | 60(10.6) | 72(12.8) | 387(68.6) | 4.39 | 1.045 |
| IA5 | Our strategic planning process actually encourages information sharing and cross-functional cooperation. | 11(2.0) | 9(1.6) | 41(7.3) | 67(11.9) | 436(77.3) | 4.61 | 0.845 |

Table 6.14 shows the perceptions of respondents towards internal alignment. An analysis of the results reveals that 77 percent (n = 436) of the respondents strongly agree that their firms align functional strategies with business strategy well. A total number of 76 percent (n = 431) of the respondents strongly agree that their firms align operational strategy with other functional strategies well. Seventy-eight (78) percent (n = 422) of the respondents strongly agree that their firm aligns its goals and objective measures with strategic task performance well. The perceptions of those who strongly agree that their firms have well integrated IT systems across functional units is 69 percent (n = 387) and those who strongly agree that their strategic planning process actually encourages information sharing and cross-functional cooperation is 77 percent (n = 436). Mean scores for the individual items in the internal alignment scale ranged from 4.39 to 4.67. This result illustrates that respondents are satisfied with the internal alignment within their SMEs.

The results of this study illustrate that SMEs in the Gauteng province exceedingly align functional strategies with business strategy. They further imply that these SMEs extremely align operational strategy with other functional strategies well. The study also demonstrates that SMEs align their goals and objective measures well with strategic task performance. The results also illustrate that SMEs in the Gauteng province have very well integrated IT systems across functional units. In addition, the results suggest that these SMEs strongly believe that their strategic planning process actually encourages information sharing and cross-functional cooperation.

Identical to the results above, Sardan *et al.* (2010:137) investigated the impact of strategic alignment and responsiveness to the market on a small manufacturing firm's performance in India. They identified that the internal alignment contributes positively to manufacturing operations. Kellermanns *et al.* (2011:132) who conducted a meta-analytical review of strategic consensus and organisational performance within USA SMEs demonstrated that internal alignment is indeed positively and significantly associated with business performance. Walter *et al.* (2013:318) examined a missing link in the relationship between strategic consensus and organisational performance within SMEs in the USA and found that the implementation of internal alignment is particularly important for firms because it results in improved business performance. It is therefore clear that SMEs stand to benefit if their processes and resources are internally aligned.

6.5.5 The frequencies and percentages for organisational agility

The views of respondents towards organisational agility are reported on in Table 6.15.

Table 6.15: Frequencies and percentages of organisational agility

| Item | Description | Strongly disagree (%) | Disagree (%) | Moderately agree (%) | Agree (%) | Strongly agree (%) | Mean score | Standard deviation |
|------|---|-----------------------|--------------|----------------------|-----------|--------------------|------------|--------------------|
| OA1 | Our firm has been highly flexible in product mix or variety. | 12(2.1) | 4(0.7) | 36(6.4) | 56(9.9) | 456(80.9) | 4.67 | 0.806 |
| OA2 | Our firm has maintained short cycles in product design and innovation. | 18(3.2) | 11(2.0) | 43(7.6) | 60(10.6) | 432(76.6) | 4.55 | 0.949 |
| OA3 | Our firm has been responsive to external market requirements and environmental regulations. | 13(2.3) | 5(0.9) | 37(6.6) | 54(9.6) | 455(80.7) | 4.65 | 0.830 |

| | | | | | | | | |
|------------|--|--------|---------|---------|---------|-----------|------|-------|
| OA4 | Our firm responds quickly if something important happens with regard to its customers. | 7(1.2) | 8(1.4) | 22(3.9) | 40(7.1) | 487(86.3) | 4.76 | 0.704 |
| OA5 | Our firm is flexible and develops its products based on customer needs | 7(1.2) | 11(2.0) | 20(3.5) | 44(7.8) | 482(85.5) | 4.74 | 0.727 |
| OA6 | Our firm is quick to embrace innovative ideas for new products and services. | 9(1.6) | 11(2.0) | 26(4.6) | 51(9.0) | 467(82.8) | 4.70 | 0.783 |

Table 6.15 illustrates the perceptions of respondents towards organisational agility. An analysis of the results indicates that 81 percent (n = 456) of the respondents strongly agree that their firms have been highly flexible in product mix or variety. A total number of 77 percent (n = 432) of the respondents strongly agree that their firms have maintained short cycles in product design and innovation. Eighty-one (81) percent (n = 455) of the respondents strongly agree that their firm has been responsive to external market requirements and environmental regulations, and those who strongly agree that their firm responds quickly if something important happens with regard to its customers were 86 percent (n = 487). The perceptions of those who strongly agree that their firms are flexible and develop their products based on customer needs are 86 percent (n = 482) and those who strongly agree that their firms are quick to embrace innovative ideas for new products and services are 83 percent (n = 467). Mean scores for individual items in the organisational agility scale range from 4.55 and 4.74, which attests that respondents are satisfied that there is adequate organisational agility within their SMEs.

The results of this study imply that the SMEs in the Gauteng province have been highly flexible in developing their product mix or variety. They further imply that these SMEs have significantly maintained short cycles in product design and innovation. The study also reveals that these SMEs have been strongly responsive to external market requirements and environmental regulations. The results further illustrate that SMEs in the Gauteng province are highly flexible and develop their products based on customer needs. In addition, the results suggest that these SMEs are very quick to embrace innovative ideas for new products and services.

The above results support the results of a study by Vickery, Droge, Setia and Sambarmurthy (2010:7042), which investigated supply chain information technologies and organisational initiatives within manufacturing SMEs in the USA and found that organisational agility has a positive impact on business performance. Doz and Kosonen (2010:381) considered detailed research on embedding organisational agility within SMEs in Finland. The results of their study showed that organisational agility is a key factor in facilitating the ability of a business to transform and renew its strategic and operational models. In their study on the impact of IT on supply chain agility and firm performance within manufacturing SMEs in the USA, DeGroot and Marx (2013:914) found that organisational agility improves the firm's financial and operating performance by improving sales, market share, profitability, speed to market, and customer satisfaction. This makes it evident that agile and responsive businesses are likely to enjoy higher performance than those that are slow to respond to situations.

6.5.6 The frequencies and percentages for business performance

The views of respondents towards business performance are reported on in Table 6.16.

Table 6.16: Frequencies and percentages of business performance

| Item | Description | Much worse (%) | Worse (%) | Neither increased nor decreased (%) | Better (%) | Much better (%) | Mean score | Standard deviation |
|------|-----------------------|----------------|-----------|-------------------------------------|------------|-----------------|------------|--------------------|
| BPE1 | Return on investment | 14(2.5) | 13(2.3) | 119(21.1) | 116(20.6) | 302(53.5) | 4.20 | 1.011 |
| BPE2 | Sales growth | 5(0.9) | 9(1.6) | 123(21.8) | 116(20.6) | 311(55.1) | 4.27 | 0.916 |
| BPE3 | Profit growth | 5(0.9) | 13(2.3) | 118(20.9) | 108(19.1) | 320(56.7) | 4.29 | 0.932 |
| BPE4 | Customer satisfaction | 3(0.5) | 14(2.5) | 47(8.3) | 120(21.3) | 380(67.4) | 4.52 | 0.794 |
| BPE5 | Employee satisfaction | 18(3.2) | 49(8.7) | 84(14.9) | 121(21.5) | 292(51.8) | 4.10 | 1.137 |

Table 6.16 explains the perceptions of respondents towards business performance. An analysis of the results shows that 54 percent (n = 302) of the respondents state that their firms' return on investment is much better than the industry average. A total number of 55 percent (n = 311) of the respondents stated that their firms' sales growth is much better than the industry average. A total number of 57 percent (n = 320) of the respondents stated that their firms' profit growth is much better than the

industry average. The perceptions of those who stated that their firms' customer satisfaction is much better than the industry average is 67 percent (n = 380) and those who indicated that their firms' customer satisfaction is much better than the industry average is 52 percent (n = 292). Mean scores for individual items in the business performance scale range from 4.10 and 4.52. This provides a general view that respondents are satisfied with the business performance of the SMEs.

The results of this study illustrate that the return on investment of SMEs in the Gauteng province has improved. The results further imply that these SMEs have been experiencing increased growth in sales and achieving increased profits as well. The results also imply that SMEs in the Gauteng province have been able to enhance the extent to which their customers are satisfied. In addition, the results suggest that satisfaction levels amongst employees in SMEs have improved significantly.

The above results support the results of a study by Shahbaz *et al.* (2014:48), which investigated performance measurement of SMEs in Pakistan and found that profitability and customer satisfaction have a positive impact on business performance. Santos and Brito (2012:112) examined a subjective measurement model for firm performance within Brazilian SMEs and discovered that financial performance, customer satisfaction, employee satisfaction, social performance and environmental performance contribute positively to business performance. In another study, Bakotic (2016:9) who explored the relationship between job satisfaction and organisational performance within SMEs in Croatia confirmed that there is a clear link between employees' job satisfaction and business performance. From the above results from different research studies, it is evident that return on investment, sales growth, profit growth, customer satisfaction and employee satisfaction are important factors to SMEs business performance.

6.6 INFERENCE STATISTICS

Since this study was intended to test relationships between various constructs, inferential statistics were used to test the relationships between organisational agility, technology capability, collaborative innovation, organisational learning, internal alignment and business performance. In line with suggestions by Anderson and Garbing (1988:421), a two-step procedure involving a confirmatory factor analysis (CFA) and structural equation modelling (SEM) was employed to test the relationships between the different constructs.

6.6.1 Confirmatory factor analysis

A CFA is a multivariate method for testing measurement models of the relationship between a set of observed variables and a hypothesised set of latent variables (Easterby *et al.*, 2012:340). In the CFA, psychometric properties of measurement scales were assessed with the intention to check the

reliability, validity and model fit of the measurement scales used in the study. The results of psychometric properties of measurement scales are reported on in Table 6.17.

Table 6.17: Psychometric properties of the measurement scales

| Research constructs | | Cronbach's test | | Mean score | CR | AVE | Highest shared variance | Factor loadings |
|-------------------------------|-----------------|-------------------------|----------------|------------|------|------|-------------------------|-----------------|
| | | Item-total correlations | α value | | | | | |
| Technology Capability (TC) | TC ₁ | .702 | .930 | 4.23 | .931 | .737 | .32 | .727 |
| | TC ₂ | .856 | | | | | | .887 |
| | TC ₃ | .875 | | | | | | .918 |
| | TC ₄ | .848 | | | | | | .896 |
| | TC ₅ | .807 | | | | | | .851 |
| Collaborative Innovation (CI) | CI ₁ | .685 | .843 | 3.73 | .840 | .575 | .12 | .721 |
| | CI ₂ | .661 | | | | | | .699 |
| | CI ₃ | .706 | | | | | | .825 |
| | CI ₄ | .664 | | | | | | .779 |
| Organisational Learning (OL) | OL ₁ | .676 | .939 | 4.61 | .937 | .772 | .59 | .680 |
| | OL ₂ | .804 | | | | | | .816 |
| | OL ₃ | .812 | | | | | | .827 |
| | OL ₄ | .878 | | | | | | .922 |
| | OL ₅ | .880 | | | | | | .927 |
| | OL ₆ | .880 | | | | | | .931 |
| Internal Alignment (IA) | IA ₁ | .818 | .902 | 4.58 | .902 | .683 | .22 | .833 |
| | IA ₂ | .811 | | | | | | .642 |
| | IA ₃ | .620 | | | | | | .871 |
| | IA ₄ | .788 | | | | | | .897 |
| | IA ₅ | .814 | | | | | | .866 |
| Organisational agility (OA) | OA ₁ | .816 | .925 | 4.68 | .923 | .681 | .26 | .861 |
| | OA ₂ | .754 | | | | | | .807 |
| | OA ₃ | .805 | | | | | | .787 |
| | OA ₄ | .764 | | | | | | .843 |
| | OA ₅ | .784 | | | | | | .800 |
| | OA ₆ | .813 | | | | | | .854 |
| Business Performance (BP) | BP ₁ | .820 | .907 | 4.32 | .906 | .735 | .23 | .865 |
| | BP ₂ | .913 | | | | | | .976 |
| | BP ₃ | .860 | | | | | | .922 |
| | BP ₄ | .593 | | | | | | .622 |

The reliability of the measurement instrument was measured using item total correlations, the Cronbach's Alpha test and the Composite Reliability (CR) test. All measurement scale items attained item-to-total values above the minimum threshold of 0.3 (Hair, Black, Babin & Anderson, 1998:134).

To calculate the CR, the following formula was used: sum all factor loadings, square this sum (call this SSI); sum all error variances of each indicator (call this SEV); composite reliability. = $SSI/(SSI+SEV)$. Cronbach's alpha, as well as CR coefficients, were above the minimum threshold of 0.7 (Hulland, 1999:195). Since all minimum thresholds were satisfied, these results provided evidence for the acceptable reliability of the measurement scales used in this study.

Convergent validity was ascertained by testing whether individual item loadings for each research construct were above the recommended minimum threshold value of 0.5 (Anderson & Gerbing, 1988:414). All of the final items in the measurement scales had a factor loading greater than the recommended 0.5, indicating acceptable individual item convergent validity as more than 50 percent of each item's variance was shared with its respective construct. In addition, convergent validity was also tested using the Average Variance Extracted (AVE). To calculate AVE values, the following formula was used; K^2/n (the summation of the squares of all factor loadings and then dividing the sum by the number of items), where K = Factor loading and n = the number of items. Upon analysis, it was observed that the values for AVE were well above the minimum threshold of 0.5 (Fraering & Minor, 2006:284). Discriminant validity was established by assessing whether the AVE value was greater than the highest shared variance value (Fornell & Larcker, 1981:39). Also, discriminant validity was further checked by assessing whether correlations between the constructs were less than 1. As indicated in Table 6.19 correlations between constructs satisfied these thresholds, thereby indicating that discriminant validity was adequate in this study.

An analysis of the overall mean scores for the measurement scales ranged between 3.73 and 4.68. This shows that respondents agreed that technology capability, collaborative innovation, organisational learning, internal alignment, organisational agility and business performance were satisfactory in their SMEs. The CFA path diagram is presented in Figure 6.1. In the path diagram, the items for organisational agility were entered with the label 'SA' to prevent errors resulting from them correlating with items under internal alignment.

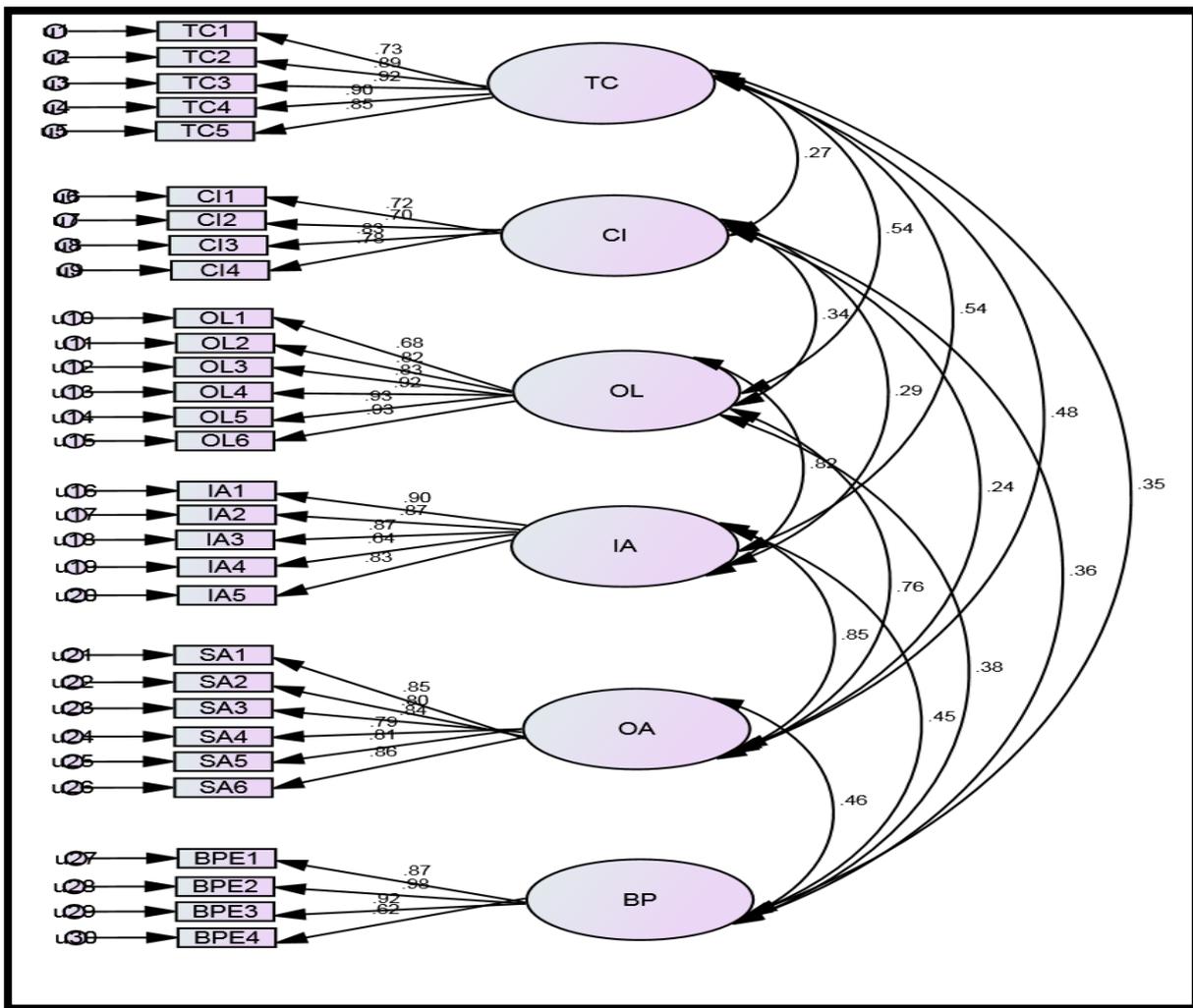


Figure 6.1: Confirmatory factor analysis model for organisational agility and business performance

6.6.2 Model fit analysis

After assessment of reliability and validity, it was deemed necessary to check the model fit for both the CFA and the structural model in line with the recommendations by Anderson and Gerbing (1988:416). Acceptable model fit was indicated by a chi-square value over degree of freedom ($c^2/d.f.$) value of between 1 and 3, with the values of goodness-of-fit index (GFI), comparative fit index (CFI), incremental fit index (IFI), and Tucker-Lewis index (TLI) equal to or greater than 0.90, and the root mean square error of approximation (RMSEA) value to be equal to or less than 0.08. The results of the model fit analysis are indicated in Table 6.18.

Table 6.18: Model-fit statistics

| Fit indices | Acceptable fit indices | CFA (<i>Measurement model</i>) | SEM (<i>Structural model</i>) |
|---|------------------------|-------------------------------------|------------------------------------|
| Chi square/degree of freedom (d/f) | < 3.0 | 1.504 | 2.801 |
| Incremental Fit index (IFI) | > 0.90 | 0.980 | 0.968 |
| Tucker-Lewis Index (TLI) | > 0.90 | 0.966 | 0.957 |
| Comparative Fit index (CFI) | > 0.90 | 0.982 | 0.936 |
| Normative Fit Index (NFI) | > 0.90 | 0.961 | 0.947 |
| Root mean square error of approximation (RMSEA) | < 0.08 | 0.044 | 0.077 |

The results of the model fit for both the CFA and the SEM show that all thresholds for model fit indices were satisfied, which confirms that there was an acceptable fit of both models to the underlying data structures.

Table 6.19: Correlations between constructs

| Constructs | TC | CI | OL | IA | OA | BP |
|--|--------|--------|--------|--------|--------|-------|
| Technology capability (TC) | 1.000 | .382** | | | | |
| Collaborative innovation (CI) | .215** | 1.000 | | | | |
| Organisational learning (OL) | .514** | .297** | 1.000 | | | |
| Internal alignment (IA) | .570** | .249** | .762** | 1.000 | | |
| Organisational agility (OA) | .455** | .414** | .512** | .371** | 1.000 | |
| Business performance (BP) | .334** | .324** | .416** | .473** | .475** | 1.000 |
| ** Correlation is significant at the 0.01 level (2-tailed) | | | | | | |

Apart from confirming discriminant validity, the correlation analysis further serves to confirm the association and direction of the association between the constructs. Inter-factor correlations were positive and significant, ranging from $r=0.215$ to $r=0.762$. This result demonstrates that when one construct increases, positive increases can be expected in the other constructs while the reverse is also true. However, this result does not imply that the constructs predict each other, hence the need to test the hypotheses using the path analysis procedure.

6.6.3 Hypotheses tests results

Hypotheses were tested using the SEM procedure. The results are reported on in Table 6.20.

Table 6.20: Structural equation modelling hypotheses testing results

| Paths | Hypothesis | Path coefficients | Unstandardised estimates | Hypotheses results |
|---|------------|-------------------|--------------------------|--------------------|
| OA → TC | H1 | 0.537*** | 0.65 | Supported |
| OA → CI | H2 | 0.291*** | 0.32 | Supported |
| OA → OL | H3 | 0.803*** | 0.78 | Supported |
| OA → IA | H4 | 0.882*** | 0.92 | Supported |
| OA → BP | H5 | 0.484*** | 0.61 | Supported |
| ***significant at $p < 0.001$ TC=Technology capability; CI=Collaborative innovation; OL= Organisational learning; IA=Internal alignment; OA=Organisational agility; BP=Business performance | | | | |

The results in Table 6.20, show that all five hypotheses are supported, which implies that all the proposed relationships between the constructs are valid. The results of the hypotheses tests are further shown in the path diagram presented in Figure 6.2.

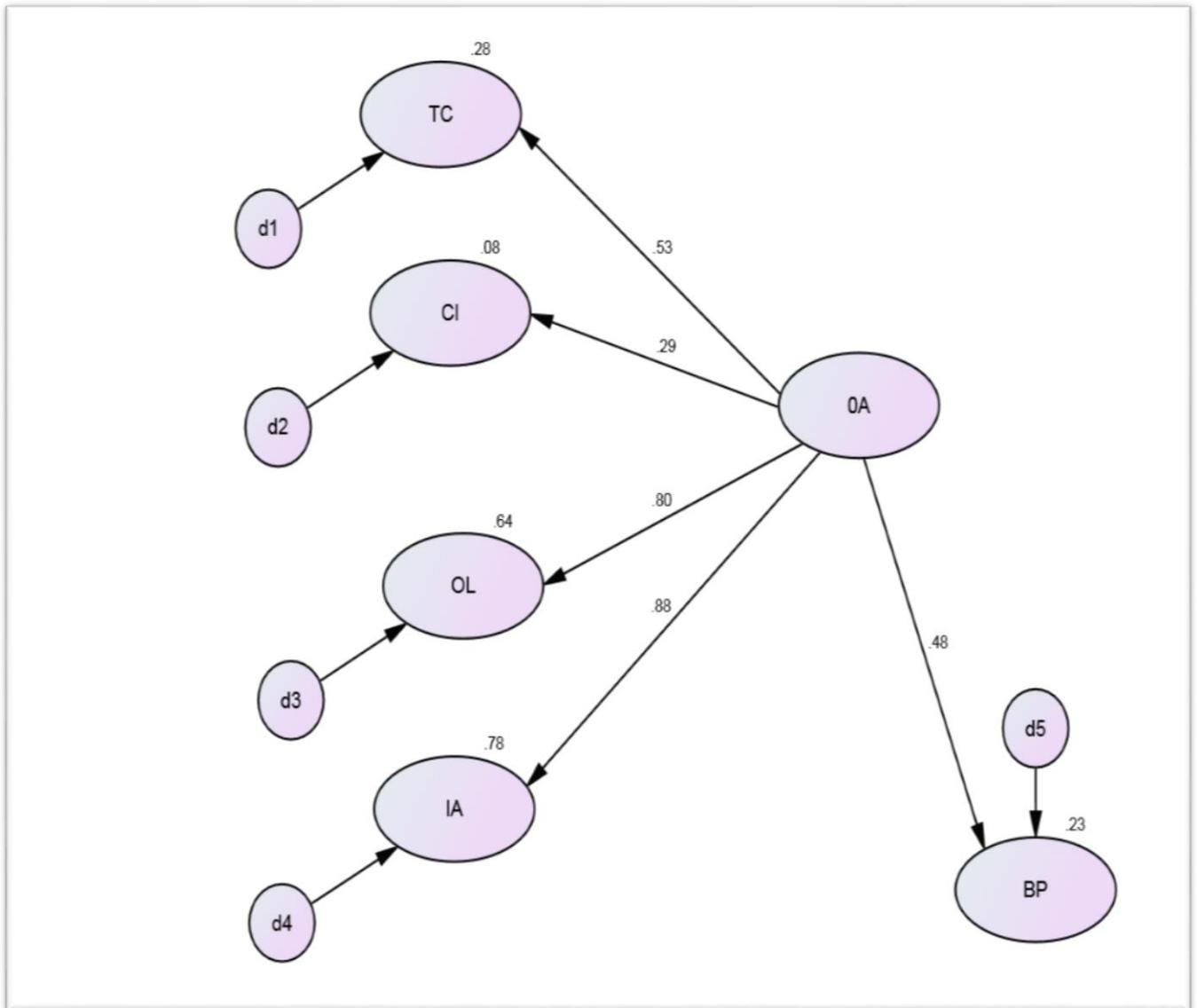


Figure 6.2: Path diagram for organisational agility and business performance

6.7 DISCUSSION OF RESULTS

The primary objective of this study was to investigate the contributions of organisational agility towards the business performance of SMEs in the Gauteng province. To achieve this objective, five hypotheses were formulated, which linked the various constructs proposed in the conceptual research model. This section discusses the results of each of these hypotheses.

6.7.1 Organisational agility and technology capability

The first hypothesis (H1) suggests that there is a significant positive relationship between organisational agility and technology capability. This hypothesis is accepted in this study since there is a positive and significant relationship between organisational agility and technology capability ($\beta = 0.537$; $p < 0.001$). This result illustrates that SMEs with organisational agility have better capabilities

to adopt relevant technologies. This result is in line with a previous study conducted by Ganguly, Nilchiani and Farr (2009:422), which investigated organisational agility within Apple Incorporated in the USA. That study found that organisational agility leads to the adoption of new technologies within Apple Incorporated. This explains why Apple remains a leader in innovation and technology within the consumer electronics industry. Another study conducted by Li, Nagel and Sun (2011:124) on organisational agility within Ace Hardware, Google, Procter and Gamble and Apple Incorporated in the USA found that organisational agility plays an important role in enhancing technology capability. Ambrose (2014:6) investigated organisational agility within information technology firms in the USA. He discovered that organisational agility positively influences technology capability. Dehaghi and Navabakhsh (2014:325) studied organisational agility within Isfahan Municipality in Iran, which revealed that organisational agility positively increases technological capability.

This result is supported by the literature review in chapter three, which shows that strategically agile firms can manage and generate technological changes. They make effective use of technological knowledge in assimilating, using, adapting, and changing existing technologies. Strategically agile firms have the capabilities to develop and design new products, new processes and more effectively operate the equipment, or resources which are needed to produce managerial technique revolution including skills, knowledge and experiences as well as institutional structures and ties. Strategically agile firms jointly mobilise different scientific resources and individual technicians, which allows the development of products or innovative and successful production processes, serving the implementation of competitive strategies that create value given certain environmental conditions. Thus, organisational agility serves as a driver for technology capabilities in SMEs.

6.7.2 Organisational agility and collaborative innovation

The second hypothesis (H2) suggests that there is a positive relationship between organisational agility and collaborative innovation. In this study, this hypothesis is supported since there is a positive and significant relationship between organisational agility and collaborative innovation ($\beta = 0.291$; $p < 0.001$). This result demonstrates that SMEs with organisational agility is likely to be able to develop innovative or creative ways of collaborating and cooperating with their trading partners. This result is in line with previous results in a study by Winby and Worley (2014:11), who researched organisational agility within Hewlett-Packard (HP) and Alegent Health in Omaha, Nebraska, USA. Their study reveals that organisational agility positively influences collaborative innovation. Shin *et al.* (2015:185) investigated organisational agility within SMEs in Korea, which showed that organisational agility plays an important part in enhancing collaborative innovation. A study by Roshani *et al.* (2015:24) on organisational agility between university-industry collaboration in Canada found that organisational agility is crucial for effective collaborative innovation. Another

study conducted by Han and Wang (2015:443), on organisational agility within SMEs in China, found that organisational agility has a positive influence on collaborative innovation.

This result is sustained by the literature review in chapter three, which reveals that strategically agile firms use a two-way process in which they have an inbound process to bring in ideas, technologies, or other resources needed to develop their own business, and an outbound process in which they out-licence or sell their ideas, technologies, and other resources. Strategically agile firms use purposive inflows and outflows of knowledge to accelerate internal innovation and to expand the markets for external use of innovation respectively. Traditionally, new technologies were mostly developed in-house. As they became more complex and requested a broad portfolio of relevant knowledge, that a single firm could not have, collaboration with external partners (suppliers, customers, and competitors) gained the upper hand. Hence, organisational agility leads to improved collaborative innovation within SMEs.

6.7.3 Organisational agility and organisational learning

The third hypothesis (H3) suggests that there is a positive relationship between perceived organisational agility and organisational learning. This hypothesis is also supported because there is a positive and significant relationship between organisational agility and organisational learning ($\beta = 0.803$; $p < 0.001$). This result implies that SMEs with organisational agility are typically able to create, retain, and transfer knowledge within their organisations. This result is in line with previous results in studies by Kelly (2012:12), who studied organisational agility within organisations in Chicago, New York and Los Angeles, USA. He found that organisational agility is a key factor that promotes organisational learning. A study by Idris and Al-Rubaie (2013:76) on organisational agility within the Elba House Company in Jordan, Middle East, found that its adoption of organisational agility improves organisational learning. Another study conducted by Vecchiato (2014:10) on organisational agility within organisations in England reveals that organisational agility has a positive influence on organisational learning. Sherehiy and Kaerwowski (2014:472) investigated organisational agility in small manufacturing enterprises in the USA and discovered that organisational agility improves organisational learning.

This result is reinforced by the literature review in chapter three, which discovered that strategically agile firms use a process of inquiry through which members of the organisation develop shared values and knowledge based on their own experiences and that of others. Agile organisations make use of learning processes at the individual, group and system level to transform the organisation continuously in a direction that is increasingly satisfying to its stakeholders. They also focus on proper learning, which leads to specified results such as an increase in the organisation's intelligence, the

improvement of its knowledge base, the increase in shareholders' satisfaction, the increase in the organisation's long-term adaptation ability, improvement of organisational productivity, more effective activities for customers and partners, and the development of competitive advantage. Accordingly, organisational agility leads to better organisational learning within SMEs.

6.7.4 Organisational agility and internal alignment

The fourth hypothesis suggests that there is a positive relationship between organisational agility and internal alignment. This hypothesis is supported as well because there is a positive and significant relationship between organisational agility and internal alignment ($\beta = 0.882$; $p < 0.001$). These results demonstrate that jobs, skills and competencies within SMEs that have organisational agility all interact in such a way that they complement each other for the benefit of the organisation. This result is in line with previous results in studies by Worley and Lawler III (2010:9), who investigated organisational agility within Acme Aerospace in the USA. Their studies found that organisational agility positively enhances internal alignment. Tseng and Lin (2011:3706) studied organisational agility within information technology firms in Taiwan and likewise found that organisational agility plays an important role in promoting internal alignment. A study conducted by Balaji, Velmurugan, Sivabalan, Ilayaraja, Prapa and Mythily (2014:2230) on organisational agility within supply chain companies in India found that organisational agility has a positive influence on internal alignment. Another investigation conducted by Shin *et al.* (2015:185) on organisational agility within Korean SMEs found a positive relationship between organisational agility and internal alignment.

This result is maintained by the literature review in chapter three, which indicates that strategically agile firms implement the process of achieving unity of effort among the various subsystems in the accomplishment of the organisation's tasks. In agile organisations, the different departments work together and tightly coordinate their activities for the achievement of organisational objectives. Agile firms employ a set of commitments, policies, strategies, procedures, behaviours and systems that support integrated customer decision-making based on suppliers' commercial and ethical commitment and performance. Their employees have an agreement of various levels on the organisation's most important goals. This validates that organisational agility is an important antecedent to internal alignment within SMEs.

6.7.5 Organisational agility and business performance

The fifth hypothesis suggests that there is a positive relationship between organisational agility and business performance. This hypothesis is supported as well because there is a positive and significant relationship between organisational agility and business performance ($\beta = 0.484$; $p < 0.001$). This result indicates that SMEs with organisational agility is likely to have superior business performance. This

result is in line with previous results from studies by Doz and Kosonen (2010:381), on organisational agility within Nokia, Easy Group, HP, SAP and Kone in Finland. They found that organisational agility is of vital importance to improved business performance. DeGroot and Marx (2013:914) conducted a study on organisational agility within manufacturing firms in the USA and found that organisational agility positively influences business performance. A study by Salih and Alnaji (2014:1880) on organisational agility within Jordanian insurance industry companies in the Middle East reveals that organisational agility plays a crucial role in enhancing business performance. Another study conducted by Dabiri and Gholami (2015:205) on organisational agility within the Gachsaran Oil and Gas Exploitation Company in Iran showed that organisational agility has a positive influence on business performance.

This result is maintained by the literature review in chapter three, which indicates that strategically agile firms have the operational ability to satisfy the desires of the company's major shareholders. They utilise their resources (such as knowledge, people and raw materials) to achieve organisational goals in an effective and efficient way. Strategically agile firms can attain their goals by using resources efficiently and effectively. They use a set of financial and non-financial indicators, which offer information on the degree of achievement of objectives and results. Agile firms achieve their performance objectives based on the constraints imposed by the limited resources. In this context, profit is one of the many indicators of business performance. Therefore, organisational agility within SMEs is an important contributor to business performance.

6.8 CONCLUSION

This chapter outlined the data analysis and interpretation of results. It covered the response rate, demographic details of the respondents, the profile of the participating SMEs, perceptions of the respondents towards organisational agility and business performance, inferential statistics and the discussion of the results. Under the results, the following was discussed: organisational agility and technology capability, organisational agility and collaborative innovation, organisational agility and organisational learning, organisational agility and internal alignment, and organisational agility and business performance. Frequency analyses showed that respondents were satisfied with the performance of their SMEs in the areas considered in this study. Upon the assessment of the psychometric properties of the measurement scales, it was discovered that reliability, validity and the model fit for the measurement scales used in the study were satisfactory. The data analysis and interpretation revealed that organisational agility has a positive influence on technology capability, collaborative innovation, organisational learning, internal alignment and business performance. The next chapter discusses the conclusions and recommendations.

CHAPTER 7

CONCLUSIONS AND RECOMMENDATIONS

7.1 INTRODUCTION

This final chapter discusses the conclusions and recommendations of the study. It first provides a summary of all the chapters before discussing the conclusions to all the theoretical and empirical objectives and explaining how each objective was achieved. The limitations of the study, that is, the different influences, conditions and shortcomings of the study, which were beyond the control of the researcher, are indicated. These are important since they add some credibility to the results and conclusions. Several suggestions for future research are discussed, which provide a view of any issues emanating from this research that could be addressed through future research endeavours. The chapter mentions some theoretical and practical contributions made by the study and presents the concluding remarks.

7.2 SUMMARY OF THE THESIS CHAPTERS

The study aimed to investigate the contributions of organisational agility towards business performance within SMEs in the Gauteng province. The study is divided into seven chapters, each serving a distinct purpose. The first chapter presents the proposal, which explores the introduction and background of the study. It discusses the problem statement, the research objectives, conceptual framework and hypotheses formulation, research methodology and the outline of chapters. The second chapter reports on the literature on SMEs from a global perspective, namely, in Europe, America, Africa and South Africa. It further discusses the definitions of SMEs in different parts of the world and reflects on their contributions. The chapter also explores the challenges faced by SMEs in their environments before directing attention to the legislation of SMEs in South Africa.

The third chapter is a literature review on organisational agility. It analyses the theory behind the concepts of organisational agility and its various sub-elements, namely, technological capability, collaborative innovation, organisational learning and internal alignment. The fourth chapter analyses the literature, which focuses on business performance. It covers issues such as definitions of business performance, the concept of business performance, business performance management, business performance management systems, the Balanced Score Card and the importance of business performance management. In the fifth chapter, an outline of the research methodologies employed in the study is provided. The chapter emphasises the research design and methods used in the research and discusses the sampling design, data collection procedures, data analysis, and ethical considerations. The sixth chapter reports on the analyses of data and interpretation of the results. It

specifically discusses issues such as the response rate, demographic details of respondents, perceptions of respondents towards the scale items, and the relationships between constructs. This is achieved by the use of statistical techniques such as descriptive statistics, CFA and SEM. The seventh chapter concludes the study by providing a summary of the thesis chapters, conclusions, recommendations, limitations and suggestions for further research as well as theoretical and practical implications of the study.

7.3 CONCLUSIONS BASED ON THE THEORETICAL OBJECTIVES

This section discusses conclusions drawn from the theoretical objectives set for the study.

7.3.1 Conclusions drawn from the review of the literature on SMEs

The first theoretical objective was aimed at conducting a literature review on SMEs, which is presented in Chapter two. It reveals that the term “SMEs” encompasses a broad spectrum of definitions and different organisations as countries set their guidelines for defining SMEs, often based on headcount, sales or assets. In South Africa, an SME is described as a separate and distinct entity, including a cooperative enterprise and non-governmental organisation, which is not part of a group of companies. It must be managed by its owner or owners, which can be a person, a partnership or a juristic body, such as a close corporation or company.

There is a consensus among researchers and practitioners alike that there are numerous economic benefits of SMEs for any country. These benefits include a contribution to the economy regarding output of goods and services, the creation of jobs at a relatively low capital cost, provision of a vehicle for reducing income disparities, and the development of a pool of skilled and semi-skilled workers as a basis for future industrial expansion. In South Africa, there are an estimated 2.8 million SMEs contributing to the GDP, which make up nearly 61 percent of employment. The government has identified SMEs as the way forward to create jobs and to stimulate economic growth to combat the huge number of unemployed youth in the country.

Although SMEs play a crucial role in economic growth and employment, their operations are often crippled by lack of adequate financing from financial institutions. SMEs in developing countries, furthermore, face significant barriers to finance. Financial constraints are higher in developing countries in general, but SMEs are particularly constrained by gaps in the financial system such as high administrative costs, high collateral requirements and lack of experience within financial intermediaries. SMEs in South Africa face a number of challenges, the most important of which have been reported by a number of organisations to be a lack of managerial skills; finance and obtaining credit; access to markets and developing relationships with customers; appropriate technology and

low production capacity; quality products; and support for the role that they play in economic development.

The role of the South African government appears to be of critical importance in shaping the present and future of the SME sector. There has been a shift since 1994 in the national policy environment surrounding small enterprises in South Africa. Two policies, aimed at helping more black people to become active in the economy and aid small business owners, have been developed, namely, the 2000 Preferential Procurement Policy Framework Act and the Black Economic Empowerment (BEE) codes of good conduct. The BEE codes, which came into effect in 2008, award points to businesses based on seven elements: the percentage of black ownership, black management, black staff, black staff trained, procurement from black suppliers, business or financial assistance to small black businesses, and corporate business investment. Companies with high BEE scores can win business with the government. Enterprise development (ED), which is the support and growth of SMEs, has been introduced as a component of broad-based black economic empowerment (BBBEE) policy in South Africa.

Furthermore, bodies like Khula Enterprise Finance were set up with a mandate to improve the SME sector's access to finance, primarily through the provision of wholesale finance or guarantees to retail financial intermediaries, which, in turn, finance the SME sector. Another initiative of the post-apartheid government is the creation of the Skills Development Programme, which was launched by the government in 1998. Through this initiative, SMEs can obtain assistance with two of the challenges that they face most, i.e. a lack of management skills and developing relationships with customers. From the above discussion, it is evident that the legislation in South Africa should be formulated in such a way that it contributes positively to the business performance of SMEs.

7.3.2 Conclusions drawn from the literature review on organisational agility

The second theoretical objective focused on conducting a literature review on organisational agility, which is presented in Chapter three. The literature defined organisational agility as the ability to dynamically revise or reinvent the company and its strategy as the business environment changes. This is achieved by continuous anticipation as well as adjusting to trends and customer needs without giving up on the company's vision. Strategically directed agility has also been defined as change management proficiency. Change proficiency is a competency that allows an organisation to apply knowledge effectively.

The organisational agility discussion is part of a discussion on how companies should be organised to do effective business in dynamic business environments. It is important to note that efficiency and agility have to be balanced. Firms that can be responsive to the changing, diverse and unpredictable

demands of customers on the front end, while minimising the back end risks to supply disruptions can be seen as strategically agile. If the company disregards the importance of agility, the consequences can be disastrous.

Key capabilities that enable organisational agility are strategic sensitivity, leadership unity and resource fluidity. Strategic sensitivity includes leadership actions such as anticipating with foresight, experimenting and corporate venturing, distancing to gain perspective, abstracting to concepts and models and reframing to imagine and generate new business models. Leadership unity encompasses actions designed to create a bond and trust within the leadership team. Resource fluidity is a company's ability to reform business models and reallocate resources rapidly, which is divided into three main clusters of tools: mobilising capital resources, mobilising people and knowledge and creating modular structure.

The benefits of enhanced agility include higher revenues, more satisfied customers and employees, improved operational efficiency and a faster time to market. Organisational agility is especially important for the most knowledgeable intensive companies in a rapidly changing world of digitalisation, globalisation and deregulation. There is a clear consensus that in today's environment organisational agility is a vital capability and that most organisations have much to do to become agile.

The literature identified four major dimensions of organisational agility, which are technological capability, collaborative innovation, organisational learning, and internal alignment. Technological capability is defined as the ability of firms to manage and generate technological changes, which can innovate. Firm-level technological capability (TC) can be classified into three distinctive levels: TAC – technological acquiring capability; TOC – technological operating capability; and TUC – technological upgrading capability. TAC ascribes capabilities to acquire new knowledge through formal, informal, internal and external channels. TOC refers to capabilities to operate, use and sustain production equipment and facilities. TUC concerns capabilities, which improve greatly on products and processes depending on a firm's strengths and on changing market demands. The upgrading results will allow the firms to reach a higher TC level.

Technology can be measured in several ways. One solution is to look at the input of the technological processes as the R&D expenditure or personnel, or their effects, as the changes in total factor productivity. Technological needs assessment not only identifies the deficient and problematic sections of the firm but also considers and determines its relative advantages. Technological capability assessment is of crucial significance to any firm or business aspiring to its strategic aims.

Its development by SMEs is crucial to overcome the fast-changing and fiercely competitive global markets.

The definition of collaborative innovation is a distributed innovation process based on purposively managed knowledge flows across organisational boundaries, using pecuniary and non-pecuniary mechanisms in line with each organisation's business model. Collaboration innovation is an emerging concept that has recently attracted a lot of attention, both in practice (among industries) and in academia (among researchers). One of the main reasons could be that the concept fits very well with many trends in the broader management arena. As collaborative innovation was initially designed for large firms, SMEs' practices need further investigation, to understand them better as well as the challenges that SMEs have to face in their implementation.

There are some practices for applying a collaborative business model in a firm. These are categorised into three different types. The first type is inside-out (outbound) practice, which allows the firm let other firms and companies use unused and unutilised ideas and technologies for their businesses. The second type is outside-in (inbound) practice, which involves opening up a company's innovation to other companies for any kinds of contribution. The last type of practice is combined knowledge inflows and outflows between role players in the innovation process.

Over the last decade, collaborative innovation has grown in popularity and success to increase innovation effectiveness and speed, especially within larger organisations. Further benefits of collaborative innovation are more diversity brought to innovation, diversifying the risk of innovation, pooling of resources and exploiting synergies. Collaborative innovation can be particularly challenging for SMEs because of their focused business portfolios, specialised knowledge basis, and limited financial resources that can be devoted to innovation activities.

Organisational learning is defined as a process of inquiry through which members of the organisation develop shared values and knowledge based on their own experiences and that of others. The concept of organisational learning has been cited in the managerial literature since the early 1980s. It describes the internal capacity of organisations to learn from experience, examine and adopt new ideas and transform them into policy and action plans to obtain a competitive advantage.

Organisational learning is a necessary and fundamental source of competitive advantage in the field of strategic management. It helps organisations achieve success in the future. It is the key to business performance and helps in gaining a sustainable competitive advantage. Organisations that adopt strategies relating to organisational learning tend to achieve better performance. It significantly affects a business's performance, by influencing the innovative performance of the business and improving market-oriented behaviour. Organisations that have adopted organisational learning can

better sense events, trends and changes in the market that can help adopt more responsive structures than its competitors to respond to challenges.

Alignment in a broad sense can translate into the issue of strategic congruence, the degree to which a firm's goals, objectives, needs and structures are consistent with one another. Alignment is defined as the process of achieving unity of effort among the various subsystems in the accomplishment of the organisation's tasks, deals with specifying how harmoniously the different departments of an organisation work together and how tightly coordinated their activities are. When reviewing the literature on how different organisational entities – companies or sub-systems like departments or functions – can work harmoniously together, several concepts such as fit, alignment and integration can be found and used in a relatively interchangeable way.

There are two types of organisational alignment: vertical and horizontal, or lateral. Vertical alignment shows the lines of reporting and accountability from the chief executive officer (CEO) level to the factory floor whereas horizontal alignment refers to coordination across organisational boundaries. A firm discovers and establishes its sources of advantage in a given context by establishing a synergy between strategy, marketing, organisational resources and technological capabilities. Such strategic alignment then contributes to a firm's external and internal fit. A firm discovers and establishes its sources of advantage in a given context by establishing a synergy between strategy, marketing, organisational resources and technological capabilities. Such strategic alignment then contributes to a firm's external and internal fit.

The literature generally assumes that higher levels of internal alignment are associated with higher organisational performance. Although operationalised differently regarding content, scope, and measurement, internal alignment is argued to improve coordination and cooperation after a decision is made, which leads to more efficient strategy implementation and hence enhanced business performance. In aligned companies, workers and customers get deeper satisfaction, while higher profit is delivered to stakeholders. Better internal alignment increases the chance of accomplishment of missions and decreases the costs via organisational and process efficiency. Internal alignment is imperative, especially for SMEs because most are owner-controlled and usually managed by owners' interests or management policies closely aligned with those interests. Organisational agility and its four dimensions, therefore, contribute positively to the business performance of SMEs.

7.3.3 Conclusions drawn from the literature review on business performance

The third theoretical objective focused on conducting a literature review on business performance, which is presented in Chapter Four. Business performance is defined as the operational ability to satisfy the desires of the company's major shareholders, and it must be assessed to measure an

organisation's accomplishment. The performance of companies is the first to be evaluated by investors around the world. Therefore, people who are responsible for running firms must improve business performance through new plans and procedures to improve operations and transactions during the firm's life cycle.

Business performance encompasses three specific areas of a firm's outcomes: financial performance (profits, return on assets, return on investment, etc.), market performance (sales, market share, etc.), and shareholder return (total shareholder return, economic value added, etc.). The ability to generate change in management by perceiving market opportunities, adapting to the environment, and possessing certain managerial factors, product innovations, creativity, pro-activeness, technological change and networking, are all factors that bring about strategic improvements in business performance.

Business performance measurement refers to the process of measuring the efficiency and effectiveness of action. Business performance measurement and assessment of complex processes or systems are indeed of vital importance; in a globalising world, it should be regarded as a must rather than as an option. Previous researchers used various concepts for measuring business performance in terms of operating efficiencies, profitability, financial returns, presence in international markets, export share, innovation and new product development.

Businesses have to achieve their growth targets to survive and increase their profitability. The control mechanism to determine by what extent targets are achieved is through a performance measurement system, which is a balanced and dynamic system able to support the decision-making process by gathering, elaborating on and analysing information. The concept of "balance" refers to the ability to use different measures and perspectives that are tied together to give a holistic view of the organisation. The concept of "dynamic" refers to the ability of developing a system, which continuously monitors the internal and external context and reviews objectives and priorities.

The Balanced Scorecard is a business performance measurement and strategic management system, which appears suitable for use by all types and sizes of business. Its greatest strength for most businesses comes from its innate ability to integrate financial and non-financial measures together by measuring both strategic and business performance across interrelated perspectives. Numerous surveys have provided evidence as to the balanced scorecard's popularity and widespread implementation by different types of organisations. The main characteristics of the Balanced Scorecard are that it uses both financial and non-financial measures to establish a complete view of a company's performance. Over the years, the Balanced Scorecard has been improved and advanced into a measurement system but more importantly into a strategic management system. The Balanced

Scorecard translates an organisation's mission and strategy into a set of business performance measures that provide the framework for implementing its strategy.

In current business management practice, business performance measurement is considered to have a more critical role compared to quantification and accounting. By measuring business performance, a company can identify its strengths and weaknesses. Accurate business performance measurement is vital to understand a firm's success and failure. Measurement of business performance can offer significant and invaluable information to allow the management's monitoring of performance, reports of improvements, motivation, communication and to pinpoint problems. It is clear, therefore, that business performance must be measured and managed for the survival of SMEs.

7.4 CONCLUSIONS BASED ON EMPIRICAL OBJECTIVES

This section discusses conclusions drawn from the following empirical objectives set for the study, which are:

- to determine perceptions of owners and managers of SMEs in the Gauteng province towards organisational agility and business performance in their businesses;
- to investigate the influence of organisational agility on the technological capability of SMEs in the Gauteng province;
- to establish the influence of organisational agility on the collaborative innovation of SMEs in the Gauteng province;
- to establish the influence of organisational agility on the organisational learning of SMEs in the Gauteng province;
- to establish the influence of organisational agility on the internal alignment of SMEs in the Gauteng province; and
- to determine the influence of organisational agility on the business performance of SMEs in the Gauteng province.

7.4.1 Conclusions on the perceptions of owners and managers of SMEs in the Gauteng province towards organisational agility and business performance

Perceptions of owners and managers of SMEs were investigated using the analysis of frequencies. These results were presented in Section 6.5. Apart from focusing on the four dimensions of organisational agility, namely, technology capability, collaborative innovation, organisational learning and internal alignment, the analysis also focused on business performance. Regarding technology capability, the study concludes that there is the meaningful adoption of technologically-driven systems in SMEs in the Gauteng province. It further concludes that these SMEs are not shy to

invest in upgrading their technology and to assess regularly the potential influence of new technology on their operations.

On collaborative innovation, the study concludes that the SMEs in the Gauteng province strongly upgrade process/product design by investigating customer needs in the product development process. Furthermore, these SMEs moderately promote collaboration among major functions from the planning stage, also revealing that they collaborate, within reason, with customers for process development and improvement, and view collaborative innovation as a viable innovation method. The study concludes that SMEs in the Gauteng province consider the innovation process as a common standard seriously, and maintain open, physical and virtual channels for information and knowledge sharing.

Regarding organisational learning, the study concludes that the SMEs in the Gauteng province provide a sound, optimal working environment in which best performance practices can be disseminated, and promote, to a greater extent, interdisciplinary training and team-based activities. It concludes that these SMEs strongly empower employees for individual learning to manage customer contact services, and strongly view learning as a key to guarantee their firm's existence in its sector. Consequently, they firmly believe that any change in their business process must include learning as a key factor.

On internal alignment, the study concludes that SMEs in the Gauteng province align functional strategies with business strategy exceptionally well. The results indicate that they align operational strategy with other functional strategies extremely well. The study also concludes that SMEs align their goals and objectives measures with strategic task performance well. It concludes that SMEs in the Gauteng province have integrated IT systems properly across functional units. Furthermore, they strongly believe that their strategic planning process encourages information sharing and cross-functional cooperation.

Regarding organisational agility, the study concludes that the SMEs in the Gauteng province have been highly flexible in developing their product mix or variety and that they have significantly maintained short cycles in product design and innovation. The SMEs have been strongly responsive to external market requirements and environmental regulations, as well as being highly flexible and developing their products based on customer needs. Also, the study concludes that these SMEs are very quick to embrace innovative ideas for new products and services.

Regarding business performance, the study concludes that the return on investment of SMEs in the Gauteng province has improved in recent years. It concludes that these SMEs have been experiencing increased growth in sales and have achieved increased profits. Furthermore, SMEs in the Gauteng

province have been able to enhance the extent to which their customers are satisfied. It concludes, in addition, that satisfaction levels amongst employees in SMEs have improved significantly.

7.4.2 Conclusions regarding the influence of organisational agility on technology capability

The second empirical objective focuses on testing the relationship between organisational agility and technology capability within SMEs in the Gauteng province, which is represented by hypothesis H1, and tested using the SEM procedure. Technology capability within SMEs in the Gauteng province was measured using a five-point Likert-type scale that was anchored by 1 = strongly disagree to 5 = strongly agree to express the degree of agreement. In this empirical objective, the following five factors of technology capability were measured:

- Our firm adopts technology-driven production systems such as Just-in-Time, value analysis, concurrent engineering and modular design systems.
- Our firm invests in upgrading production, information and inventory management systems.
- Our firm regularly assesses the potential influence of new technology on its operations.
- Our firm is susceptible to new technology and methods to do business.
- Our firm has specific mechanisms to conduct environmental scanning on technology.

It emerged from the study that the SMEs in the Gauteng province use technology to gain competitive advantage and improve business performance. This is shown by the fact that the majority of responses on all items were found between the ‘agree’ and ‘strongly agree’ anchor on the scale. There was a strong positive and significant relationship between organisational agility and technology capability. If organisational agility increases, adoption of technologies increases in SMEs. In this regard, it can hence be concluded that organisational agility positively influences technology capability.

7.4.3 Conclusions regarding the influence of organisational agility on collaborative innovation

The third empirical objective focuses on testing the relationship between organisational agility and collaborative innovation within SMEs in the Gauteng province. This is represented by hypothesis H2, and was tested using the structural equation modelling procedure. Collaborative innovation within SMEs in the Gauteng province was measured using a five-point Likert-type scale that was anchored by 1 = strongly disagree to 5 = strongly agree to express the degree of agreement. The following six factors of collaborative innovation were measured:

- Our firm upgrades process/product design by investigating customer needs in the product development process.
- Our firm promotes collaboration among major functions from the planning stage.
- Our firm collaborates with customers for process development and improvement.

- Collaborative innovation is a viable innovation method for our firm.
- The innovation process is considered as a common standard within our firm.
- Our company opens and maintains physical and virtual channels for information and knowledge sharing.

It was discovered that the SMEs in the Gauteng province do implement collaborative innovation to improve their business performance. This is shown by the fact that the majority of responses on all items were found between the ‘agree’ and ‘strongly agree’ anchor on the scale. It can therefore be concluded that there is a strong positive and significant relationship between organisational agility and collaborative innovation.

7.4.4 Conclusions regarding the influence of organisational agility on organisational learning

The fourth empirical objective focuses on testing the relationship between organisational agility and organisational learning within SMEs in the Gauteng province. The relationship is represented by hypothesis H3, and was tested using the structural equation modelling procedure. Organisational learning within SMEs in the Gauteng province was measured using a five-point Likert-type scale that was anchored by 1 = strongly disagree to 5 = strongly agree to express the degree of agreement. The following six factors of organisational learning were measured:

- Our firm provides an optimal working environment in which best performance practices can be disseminated.
- Our firm promotes interdisciplinary training and team-based activities.
- Our firm empowers employees for individual learning to manage customer contact services.
- Our firm promotes individual and organisational learning for business environment adaption.
- Learning in our firm is seen as a key to guarantee the firm’s existence in its sector.
- Our basic values of any change in the business process include learning as a key factor.

It emerged from the study that the SMEs in the Gauteng province do apply organisational learning to improve their business performance. This is supported by the fact that the majority of responses on all items were found between the ‘moderate’ and ‘agree’ anchor on the scale. There was a moderate positive and significant relationship between organisational agility and organisational learning. If organisational agility increases, organisational learning increases in SMEs. It can thus be concluded that organisational agility positively influences organisational learning.

7.4.5 Conclusions regarding the influence of organisational agility on internal alignment

The fifth empirical objective focuses on testing the relationship between organisational agility and internal alignment within SMEs in the Gauteng province. The relationship is represented by

hypothesis H4 and was tested using the structural equation modelling procedure. Internal alignment within SMEs in the Gauteng province was measured using a five-point Likert-type scale that was anchored by 1 = strongly disagree to 5 = strongly agree to express the degree of agreement. The following five factors of internal alignment were measured:

- Our firm aligns functional strategies with business strategy well.
- Our firm aligns operational strategy with other functional strategies well.
- Our firm aligns its goals and objectives measures with strategic task performance well.
- Our firm has well-integrated IT systems across functional units.
- Our strategic planning process encourages information sharing and cross-functional cooperation.

It appears that the SMEs in the Gauteng province do align business functions to improve their business performance. This is demonstrated by the fact that the majority of responses on all items were found between the ‘agree’ and ‘strongly agree’ anchor on the scale. There was a strong positive and significant relationship between organisational agility and internal alignment. If organisational agility increases, internal alignment in SMEs increases. It can, therefore, be concluded that organisational agility positively influences internal alignment.

7.4.6 Conclusions regarding the influence of organisational agility on business performance

The sixth empirical objective focuses on testing the relationship between organisational agility and business performance within SMEs in the Gauteng province. The relationship is represented by hypothesis H5 and was tested using the using structural equation modelling procedure. Business performance within SMEs in the Gauteng province was measured using a five-point Likert-type scale that was anchored by 1 = much worse to 5 = much better to express the degree of agreement. In this empirical objective, the following five factors of business performance were measured:

- return on investment;
- sales growth;
- profit growth;
- customer satisfaction; and
- employee satisfaction.

From the study, it emerged that the business performance within SMEs in the Gauteng province was much improved due to employing organisational agility within their organisations. This is verified by the fact that a majority of responses on all items were found between the ‘better’ and ‘much better’ anchor on the scale. There was a strong positive and significant relationship between organisational agility and business performance. If organisational agility increases, business performance in SMEs

increases. Therefore, it can be concluded that organisational agility positively and significantly influences business performance.

7.5 RECOMMENDATIONS

The results and conclusions of this study indicate that organisational agility and its underlying dimensions (technology capability, collaborative innovation, organisational learning and internal alignment) contribute positively towards the business performance of SMEs in the Gauteng province. Organisational agility assists organisations to respond well to unexpected challenges and environmental dynamics. It is thus recommended that SMEs in the Gauteng province should work on improving their organisational agility to enhance their business performance. Recommendations that are more specific are provided in sections 7.5.1 to 7.5.6.

7.5.1 Recommendations based on the perceptions of owners and managers of SMEs in the Gauteng province regarding organisational agility and business performance

To maintain satisfactory technology capability, SMEs in the Gauteng province should:

- adopt technology-driven systems such as Just-in-Time, value analysis, concurrent engineering and modular design systems; and
- invest in upgrading production, information and inventory management systems.

To maintain satisfactory collaborative innovation, SMEs in the Gauteng province should:

- upgrade process/product design by investigating customer needs in the product development process; and
- promote collaboration among major functions from the planning stage.

To maintain satisfactory organisational learning, SMEs in the Gauteng province should:

- provide an optimal working environment in which best performance practices can be disseminated; and
- promote interdisciplinary training and team-based activities.

To maintain satisfactory business performance regarding internal alignment, SMEs in the Gauteng province should:

- align functional strategies with business strategy well; and
- align operational strategy with other functional strategies well.

To maintain satisfactory business performance regarding organisational agility, SMEs in the Gauteng province should:

- be flexible in product mix or variety; and
- maintain short cycles in product design and innovation.

To maintain satisfactory business performance, SMEs in the Gauteng province should:

- enhance return on investment by employing the skills and information needed to identify feasible investment projects; and
- boost sales growth by having the ability to achieve market leadership.

7.5.2 Recommendations based on the influence of organisational agility and technology capability

To increase technology capability through organisational agility, SMEs in the Gauteng province should:

- regularly assess the potential influence of new technology on their operations;
- be susceptible to new technology and methods to do business;
- have specific mechanisms to conduct environmental scanning on technology;
- adopt technology-driven production systems such as Just-in-Time, value analysis, concurrent engineering and modular design systems; and
- invest in upgrading production, information and inventory management systems.

7.5.3 Recommendations based on the influence of organisational agility and collaborative innovation

To enhance collaborative innovation through organisational agility, SMEs in the Gauteng province should:

- collaborate with customers for process development and improvement;
- consider collaborative innovation as a viable innovation method;
- consider the innovation process as a common standard;
- open and maintain physical and virtual channels for information and knowledge sharing; and
- promote collaboration among major functions from the planning stage.

7.5.4 Recommendations based on the influence of organisational agility and organisational learning

To develop organisational learning through organisational agility, SMEs in the Gauteng province should:

- empower employees for individual learning to manage customer contact services;

- promote individual and organisational learning for business environment adaptation;
- consider learning as a key to guarantee the firm's existence in its sector;
- include learning as a key factor in basic values of any change in the business process; and
- promote interdisciplinary training and team-based activities.

7.5.5 Recommendations based on the influence of organisational agility and internal alignment

To advance internal alignment through organisational agility, SMEs in the Gauteng province should:

- align their goals and objectives measures with strategic task performance well;
- have well-integrated IT systems across functional units;
- adopt strategic planning processes that encourage information sharing and cross-functional cooperation;
- align functional strategies with business strategy well; and
- align operational strategy with other functional strategies well.

7.5.6 Recommendations based on the influence of organisational agility and business performance

To improve business performance through organisational agility, SMEs in the Gauteng province should:

- improve customer satisfaction by adjusting to trends, be responsive and flexible to consumer needs;
- advance employee satisfaction by involving employees in the process of management via delegation, entrusting responsibilities and sharing information and knowledge;
- increase profit growth through the ability to achieve lower production cost and greater market share;
- enhance return on investment by employing the skills and information needed to identify feasible investment projects; and
- boost sales growth by having the ability to achieve market leadership.

7.6 REALISATION OF THE OBJECTIVES OF THE STUDY

The current study managed to achieve the three sets of objectives that were formulated in the first chapter of the thesis. These were the primary objective, theoretical objectives and empirical objectives.

7.6.1 Realisation of the primary objective

The primary objective of the study was to investigate the contributions of organisational agility towards the business performance within SMEs in the Gauteng province. This objective was realised through the testing of the hypotheses that were formulated for the study. These were stated in the first chapter but were tested in Chapter six where structural equation modelling analysis was conducted to test the relationships between the variables. The results of the analysis indicate that organisational agility and its underlying dimensions contribute positively towards the business performance within SMEs in the Gauteng province.

7.6.2 Realisation of theoretical objectives

In this study, the three theoretical objectives were formulated in the first chapter of the thesis. These are:

- to conduct a literature review on SMEs;
- to explore literature on organisational agility and its sub-elements such as technology capability, collaborative innovation, organisational learning and internal alignment; and
- to analyse literature on business performance.

The first theoretical objective is realised in the second chapter, which is a report on the literature that focuses on SMEs from a global perspective, in Europe, America, Africa and South Africa. It discusses the definitions of SMEs in different parts of the world and reflects on contributions of SMEs in these regions. It further analyses challenges faced by SMEs in the same environments, after which it directs attention to the legislation of SMEs in South Africa. The third theoretical objective is realised in Chapter three, which analyses the theory behind the concepts of organisational agility and its various sub-elements, namely, technological capability, collaborative innovation, organisational learning and internal alignment. The fourth chapter analyses literature that focuses on business performance. It covers issues such as definitions of business performance, the concept of business performance, business performance management, business performance management systems, the Balanced Score card and the importance of business performance management.

7.6.3 Realisation of empirical objectives

In this study, the six empirical objectives were formulated in the first chapter. These are:

- to determine perceptions of owners and managers of SMEs towards the implementation of organisational agility and business performance in their businesses;
- to investigate the influence of organisational agility on the technological capability of SMEs in the Gauteng province;

- to establish the influence of organisational agility on the collaborative innovation of SMEs in the Gauteng province;
- to establish the influence of organisational agility on the organisational learning of SMEs in the Gauteng province;
- to establish the influence of organisational agility on the internal alignment of SMEs in the Gauteng province; and
- to determine the influence of organisational agility on the business performance of SMEs in the Gauteng province.

These six empirical objectives are realised in Chapter six, which reports on the analyses and interpretation of the data. The chapter specifically discusses issues such as the response rate, demographic details of respondents, perceptions of respondents towards the scale items, and the relationships between constructs. This is achieved by the use of statistical techniques such as descriptive statistics, structural equation modelling, correlation analysis and regression analysis.

7.7 CONTRIBUTION OF THE STUDY

This study is important in several ways. Theoretically, the study contributes to the existing body of knowledge since it is an addition to the available literature on organisational agility and business performance in SMEs. It is also an important source of information on research methodologies for studies in SME management. Furthermore, the study provides a specific conceptualisation of the relationship between organisational agility and business performance within SMEs. The study is ground-breaking in the sense that no such study had been conducted before in that area.

Practically, the study provides information to owners and managers of SMEs regarding the improvement of business performance. It emphasises that SME business performance can be improved by enhancing the four organisational agility sub-elements considered in this study, namely, technology capability, collaborative innovation, organisational learning and internal alignment. This illustrates that where business underperformance within SMEs is unsatisfactory, such as when service delivery is inadequate, the solution is to optimise the four agility factors mentioned in this study. This in turn will lead to better supply chain performance. Therefore, this study provides an important solution to the high SME failure rate facing most developing countries, inclusive of South Africa.

7.8 LIMITATIONS AND SUGGESTIONS FOR FURTHER RESEARCH

Although the current study provided a number of useful insights on the relationship between organisational agility and business performance, it has several limitations that need to be highlighted so that they can be addressed in the future. The first limitation is that the study was restricted to a small sample size of 564 SMEs that were based on geographic location, namely, the Gauteng

province. In view of this, future studies could be conducted using larger samples composed of SMEs drawn from different provinces. The second limitation is that the study did not consider all organisational agility factors, some, which are also important in influencing SME business performance. Future studies could be conducted using other organisational agility sub-elements that were excluded from this study. The third limitation is that the researcher could not confirm the accuracy of the responses because respondents completed the questionnaires in their own time in the absence of the researcher. The researcher did not have the resources to sit with each respondent in their own time to monitor the completion of the questionnaires. In future, it may be best to conduct the study using a mixed method approach, which ensures that the data collection is triangulated through the use of a combination of qualitative and quantitative methodologies. In that manner, an opportunity is provided to collect data using face-to-face interviews, which ensures that the researcher can control the responses provided by participants.

7.9 FINAL REMARKS

The purpose of this study was to investigate the contributions of organisational agility towards the business performance within SMEs in the Gauteng province. Only one in ten newly established business enterprises survive for longer than ten years in the business environment. The reasons behind the failures of these small enterprises include the lack of access to financing, lack of financial and managerial skills, lack of expertise as well as economic factors such as poor sales and weak growth prospects. There are several possible reasons for the failure of SMEs and there is no 'one size fits all' solution to the struggles involved in establishing an entrepreneurial venture that is able to survive economic turbulence. As a possible solution to the scourge of SME business failure, there is a need to investigate how best practice in management can be used as a tool to assist the streamlining of the operations of such enterprises. The list of available best practices in management could plausibly be inexhaustible and beyond the scope of a single study, although two areas of interest are organisational agility and business performance.

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APPENDIX 1

RESEARCH QUESTIONNAIRE

Date: 05 December 2016

Dear respondent,

I am a postgraduate student at the Vaal University of Technology studying towards a Doctoris Technologiae: Business Degree. The title of my research project is **THE CONTRIBUTIONS OF ORGANISATIONAL AGILITY TOWARDS BUSINESS PERFORMANCE WITHIN SMALL AND MEDIUM SCALE ENTERPRISES IN GAUTENG PROVINCE.**

You are invited to participate in this research study by completing the attached survey questionnaire. This questionnaire consists of eight sections. Before you complete the enclosed questionnaire, I wish to confirm that:

- Your employer has given me permission for this research to be carried out.
- Your participation in this study is voluntary and you are free to withdraw at any time.
- Your anonymity will be maintained and no comments will be ascribed to you by name in any written document or verbal presentation. Nor will any data be used from the questionnaire that might identify you to a third party. Please do not write your name anywhere on the questionnaire.
- On completion of the research, a copy of the completed research report will be made available to you upon request.
- Completion of the questionnaire will take approximately 15 minutes.

If you have any queries concerning the nature of this research or should you have any question/s please feel free to contact me at sithembiso.govuzela@vut.ac.za or 082 920 6040.

Your response and time is greatly appreciated. Thank you!

Yours sincerely,

Survey questionnaire

Section A: Demographic information

In this section, we would like to find out a little more about you and the profile of your company. Please place a cross (x) in the appropriate block.

| | | | |
|-----------|--------------------|------|--------|
| A1 | Your gender | Male | Female |
|-----------|--------------------|------|--------|

| | | | | | | |
|-----------|-----------------------|-------------|-------------|-------------|-------------|-------------------|
| A2 | Your age group | 18-25 years | 26-33 years | 34-41 years | 42-49 years | 50 years and over |
|-----------|-----------------------|-------------|-------------|-------------|-------------|-------------------|

| | | | | | | |
|-----------|-------------------------------|---------------|----------|----------------|---------|------------------------------|
| A3 | Highest qualifications | Matriculation | Diplomas | Degree/honours | Masters | Other (Specify)..... |
|-----------|-------------------------------|---------------|----------|----------------|---------|------------------------------|

| | | | | | | |
|-----------|------------------|---------|-------|--------------|----------|----------------------|
| A4 | Ethnicity | African | White | Indian/Asian | Coloured | Other (Specify)..... |
|-----------|------------------|---------|-------|--------------|----------|----------------------|

| | | | | | | |
|-----------|------------------------|------------------|----------------------|-----------------------|------------------------|-------------------|
| A5 | Work experience | Less than 1 year | Between 1 to 5 years | Between 5 to 10 years | Between 10 to 15 years | 15 years and over |
|-----------|------------------------|------------------|----------------------|-----------------------|------------------------|-------------------|

SECTION B: SME profile

| | | | | | |
|-----------|--|--------------|-----------|------------|------------|
| B1 | Number of employees in this SME | Less than 50 | 51 to 100 | 101 to 150 | 151 to 200 |
|-----------|--|--------------|-----------|------------|------------|

| | |
|-----------|---|
| B2 | Type of industry sector you operate in |
|-----------|---|

| | | | | | | | |
|--|---------------|--|----------------------------|--|---------------------------------------|-------------------------------|--|
| | Manufacturing | Retail and Motor Trade and Repair Services | Electricity, Gas and Water | Wholesale Trade, Commercial Agents and Allied Services | Transport, Storage and Communications | Finance and Business Services | Other (Specify)..... |
|--|---------------|--|----------------------------|--|---------------------------------------|-------------------------------|--|

| | | | | | | |
|-----------|--------------------------------------|----------------|--------------------|--------------------|--------------------|--------------------|
| B3 | Turnover per annum (millions) | Less than R10m | Between 10m to 20m | Between 20m to 30m | Between 30m to 40m | Between 40m to 50m |
|-----------|--------------------------------------|----------------|--------------------|--------------------|--------------------|--------------------|

| | | | | | | |
|-----------|---------------------------|------------------|----------------------|-----------------------|------------------------|-------------------|
| B4 | Years in existence | Less than 1 year | Between 1 to 5 years | Between 5 to 10 years | Between 10 to 15 years | 15 years and over |
|-----------|---------------------------|------------------|----------------------|-----------------------|------------------------|-------------------|

SECTION C: Technology capability

We would like to find out a little more about your perceptions of technology capability in your firm. Please indicate the extent to which you agree or disagree by encircling the corresponding number between 1 (Strongly disagree) and 5 (Strongly agree). A rating of 3, point towards moderate acceptance of the statement.

| | | | | | | | | |
|-----|--|-------------------|---|---|---|---|---|----------------|
| TC1 | Our firm adopts technology driven production systems such as Just-in-Time, value analysis, concurrent engineering and modular design systems | Strongly disagree | 1 | 2 | 3 | 4 | 5 | Strongly agree |
| TC2 | Our firm invests in upgrading production, information and inventory management systems | Strongly disagree | 1 | 2 | 3 | 4 | 5 | Strongly agree |
| TC3 | Our firm regularly assesses the potential influence of new technology on its operations | Strongly disagree | 1 | 2 | 3 | 4 | 5 | Strongly agree |
| TC4 | Our firm is susceptible to new technology and/or methods to do business | Strongly disagree | 1 | 2 | 3 | 4 | 5 | Strongly agree |
| TC5 | Our firm has specific mechanisms to do environmental scanning on technology | Strongly disagree | 1 | 2 | 3 | 4 | 5 | Strongly agree |

SECTION D: Collaborative innovation

We would like to find out a little more about your perceptions of collaborative innovation in your firm. Please indicate the extent to which you agree or disagree by encircling the

corresponding number between 1 (Strongly disagree) and 5 (Strongly agree). A rating of 3, points towards moderate acceptance of the statement.

| | | | | | | | | |
|-----|---|-------------------|---|---|---|---|---|----------------|
| CII | Our firm upgrades process/product design by investigating customer needs in the product development process | Strongly disagree | 1 | 2 | 3 | 4 | 5 | Strongly agree |
| CI2 | Our firm promotes collaboration among major functions from the planning stage | Strongly disagree | 1 | 2 | 3 | 4 | 5 | Strongly agree |
| CI3 | Our firm collaborates with customers for process development and improvement | Strongly disagree | 1 | 2 | 3 | 4 | 5 | Strongly agree |
| CI4 | Collaborative innovation is a viable innovation method for our firm | Strongly disagree | 1 | 2 | 3 | 4 | 5 | Strongly agree |
| CI5 | The innovation process is considered as a common standard within our firm | Strongly disagree | 1 | 2 | 3 | 4 | 5 | Strongly agree |
| CI6 | Our company opens and maintains physical and virtual channels for information and knowledge sharing | Strongly disagree | 1 | 2 | 3 | 4 | 5 | Strongly agree |

SECTION E: Organisational learning

We would like to find out a little more about your perceptions of organisational learning in your firm. Please indicate whether you agree with the statements by encircling the corresponding number between 1 and 5. A value of 3, points towards moderate acceptance of the statement.

| | | | | | | | | |
|-----|--|-------------------|---|---|---|---|---|----------------|
| OL1 | Our firm provides an optimal working environment in which best performance practices can be disseminated | Strongly disagree | 1 | 2 | 3 | 4 | 5 | Strongly agree |
| OL2 | Our firm promotes interdisciplinary training and team-based activities | Strongly disagree | 1 | 2 | 3 | 4 | 5 | Strongly agree |
| OL3 | Our firm empowers employees for individual learning to manage customer contact services | Strongly disagree | 1 | 2 | 3 | 4 | 5 | Strongly agree |
| OL4 | Our firm promotes individual and organisational learning for business environment adaption | Strongly disagree | 1 | 2 | 3 | 4 | 5 | Strongly agree |
| OL5 | Learning in our firm is seen as a key to guarantee the firm's existence in its sector | Strongly disagree | 1 | 2 | 3 | 4 | 5 | Strongly agree |
| OL6 | Our basic values of any change in the business process include learning as a key factor | Strongly disagree | 1 | 2 | 3 | 4 | 5 | Strongly agree |

SECTION F: Internal alignment

We would like to find out a little more about your perceptions regarding internal alignment in your firm. Please indicate whether you agree with the statements by encircling the corresponding number between 1 and 5. A value of 3, points towards moderate acceptance of the statement.

| | | | | | | | | |
|------|--|-------------------|---|---|---|---|---|----------------|
| IA1 | Our firm aligns functional strategies with business strategy well | Strongly disagree | 1 | 2 | 3 | 4 | 5 | Strongly agree |
| IA 2 | Our firm aligns operational strategy with other functional strategies well | Strongly disagree | 1 | 2 | 3 | 4 | 5 | Strongly agree |
| IA 3 | Our firm aligns its goals and objectives measures with strategic task performance well | Strongly disagree | 1 | 2 | 3 | 4 | 5 | Strongly agree |
| IA4 | Our firm has well integrated IT systems across functional units | Strongly disagree | 1 | 2 | 3 | 4 | 5 | Strongly agree |

| | | | | | | | | |
|-----|---|-------------------|---|---|---|---|---|----------------|
| IA5 | Our strategic planning process actually encourages information sharing and cross-functional cooperation | Strongly disagree | 1 | 2 | 3 | 4 | 5 | Strongly agree |
|-----|---|-------------------|---|---|---|---|---|----------------|

SECTION G: Organisational agility

We would like to find out a little more about your perceptions regarding organisational agility in your firm. Please indicate whether you agree with the statements by encircling the corresponding number between 1 and 5. A value of 3, points towards moderate acceptance of the statement.

| | | | | | | | | |
|-----|--|-------------------|---|---|---|---|---|----------------|
| OA1 | Our firm has been highly flexible in product mix or variety | Strongly disagree | 1 | 2 | 3 | 4 | 5 | Strongly agree |
| OA2 | Our firm has maintained short cycles in product design and innovation | Strongly disagree | 1 | 2 | 3 | 4 | 5 | Strongly agree |
| OA3 | Our firm has been responsive to external market requirements and environmental regulations | Strongly disagree | 1 | 2 | 3 | 4 | 5 | Strongly agree |
| OA4 | Our firm responds quickly if something important happens with regards to its customers | Strongly disagree | 1 | 2 | 3 | 4 | 5 | Strongly agree |
| OA5 | Our firm is flexible and develops its products based on customer needs | Strongly disagree | 1 | 2 | 3 | 4 | 5 | Strongly agree |
| OA6 | Our firm is quick to embrace innovative ideas for new products and services | Strongly disagree | 1 | 2 | 3 | 4 | 5 | Strongly agree |

SECTION H: Business performance

We would like to find out a little more about your perceptions regarding the business performance of your firm. Please indicate whether you agree with the statements by encircling the corresponding number between 1 (much worse than industry average) and 5 (much better than industry average). A value of 3, points towards a neutral view of the statement.

| | | | | | | | | |
|------|----------------------|------------|---|---|---|---|---|-------------|
| BPE1 | Return on investment | Much worse | 1 | 2 | 3 | 4 | 5 | Much better |
| BPE2 | Sales growth | Much worse | 1 | 2 | 3 | 4 | 5 | Much better |

| | | | | | | | | |
|------|-----------------------|------------|---|---|---|---|---|-------------|
| BPE3 | Profit growth | Much worse | 1 | 2 | 3 | 4 | 5 | Much better |
| BPE4 | Customer satisfaction | Much worse | 1 | 2 | 3 | 4 | 5 | Much better |
| BPE5 | Employee satisfaction | Much worse | 1 | 2 | 3 | 4 | 5 | Much better |

Thank you for taking time to complete this. Your views are much appreciated

APPENDIX 2
DECLARATION BY LANGUAGE EDITOR

8 Belle Ombre Road

Tamboerskloof

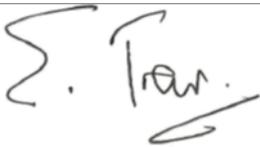
Cape Town 8001

Faculty of Management Sciences
Vaal University of Technology
Vanderbijlpark.

14 November 2017

LANGUAGE EDITING

This is to certify that I language edited, together with technical editing, “The contributions of organisational agility towards business performance within small and medium scale enterprises in Gauteng Province,” by Sithembiso Govuzela for his degree in D. Tech: Business in the Faculty of Management Sciences.



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