The role of management accounting practices in the success of Small and Medium-sized Enterprises in Durban

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DECLARATION

I, Sicelo Cele, declare that this dissertation is a representation of my own work in conception and execution. This work has not been submitted in any form for another degree at any university or institution of higher learning. All information cited from published or unpublished works have been acknowledged.

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ABSTRACT

The sustainability of small and medium-sized enterprises (SMEs) in South Africa is important, mainly because of their contribution to the Gross Domestic Product (GDP) of the country as a whole. Nonetheless, the high rate of SME failure in South Africa is largely attributable to lack of management skills by owners and managers of these SMEs. This study investigated the role of management accounting practices in the success of SMEs in Durban. The objectives were to identify the types of management accounting practices used in SMEs, to examine factors that affect the use of management accounting practices by SMEs, to examine the extent to which management accounting practices are used by SMEs and to examine the impact of management accounting practices in SMEs' success.

A quantitative approach was adopted in a form of self-administered questionnaires which were mailed to respondents. Data were analyzed using descriptive statistics to summarise the opinions of the respondents from the data collected. The findings were analysed using the Statistical Package for Social Sciences (SPSS) version 25.

The findings of the study indicate that although the management accounting practices were not often used, the most used costing system was traditional costing as well as process costing. In terms of the decision support and investment appraisal tools, the most used tool was the accounting rate of return followed by the payback method and relevant cost and revenues. Planning and control techniques such as the sales budget and production costing were also used by SMEs in Durban. Factors that affect the use of management accounting practices are the lack of management accounting knowledge, lack of education and skills and the cost to employ management accountants.

Management accounting practices were found to have a positive relationship with planning and performance. Challenges faced by SMEs are financial challenges, human resource challenges as well as technological challenges. The study recommended that SMEs' owners and managers should attend management accounting training, employ management accountants or outsource the management accounting function. Implementing management accounting practices by SMEs may improve their business management in terms of cost controls and decision-making.

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LIST OF ACRONYMS

ABC - Activity Based Costing

CIMA - Chartered Institute of Management Accountants

DTI - Department of Trade and Industry

DUT- Durban University of Technology

EDGE - Economic Development and Growth in eThekwini

GDP - Gross Domestic Product

GEM - Global Entrepreneurship Monitor

IFRS - International Financial Reporting Standards

IREC - Institutional Research Ethics Committee

IT- Information Technology

OECD – Organization for Economic Co-operation and Development

PMTs - Performance Measurement Tools

ROI - Return on Investment

SAICA – South African Institute of Chartered Accountants

SARS – South African Revenue Service

SEDA – Small Enterprise Development Agency

SMA - Strategic Management Accounting

SME - Small and Medium-sized Enterprise

SMME – Small, Medium and Micro-sized Enterprise

SMMTE - Small, Medium and Micro-Sized Tourism Enterprise

SPSS - Statistical Package for the Social Sciences

UNIDO - United Nations Industrial Development Organization

CHAPTER ONE
INTRODUCTION

1.1 Background to the study

Small and medium-sized enterprises (SMEs) are seen as a vehicle to promote economic development (Nandan 2010: 65; Shipulwa 2016: 1; Bruwer, Coetzee and Meiring 2017; Organization for Economic Co-operation and Development (OECD) 2017). SMEs play an important role in job creation in many countries. In the United Kingdom, SMEs employ around 59% of the workforce (Lucas, Prowle and Lowth 2013: 3), in Malaysia, SMEs contribute more than 30% of the total workforce while in Kenya, SMEs account for 79.8% of the total workforce (Mbogo 2011: 109). The importance of these SMEs in South Africa is evident from the interventions by government to address SME failures and promote sustainability through the provision of training and financial support. Despite the best efforts of the South African government, new SMEs have achieved limited growth (Olawale and Garwe 2010: 730).

There is potential for management accounting practices to be used in the decision-making of SMEs in South Africa. Decisions in these SMEs should be informed by management accounting information to ensure their sustainability (Shaku 2011: 16). In South Africa, Maziriri and Mapuranga (2017: 22) studied the impact of management accounting practices in Gauteng, and revealed that “management accounting practices such as costing systems, budgeting, performance evaluation, information for decision-making and strategic analysis are instrumental in stimulating SMEs’ performance”. Mbumbo (2015: 94) studied the management accounting skills of decision-makers of SMEs in the tourism industry in Western Cape. Mbumbo (2015: 94) asserted that decision-makers in SMEs in the tourism sector are able to use management accounting skills and perceive them as being effective for the business management. Maduekwe (2015: 5) discovered that most decision-makers of SMEs in South Africa lack conventional management accounting skills. They largely rely on unconventional techniques such as their gut-feeling, rule of thumb, personal whims, as well as trial-and-error techniques when they are budgeting, measuring performance and pricing decisions, which are unsuitable in today’s business environment. Kirsten, Vermaak and Wolmarans (2015: 32) studied performance measurement in SMEs in South Africa.

They concluded that the use of performance measurement tools is important in SMEs as they can assist in improving their performance and chances of survival. Management accounting practices are necessary for control, monitoring performance and formulating strategies to achieve business objectives. SME owners and managers should be able to use management accounting practices to identify potential opportunities for growth and explore them accordingly. Therefore, management accounting practices are critical for the survival of SMEs in South Africa.

1.2 Problem statement

SMEs are central to South African economic development (Agbenyegah 2013: 2; Sharmilee 2014: 1; Berry 2011: 5). Despite their recognised importance, South African SMEs have a high failure rate (Aren and Sibindi 2014: 87; Nieuwenhuizen 2019). Nandan (2010) as cited by Lucas *et al.* (2013: 3) claimed that the high failure rate and underperformance of SMEs is often due to SMEs' failure to utilise suitable management accounting techniques. Lucas *et al.* (2013: 3) also contend that this is an under-researched area. Most SMEs fail within two years of start-up due to a lack of the necessary managerial skills to sustain their businesses (Govender 2014: 1).

Mbogo (2011: 110) notes that the lack of management accounting skills for decision making and the lack of technical skills are as much obstacles to developing a small business as is the inability to access credit. Furthermore, Tauringana and Afrifa (2013: 185) affirm that SMEs are poorly managed due to lack of management competences. Likewise, Watson (2004: 16) acknowledged that a lack of managerial skills and training is an important reason for enterprise failure.

According to Van der Poll (2015: 1), management accounting improves decision-making as it communicates decision relevant insight and analysis to every decision-maker. Likewise, Matambele (2014: 11) notes that management accounting plays an important role in the decisions an organisation makes and may determine the success or failure of the organisation. There is therefore a need to investigate the management accounting practices used by SMEs in Durban because of their high failure rates which have an adverse impact on the economy of the country and to be able to suggest any recommendations which could be made to promote the use of these practices.

1.3 Aim and objectives of the study

The aim of the study is to investigate the role of management accounting practices in the success of SMEs in Durban. By determining the role of management accounting practices in SMEs, recommendations can be made to ensure SMEs are sustainable. This is achieved by addressing the following research objectives:

1. To identify management accounting practices used by SMEs in Durban,
2. To examine the extent to which management accounting practices are used by SMEs in Durban,
3. To determine the factors that affect the use of management accounting practices in SMEs in Durban,
4. To examine the impact of management accounting practices on SMEs' success, and
5. To suggest recommendations that would contribute towards the adoption of appropriate management accounting practices to be used by SMEs in Durban.

1.4 Research questions

Based on the above research objectives, the research questions are thus stated as follows:

1. Which management accounting practices are used by SMEs in Durban?
2. To what extent are management accounting practices used by SMEs in Durban?
3. What are the factors that affect the use of management accounting practices by SMEs in Durban?
4. What impact do management accounting practices have on the success of SMEs in Durban?
5. What recommendations could be suggested towards the adoption of appropriate management accounting practices to be used by SMEs in Durban?

To answer the research questions, this study followed a quantitative research design using a positivist approach by using the perceptions of owners and managers of SMEs to answer the research questions. A questionnaire survey was used to collect data from the targeted SMEs. The sample consisted of 102 respondents from the eThekwini Municipality's contractors' database of SMEs. The data from the questionnaire was analysed using SPSS and descriptive statistics were used to summarise the findings.

1.5 The significance of the study

This study may play a role in encouraging public debate on the business policies and strategies used to regulate and promote SMEs. The study may assist different metropoles to address challenges that have negatively affected SMEs. The South African government may use the findings of the present study to guide future decisions on SMEs and policy development. Researchers and academics may use this study to benchmark future studies on SMEs. Lastly, the study may help in minimising and addressing challenges and problems the SMEs are facing. The study is relevant as it focuses on topical issues in management accounting practices of SMEs operating in Durban.

This study provides information to the decision-makers of SMEs on the roles and benefits of management accounting practices adopted by their peers and competitors. This should enable them to benchmark their own usage of these tools against best practices and possibly adopt the best practices or improve on their current usage of these tools. Without a study such as this one, decision-makers may continue using their own unconventional techniques for managing their businesses to their detriment.

The usage of management accounting practices can benefit SMEs in the many ways emphasised above. Lacking research such as this, it would be difficult for institutions such as the government to measure how well SMEs are using management accounting practices which are favourable for the survival of these entities. A study such as this one is consequently significant to inform the government's processes that are meant to ensure that SMEs not only survive but that they also thrive.

1.6 Structure of the dissertation

The dissertation consists of five chapters which are structured as follows:

Chapter One - Introduction

This chapter provides the background and rationale for the study. This chapter also details the research problem, the significance of the study, the research aims and objectives as well as the research questions.

Chapter Two- Literature review

The literature review presents the key definitions of the management accounting practices used in the study. It also highlights the respective studies on management accounting practices used by SMEs in South Africa as well as in other countries.

Chapter Three- Research methodology

In this chapter the research paradigm that the study follows is outlined together with the research methodology. This chapter also highlights the data analysis methods that are used to analyze the results of the study.

Chapter Four- Presentation and discussion of the findings

This chapter presents the analysis of the data and the findings of the study. This chapter discusses the views of SMEs in Durban with regards to management accounting practices to meet the objectives of the research.

Chapter Five - Conclusions and recommendations

This chapter summarises the results of the study and draws conclusions from the results. The limitations of the study and recommendations for additional research are also discussed.

In the next chapter, the literature review is presented.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

Chapter one provided the background to this study as well as an introduction to the problem statement, research aim, research objectives, research questions and the significance of the study. This chapter reviews the literature related to SMEs and management accounting practices to achieve the research aims and objectives. Chapter two highlights studies in respect of management accounting practices used by SMEs, the impact of management accounting practices in SMEs, factors that affect the use of management accounting practices within SMEs as well as the challenges facing SMEs, particularly in Durban. Randolph (2009: 2) views “conducting a literature review as means of demonstrating an author’s knowledge about a particular field of study, including vocabulary, theories, key variables and phenomena, and its method and history”. Snyder (2019:334) emphasises that an acceptable and unique means of understanding knowledge is a literature review. Literature on management accounting is used to support the view that SMEs could be better managed if management accounting practices are adopted and their survival chances would be enhanced. Academics and researchers who are conducting studies on management of SMEs are informed by existing literature. The review of the literature enables researchers to establish whether the phenomenon is under-researched or inappropriately researched, to establish the methodology used, variables researched and the results obtained while using those variables as the bases of the study (Nader 2012: 8). Consequently, researchers are able to identify any knowledge gaps and emphasis the under-researched areas using new or different variables. The study also discusses other factors that affect the success of SMEs even though the focus is on the management accounting practices.

This chapter focuses on literature on management accounting practices in SMEs across countries in different industries. The next section sets out the key definitions of the key terms used in the study.

2.2 Definitions of key terms used in the study

This section defines the following four terms: SMEs, management accounting, management accounting practices and sustainability.

2.2.1 SMEs

The growth of the small, medium and micro-sized (SMME) sector has been emphasised over the past few years in many countries, both in Africa and elsewhere, such as the United States, United Kingdom, Brazil, Ghana, Zimbabwe, South Africa, Malaysia and India (Asfaq, Younas, Usman and Hanif 2014; Makanyeza and Dzvuke 2015; Gray and Jones 2016; Boadi, Dana, Mertens and Mensah 2017; Domeher, Musah and Hassan 2017. Defining an SMEs can be challenging, as globally there are a many different definitions of SMEs. When defining SMEs, countries and businesses often use use a combination of the asset value of the business, number of people employed, and annual turnover generated (Sitharam 2014: 9). SMEs are therefore defined differently across countries and industries. The National Small Business Act No. 102 of 1996 (Department of Trade and Industry 1996) defines “a small business as a separate and distinct business entity, including cooperative enterprises and non-governmental organisations, managed by one owner or more including its branches or subsidiaries, if any, that can be classified as a micro, very small, small or medium enterprise”. Micro-enterprises have between 1 – 5 temporarily or permanent employees, very small enterprises have less than 10 temporarily or permanent employees, while small enterprises have less than 100 temporarily or permanent employees, and lastly, a medium enterprise has less than 200 employees. SMEs constitute the bulk of established businesses and may employ between five and fifty employees (Bezuidenhout and Nenungwi 2012: 11659). These small businesses are generally referred to as SMEs.

The National Small Business Act No. 102 of 1996 as shown in Table 2.1 provides definitions for different industries on the bases of annual turnover, number of fulltime employees and total amount of fixed assets.

Table 2.1: SME definitions by industry				
Sector or sub-sectors in accordance with the Standard Industrial Classification	**Size or Class**	**In accordance with Standard Industrial Classification Size or Class. Total full-time equivalent of paid employees**	**Total annual turnover (Rm)** *Less than*	**Total gross asset value (Rm) (fixed property excluded)** *Less than*
Agriculture	Medium	51-100	R 3.1-R5	R3.1-5
	Small	11-50	R0.51-R3	R0.51-R3
	Very Small	6-10	R0.21-R0.5	R0.10-R0.5
	Micro	0-5	R0.0-R0.2	R0.0-R0.1
Mining and quarrying	Medium	51-100	R10.1-R39	R6.1-R23
	Small	11-50	R4.1-R10	R2.1-R6
	Very Small	6-10	R0.21-R4	R0.11-R2
	Micro	0-5	R0-R0.2	R0-R0.1
Manufacturing	Medium	51 – 200	R13.1 - R51	R5.1 - R19
	Small	21 - 50	R5.1 - R13	R2.1 - R5
	Very small	6 – 20	R0.21- R5	R0.11 - R2
	Micro	0 – 5	R0 - 0.2	R0 - R0.1
Electricity, gas and water	Medium	51 - 200	R13.1 - R51	R5.1 - R19
	Small	21 - 50	R5.2 - R13	R1.91 - R5
	Very small	6 - 20	R0.21- R5.1	R0.11 - R1.9
	Micro	0 – 5	R0 - R0.2	R0 - R0.1
Construction	Medium	51 - 200	R6.1 - R26	R 1.1 - R5
	Small	21 - 50	R3.1 - R6	R0.51 - R1
	Very small	6 - 20	R0.21 - R3	R 0.11 - R0.5
	Micro	0 – 5	R0 - R0.2	R0 - R0.1
Retail and motor trade and repair services	Medium	51 - 200	R19.1 - R39	R3.1 - R6
	Small	21 - 50	R4.1 - R19	R0.61 - R3
	Very small	6 - 20	R0.21 - R4	R0.11 - R0.6
	Micro	0 – 5	R0 - R0.2	R0 - R0.1
Wholesale trade, commercial agents and allied services	Medium	51 - 200	R32.1 - R64	R5.1 - R10
	Small	21 - 50	R6.1 - R32	R0.61 - R5
	Very small	6 - 20	R0.21 - R6	R0.11 - R0.6
	Micro	0 – 5	R0 - R0.2	R0 - R0.1
Catering, accommodation and other trade	Medium	51 - 200	R6.1 - R16	R1.10 - R3
	Small	21 - 50	R5.2 - R6	R1.91 - R1
	Very small	6 - 20	R0.21 - R5.1	R0.11 - R1.9
	Micro	0 – 5	R0 - R0.2	R0 - R0.1
Transport, storage and communication	Medium	51 - 200	R13.1 - R26	R3.1 - R6
	Small	21 - 50	R3.1 - R13	R0.61 - R3
	Very small	6 - 20	R0.21 - R3	R0.11 - R0.6
	Micro	0 – 5	R0 - 0.2	R0 - R0.1

Finance and business services	Medium Small Very small Micro	51 - 200 21 - 50 6 - 20 0 – 5	R13.1 - R26 R3.1 - R13 R0.21 - R3 R0 - 0.2	R3.10 - R5 R0.51 - R3 R0.11 - R0.5 R0 - R0.1
Community, social and personal services	Medium Small Very small Micro	51 - 200 21 - 50 6 - 20 0 – 5	R6.1 - R13 R1.1 - R6 R 0.21 - R1 R0 - 0.2	R3.1 - R6 R0.61 - R3 R0.11 - R0.6 R0 - R0.1

The study adopted the classifications of SMEs by industry as outlined in the table above. This is because the population of the study includes SMEs operating in different industries across Durban as listed in the eThekwini contractors' database.

2.2.2 Management accounting

Asfaq, Younas, Usman and Hanif (2014) defined management accounting as the production of long experience and techniques of the business, managers and the use of financial information for their firms' decisions. However, the main focus of management accounting is to improve the business performance and profitability and also to assist managers by providing relevant financial and non-financial information for making decisions (Ghorbel 2016). Furthermore, Drury (2015) clarifies that management accounting is more concerned with providing information to people within the business to help them make better business decision; and improve the efficiency and effectiveness of the existing operations. Ayadi and Affes (2014: 47) argue that "management accounting is a technique of monitoring, controlling of the opportunistic behaviour and rewards, and hence, support the decision-making" within the business.

Hilton and Platt (2011: 38) and Ghasemi, Mohamad, Karami, Bajuri, and Asgharizade (2015: 394) view management accounting as a kind of a system that supports managers to access and use necessary management accounting practices to achieve the SMEs' objectives and subsequently improve their performance. Mayanja (2010: 5) concurs that management accounting is one of the key instruments for decision-making in organisations. Breuer, Frumuşanu and Manciu (2013:364) asserted that "management accounting produce and transmit information about the activity costs, information required for the budget and control of the activity, respectively other information imposed by a performing management, information that sustain the elaboration of internal reports and analysis necessary for decision-making and for an

efficient management of the assets" in organisations including microenterprises, SMEs and large companies.

2.2.3 Management accounting practices

Management accounting practices provide management solutions for internal management purposes (Ndwinga 2011). Nuhu, Baird and Appuhami (2016) clarify that management accounting systems are internal information systems that are placed to provide an organisation with relevant information to add value to the organisation as whole. Examples of management accounting practices include budgeting, performance evaluation, decision-making strategies and strategic analyses, among many others (Gichaaga 2013). Lopez and Hiebl 2015: 82) argued that SMEs require special attention when it comes to management accounting practices because they have different resources, but also face different difficulties compared to large enterprises. Berry (2011: 77) affirmed that the use of management accounting practices such as budgets can determine the success of any sized organisation, including small and micro enterprises.

2.2.4 Sustainability and success

Sustainability was first introduced in a report entitled *The Limits of Growth* published in 1972 (Gunilla 2014) and later expanded in the Brundtland Report in 1987 and published in the World Commission on Environment and Development in 1989 (Borim-de-Souza, Balbinot, Travis, Munck, and Takahashi 2015), wherein it was defined as current development without compromising future needs (Barkemeyer, Holt, Preuss, and Tsang 2014). The theory of sustainability is therefore established from sustainable development (Lang and Murphy 2014). Although the terms sustainable development and sustainability are often used interchangeably, they are fundamentally different. From the first perspective, sustainable development is the journey or method to achieve sustainability (Lozano 2008), and from the second perspective, sustainability is the process used to achieve sustainable development (Sartori, Latronico, and Campos 2014).

Currently there is no one definition of sustainability (Galpin and Hebard 2015) with more than sixty different definitions used by various studies (Owens and Legere 2015; Habidin, Zubir, Fuzi, Latip, and Azma 2015; Ratiu and Anderson 2015) depending on how the sustainability is approached and perceived (Barkemeyer *et al*. 2014; Owens

and Legere 2015). Ali, Ismail, Khurram, Soehod, and Omar (2014) and Jafri, Ismail, Khurram and Soehod (2014) define sustainable growth in their studies as reaching growth without having setbacks such as those of a financial, structural or strategic nature. Schwab, Gold, Kunz, and Reiner (2017) defined sustainable growth as growth in economic, social and environmental performance.

George, Siti-Nabiha, Jalaludin, and Abdalla (2016) examined the role of accounting tools, particularly for performance management and reporting systems, in supporting sustainability in strategic operations across various types of organisations. They acknowledged management accounting as one of processes to use to achieve operational sustainability. Bruwer and Coetzee (2016: 202) and Lebacq, Baret and Stilmant (2013: 314) referred to financial sustainability as the SME's ability to attain a sound economic performance to ensure that SMEs continue operating for the predictable future. This concept of financial sustainability would ensure the success of the SME.

Depending on the management of SMEs, they measure success as meeting their targets and strategic goals, such as profits (income more than expenses) and net assets (assets more than liabilities) (Lucas, Lowth and Prowle 2013: 3).

2.3 SMEs' contribution to the economy

There are many opinions, suggestions and results which support the contribution of SMEs to the economic growth of all the nations in the world (Musa and Chinniah 2016). SMEs have become a topical subject among business managers as well as researchers world-wide, and this has led to more focus on research on SMEs (Mafini and Omuruyi 2013). According to Van Scheers and Makhitha (2016), the total number of SMEs in South Africa is just over 2 million. The OECD (2017) also note that SMEs contribute considerably to the national GDP and to private sector employment.

SMEs play a crucial role in the development and sustainability of the nation (Ayandibu and Houghton 2017) as they provide employment to thousands and their contribution to the South African GDP ranges from 70% and 95% (Statistics South Africa 2018). A study by the OECD (2017) showed that the South African SMEs account for 91% of official businesses. SMEs are globally recognised as important drivers of economic success, and are not only job creators, but are also sales generators and a source of tax and thus fiscal revenue (Bruwer, Coetzee and Meiring 2017; OECD 2017).

Accenture (2010: 10) noted that sustainability is of great importance to a business and is vital for future growth. If SMEs are sustainable, the country as a whole will experience economic growth through the significant contribution of SMEs to the GDP. Management accounting practices may not be the only solution for SME growth and survival but they are important to SMEs as they promote planning and control (Berry 2011: 132).

South African economic development relies heavily on the significant contributions by SMEs and therefore SMEs are of great importance in South Africa (Berry 2011: 132). It is therefore very important to ensure that SMEs are sustainable in South Africa since they contribute to the economic growth. However, there is a high failure rate for SMEs in South Africa (EDGE 2013: 4). This high failure rate of SMEs reduces the GDP contribution and contributes to the high unemployment rate, high crime rate and poverty. Furthermore, the Real Economic Bulletin (2017:2) states that in 2015, formal small business employment figures were 5.8 million people compared to 3.6 million people employed by large business. To further support these numbers, Business Unity South Africa (2019) also states that SMEs create many employment opportunities making them the largest contributor to private employment in South Africa.

2.4 Challenges facing SMEs

Many researchers have studied the challenges faced by SMEs (Agbenyegah 2013: 8; Cant and Wiid 2013: 707). They report that there are many challenges faced by SMEs worldwide from both internal and external environments that impact on SME failure. In Canada, Giroux (2008: 126) studied the survival rates of SMEs in Vancouver and found that the lack of management skills, amongst other challenges, contributed to the failure rate, and that many SMEs in Vancouver fail as a consequence of problems in their internal management processes rather than as a result of external circumstances. Dorasamy, Marimuthu, Jayabalan, Raman and Kaliannan (2010: 39) investigated challenges facing management accounting practices in SMEs in Malaysia. The authors conducted a survey to identify the outsourcing landscape as it relates to accounting. They found that there is a significant relationship between outsourcing accounting functions and the two contributing factors of risks and operation management (Dorasamy *et al.* 2010: 39). Amongst the functions that were investigated were accounts receivables, accounts payables, payroll, cash records and the fixed asset accounts.

In South Africa, Smit and Watkins (2012: 6328) reviewed risk management practices in South African SMEs. The authors argued that the barriers to SMEs' success varies and include inherent business barriers such as the lack of management skills and the lack of education and training (Smit and Watkins 2012: 6328). Likewise, Abor and Quartey (2010: 31) argue that South African and Ghanaian SMEs' development are mainly delayed by challenges such as the lack of access to appropriate technology, limited access to international markets, the lack of finance, the lack of management skills and the existence of laws and regulations that negatively impact on their operations.

In Rwanda, Bosire and Nzaramba (2013: 13) noted that SMEs identify a diversity of skills gaps in certain business areas, for example, information and communication technology, technical and industrial knowledge, finance and management accounting. Bosire and Nzaramba (2013: 13) also observed that in Rwanda there is limited innovation and competitiveness in the SMEs sector, and this is caused by the lack of technical and management skills of the owners and management.

In Malaysia, Isa, Saleh and Sapiei (2007: 2) argued that the lack of appropriate financial management and cost controls such as inaccurate financial records, inability to manage changing costs and prices efficiently, undercapitalisation, products controls and credit controls, the lack of financial planning and poor use of assets are factors that contribute to the failure of SMEs. The afore-mentioned aspects are vital in establishing an enterprise's performance. In another Malaysian study, Khalique, Isa, Nassir Shaari and Ageel (2011: 399) added that Malaysian SMEs are also facing challenges such as the economic downturn, barriers to global sourcing, low productivity, the lack of management abilities, the lack of financing, difficulties in accessing technology and strict regulations.

Marembo (2013) collected data using self-administered questionnaires from 201 SMEs registered with the Eastern Cape Development Corporation (ECDC) located in East London and King Williams Town. The author noted that SMEs in South Africa lack appropriate general management skills and human resource skills which have a negative effect on the SME growth. The study revealed that 55% of the SMEs identified lack of resources as a major challenge, while 28.3% confessed that they lack management expertise (Marembo 2013: 32).

Cant and Wiid (2013 investigated challenges facing SMEs in South Africa. Their results indicated that crime, government legislation, unemployment, inflation, and interest rates are the main macro environmental factors affecting South African SMEs. They also identified other factors such as the low demand for products, the wrong pricing strategies implemented and the location of the business to be the major problems experienced by SMEs (Cant and Wiid 2013: 707).

A study by Agwu and Emeti (2014) used a cross sectional survey research design and administered questionnaires to 120 randomly selected operators of SMEs in Port-Harcourt City. The results indicated that the main challenges facing SMEs in Nigeria were poor financing, inadequate social infrastructures, lack of managerial skills and multiple taxes. These problems included inadequate working capital, stiff competition from bigger companies, problems in obtaining raw materials, low capacity utilisation, lack of strategizing by management, poor educational background of owners, and other major financial problems. Agwu and Emeti (2014: 103) also noted other challenges such as the lack of sufficient capital, power supply outages, inadequate infrastructure, lack of focus, insufficient market research, an over-concentration on one or two markets for finished products, lack of successful planning, inexperience, lack of proper accounting records, lack of proper records, failure to separate business and personal finances, lack of business planning, inability to know the difference between revenue and profits, failure to access the right plant and machinery, failure to employ the right staff and competition from other businesses.

Shipulwa (2016) investigated into the challenges facing SMEs in Windhoek, Namibia. One hundred and twenty (120) SMEs who are associates of the Namibian Chamber of Commerce and Industry and Namibian Manufacturing Association were investigated using structured questionnaires as the primary data collection method. The results revealed that access to land, access to finance, high cost of utilities, crime and skills as major challenges faced by the SMEs (Shipulwa 2016: 71). Shipulwa (2016: 74) emphasised lack of finance for capital and investments, taxes and levies, skilled labour, labour retention and technical advice, and lack of technical and vocational training as most important challenges that SMEs need to address in Windhoek.

The South African Institute of Chartered Accountants (SAICA) (2017) in their 2016 SMME insight report stated that SMMEs are challenged by financial crime, attracting and retaining staff, new technology, competition, regulations, accessing funds,

economic uncertainty and rising costs. Mwanza and Benedict (2018) examined the challenges in utilising budgets among SMEs in the manufacturing sector is the Cape Metropole. They found that 74.5% of SMEs indicated that they found management accounting practices are expensive, and 70.6% indicated that they lacked necessary resources such as computers. Other challenges indicated were the lack of sufficient data for budget preparation, a lack of knowledge on how to prepare budgets, that the business environment is too uncertain to use budgets, and the lack of the necessary qualifications and experience to prepare and use budgets. Nieuwenhuizen (2019) reported that the regulatory environment hinders SMEs development, therefore there is a need to examine policy development in South Africa.

In summary, SMEs globally face many challenges both internally and externally. The internal challenges faced by SMEs include the lack of management skills, the lack education and training, financial challenges, the lack of management accounting systems to manage their businesses, the use of the wrong pricing strategies, limited innovation, the lack of finance for capital and investments, the lack of skilled labour, labour retention and technical advice, the lack of technical and vocational training, the lack of technical skills and lack of management accounting information and the lack of experience amongst SME owners and managers. The external challenges faced by SMEs includes lack of access to appropriate technology, limited access to international markets, inflation and interest rates, the location of the business, crime and unemployment, low demand for products and competitiveness in the SME sector.

The next section discusses the use of management accounting practices in SMEs.

2.5 The use of management accounting practices in SMEs

Maroyi and Van der Poll (2014: 5) studied the facilitating of a greener environment through management accounting tools in South Africa and noted that management accounting tools may assist these SMEs in their management with more detailed information. Similarly, Berry (2011: 133) studied financial planning and control systems as an essential tool for the survival of the South African SMEs in the manufacturing sector in the Tshwane Metropolitan Municipality and concluded that suitable financial controls and wide-ranging management accounting practices are two main aspects that are required to ensure the success of SMEs. A more recent study by Msomi, Ngibe and Nyide (2019: 1939) examined the factors that influence the adoption of management accounting practices by manufacturing SMEs in Durban. The study

found that there are internal and external factors that exist. Education, the level experience, age, and size of the firm were found to be influential in the adoption of management accounting practices (Msomi *et al.* 2019).

In South Africa, SMEs are an important tool for economic growth and therefore their sustainability will benefit the country in many ways. SMEs' contribution to economic growth has been overlooked in the past, but their failure rates have increased over the years to a point where many researchers have felt the need to investigate the challenges facing SMEs in South Africa (Agbenyegah 2013: 8; Cant and Wiid 2013: 707). SMEs are failing because of their lack of managerial skills (Nandan 2010: 65). This implies that SMEs' management should be able to utilise all or some of the management accounting techniques required to ensure sustainability and growth in their businesses such as costing systems, performance measurement systems and strategic planning techniques such as budgeting and variance analysis.

The literature on SME management worldwide suggests that managerial competences have a great influence on SMEs' failure (Agwu and Emeti 2014: 104; Padachi 2012: 5). Olawale and Garwe (2010: 731) emphasise that management capabilities are significant to the survival and development of established SMEs. Ahmad (2012a: 215) also asserts that management competency has an influence on the sustainability of SMEs since management are responsible for directing the activities of the business. However, managers of SMEs are individuals who may not be competent in any or some areas of the business. It is therefore imperative that SMEs acquire or outsource management accounting practices to support the decision-making process.

Khoshouei, Oreyzi and Noori (2013: 149) found management competencies to be measured by owners' and managers' values, analysis, decision-making, knowledge, adaptation, performance, leadership and communication. Should management lead the business carelessly, without any guidelines or policies in place to protect the business from conflicts of interest, this may affect the decision-making in the SME. Therefore, management should be competent in order to compete with their competitors and adapt to changes in the market. Mbumbo (2015: 16) noted that having management accounting skills assists owners and managers to make the right decisions and subsequently SMEs are successful.

2.5.1 Capital budgeting

Leite, Fernandes, and Leite (2015: 67) studied factors influencing the use of management accounting practices in the Portuguese textile and clothing sector and found that 51.9% of the companies studied used capital budgeting as the decision-making support system. McLellan and Sherine (2013: 9) reported that 77% of the SMEs investigated adopted capital budgeting techniques in Egypt. In South Africa, Maduekwe (2015: 71) revealed that 65.76% of the SMEs investigated used capital expenditure budgets. Armitage, Webb and Glynn (2016:48) reported that 82% of the SMEs in Australia and 91% of the SMEs in Canada used capital budgeting techniques in a study of management accounting practices used by SMEs in Australia and Canada.

SME are using capital budgeting techniques, such as the accounting rate of return, the internal rate of return, net present value, and payback and discounted payback method, to evaluate investment opportunities. The literature also reveals that SMEs believe that their chances of survival would be enhanced if they used capital budgeting for decision-making (Maduekwe 2015: 97). These capital budgeting techniques are discussed next.

2.5.1.1 Accounting rate of return

The accounting rate of return calculates the project costs based on standard historical cost accounting estimates (Olawale, Olumuyiwa and George 2010: 1226). The accounting rate of return is based on the project assessment using average returns and accounting information rather than the project's main cash-flows. This technique produces a percentage of a return figure, which is then used to rank the other alternative investments (Olawale *et al.* 2010: 1226).

Maroyi and Van der Poll (2012: 9284) found that none of the companies surveyed in South Africa used the accounting rate of return. On the other hand, Ahmad and Zibra (2014: 527) reported that 50% of the Malaysian SMEs used the accounting rate of return. These latter results are similar to those of Harif, Osman and Hoe (2010: 24) who reported that the most used technique by Malaysian SMEs was accounting rate of return. Although Maroyi and Van der Poll (2012) noted that SMEs in South Africa do not use the accounting rate of return, the same assumption cannot be made in the context of SMEs in Durban.

2.5.1.2 Internal rate of return

This is a technique that uses discounted cash flows in order to decide on the viability of long-term investments. If the internal rate of return is greater than the projected cost of capital or hurdle rate, the project will add value to the company (Olawale *et al.* 2010: 26). Menya and Gichinga (2013: 45) asserted that the internal rate of return plays an important role in investment appraisals carried out by financial institutions. This technique can efficiently safeguard financial resources by knowing the internal rates of return and effectively making investments based on this information (Menya and Gichinga 2013: 45).

Maroyi and Van der Poll (2012: 9284) studied the use of capital budgeting in South Africa and found that 46% of the companies investigated used the internal rate of return when making investment decisions. In Malaysia, Ahmad and Zibra (2014: 527) reported that 49% of the SMEs investigated used the internal rate of return. In Kenya, Menya and Gichinga (2013: 44) found the internal rate of return to be the most used capital budgeting technique. In Egypt, McLellan and Sherine (2013: 10) reported that 77% of the SMEs investigated used internal rates of return. Although, Maroyi and Van der Poll (2012) noted that SMEs in their study used the internal rate of return in South Africa, their results cannot be generalised to SMEs in Durban.

2.5.1.3 Net present value

Olawale *et al.* (2010: 1276) define net present value as the "net present value of cash-flows discounted at the cost of capital, less the investment outlay". Ahmad and Zibra (2014: 527) investigated the use of management accounting practices by Malaysian firms in the SMEs sector. They reported that 50% of the SMEs investigated used net present value. In South Africa, Maroyi and Van der Poll (2012: 9284) found that 69% of the companies they investigated used net present value, while Marembo (2013: 108) reported that 16.7% of the SMEs investigated used net present value. In the United Kingdom, Lucas *et al*. (2016: 8) revealed that none of the SMEs investigated used net present value to evaluate major projects. In Kenya, Menya and Gichinga (2013: 44) reported net present value as the most favoured management accounting technique. While in Egypt, McLellan and Sherine (2013: 9) revealed that 77% of the SMEs investigated used net present value. Although Maroyi and Van der Poll (2012) did find

that SMEs used net present value in South Africa, their results cannot be generalised in the context of SMEs in Durban.

2.5.1.4 Payback and discounted payback method

Menya and Gichinga (2013: 45) define the payback period as the calculation of the period length before an enterprise gets returns on its investments. This method is typically used for short-term investments. On the other hand, the discounted pay-back period is the time it takes for the present value of the project's cash-flows to equal the cost of its investment (Olawale *et al*. 2010: 1227). The discounted payback period method considers the time value of money (Olawale *et al*. 2010: 1227).

Lucas *et al*. (2013: 8) studied management accounting practices used by SMEs in the United Kingdom. They found that none of the SMEs they investigated used capital expenditure appraisal tools such as the payback method. In South Africa, Maroyi and Van der Poll (2012:9272) found that 23% of the companies investigated used the payback method when evaluating major projects. However, Marembo, (2013: 108) reported that 69% of the SMEs investigated used payback method while 14.3% used discounted payback method. Ahmad and Zibra (2014: 527) reported that 55% of the SMEs investigated used the payback method in Malaysia. In Egypt, McLellan and Sherine (2013: 9) found 77% of the SMEs investigated used the payback method when evaluating investment projects. Although Maroyi and Van der Poll (2012:9272) noted that SMEs in South Africa used the payback method, the same assumption cannot be made in the context of SMEs in Durban.

In summary, the following capital budgeting techniques are mostly used by SMEs.

In South Africa, (Maroyi and Van der Poll (2012: 9272) revealed that 65.76% of SMEs use capital budgeting techniques. Few of the SMEs used the accounting rate of return. On the other hand, 46% of the SMEs used the internal rate of return. Notwithstanding that 69% of SMEs use net present value (Maroyi and Van der Poll 2012: 9272), this is in contrast with Marembo (2013: 108) who reported that only 16.7% of SMEs use net present value. Also, 23% of SMEs use the payback method (Maroyi and Van der Poll 2012: 9272) in contrast to Marembo (2013: 108) who reported that 69% of SMEs use payback method.

In respect of other countries, in the United Kingdom, Lucas *et al.* (2013: 8) found that none of the SMEs used capital budgeting. In Malaysia, 50% of SMEs used accounting

rate of return and net present value, while 49% used internal rate of return. Capital budgeting techniques are thus adopted differently across countries and the uptake of such techniques is increasingly becoming more important to SMEs, particularly in South Africa. This implies that SMEs would be in a better position to select only the most profitable investment opportunities through the adoption of capital budgeting techniques. Therefore, the adoption of capital budgeting may ensure that SMEs are sustainable.

2.5.2 Costing systems

This section highlights which management accounting costing systems are utilised by SMEs in South Africa and internationally. The use of management accounting costing systems is different in SMEs across countries and industries as discussed below.

2.5.2.1 Contemporary management accounting practices

Ndwiga (2011:16) noted that "contemporary management accounting practices have incorporated the skills of traditional and innovative costing methods". He indicated that these "costing methods includes standard costing, lifecycle costing, activity-based costing (ABC), target costing and process costing" (Ndwiga, 2011:16).

In Bangladesh, Fowzia (2010: 60) reported that SMEs used strategic management accounting techniques, such as ABC, benchmarking, competitive position monitoring, life cycle costing, target costing, quality costing and strategic costing. Karanja, Mwangi, Nyaanga (2012: 16) revealed that modern management accounting techniques such as target costing, just-in-time costing, ABC and lifecycle costing are low in use and undocumented amongst the investigated SMEs in Kenya.

2.5.2.2 Traditional costing systems

Traditional costing systems are costing systems that allocate indirect manufacturing overheads using volume such as direct labour hours or machine hours. This method is widely used by businesses as it is easy and straightforward (Ogunjuboun *et al.* 2009: 87).

Karanja *et al*. (2012: 12) studied the adoption of modern management accounting techniques of SMEs in Kenya and reported that 60% of these SMEs still make use of traditional techniques. However, Karanja *et al*. (2012: 12) asserts that "traditional accounting costing practices do not adequately fulfil their role especially in inter-

organisational accounting practices". This indicates that SMEs tend to believe in traditional management accounting practices rather than the modern management accounting practices.

2.5.2.3 Process costing

Ogunjuboun *et al.* (2009: 138) defined process costing as "a method used in a situation where production follows a series of sequential processes. This method is further used to ascertain the cost of a product or service at each stage of production, manufacture or process Some products may be sold at split off and some after further processing"

Yalcin (2012: 106) studied the adoption and benefits of management accounting practices in Turkey, and reported that 59% of the SMEs investigated used process costing. Ilias, Razek and Yasoa (2010: 85) concluded that 63% of the SMEs investigated used process costing in Malaysia. From the results above, it was noted that SMEs do use process costing, although one cannot make the same assumption in the context of SMEs in Durban.

2.5.2.4 Job costing

Job costing system is a costing system that allocates cost to the specific job undertaken by an entity as incurred. "Job costing involves the detailed accumulation of production costs attributable to specific units or group of units" (Bragg 2006: 68). Ogunjuboun *et al.* (2009: 121) defined job costing as a "method of costing that is used when certain jobs are carried out to customer's specific requirement".

Ilias *et al.* (2010: 85) studied management accounting practices in SMEs in Malaysia and concluded that 44% of the SMEs investigated used job costing. In Turkey, Yalcin (2012: 106) found that 54% of the SMEs investigated used job costing. In Bangladesh, Fowzia (2010: 59) reported that 80% of the SMEs investigated used job costing. From the results above, it can be assumed that SMEs do use job costing, although one cannot make the same assumption in the context of SMEs in South Africa.

2.5.2.5 Life cycle costing

According to Ogunjuboun *et al.* (2009: 283), life cycle costing involves "the estimation of the total costs as well as the expected revenues of a product over its entire life to determine whether or not the costs to be committed now and in the future would be recovered".

Fowzia (2010: 59) studied strategic management accounting techniques in Bangladesh focusing on its relationship with business strategy and the strategic effectiveness of manufacturing organisations. Fowzia (2010: 59) revealed that 82% of the SMEs investigated used life cycle costing in Bangladesh. However, Yalcin (2012: 106) reported that only 19% of the SMEs investigated used life cycle costing in Turkey. From these studies, one may conclude that SMEs do use life cycle costing; however, this cannot be generalised to the context of South African SMEs.

2.5.2.6 Just-in-time costing

Ogunjuboun *et al.* (2009: 63) defined just-in-time costing as "a production costing system driven by demand for finished product where each component on a production line are produced only when needed".

In Indonesia, Sunarni (2013: 622) studied the adoption of management accounting practices and the role of management accountants in Yogerta, and found that 70% of the SMEs investigated used just-in-time costing. In a study by Karanja *et al.* (2012: 12), the authors found 13.3% of the SMEs investigated used just-in-time in Kenya. In Turkey, Yalcin (2012: 106) revealed that 78% of the SMEs investigated used just-in-time. In Bangladesh, Fowzia (2010: 59) reported that none of the SMEs investigated used just-in-time. In Malaysia, Ilias *et al.* (2010: 85) reported that 53% of the SMEs investigated used just-in-time. From the results above, it can be assumed that SMEs have used just-in-time costing, although one cannot use the same assumption in the context of SMEs in South Africa.

2.5.2.7 Target costing

Target costing sets the acceptable restrictions of the cost of a product before the production process. It involves the identification of products that may have demand in the market, estimation of a possible price and deducts the expected profit margin (Ogunjuboun *et al.* 2009: 283).

In Indonesia, Sunarni (2013: 622) revealed that all the SMEs studied used and perceived target costing as an important management accounting tool. Fowzia (2010: 59) found that 90% of SMEs investigated used target costing in Bangladesh. In Turkey, Yalcin (2012: 106) reported that 41% of the SMEs investigated used target costing. In Malaysia, Ilias *et al.* (2010: 85) concluded that 32% of the SMEs investigated used

target costing. In Karanja *et al.* (2012: 12) found that 19.3% of the SMEs investigated used target costing.

2.5.2.8 Activity based costing

According to Rundora, Ziemerink and Oberholzer (2013: 487), ABC is a two-stage method for assigning indirect costs based on cost drivers at different levels of production. The first stage allocates factory overhead costs to production activities or cost centres using a suitable resource consumption cost driver (Rundora *et al*. 2013: 487). The second stage allocates the cost of activities or activity cost pools to cost objects using suitable activity consumption cost drivers (Rundora *et al*. 2013: 487).

Ramljak and Rogosic (2012: 94) observed that the most frequently used costing techniques are ABC and noted that this result was consistent with prior studies (Fowzia 2010; Cinquini and Tenucci 2010). This view however contrasts with that of Fei and Isa (2010: 144) who stated that most SMEs are facing challenges in applying ABC and in some extreme cases, ABC is not successful after investigating factors influencing ABC success.

Karanja *et al.* (2012: 12) revealed that only 4.1% of the SMEs studied used ABC in Kenya. On the other hand, Sunarni (2013: 632) found that 23.3% of SMEs studied used and rated ABC as vitally important, while 73.3% used and rated ABC as moderately important, leaving only 3.3% of the SMEs studied as the non-adopters of ABC in Indonesia. Fowzia (2010: 59) reported that 85% of the SMEs investigated used ABC in Bangladesh. McLellan and Sherine (2013: 9) noted that 13% of the studied SMEs in Egypt. In Turkey, Yalcin (2012: 106) reported that 39% of the SMEs investigated used ABC. In Malaysia, Ilias *et al.* (2010: 85) concluded that 50% of the SMEs investigated used ABC.

2.5.2.9 Cost volume profit analysis

Cost volume profit analysis involves the analysis of how the total cost, total revenues and total profits relate to sales volume (Ogunjuboun *et al*. 2009: 261). In Indonesia, Sunarni (2013: 622) reported that 96.7% of the SMEs investigated used and perceived cost volume profit analysis and price analysis as an important tool. In the United Kingdom, Lucas *et al*. (2013: 6) found that cost volume profit analysis is frequently used. In Thailand, Sumkaew, Liu and McLaren (2012: 11) noted that a cost volume profit analysis is frequently used by the SMEs investigated. Armitage *et al*. (2016: 54)

reported that none of the SMEs investigated used cost volume profit analysis in Australia and Canada. Ilias *et al.* (2010: 85) revealed that 53% of the SMEs investigated used cost volume profit analysis in Malaysia.

2.5.2.10 Economic value added

Economic value added measures the residual income method that serves as an indicator of the profitability of the production or service undertaken. Its underlying premise constitutes of the reality that profitability happens if all production and service create returns to shareholders (Ogunjuboun *et al.*, 2009: 243). In Thailand, Sumkaew *et al.* (2012: 11) found that 50% of the SMEs investigated perceived economic value added as not beneficial. In Indonesia, Sunarni (2013: 622) reported that 83.3% of the SMEs investigated used economic value added. In Malaysia, Ilias *et al.* (2010: 85) noted that 88% of the SMEs investigated did not use economic value added. Yalcin (2012: 108) reported that 32% of the SMEs studied in Turkey used economic value added, 28% of the SMEs studied in Greece used economic value added, 71% of the SMEs studied in Finland used economic value added, 20% of the SMEs studied in India used economic value added.

2.5.2.11 Variable costing

Variable costing measures only the variable costs of goods or services produced with the assumption that fixed costs do not change regardless of the level of production or service (Ogunjuboun *et al.*, 2009: 243).

Ilias *et al.* (2010:85) reported that only 62% (36 out of the 58) SMEs studied used variable cost analysis in Malaysia. The results are in contrast with those of Armitage *et al.* (2016: 48) who noted that only 18% of the SMEs studied in Australia used variable costing while only 27% of the SMEs studied in Canada use variable costing.

2.5.2.12 Absorption costing

Absorption costing measures both fixed costs and variable costs as they are incurred from the start of the production level up to the sale of the goods or services (Ogunjuboun *et al.*, 2009: 243).

Armitage *et al.* (2016: 48) revealed that only 18% of the SMEs studied in Australia used variable costing while only 36% of the SMEs studied in Canada use a variable costing system.

The literature above clearly attests to the ability of SMEs to utilise management accounting costing systems. The nature and type of organisation also influences the use of certain management accounting practices.

In summary:

- SMEs have adopted management accounting techniques such as just-in-time costing, traditional methods, target costing, life cycle costing, and ABC.
- Product costing, break even analysis, working capital measures, formal budgets, and cost volume profit analysis are frequently used by SMEs.
- Standard cost variance analysis, overhead allocation and strategic management accounting are not used by these SMEs.
- Strategic management accounting techniques such as ABC, benchmarking, competitive position monitoring, life cycle costing, quality costing and strategic costing are not frequently used.
- Target costing was frequently used and the rest of the techniques were low in adoption.
- SMEs tend to use traditional management accounting practices more than advanced management accounting practices.
- SMEs perceive traditional management accounting tools more important rather than the contemporary ones.

2.5.3 Information for planning and control

Literature has documented the change in management accounting practices over the years, and this change includes the usage in financial planning and control systems (Berry 2011: 1). Berry also indicated that information for planning and control is obtained from non-financial indicators. These indicators include competitors' information, the availability of resources, and quality and customer satisfaction which are utilised by SMEs' management in their decision-making (Berry 2011: 2). Matambele (2014: 43) noted that management accounting practices could assist organisations by providing SMEs with relevant sustainability information for their decision-making processes. In this way, the information that management accounting provides could be applied to make good and reliable decisions for a sustainable future. This could improve the financial performance of an organisation. In a study by Ilias *et*

al. (2010: 65), the authors reported that 59.3% of the SMEs investigated used budgeting systems for planning and control.

The following sections discuss management accounting practices used for planning and control.

2.5.3.1 Variance analysis

Ogunjuboun *et al*. (2009: 215) asserted that "a variance is simply the difference between planned or budgeted cost and actual costs". Similarly, the difference between budgeted revenues and actual revenue accrued or received is the variance in respective revenues (Ogunjuboun *et al*. 2009: 215).

Armitage *et al.* (2016: 48) reported that 82% of SMEs studied in Australia and 73% of SMEs studied in Canada used variance analysis. Variance analysis was extensively employed by the majority of SMEs studied and these variances did not involve sophisticated techniques whereby total variance is broken down into the subcomponents such as a price variance, quantity variance and mix variance (Armitage *et al.* 2016: 53). These SMEs only did an analysis to find the difference between budgeted and actual results and for taking corrective actions. Likewise, Ilias *et al.* (2010: 85) found that 48% of the SMEs investigated used variance analysis in Malaysia.

2.5.3.2 Budgets

Ogunjuboun *et al.* (2009: 167) defined budgets as "exercises in communication by which the expectations of management about levels of performance of subordinates are communicated". Anohene (2011: 24) added that a budget is a quantitative expression of a plan for a defined period meant to attain a certain objective. Although the adoption of budgeting tools will differ according to the nature of the business (Badu 2011: 17), some budgeting tools are applicable to all SMEs.

In South Africa, Maduekwe (2015: 70) studied the usage of management accounting tools by SMEs in Cape Metropole. He found that 79.35% of the SMEs investigated used budgets for planning after reporting; thus 20.65% of those SMEs did not use budgeting at all. Those that used budgets indicated that they frequently used sales budgets (83.57%), purchases budgets (82.19%) and cash budgets (82.19%). Other budgets used in order of frequency included inventory budgets (67.13%), capital expenditure budgets (65.76%), personnel budgets (58.91%), and marketing budgets

(57.54%). The results also revealed that of the SMEs that prepared budgets, they most frequently used fixed budgeting (50%) and flexible budgeting (47.14%) methods, followed by incremental budgeting (27.14%) and zero-based budgeting (27.14%) methods (Maduekwe 2015: 71).

Berry (2011: 144) studied financial control systems as vital tools to increase the survival rate of SMEs in the Tshwane Metropolitan Municipality. He reported that 52.4% of the respondents were using formal financial planning, while 46.6% did not use any financial planning tools at all. Some respondents indicated that they used more than one type of budgeting systems; only 68.3% indicated that they used traditional budgeting systems. The result also revealed a low adoption of ABC as only 19.4% used ABC, while 80.6% did not use ABC. Twenty-one point three percent (21.3%) indicated that they used flexible budgets while 78.7% indicated the non-use of flexible budgets. Lastly, zero-based budgeting achieved the lowest adoption rate at 6.5%.

Maduekwe and Kamala (2016: 185) studied the use of budgets by SMEs in the Cape Metropole. Their study revealed that 84% of the SMEs used sales budgets and the cash budget while the purchases budget was used by 82% of the SMEs in the Cape Metropole. Fifty percent (50%) of SMEs studied use fixed budgeting, while 47% used flexible budgeting. Only 27% used incremental budgets as well as zero based budgeting. These results are consistent with that of Ahmad (2012b: 179) who reported that planning and control techniques such as sales budgets, purchasing budget and production budgets are used by SMEs in Malaysia.

In Egypt, McLellan and Sherine (2013: 9) studied strategy and management accounting practices alignment and its effects on organisational performance. Data was collected from 215 manufacturing companies using self-administered questionnaires. The result of the study revealed that all (100%) the companies use budgeting tools for controlling costs, 98% use budgeting for planning cash flows, 96% use budgeting for co-ordinating activities across business units, 91% use budgeting to plan day-to-day activities and 65% use budgeting for planning financial positions. McLellan and Sherine (2013: 9) revealed that only 4% of the SMEs investigated used ABC. McLellan and Sherine (2013: 9) concluded that SMEs that plan to adopt a different marketing strategy should also adopt more of the advanced management accounting practices to achieve greater performance.

In Kenya, Gichaaga (2013: 39) studied the effect of management accounting practices on the financial performance of manufacturing firms. His results revealed that 90.8% of the SMEs studied used budgeting for long-term (strategic) plans, 87.4% used zero-based budgeting, 85.2% used budgeting for controlling costs, 84% flexible budgeting, 82.8% used budgeting with what if analysis, 82.2% used budgeting for planning while 81.6% used activity-based budgeting. Overall, Gichaaga (2013) concluded that budgeting systems were widely used.

Although the budget is still perceived as an important tool for planning, Abogun and Fagbemi (2012: 179) argue that the budgeting process is time consuming, costly, distorted by tactics employed and focused on cost controls. It may be that SMEs do not take budget planning as important to their survival and therefore refrain from using budgets. The criticism of budgets as a planning and control tool raises questions concerning the efficiency of the budgets employed by SMEs and whether the budgets assist their intended purpose and objectives (Alleyne and Marshall 2011: 53). Finding out the impact of budgeting on SMEs is one of the key objectives of the study.

Budgets can be done separately. It was noted that most SMEs do not separate their budgets into separate mini-budgets such as labour budgets, material budgets as well as the overheads budgets but SMEs rather do one consolidated budget such as production and operational budgets. This was inferred as there is a lack of literature on the material, labour and overhead budgets, and therefore it was assumed that SMEs in general might prefer to consolidate these budgets.

The use of budgets can determine the success of any sized organisation, including small and micro enterprises. Research in many other countries indicates that there is a positive correlation between firm success and a formal planning and control system (Berry 2011: 77).

2.5.3.2.1 Sales budget

Maduekwe and Kamala (2016: 187) studied the use of budgets by SMEs in the Cape Metropole. They reported that 84% of the SMEs studied used sales budgets. Likewise, Ahmad (2012b: 178) revealed that 91% of the total population studied used sales budgets in Malaysia. Ilias, *et al*. (2010: 85) stated that 62% (36 out of the 58) of the SMEs studied in Malaysia used sales budgets.

2.5.3.2.2 Production budget

Ahmad (2012b:178) reported that 80% of the total population studied used production budgets. These results are consistent with those of Armitage *et al.* (2016: 48) who studied the use of management accounting practices in Australia and Canada. The authors revealed that 91% of the SMEs in Australia used production budgets while in Canada, only 73% of SMEs indicated that they use production budgets.

2.5.3.3. Transfer pricing

In some instances, SMEs may exchange resources internally within departments or divisions. The inability of SMEs to adopt the transfer pricing technique may lead to a lack of accountability for resources that move within the group. Ilias *et al*. (2010: 85) revealed that only 31% (16 out of 58) of SMEs studied used transfer pricing. The adoption results were relatively similar to those of Yalcin (2012: 108) who noted that none of the SMEs used transfer pricing in Greece, Finland, India, Australia and Japan. There was an exception with regards to the adoption of the transfer pricing technique in Turkey where 74% of the SMEs used transfer pricing.

2.5.3.6 Quantitative methods for planning and stock control

Ahmad and Zabri (2016: 112) studied inventory management in Malaysian SMEs and noted that the majority of SMEs still used the rule of thumb as their inventory management system. They also highlighted that economic order quantity and bar code tagging were only adopted by a minority of the population studied. In a study of the gap in management accounting skills required by venture capital providers and those possessed by SMEs in the craft industry, Shaku (2012: 151) revealed that 76.67% of the venture capitalists stated that inventory management is considered a requirement for SMEs to get funding from financial institutions.

Aren and Sibindi (2014: 96) studied cash flow management in a case study of SMEs operating in South Africa and reported 93.55% of the SMEs studied used inventory management. For better decision making purposes, the use of quantitative methods for planning and stock control such as economic order quantity, re-order points, weighted average and first in first out were found to be very beneficial to SMEs management (Aren and Sibindi 2014: 96).

In summary South African SMEs use more than one type of budgeting system. Most SMEs preferred the budgeting tools while a few did not use management accounting

tools at all. Flexible budgeting is highly used while activity-based budgeting and zero-based budgeting have a low adoption rate. SMEs frequently used sales budgets, purchases budgets, cash budgets, inventory budgets, capital expenditure budgets, personnel budgets and marketing budgets.

In Malaysia, SMEs employed budgeting systems such as the sale budget, purchasing budget and production budgets. In Kenya, SMEs use zero-based budgeting, flexible budgeting and activity-based budgeting. In Egypt, all the SMEs studied revealed that they used budgeting for control.

The above literature also highlighted that budgeting tools are very important to SMEs for planning. Planning for all business activities help SMEs to create and monitor their goals. Setting business goals helps in developing business strategies to direct and control all business activities. Insight on which management accounting planning and control techniques are used and the extent to which they are used is also indicated in the literature above.

2.6 Factors affecting the use of management accounting practices by SMEs

Many studies have investigated the factors affecting the use of management accounting practices amongst SMEs. In Thailand, Sumkaew *et al.* (2012: 13) reported that high implementation costs, the time it takes, non-economic information, lack of expertise, resistance to change by implementers, objection from the top management and 'never heard of it' as the main reasons for the non-adoption of management accounting practices. Other factors that have influenced SMEs to not use management accounting practices are the need to save costs and time, organisational change and pressure from the governments (Sumkaew *et al.* 2012: 13). The authors argued that management accounting techniques may have high implementation costs and they may be time-consuming, leading to reporting delays as other reasons for not using management accounting practices.

In Australia, Nandan (2010: 70) noted that "owners and managers perceive that it is not the cost but the lack of knowledge and expertise of their business on the part of the accountants". Nandan (2010: 70) contended that "financial and cost management needs and the level of sophistication are influenced by contingent complexities at each stage of growth within SMEs". He viewed complexities such as "strategic, organisational and financial in nature depending on the different stages of growth of

the organisation, (from inception to maturity) as contingent complexities faced by SMEs" (Nandan 2010: 70).

Lucas *et al*. (2013: 10) studied management accounting practices in United Kingdom. They revealed that factors influencing management accounting practices were the diversity of the SMEs' segments and that the amount and type of management accounting practices is influenced by the nature of operations. On the other hand, Lohr (2012: 52) investigated the specificities of management accounting practices in SMEs in a qualitative empirical study and asserted that information systems are necessary for successful and efficient managerial accounting. Lohr (2012: 52) also emphasised that software-driven information for management accounting was of a high priority to SMEs. This may suggest that technology has a significant influence on management accounting practices.

Regarding Malaysia, Harif *et al.* (2010: 16) studied financial management practices amongst SMEs. Harif *et al.* (2010: 16) argued that "the quality of management depends on the education, experience, and training of the entrepreneurs themselves". However, since many SMEs did not have a formal education in business management, they usually operated their business as traditional family-type businesses. Breuer *et al.* (2013: 365) highlight that problems of management accounting in SMEs are related to the lack of training programs, qualified staff and specialised software programs used in management accounting.

In Tunisia, Ayadi and Affes (2014: 54) studied contextual factors that impact on the use of new management accounting practices. Ayadi and Affes (2014: 47) "consider environmental uncertainty, the relational capital with suppliers, the generic strategy of cost domination, the organisational architecture and the size of the company as the factors that affect the use of management accounting practices". Ayadi and Affes (2014: 47) noted that a decentralised organisational planning with comprehensive control systems certainly "influences the use of the new management accounting practices in order to have additional tools for the control of the subordinate's opportunistic behaviour".

Ahmad (2012a: 101) stressed that the size of the firm, intensity of market competition, commitment of owners and managers and advanced technology management have a significant influence on the use of certain management accounting practices by

Malaysian SMEs, such as costing systems and performance evaluation systems. Ahmad (2012a: 107) further noted that owners and managers have a major influence on the use of management accounting practices that related to decision making in the short-run, and planning and control including the development of strategy.

In Kenya, Karanja *et al*. (2012: 6) argued that the adoption as well as the implementation of management accounting practices is influenced by a mixture of different internal challenges within SMEs as well as external challenges that affect the SMEs. Karanja *et al*. (2012: 10) further noted that timeliness, technology, effectiveness, information needs and an adoption of best practice are important factors influencing the choice of management accounting practices used. Their results are shown in Table 2.3.

Table 2.2: Factors that affect the use of management accounting practices	
Factors affecting the use of management accounting practices	**The percentage of respondents who agree with the statement**
Internal factors	
Size of the firm	91%
Organisational strategy	96%
Perceived critical success factors	98%
Age of the firm	76%
Other internal factors	19%
External factors	
Competition	98%
Raw material availability	51%
Existing infrastructural network	17%
Technological advancement	82%
Other external factors	9.3%

Source: Karanja *et al*. (2012: 10)

As shown in table 2.3 above, the results indicated that internal factors effecting the use of management accounting practices is the size of the firm (91%), organisational strategy (96%) perceived critical success factors (98%), age of the firm (76%) as well as other internal factors (19%). External factors affecting the use of management accounting practices is competition (98%), raw material availability (51%), existing infrastructural network (17%), technological advancement (82%) as well as other external factors (9.3%).

In South Africa, Maduekwe (2015: 86) reported the following factors that inhibit the usage of management accounting practices as shown in Table 2.4

Table 2.3: Factors that affect the use of management accounting practices in South Africa	
Details	**Percentage of the respondents who agreed with statements**
Budgeting tools	
Lack of top management support	56.04%
Lack of qualified personnel	54.95%
Lack of resources	49.45%
Lack of awareness about management accounting practices	41.67%
Performance measurement tools	
Lack of awareness about management accounting practices	49.45%
Lack of qualified personnel	47.26%
Lack of top management support	43.96%
Lack of resources	40.66%
Pricing tools	
Lack of resources	43.96%
Lack of top management support	42.85%
Lack of awareness about management accounting practices	41.75%
Lack of qualified personnel	38.47%

Source: Maduekwe (2015: 86)

The information in Table 2.4 above suggests that SMEs in South Africa do not use budgeting tools due to internal factors such as lack of top management support (56.04%), lack of qualified personnel (54.95%), lack of the required resources (49.45%) as well lack of awareness about management accounting practices that are be used by SMEs (41.67%).

With respect to performance measurements tools, the respondents cited lack of awareness about management accounting practices (49.45%), lack of qualified personnel (47.26%), lack of top management support (43.96%) as well as the lack of the required resources (40.66%) as the reasons for the poor adoption of management accounting practices.

With regards to the pricing tools, lack of the required resources (43.96%), lack of top management support (42.85%), lack of awareness about management accounting

practices (41.75%) and lack of qualified personnel (38.47%) are central to the poor or non-adoption. SMEs may be facing a number of both internal and external factors that some affect the use of management accounting practices in one way or another, thus this current study sought to examine factors that affect the use of management accounting practices in Durban.

Rundora and Shelesho (2014: 34) also studied determinants of the adoption of ABC for manufacturing SMEs in Gauteng. Forty-eight small manufacturing firms operating in Gauteng were sampled for data collection. The authors reported that ABC non-users indicated that the following as the main reasons they do not use ABC: it is too expensive, lack of adequate support systems, lack of ABC knowledge, and too detailed and time consuming. The results of this study were consistent with those of Rundora, *et al.* (2013: 494) who studied ABC in SMEs in Gauteng (South Africa).

In summary, the following factors influence the decisions of most SMEs for not using management accounting practices: Internal and external factors such as size of the business and competition, the lack of expertise and high implementation costs, the lack of knowledge and expertise, the lack of awareness about management accounting practices, the lack of top management support, the lack of personnel, the lack of resources, the lack of adequate support systems, the nature of operations, information systems, education, experience and training, and the lack of special software programs used in management accounting. The organisational architecture and the size of the company, commitment of owners and managers and advanced technology management and intensity of market competition were also highlighted.

From the literature above, it is evident that there are many factors that affect the adoption of management accounting practices. This current study places emphasis on internal factors. This is because internal factors can be controlled as opposed to external factors which cannot be controlled. If SMEs are aware of the internal factors affecting the use of management accounting practices in Durban, they can mitigate and reduce those factors in order to gain the advantages of adopting management accounting practices. Identifying the factors affecting the use of management accounting is one of the objectives of the study.

2.7 The impact of management accounting practices on the success of SMEs

This section addresses the impact of management accounting practices on the success of SMEs. In Kenya, Mbogo (2011: 128) studied the influence of management accounting skills on SMEs. Mbogo (2011: 128) established that the training level and management accounting abilities have a positive and important effect on the decision-making of owners and managers and subsequently the success and growth of SMEs. Matambele (2014: 104) investigated whether management accounting tools provide sustainability information for decision-making and their influence on financial performance in South Africa. The study was qualitative in nature and information was collected using interviews in South African SMEs listed on the Johannesburg Stock Exchange. Matambele (2014: 104) found that "management accounting tools are important in providing sustainability information for decision-making and in determining how this information influences the financial performance of Johannesburg Stock Exchange listed companies". However, Matambele (2014: 104) found that most SMEs are not using management accounting tools to assist them in the provision of sustainability information for decision-making. Matambele (2014: 104) noted that management accounting information has been non-compulsory for most SMEs in terms of driving their strategy, financial performance, decision-making and day to day activities. Matambele (2014: 130) further emphasised that management accounting practices can improve the sustainability and performance of SMEs.

Van der Poll (2015: 11) studied facilitating a greener environment through management accounting practices in South Africa. Van der Poll (2015: 11) argued that to support SMEs to be aware of their waste and their environmental responsibilities, they need to be cognisant of the use of management accounting practices, for instance, ABC and material flow cost accounting. Furthermore, Van der Poll (2015: 11) argued that management accounting improves decision-making as it communicates relevant insights and allow analyses to be put in action.

In South Africa, Maduekwe (2015: 82) reported the following factors as the reasons why management accounting practices were adopted after studying the usage of management accounting tools by SMEs in Cape Metropole. These benefits may help SMEs achieve success and sustainability.

Table 2.4: Benefits of using management accounting practices	
Statements	**Percentage as per the respondents**
Monitoring the business	68.13%
Measuring performance	67.04%
Planning	65.93%
Control	62.64%
Improving decision-making	61.54%
Business process improvement	59.34%
Problem identification	59.34%
Optimising the use of resources	57.15%
Developing tactical strategies	52.75%
Communication	50.55%
Motivating employees	47.25%

Source: Maduekwe (2015: 82)

The information in Table 2.5 suggests that SMEs use management accounting practices to monitor the business (68.13%), measure its performance (67.04%) as well as for planning (65.93%) and control (62.64%). SMEs also use management accounting practices to improve decision-making (61.54%), business processes (59.34%), identification of problems (59.34%) and communication (50.55%). Lastly, management accounting practices assist SMEs in developing tactical strategies (52.75%), optimising the use of the available resources (57.15%) and motivating employees (47.25%) by for example, providing targets-based incentives.

Mohammad and Ayuba (2012: 49) studied the roles and responsibilities of management accountants in Malaysia. Mohammad and Ayuba (2012: 49) found that management accounting practices have an active role in the procurement and provision of business information in respect of the enterprises' performance.

Ramljak and Rogosic (2012: 95) studied strategic management accounting practices in Croatia. Ramljak and Rogosic (2012: 95) state that companies apply different strategies and management accounting to achieve competitiveness and as the main supporting system for strategy implementation. Ramljak and Rogosic (2012: 95) concluded that "costing techniques of strategic management accounting support the

enterprise strategy more reliably compared to the customer and competitor-oriented techniques".

Mbumbo (2015: 95) supports the belief that SMEs may increase their chances of success when they use management accounting practices for decision-making. This implies that the management of SMEs in Durban should adopt management accounting practices in order to run sustainable and successful businesses. Afrifa (2013: 189) found that to enhance business performance, differences between educational levels and years of work experience of SME owners and managers must be considered; this confirms Rogerson's (2010: 115) assertion that successful owners and managers are more likely to have good education and training backgrounds in respect of the business administration.

Armitage *et al.* (2016: 33) and Lucas *et al*. (2013: 3) noted that management accounting practices could play a critical role in sustaining SMEs. However, they stressed that little is known about the role of management accounting practices in SMEs and its contribution to SMEs' success. Lohr (2013: 147) identified cost savings, better cooperation and reduced uncertainty as the three constructs expressing the potential net benefits of managerial accounting practices. Furthermore, Lohr (2013: 147) stressed that the critical role of user satisfaction for achieving managerial accounting benefits is consistent with the original concept of resource poverty in SMEs.

Sunarni (2013: 617) argued that management accounting practices help management perform their functions by collecting, processing and communicating information. Management accounting practices improve decision-making through providing financial information to managers to make decisions that are more informed. This is supported by Nandan (2010: 69) who emphasised that management accounting information is particularly significant to SMEs for better resource management and allocating decisions. Karanja *et al*. (2012: 4) observed that if modern management accounting techniques are well utilised, the firm's management will be more efficient in its operations as well as in its final results. This implies that management accounting information helps managers improve performance. Ahmad (2012a: 107) noted that management accounting practices deliver appropriate managerial information to assist management to meet their strategic goals and objectives.

According to Nandan (2010) and Mbumbo (2015: 95), little is known concerning management accounting practices in South Africa. Yeshim and Fowzia (2010: 132) note that management accountants are responsible for the cost and strategic management of the businesses they work for. This implies that management accountants execute all management accounting practices in a business using management accounting information to ensure the sustainability of their companies.

Sunarni (2013: 619) revealed that management accounting practices' focus has always been on improving organisational performance and profitability. Likewise, Matambele (2014: 43) noted that management accounting practices ensure sustainability through the projection of useful information for decision-making. Therefore, management accounting practices determine the future of an entity through planning and forecasting, control and performance measurements. Lastly, management accounting practices have a potential impact on SMEs' reduction of costs, providing strategic directions, reducing risks, increasing profit and sustainability.

To summarise the impact of management accounting in SMEs, the following comments are drawn from the literature: management accounting practices lead to stronger, positive and important influences on decision-making, are critical for SME survival, have an influence on financial performance, improve decision-making, assist in monitoring and measuring performance, and assist in planning and control.

Management accounting practices also play an active role in acquisition and provision of information for better performance, supports strategic implementation and achieves competitiveness, increases chances of success, improves planning, control and performance of SMEs, assists on cost saving, better co-operation and reduced uncertainty, leads to better resource management, and improves performance and to deliver appropriate managerial information. The literature thus reveals that management accounting practices have a positive impact on SMEs' performance by improving the decision-making process. Informing SMEs that adopting of management accounting practices are an added advantage in a competitive environment would help to shape their future through sustainability.

2.8 Summary

There has been little research undertaken in this context in South Africa and more particularly, in Durban. There are many challenges faced by SMEs in South Africa.

Very few SMEs possess business managing qualities, and therefore only a few SMEs are successful, adding to the poor performance of the South African economy. It was noted that internal challenges such as lack of management experience, lack of networking, lack of business management skills, shortage of skilled labour, lack of training, poor communication and lack management accounting skills are some of the challenges faced by SMEs.

SMEs have a high failure rate in South Africa. This is the main reason why it was imperative to investigate whether the adoption of management accounting practices has a role in the success of SMEs. SMEs still need an awareness of the existence and applicability of management accounting decision support tools, including cost volume profit analysis, relevant cost analysis, capital expenditure appraisal techniques and tools for dealing with risk and uncertainty.

Management accounting practices are vital for SME growth and sustainability as they provide management with information for decision-making. SMEs still need assistance in terms of management accounting practices as it will enable them to use the financial tools such as breakeven point, budgeting, financial ratios, costing analysis as most of them come from a non-financial background and lack accounting knowledge. Management accounting practices help SMEs to plan, control and measure their performance. Therefore, management accounting practices are critical for sustainability as SMEs should obtain high quality and suitable information from both formal and informal channels to make informed business decisions. The decisions made by the management are very critical to the growth and sustainability of SMEs and must be informed by management accounting information.

Management accounting practices provide many avenues which management can use to make decisions. Even non-financial information such as the availability of resources, quality and customer satisfaction and competition can be used by management to make decisions. Therefore, management accounting practices should be adopted by SMEs to ensure that the decisions made by the management are justified, as they have a positive influence on SMEs' success or failure. Management accounting practices has a potential role to play in SMEs in South Africa, one of which is to provide SMEs with planning tools such as budgeting and control tools such as cost volume profit analysis. Planning and control systems are essential tools for the economic survival of SMEs.

The next chapter discusses the research methodology used for data collection and analyses in the current study.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

The previous chapter reviewed and discussed the literature related to SMEs, management accounting practices and its roles, and the factors which deter SMEs from using management accounting practices. To recap, the objectives of the study were: (1) to identify management accounting practices used by SMEs in Durban, (2) to examine the factors that affect the use of management accounting practices within SMEs in Durban, (3) to examine the extent to which management accounting practices are used within SMEs in Durban, (4) to examine the impact of management accounting practices in SMEs' success and lastly, (5) to suggest recommendations that would contribute towards the adoption of appropriate management accounting practices to be used by Durban SMEs.

This chapter outlines the research methodology adopted in this study to meet these objectives. Research methodology is a systematic approach to resolve any problem (Rajasekar, Philominathan and Chinnathambi 2013: 5). Rajasekar *et al.* (2013) also referred to research methodology as a science of how research is conducted and procedures. Furthermore, this methodology explains and predicts a particular phenomenon in order to acquire information from the phenomenon (Rajasekar *et al.* 2013: 5). Kothari (2004: 8) states that research methodology is a study of the different steps that are normally implemented by investigators in studying the research problem together with the logical thinking behind the problem. Therefore, this chapter presents the logic behind the research methodology of this study to meet this study's research objective. This current study's research questions intended to address the research objectives favours a positivist paradigm.

3.2 Research design and methods

Research methods can be described as the path that the researcher follows to find responses to the research questions (Kumar 2011: 36). Kothari (2004: 32) noted that a research design includes the advanced preparation of the methods to be implemented for gathering the relevant data and the procedures to be used in the data analysis. Pandey and Pandey (2015: 18) support that a research design is basically

the outline or plan for a study that is used as a guide in collecting and analysing the data. Pandey and Pandey (2015: 18) referred to research design as a proposal that is followed in finalising a study.

The following research design types were critically analysed before choosing the one deemed appropriate to achieve the objectives of the study. There are two types of research: the "positivist research paradigm and interpretive research paradigm depending on their goal in scientific research" (Bhattacherjee 2012: 35).

The next section discusses the positivist research paradigm.

3.2.1 Positivist research paradigm

The most used research design is the positivist paradigm. The positivist paradigm, such as laboratory experiments and survey research, is aimed at theory testing, thus seeks generalised patterns based on an objective view of reality (Bhattacherjee 2012: 39). Bhattacherjee (2012: 39) noted that positivist approaches use a deductive approach to research, beginning with a theory and testing theoretical hypotheses using empirical data. The disadvantages and advantages of the positivist paradigm are shown in Table 3.1 below.

Table 3.1: Advantages and disadvantages of the positivist paradigm

Advantages	**Disadvantages**
Economical collection of a large amount of data	Often does not discover the meanings people attach to social phenomena
Clear theoretical focus for the research from the outset	Inflexible, direction often cannot be changed once data collection has started
Easily comparable data	Weak at understanding social processes
Greater opportunity for the researcher to retain control of the research process	Data analysis is challenging and can be Complex

Source: Raddon (2017)

Mora, Gelman, Steenkamp and Raisinghani (2012: 47) observed that positivist studies try to research human and social phenomena in the same manner as natural scientists study the physical world. The positivist paradigm affirms that real occasions can be observed empirically and described with reasonable analysis (Kaboub 2008: 343).

The following section discusses the interpretative research paradigm.

3.2.2 Interpretative research paradigm

Interpretative research focuses on reality as a human construction which can only be understood subjectively (Mora *et al.* 2012: 47). This paradigm uses an inductive approach that starts with data and tries to derive a theory about the phenomenon of interest from the observed data (Bhattacherjee 2012: 35). The disadvantages and advantages of the interpretative paradigm are shown in Table 3.2 below.

Table 3.2: Advantages and disadvantages of the interpretative paradigm

Advantages	**Disadvantages**
Good at understanding social processes	Data collection can be time consuming
Facilitates understanding of how and why	Researcher has to live with the uncertainty that clear patterns may not emerge
Allows for complexity and contextual factors	Generally perceived as less credible by non-researchers
Enables the researcher to be alive to changes which occur	

Source: Raddon (2017)

McGregor and Murnane (2010: 423) further state that interpretative research methods assume there are numerous ways of obtaining information besides from using the scientific methods.

After considering the above research paradigms, the positivist research paradigm was deemed appropriate for the current study because it uses a questionnaire to obtain the data to answer the research questions; thereby it seeks to generalise patterns (i.e. answers) based on an objective view of reality (Bhattacherjee 2012: 39). The data collection instrument, data collection procedures as well as the questionnaire administration are explained in the next sections.

3.3 Descriptive research

This study employed descriptive research which is focused at making observations and comprehensive documentations of a phenomenon of interest. A descriptive study intends to methodically analyse a problem or phenomenon, provide information about

the problem and describe the attitudes towards a subject or problem (Kumar 2011: 30). It also provides the data about the dynamics of the phenomenon being studied, including the frequency that something occurs (Glazunov 2012: 126). The two common data collection methods of descriptive research are observations and surveys (Ogunjuboun *et al.* 2009: 283).

The observations done in this approach are mostly founded on scientific methods and therefore tend to be more reliable (Bhattacherjee 2012: 6). Descriptive research designs help to provide answers to the questions of who, what, when, where, and how associated with a particular research problem; a descriptive study cannot conclusively ascertain answers to why (Ogunjuboun *et al.* 2009: 283). Descriptive research is related to describing the characters of a specific individual, or group (Kothari 2004: 37). For the purpose of this study the descriptive research design met the need to provide the relevant information to answer the three research questions regarding the role of management accounting practices in the success of SMEs in Durban. The descriptive data also provided information on the impact of the use of management accounting practices by SMEs in Durban.

3.4 The quantitative approach

A quantitative research approach is a process that is systematic and objective in its ways of using numerical data from only a selected subgroup of a universe to generalise the findings to the universe that is being studied (Maree and Pietersen 2007:145). It involves numerical data collection and the use of mathematical models as data analysis methods (Williams 2007: 66). This research approach also explains the phenomena by collecting quantitative data which are analysed using mathematically based methods (Sukamolson 2012: 62). Kothari (2004: 3) notes that a quantitative research approach is founded on the measurement of quantities. It is applicable to any phenomena that can be expressed in terms of quantity (Kothari 2004: 3).

The study followed a quantitative approach in order to determine the SME owners' and managers' opinions, attitudes and experiences (Leedy and Ormrod 2010: 188) with regards to management accounting practices.

3.5 Survey research

The current research study is quantitative in nature; thus, a questionnaire survey was deemed appropriate to collect data. Bhattacherjee (2012: 73) defines survey research as a research method involving the use of standardised questionnaires or interviews to collect data about people and their preferences, thoughts, and behaviours in a systematic manner. MacDonald and Headlam (2011: 11) noted that survey research includes any measurement technique that consists of probing answers from respondents. MacDonald and Headlam (2011: 11) further state that surveys are a questionnaire-based technique that can yield both qualitative and quantitative data depending on how they are organised and analysed (MacDonald and Headlam 2011: 35).

Pandey and Pandey (2015: 15) noted that there are numerous ways of gathering suitable data that vary significantly in the context of cost, time and other resources. In the case of survey research, data can be gathered by observation, through personal interviews, through telephonic interviews and by the mailing of questionnaires (Pandey and Pandey 2015: 15; MacDonald and Headlam 2011: 16). The current study used a survey questionnaire to collect data from the research population.

3.6 Research population

The word ‘population’ denotes the total number of items from where the information is collected (Kothari 2004: 153). The target population of the current study was drawn from the eThekwini SME contractors’ database of 163 registered SMEs which operate in diverse sectors or industries, i.e. legal and financial, education and training, food and beverages; manufacturing, medical and health services, safety and security, marketing and information technology, logistic and transport, and retail and wholesale stores. Some of the SMEs that were listed in the SME database were no longer operating and in view of the low number of SMEs in the database, a census method was used.

3.7 Sampling strategy and sample size

This study used a census sampling approach. Check and Schutt (2012: 154) define a census as a research approach that allows information to be obtained through the responses of an entire population. The census method was deemed appropriate for the study as it was concerned with the enquiry of the entire population (Check and

Schutt 2012: 154). This method allows responses to be received from the entire targeted population and responses tend to be more accurate (Pandey and Pandey 2015: 11).

As some SMEs were no longer in operation, only the 102 SMEs which were still operating in Durban were used for this current study.

3.8 The research instrument

The study used a questionnaire survey as the research instrument to collect a variety of information from the targeted respondents. A questionnaire comprises of a number of questions in a specific order. It is administered to targeted respondents who are expected to thoroughly read and understand the questions in the questionnaire (Kothari 2004: 100).

Kothari (2004: 100) indicates that the advantages of mailed questionnaires are as follows: the costs associated with it are very low, it is free from the bias of the researcher and answers are derived from respondents' own words, respondents have sufficient time to give answers, appropriate respondents are reached, and even large samples can be achieved.

On the other hand, Kothari (2004: 100) indicates that the disadvantages of a mailed questionnaire are as follows: a low response rate of the duly filled in questionnaires, bias due to non-response is often indeterminate, it can be used only when respondents are educated and cooperating, the control over questionnaire may be lost once it is sent, there is inbuilt inflexibility because of the difficulty of amending the approach once questionnaires have been despatched, there is also the possibility of ambiguous replies or omission of replies altogether to certain questions, interpretation of omissions is difficult and lastly, it is difficult to know whether willing respondents are truly representative. Despite the above disadvantages, a mailed questionnaire method was chosen for the following reasons:

Firstly, a mailed questionnaire approach was deemed appropriate for the study as it allowed respondents to finish the questionnaire without the researcher being present (Maree and Pietersen 2007: 157).

Secondly, mailed questionnaires enabled the researcher to obtain detailed information from respondents who may not be accessible otherwise (Maree and Pietersen 2007: 157).

Lastly, a mailed questionnaire was convenient for the study as it is relatively low cost, allowing the respondents to complete the questionnaire at a convenient time and also to check personal records, if necessary, to answer the questions (Maree and Pietersen 2007: 157).

3.9 Questionnaire design

Questionnaire design is the putting together of questions to obtain answers to the research questions. A well organised questionnaire is the one that all the questions and possible answers are specified. However, there ought to be provision for indications of uncertainty (not sure), and the length of the questionnaire ought to be manageable (Kothari 2004: 104).

The questionnaire was designed to be user-friendly in order to encourage respondents to participate, thus the questionnaire was free of confusing terminologies. The use of closed-ended questions also simplified the data collection, capture, and analysis process.

The questionnaire comprised five-point Likert scale questions throughout, giving the respondents options to respond as never (1), rarely (2), occasionally (3), frequently (4), or always (5), or strongly disagree (1), disagree (2), neither agree nor disagree (3), agree (4), or strongly agree (5). Some questions gave the respondents the option to tick the most relevant responses from the given responses and respondents were also given the option to add other specific responses that were not in the options provided where necessary.

The questionnaire comprised 17 close-ended questions and consisted of six pages in total excluding the consent letter (see Appendix A for a full questionnaire). The latter was sent along with the questionnaire to explain the procedures of the research study.

3.10 Content of the questionnaire

In order to address the objectives of this study, the questions were linked to the research objectives and were sourced from the literature.

3.10.1 Sections A and B of the questionnaire

The questionnaire for the current study was divided into two sections (A and B). Section A of the questionnaire asked various questions to obtain the biographical information of the respondents. This section was made up of nine questions. Respondents were

required to tick only one response for each question to indicate their answer. Section A was used as the reference point for the analysis and interpretation of the data in section B, as well as to gain an understanding of the background information of the businesses.

Section B of the questionnaire focused on the management accounting practices, factors that affect the use of management accounting practices, the challenges facing SMEs in Durban, impact of management accounting in SMEs in Durban, and lastly recommendations by respondents on the adoption of management accounting practices. Section B thus sought to understand the perceptions of the respondents regarding the management accounting practices used by SMEs in Durban. This section was divided into five parts (see Appendix A).

The questionnaire also summarised the definitions of the management accounting practices that were being investigated in the study. The questionnaire ended with the researcher's contact details should there be any need for the respondents to contact the researcher.

3.11 Pre-testing of the research instrument

For any research study, the instruments need to be tested before they are employed. For the purpose of this study, "pre-testing the questionnaire helped to identify possible errors in the research instrument and to warrant that the measurement instruments used in the research are reliable and valid measures of the constructs of interest" (Bhattacherjee 2012: 23). Before administering questionnaires to the targeted population, pre-testing the questionnaire was conducted to determine any weaknesses in the questionnaire (Kothari 2004: 17). This was to ensure that respondents understood the questionnaire and that it addressed the research questions. Fifteen persons were asked to pre-test the research questionnaire. These were five academics and 10 SME owners and managers located in Durban. However only 12 of the participants responded, four being academics and eight being SME owners and managers. None of the eight SME owners and managers were part of the targeted population.

The participants who pre-tested the questionnaire felt that the questionnaire was too long and suggested that the researcher's contact details be added at the back of the questionnaire because although the definitions of certain management accounting

practices were attached to the questionnaire, some participants still did not understand the definitions. The length of the questionnaire was reduced to 6 pages from 10 pages as a result. The total time to complete the questionnaire was a maximum of 20 minutes according to the pre-testing participants.

All the issues relating to the understand ability of the questionnaire were addressed, and the questionnaire instrument was deemed appropriate to provide data to meet the current research study's objectives.

3.12 Administering of the questionnaire

E-mails were sent to all potential participants in order to enquire about their availability to participate in the study. Only 20% of the respondents confirmed their availability to take part in the research study. However, the questionnaires were emailed to all 163 SMEs that were deemed as the population of the study. The e-mail also requested respondents to read and sign the letter of consent accompanied by the questionnaire. Respondents were given a month to complete the questionnaire. However, 15 (9.20%) of the emails were undeliverable. Telephonic follow ups were done to check the status of those potential respondents. All those with undelivered emails confirmed that they were no longer in business.

After one month, only 38 (25.67%) of questionnaires which had been completed were received through e-mail from the total distributed questionnaires. To ensure that SMEs did not forget to answer and return the questionnaires, they were reminded two weeks after the questionnaires were distributed. Follow ups through e-mail and telephonic phone calls were made to those who did not respond. These follow ups helped to identify those who had completed the questionnaire but who did not e-mail their questionnaires back, those who forgot about the study and those whose responses could be personally collected. In addition, to encourage the SME owners and managers to participate in the study, the researcher emphasised the importance of the study to SMEs and to South Africa as a whole. The researcher informed the respondents that participating in the study would be contributing towards SME development in South Africa. Participants who had not replied after the reminders by email and telephonically were then discarded in order to save time and the costs associated with the study. Thus only 102 questionnaires were received from the respondents of which all were usable.

The response rate is shown in Table 3.3.

Table 3.3: Response rate

	Number of respondents	Response rate
Number of questionnaires	163	100%
Undeliverable emails	(15)	(9.2%)
Number of questionnaires delivered	148	90.8%
Discarded respondents	(46)	(28.2%)
Total usable responses	102	62.6%

A total usable response rate of 62.6% was achieved from the total number of questionnaires distributed. This rate is relatively higher than the response rates in comparable management accounting studies such as Maduekwe (2015) who achieved 54.1%, Ahmad (2012b) who achieved 13% and Afrifra (2013) who achieved 29.03%.

3.13 Data management and processing

All the quantitative data collected was captured in a Microsoft Excel spreadsheet. Excel was selected because it is faster and easier to identify errors during data entry, and provides tables to assist in capturing the data collected. To ensure accuracy, every tenth captured response data was verified and compared. The raw data were then sent to a statistician to analyse the data using SPSS Version 25.

The study adopted a descriptive analysis as there were no hypotheses to be tested. During the analysis, measures of central tendencies were used to assess the frequencies of the use of management accounting practices. The mean was used to assess the central tendencies of the responses, giving information on the average responses for all the five scale Likert questions. The standard deviation was used to assess the dispersion.

3.14 Statistical presentation of the data

To summarise the data, the following descriptive statistics were used.

3.14.1 Frequency tables

Bhattacherjee (2012: 122) explains the frequency distribution of a variable as “a summary of the frequency (or percentages) of individual values or ranges of values for that variable”. Frequency tables are a detailed description of the categories or values

for one variable (Bhattacherjee (2012: 122). Section one of the questionnaire was analysed with the use of absolute frequency and relative frequency to reflect the actual number of responses for each question out of the total number of studied SMEs, plus a percentage of those responses.

3.14.2 Measures of central tendencies

Kothari (2004: 132) explains that measures of central tendency or statistical averages are indicators of the point about which items have tendencies to cluster. These measures (mean, median and mode) are the most popular averages which are considered to be the most representative figures for the entire mass of data (Kothari 2004: 132) and were used to summarise the data.

3.14.2.1 Mean

The mean is the measurement of central tendency. The mean is used for summarising the crucial features of a series and in enabling data to be compared. It is a relatively stable measure of central tendency (Kothari 2004: 132). Bhattacherjee 2012: 122) further notes that the mathematics mean (often simply called the mean) is the average of all values in a given distribution. In this study, the mean was calculated and used to analyse much of the data.

3.14.3 Statistical analysis of the data

An average symbolises a series only as best as a single figure can, but it definitely cannot depict the whole story of any phenomenon under investigation (Kothari 2004: 134). Specifically, it fails to give an idea about the scatter of the values of items of a variable in the series around the true value of average (Kothari 2004: 134). In order to measure this scatter, statistical devices called measures of dispersion are calculated. Important measures of dispersion are range, mean deviation, and standard deviation (Kothari 2004: 134). Bhattacherjee (2012: 122) noted that dispersion denotes the manner values are spread around the central tendency, for instance, how tightly or how widely the values are clustered around the mean.

3.14.3.1 Standard deviation

Kothari (2004: 135) defines the standard deviation as “the square-root of the average of squares of deviations, when such deviations for the values of individual items in a series are obtained from the arithmetic average”. Bhattacherjee (2012: 122) asserted

that the standard deviation is the second measure of dispersion, amends for such outliers by using a principle that reflects how close or how far each value is from the distribution mean. In this study, together with the means, the standard deviation was calculated and shown in the tables where relevant.

3.14.4 The Kruskal-Wallis H test

The Kruskal-Wallis H test was used to test whether the mean scores are the same in all the groups, i.e. male and female (McDonald 2014). This analysis was done to identify if there are any patterns or differences that might exist in the respondents' responses in terms of their gender. This analysis does not assume that the data are normal, however, it does assume that the different groups have the same distribution, and groups with different standard deviations have different distributions (MacDonald 2014).

3.14.5 The binominal test

The binomial test is a thorough test applied for studying a perceived distribution to the anticipated distribution when there are only two groups (MacDonald 2014). The included analysis was based on p-value results below 0.05. For the purpose of this study this analysis was used to test variables on the impact of management accounting practices of SMEs in Durban and the factors that affect SMEs in Durban from using management accounting practices.

3.14.6 Spearman rho correlation test

A Spearman rho correlation test was also used in this study. This test is normally utilised to discover the strength of the link between two sets of data (MacDonald 2014). For the purpose of this study a Spearman rho correlation test was performed to ascertain if there is a relationship between the management accounting practices and its impact and SMEs' sustainability (MacDonald 2014).

3.15 Measurements of reliability and validity

Validity and reliability are two essential aspects in the valuation of a measurement instrument. Leedy and Ormrod (2010: 29) asserted that both validity and reliability reflect the degree to which the research measurement might have errors. According to Leedy and Ormrod (2010: 28), the validity and reliability of the measuring instrument impact the extent to which an investigator might discover something from the

phenomenon studied, the probability that the investigator will attain statistical significance during data analysis and the extent to which the investigator can draw a conclusion from the collected data.

3.15.1 Validity

Leedy and Ormrod (2010: 28) state that validity refers to the capability of the research questionnaire to measure what is intended to measure. The validity of the research instrument was ensured by pretesting the questionnaire. Any bias in the questionnaire was eliminated to ensure the findings were believable and valid. This was achieved after the pretesting of the survey instrument.

3.15.2 Reliability

Reliability refers to the ability of the research instrument to yield the same result even if the population studied changes (Leedy and Ormrod 2010: 28). In simple terms reliability refers to the quality of a measurement procedure that provides repeatability and accuracy (Kumar 2011: 26). All items used in the questionnaire were sourced from the relevant literature. The reliability of the research instrument was measured using the Cronbach alpha test. The results of this test are shown in Table 3.4 below.

Table 3.4: Key questions and Cronbach's alpha

Statements	**Cronbach's alpha**
Challenges facing SMEs	0,742
Management accounting practices used and the extent of use of management accounting practices	0,834
Decision support and investment appraisal techniques which are used	0,955
Planning and control techniques which are used	0,864
Factors that affect the use of management accounting practices	0,794
Impact of management accounting practices	0,885
Average Cronbach's Alpha	0.845
Note: Average Cronbach alpha Coefficient = Total Cronbach alpha /Number of questions	

The average Cronbach's alpha is 0.845; hence the research questionnaire was considered to be consistent and reliable since an average Cronbach's alpha between 0.70 to 0.95 is considered as an acceptable value of coefficient alpha (Tavakol and Dennick 2011: 54).

3.16 Ethical considerations

Ethical clearance was obtained from the DUT's Institutional Research and Ethics Committee (IREC) before data collection commenced (see Appendix C). All participants received letters of consent (Appendix B) which explained the context of the research. This letter served as a preamble to the study, outlining the duties of the researcher and those of the respondents, the importance of the study and the potential benefits of conducting the study.

3.17 Informed consent

The participants were informed through the letters of consent (Appendix B) that were sent to them before the questionnaires were distributed and completed. The consent letter contained all the relevant information with regards to the study, including that the researcher would be available to respondents should they need clarity in any area in the study including the definitions of the terms used in the study. The consent letters were required to be signed by the participants before the questionnaire could be completed.

3.18 Confidentiality and anonymity

Participants were assured that their personal details would be kept confidential and all their responses would be used only for the purpose of the study. Participants were also informed that their personal details would never be divulged to any third party. In addition, the participants were informed that they may withdraw from participating in the study at any time and there would be no consequences. Lastly, participants were assured that their personal information and responses collected would be kept anonymous and that the respondents would never be linked with the study.

3.19 Summary

This chapter outlined the methods that were adopted to collect the data needed to achieve the objectives of the study. The chapter began with a discussion of the research design which the research adopted, followed by the research population, the questionnaire design and pre-testing. The data collection and data analyses methods were explained as well as the measures used to ensure the validity and reliability of the research questionnaire. Reliability was tested using Cronbach's alpha.

The ethical procedures adopted were also addressed. All in all, the research methods adopted in the study were deemed appropriate to achieve the objectives of the study.

Having discussed the research methodology adopted by this research study, the next chapter presents and discusses the findings of the study.

CHAPTER FOUR
PRESENTATION AND DISCUSSION OF THE FINDINGS

4.1 Introduction

Chapter three discussed the research design and the methodology adopted for the current study. The research design covered the research paradigm and methods, research methodology approach, the population, census method, the research instrument, data collection procedures, and the reliability and validity of the study. The research method adopted informed the analysis and presentation of the results.

This chapter presents and discusses the findings on the use of management accounting practices by SMEs in Durban. The data was collected through questionnaires. The respondents selected were owners and managers of SMEs in Durban on the EThekwini Municipality's contractors' database. The findings are presented using descriptive statistics in the form of frequency tables. The presentation and analysis of the findings in this chapter is divided into sections (A and B), which follows the design of the research questionnaire.

The next section recaps the research objectives of the current study.

4.2 Research objectives

The aim of the study was to investigate the role of management accounting practices in the success of SMEs in Durban. This was achieved by addressing the following five research objectives:

- To identify management accounting practices used by SMEs in Durban;
- To examine the extent to which management accounting practices are used by SMEs in Durban;
- To examine the factors that affect the use of management accounting practices in SMEs in Durban;
- To examine the impact of management accounting practices on SMEs' success; and
- To suggest recommendations that would contribute towards the adoption of appropriate management accounting practices to be used by SMEs in Durban.

The respondents' biographical information is discussed in the following section.

4.3 Biographical information

The biographical information was obtained through the answering of the questions in Section A of the questionnaire. These questions covered the age group, gender, occupation or position in the firm, the industry they operate in, the number of years in operations, the form of business, educational levels, and the number of permanent employees in the firm and lastly, the average annual turnover.

This biographical information is necessary as each category plays a unique part in achieving the objectives of this study and allows a deeper analysis of the results. These findings are presented and discussed in Tables 4.1 to 4.9 below.

The following section presents and analyses the age groups of the respondents.

4.3.1 Age group (in years) of respondents

The respondents were asked to state their age group. These findings are shown in Table 4.1.

Table 4.1: The age group	**Number**	**Percentage**
<25 years	21	20.6%
26-35 years	47	46.1%
36-45 years	19	18.6%
46-55 years	14	13.7%
>56 years	1	1.0%
Total	**102**	**100%**

Table 4.1 shows that the largest number of the respondents (47 or 46.1% of 102 respondents) are between the ages of 26-35 years. The second largest number of the respondents (21 or 20.6% of 102 respondents) are 25 years old and/or below. The third age group of respondents (19 or 18.6% of 102 respondents) are between the ages of 36-45 years. The fourth age group of the respondents (14 or 13.7% of 102 respondents) are between the ages of 46-55 years. The lowest age group of respondents (1 or 1.0% of 102 respondents) are in the age group that is 56 or above. This spread of ages is useful as it indicates that the respondents represent all age groups. However, the majority of the respondents are 35 years or younger. This may indicate that the owners or managers of SMEs are more likely to be relatively younger persons who are using their entrepreneurial skills to start their own businesses. For

this age group, the use of management accounting practices may be very important should they wish to build successful businesses.

4.3.2 Gender of respondents

This section presents the analysis of the gender information of the respondents. It is necessary to ensure that both genders are represented in the study and it also allows some comments to be made with reference to gender equity. The gender information numbers and the percentage thereof are presented in Table 4.2 below.

Table 4.2: Gender	**Number of respondents**	**Percentage**
Male	60	58.8%
Female	42	41.2%
Total	**102**	**100%**

Table 4.2 indicates that the respondents are mainly males (60 out of 102 respondents or 58.8%). Only 41.2% (or 42 out of 102) of the total respondents are females. The majority of SMEs in the Cape Metropole that were studied had mainly male respondents, representing 68.50% as compared to females who represented 31.50% of the total sample (Tabot 2015: 57). It could therefore be assumed that males represent the majority of owners and managers of SMEs, although this current study shows a slightly higher percentage of females than the studies mentioned which may indicate that more females are starting their own SMEs.

4.3.3 Occupation or position of respondents

Issues of occupation or position of respondents are essential in ensuring that both managers and/or owners are represented in this study. The occupation or position of the respondents' number and the percentage thereof are presented in Table 4.3 below.

Table 4.3: The occupation or position of respondents	**Number**	**Percentage**
Owner	18	17,6%
Manager	31	30,4%
Both (owner and manager)	53	52,0%
Total	**102**	**100%**

Table 4.3 shows that in the SMEs which formed the sample, the respondents are dominated by respondents who are both owners and/or managers (53 out of 102

respondents or 52.0%). On the other hand, 30.4% (or 31 out of 102) of the total respondents were managers. Only 17.6% of the respondents were the owners of their businesses. This may indicate that for these SMEs, it is more likely that the owner would also be the manager as the business may not be large enough or profitable enough to warrant employing a manager. As owners start their own businesses, a hands-on approach may be necessary to ensure the business does succeed.

4.3.4 Industry of the respondents' business

Table 4.4 presents and discusses the findings relating to the industry in which the respondents operate.

Table 4.4: Industry of the business	**Number**	**Percentage**
Food and manufacturing	40	39.2%
Retail and wholesale stores	33	32.4%
Medical and health services	9	8.8%
Legal and financial services	6	5.9%
Safety and security	5	4.9%
Education and training	4	3.9%
Marketing and information technology	3	2.9%
Logistic and transport	2	2.0%
Total	**102**	**100%**

As can be seen from Table 4.4, the majority of the respondents are from the food and manufacturing industry (39.2%), followed by retail and wholesale stores (32.4%), medical and health services (8.8%), legal and financial services (4.9%), and education and training (3.9%). Respondents from other industries (marketing and information technology, logistic and transport) ranged between 2 to 3 percent. These respondents are representative of the businesses on the eThekwini Municipality's contractors' database of SMEs. Although some of the industries are under-represented in this study, this may be due to using the contractors' database which may not include all possible industries.

4.3.5 Number of years the business has been in existence

The questionnaire enquired about the number of years the business has been in existence. These findings are shown in Table 4.5 below.

Table 4.5: The number of years in existence	Number	Percentage
1-3 years	18	17,6%
4-10 years	55	53,9%
10-13 years	16	15,7%
14-19 years	11	10,8%
19-24 years	2	2,0%
Total	**102**	**100%**

Table 4.5 indicates that 55 (53.9%) of the firms had been in business for 4-10 years and 18 (17.6%) had been in existence for 1-3 years, while 16 (15.7%) had been in business for 10-13 years. Lastly, only 13 (i.e. 10.8% and 2.0%) of respondents had been in existence for 14 or more years. These statistics suggest that the responses were received from the less established firms. This may indicate that many SMEs find it difficult to grow their businesses as there are so few businesses which have been in existence for more than 14 years. It is possible that the use of management accounting practices could help SMEs be more successful and stay in business for longer periods of time.

4.3.6 The form of the business

The questionnaire enquired about the form of the respondents' businesses. Table 4.6 presents these findings.

Table 4.6: The form of the business	Number	Percentage
Sole trader	53	52.0%
Partnership	35	34.3%
Close corporation	8	7.8%
Co-operative	4	3.9%
Franchise	1	1.0%
Private company (Pty Ltd	1	1.0%
Total	**102**	**100%**

Table 4.6 shows that the sole trader is the most dominant form of the business, with a total of 53 or 52.0% of the respondents choosing this option. The second dominant form of business is a partnership with 35 (34.3%) respondents indicating that they were in a partnership. The third form of business indicated by the respondents is a close corporation with 8 or 7.8% of the 102 respondents. The three lowest forms of business indicated by the respondents were co-operatives, franchises and private companies. It is not unexpected that the main form of businesses used by the respondents are sole traders and partnerships, as both these forms of businesses are not required to register with any regulatory body, nor are any legal documents required to establish such a business (ignoring the possible need to register with SARS and comply with any municipal by-laws). Partners may prefer to have their partnership agreement legally documented but this is entirely voluntary. This information may help to identify the type of business that is likely to use management accounting practices. This may assist in the generalisability of the findings to all SMEs as all forms of business are represented in the study. The analysis indicates that the respondents are mostly dominated by businesses owned and managed by their founders.

4.3.7 The level of education of respondents

In the questionnaire, the respondents were required to provide their highest level of education obtained in an attempt to ascertain their academic qualifications and thus their skill base. The level of education of the respondents is presented in Table 4.7.

Table 4.7: The highest level of education	**Number**	**Percentage**
Primary level	3	2.9%
Secondary level	10	9.8%
High school level	29	28.4%
Tertiary level	60	58.8%
Total	**102**	**100%**

Table 4.7 shows that the most respondents (60 or 58.8% of 102 respondents) have obtained a tertiary level of education. The second largest number of the respondents (29 or 28.4% of 102 respondents) have obtained a high school education level. The third group of respondents (10 or 9.8% of 102 respondents) obtained a secondary school education level. The last group of the respondents (3 or 2.9% of 102 respondents) have only obtained the primary level.; The high number of respondents with a tertiary level of education may suggest that the owners or managers have been

unable to find employment in established companies, and have instead used their entrepreneurial skills to start their own businesses. However, respondents were not asked whether they had applied for employment in established companies so the above statement, while plausible, could be seen as speculative.

The findings indicate that all the respondents are literate because they all had received at least some kind of basic education. This finding may indicate that the respondents are aware of the skills needed to run a successful business which includes the use of management accounting practices and the importance of communication in the SMEs. It must be also noted that the respondents were all on the EThekwini Municipality's contractors' database. To be listed on the database implies that the SMEs would have been required to comply with the necessary regulations, and having a good education would facilitate this. Finally, this finding indicates that the responses are from an informed (learned) source and provides credibility and supports the reliability of the findings.

4.3.8 Number of permanent employees

The questionnaire further probed the number of permanent employees employed by the respondents. This question was included to establish whether all participating respondents met the definition of an SME as discussed in chapter two (Sitharam 2014: 8; National Small Business Act No 102 of 1966 as amended in 2004). Table 4.8 presents the number of permanent employees in each of the SMEs.

Table 4.8: The number of permanent employees	**Number**	**Percentage**
Less than 50	83	81,4%
51- 100	14	13,7%
100-150	1	1,0%
150-200	2	2,0%
More than 200	2	2,0%
Total	**102**	**100%**

Table 4.8 indicates that 83 or 81.4% of the SMEs surveyed employed less than 50 permanent employees, while 14 or 13.7% of the SMEs employed between 51 to 100 permanent employees. Two or 2.0% of the respondents respectively employed between 150 to 200 and more than 200 permanent employees, and lastly, one or 1.0% respondent employed 100-150 permanent employees. The fore-mentioned findings

reveal that the majority of the firms fall within the small-sized enterprises' category of the National Small Business Act 1996.

4.3.9 Annual turnover

The questionnaire asked respondents to indicate their annual turnover. Turnover was important in order to assess whether the annual turnover of SMEs influences the decision to decide to either employ management accountants, or to outsource the management accounting function. Table 4.9 presents the findings on the annual turnover of the SMEs.

Table 4.9: The annual turnover	**Number**	**Percentage**
Less than R200 000	28	27,5%
R200 001-R1 000 000	30	29,4%
R1 000 001-R3 000 000	27	26,5%
R3 000 001-R6 000 000	13	12,7%
R6 000 001- R13 000 000	3	2,9%
R13 000 001 and above	1	1,0%
Total	**102**	**100%**

Table 4.9 shows that more than half (56.9%), (i.e. 27.5% plus 29.4%) of the responding SMEs reported an annual turnover not greater than R1m. This was followed by respondents reporting an annual turnover between R1m and R6m (39.2%), that is 26.5% plus 12.7% of respondents. The smallest group of only four respondents (3.9% i.e. 2.9% plus 1.0%) reported an annual turnover between R6m to R13m and above. The results may indicate that SMEs with low levels of annual turnover will lack the resources to employ a management accountant and will be more likely to outsource the function.

In summary, most respondents had a total turnover of R1m or less than R200 000. There were more male respondents than female respondents although the number of female respondents in this study was higher than that of other studies which were reviewed. Most respondents were owner-managers running their own businesses or were in a partnership, and were between the ages of 25-35 years. The majority of these respondents possess tertiary qualifications which indicates they have the necessary skill and knowledge to answer the questionnaire. The biographical information used in the study is exclusively for clarity and directions on the use of

management accounting practices by SMEs. The biographical information used in this study includes educational levels which may suggest that SMEs with certain level of education are the ones practicing or not practicing management accounting, years of operation which might also suggests that SMEs with different levels of experience might also have different reasons for non-adoption of management accounting practices. The same as for businesses ownership or management, which suggest that SMEs owner-managed by females might have different reasons for non-adoption of management accounting than those owned by males.

The next section discusses the findings using the responses for the questions based on the research objectives of this study. The research objectives of this study are aligned to section B of the questionnaire.

4.4 Management accounting practices: Use and extent of use

This section provides the analysis and discusses the findings related to the first and second research objectives: (1) to identify which management accounting practices are used by SMEs and (2) to examine the extent to which management accounting practices are used by SMEs in Durban. The same data that was used to the achieve research objective one was also used to examine the extent to which management accounting practices are used. For the purpose of analysis, management accounting practices were grouped into three categories, namely, costing systems, decision support and the investment appraisal techniques and lastly, planning and the control techniques. Respondents were given five options from 1 - 5 (never, rarely, occasionally, frequently and always) which they could use to indicate their use of the management accounting practices. This question also served the purpose of indicating whether or not the respondents used the management accounting practices as respondents who answered “Never” to a particular management accounting practice would be indicating that it was not used at all. The findings based on data collected for section B of the questionnaire are discussed and presented, logically and simplistically, in Tables 4.10 – 4.15.

It can be noted that in almost all the tables, the mean score is between 1.40 and 2.40. This indicates that the middle point in the analysis is between “rarely” and “occasionally”.

4.4.1 The use and extent of use of the costing systems

Section two of the questionnaire enquired about the extent of use (and by implication, the usage) of the costing systems by the respondents. The mean and the standard deviation (SD) are also showed to provide clarity on the total sample. These findings are shown in Table 4.10.

Table 4.10: The extent of use of the costing systems

Costing systems	Never		Rarely		Occasionally		Frequently		Always		Mean	SD.
	No.	%	No.	%	No.	%	No.	%	No.	%		
Traditional costing	51	50.0	4	3.9	6	5.9	30	29.4	11	10.8	2.47	1.58
Process costing	77	75.5	2	2.0	3	2.9	14	13.7	6	5.9	1.73	1.34
Joint and by product costing	83	81.4	3	2.9	10	9.8	2	2.0	4	3.9	1.44	1.02
Target costing	74	72.5	6	5.9	7	6.9	6	5.9	9	8.8	1.73	1.33
Job costing	76	74.5	2	2.0	3	2.9	14	13.7	7	6.9	1.76	1.38
Activity based costing	81	79.4	4	3.9	7	6.9	7	6.9	3	2.9	1.50	1.08
Variable costing	75	73.5	5	4.9	9	8.8	9	8.8	4	3.9	1.65	1.19
Absorption costing	77	75.5	3	2.9	6	5.9	9	8.8	7	6.9	1.69	1.30
just-in-time costing	82	80.4	3	2.9	10	9.8	0	0.0	7	6.9	1.50	1.13

Note: A Likert scale of 1 = never, 2 = rarely, 3 = occasionally, 4 = frequently and 5 = always was used.

Table 4.10 indicates that many of the costing systems are never or rarely used. This is because the mean scores approximating 2.00 or less show lower levels of the extent of use. This means that the respondents are not gaining any benefits by using costing systems. Notwithstanding that more than half (50.0%) of the SMEs reported that they never used the costing systems, 29.4% of the SMEs reported that they frequently used traditional costing (m=2.47). This result indicates that traditional costing is the most popular management accounting practice for this group of respondents. It can also be noted from Table 4.10 that all the other costing systems showed some usage by the respondents, although the level of usage was very low as indicated by the low mean scores. The low standard deviation scores for most items also indicates that most scores were clustered closely to the mean.

In comparison with the literature, the above findings are similar to the study by Karanja *et al.* (2016: 12) who reported that above 60% of Kenyan SMEs use the traditional costing techniques. However, in contrast, in Turkey Yalcin (2012) reported that 59% of the SMEs explored used process costing. Similarly, Ilias *et al.* (2010) found that 63% of the SMEs investigated used process costing in Malaysia. Alternatively, Sunarni (2013) found that 23.3% of Indonesian SMEs used and rated ABC as significant;

whereas 73.3% cited that they used and rated ABC as moderate important to their firms.

The following section covers the findings of the usage of the costing systems analysed according to gender. Gender was chosen ahead of the other items comprising the background information because of the emphasis on gender equality in South Africa.

4.4.1.1 The extent to which costing systems are used by gender

The respondents' perspectives of the use of costing systems are further presented and analysed according to the gender using the Kruskal-Wallis H test mean scores. The subsequent analysis was done to identify if there are any patterns or differences that might exist in respondents' responses in terms of their gender. The findings are presented in Table 4.11.

Table 4.11: The extent to which costing systems are used by gender			
Costing systems	**Gender**	**No.**	**Kruskal-Wallis mean rank**
Traditional costing	Male	60	49,31
	Female	42	54,63*
	Total	**102**	
Process costing	Male	60	48,13
	Female	42	56,32*
	Total	**102**	
Joint and by product costing	Male	60	48,93
	Female	42	55,17*
	Total	**102**	
Target costing	Male	60	50,63
	Female	42	52,74*
	Total	**102**	
Job costing	Male	60	46,52
	Female	42	58,62*
	Total	**102**	
Activity based costing	Male	60	48,77
	Female	42	55,40*
	Total	**102**	
Variable costing	Male	60	48,92
	Female	42	55,19*
	Total	**102**	
Absorption costing	Male	60	48,36
	Female	42	55,99*
	Total	**102**	
Just-in-time costing	Male	60	47,50
	Female	42	57,21*
	Total	**102**	
Relevant costs and revenues	Male	60	49,54
	Female	42	54,30*
	Total	**102**	
Note: * represents the significance based on the rank of the mean scores			

Table 4.11 indicates that more female respondents than male respondents are using the costing systems such as traditional costing (m= 54.63*), process costing (m= 56.32*) joint and by product (m= 55.17*) and target costing (m= 52.74*). This also applied to job costing (m= 58.62*), ABC (m= 55.40*), variable costing (m= 55.19*), absorption costing (m= 55.99), just-in-time costing (m= 57.21*) and lastly, relevant

costs and revenues (m= 54.30*). A possible reason for this could be that SMEs in Durban owned or managed by females are more likely to use costing systems when compared to males as they are entering a space generally considered as male-dominated. This may mean that females have a greater motivation to succeed and that they are more likely to use tools to help them succeed. However, at this point of the analysis, this reasoning could be considered speculative.

4.4.2 The use and extent of use of the decision support and the investment appraisal techniques

Section two of the questionnaire enquired about the extent of use of the decision support and the investment appraisal techniques by respondents. The mean and the standard deviation are also showed to support the analysis. These findings are shown in Table 4.12.

Table 4.12: The extent of use of decision support and investment appraisal techniques

Decision support and investment appraisal techniques	Never		Rarely		Occasionally		Frequently		Always		Mean	SD.
	No	%	No	%	No	%	No	%	No	%		
Relevant costs and revenues	82	80.4	3	2.9	3	2.9	9	8.8	5	4.9	1.55	1.20
Payback method	82	80.4	3	2.9	7	6.9	3	2.9	7	6.9	1.53	1.18
Net present value	83	81.4	4	3.9	6	5.9	3	2.9	6	5.9	1.48	1.12
Internal rate of return	85	83.3	5	4.9	1	1.0	5	4.9	6	5.9	1.45	1.13
Accounting rate of return	80	78.4	6	5.9	5	4.9	4	3.9	7	6.9	1.55	1.19
Cost volume profit analysis	90	88.2	0	0.0	5	4.9	3	2.9	4	3.9	1.34	0.99
Decisions under risk and uncertainty	86	84.3	0	0.0	5	4.9	5	4.9	6	5.9	1.48	1.17
Pricing and profitability analysis	88	86.3	1	1.0%	6	5.9	3	2.9	4	3.9	1.37	1.00

Note: A Likert scale of 1 = never, 2 = rarely, 3 = occasionally, 4 = frequently and 5 = always was used.

Table 4.12 indicates that decision support and the investment appraisal techniques are never or rarely used by the respondents. This is because mean scores that are less than 2.00 show very low levels of usage. The low standard deviations indicate that the responses were clustered around the mean score. The technique with the most support was for “relevant costs and revenues” with 14 respondents indicating that they frequently or always used that technique (m= 1.55). In comparison to other studies, this study showed a low rate of use of accounting rate of return (m = 1.55) and internal rate of return (m = 1.45), as well as a low usage of net present value (m = 1.48). For instance, Maroyi and Van der Poll (2012) studied mining companies in South Africa and found that only 46% of the companies investigated used the internal rate of return. Similarly, in Malaysia, Ahmad and Zibra (2014) reported that 49% of the SMEs investigated used the internal rate of return. Marembo (2013) also found low usage of net present value and stated that only 16.7% of the SMEs in South Africa used net present value.

However, in contrast, Menya and Gichinga (2013) discovered the internal rate of return to be used by the more than two-third of the SMEs surveyed in Kenya. Likewise, McLellan and Sherine (2013) reported that 77% of the SMEs in Egypt used the internal rate of return. This study also found low usage of cost volume profit analysis (m = 1.34) whereas Ilias *et al.* (2010) reported that about 53% of Malaysian SMEs used cost volume profit analysis. To summarise, the mean scores of most decision support and the investment appraisal practices ranged from 1.37 to 1.55 which suggests that the practices investigated are not being used by the respondents and any benefits that could be gained are not perceived by the SMEs in Durban. The following section discusses the findings based on gender.

4.4.2.1 Use of decision support and the investment appraisal practices and gender

The respondents’ perspectives of the use of decision support and the investment appraisal practices are further presented and analysed according to the gender. As indicated before, the gender variable was considered the most important of all the background questions in view of the current emphasis on gender equality. The findings in Table 4.12 above have revealed that the decision support and the investment appraisal practices are rarely used; therefore, this analysis was done to identify if there are any patterns or differences that might exist in respondents’ responses in terms of

their gender. Table 4.13 presents the mean score ranks of the male and female respondents. A Kruskal-Wallis H test was performed to assess and rank the gender tendencies with mean rank scores with the * representing the significance.

Table 4.13: The use of decision support and investment appraisal techniques by gender

The decision support and investment appraisals	Gender	No.	Kruskal-Wallis mean rank
Payback method	Male	60	48,58
	Female	42	55,67*
	Total	**102`**	
Net present value	Male	60	49,78
	Female	42	53,95*
	Total	**102**	
Internal rate of return	Male	60	50,11
	Female	42	53,49*
	Total	**102**	
Accounting rate of return	Male	60	50,83
	Female	42	52,45*
	Total	**102**	
Cost, volume, price analysis	Male	60	49,90
	Female	42	53,79*
	Total	**102**	
Decisions under risk and uncertainty	Male	60	50,26
	Female	42	53,27*
	Total	**102**	
Pricing and profitability analysis	Male	60	50,65
	Female	42	52,71*
	Total	**102**	
Note = * represents the significance based on the rank of the mean scores			

Albeit that the above practices are rarely used, Table 4.13 indicates that decision support and investment appraisals practices are mostly used by female owners as the rank of their mean values are higher than that of the male owners for all practices. Decision techniques such as payback method (m= 55.67*), net present value (m= 53.95*), internal rate of return (m= 53.49), accounting rate of return (m= 52.45*), and cost volume profit analysis (m= 53.79*) were found to be significantly more used by female owners. The same conclusions may be made for decisions under risk and uncertainty (m= 53.27*), and pricing and profitability analysis (m= 52.71*).

The next section discusses the extent of use (and by implication, its usage) of planning and the control techniques.

4.4.3 The use and extent of use of planning and the control techniques

Section two of the questionnaire enquired about the extent of use of planning and the control techniques by the respondents. The mean and the standard deviation are also shown to provide clarity on the total population. The findings on this question are shown in Table 4.14.

Table 4.14: Planning and control techniques

Planning and control techniques	Never		Rarely		Occasionally		Frequently		Always		Mean	SD.
	No	%	No	%	No	%	No	%	No	%		
Sales budget	25	24.5	5	4.9	14	13.7	34	33.3	24	23.5	3.26	1.50
Production budget	45	44.1	3	2.9	5	4.9	17	16.7	32	31.4	2.88	1.80
Labour budget	50	49.0	2	2.0	12	11.8	17	16.7	21	20.6	2.58	1.68
Material budget	50	49.0	1	1.0	5	4.9	16	15.7	30	29.4	2.75	1.81
Overheads budget	76	74.5	5	4.9	6	5.9	7	6.9	8	7.8	1.69	1.30
Standard costing and variances	79	77.5	3	2.9	11	10.8	2	2.0	7	6.9	1.58	1.19
Transfer pricing	84	82.4	4	3.9	5	4.9	3	2.9	6	5.9	1.46	1.11
Return on investment	84	82.4	4	3.9	5	4.9	3	2.9	6	5.9	1.46	1.11
Residual income	88	88.0	3	3.0	2	2.0	4	4.0	3	3.0	1.31	0.93
Quantitative methods for planning and stock control	81	80.2	5	5.0	7	6.9	4	4.0	4	4.0	1.47	1.05

Note: A Likert scale of 1 = never, 2 = rarely, 3 = occasionally, 4 = frequently and 5 = always was used.

Table 4.14 indicates that planning and the control techniques are occasionally, rarely or never used. This is because the mean scores approximating 3.00 or less show lower levels of the extent of use. In addition, the standard deviations indicate that the scoring is clustered close to the mean scores. However, there was some support for the use of budget techniques by SMEs. The sales budget, production budget, labour budget, and material budget were frequently used by 33.3%, 16.7%, 16.7% and 15.7% of respondents respectively and always used by 23.5%,31.4%, 20.6% and 29.4% of the respondents respectively with mean scores of between 2.58 to 3.26. It is possible that one reason for this is that these budgets (i.e. sales, production, labour and material) which are used for planning and control are the most used as they are necessary for the frequent monitoring of the business, and that some of the other

planning and control techniques would not be that relevant to an SME (for example, transfer pricing).

In comparison with the literature reviewed, in South Africa, Maduekwe (2015) found that 79.35% of the SMEs examined used budgets. He further indicated that frequently used budgets are the sales budgets cited by 83.57% of the SMEs. These results are consistent with that of Ahmad (2012b) who stated that planning and control techniques such as sales budgets, purchasing budgets and production budgets are mostly used by SMEs in Malaysia. However, in Egypt, McLellan and Sherine (2013) revealed that 100% the companies used the budgeting tools and Gichaaga (2013) revealed that 90.8% of the Kenyan SMEs used budgeting tools.

The following section discussed the findings of the analysis based on gender.

4.4.3.1 Planning and the control techniques and gender

The respondents' perspectives on the use of the planning and the control techniques are further presented. The below analysis is done to pinpoint any patterns or differences that might exist in respondents' responses in terms of their gender; this was indicated by a Kruskal-Wallis H test. The mean scores are presented in Table 4.15.

Table 4.15: Planning and control techniques usage between gender groups			
Planning and control techniques	**Gender**	**No.**	**Kruskal-Wallis mean rank**
Sales budget	Male	60	53,04*
	Female	42	49,30
	Total	**102**	
Production budget	Male	60	50,23
	Female	42	53,31*
	Total	**102**	
Labour budget	Male	60	49,07
	Female	42	54,98*
	Total	**102**	
Material budget	Male	60	49,64
	Female	42	54,15*
	Total	**102**	
Overheads budget	Male	60	49,96
	Female	42	53,70*
	Total	**102**	
Standard costing and variances	Male	60	51,43
	Female	42	51,61*
	Total	**102**	
Transfer pricing	Male	60	49,59
	Female	42	54,23*
	Total	**102**	
Return on investment	Male	60	50,19
	Female	42	53,37*
	Total	**102**	
Residual income	Male	59	48,80
	Female	41	52,95*
	Total	**100**	
Quantitative methods for planning and stock control	Male	59	48,65
	Female	42	54,30*
	Total	**101**	
Note = * represents the significance based on the rank of the mean scores			

The findings in Table 4.15 suggested that most of planning and control techniques such as production budgets (m= 53.31*), labour budgets (m= 54.98*), material budgets (m= 54.15*), overheads budgets (m= 53.70*), standard costing and variances (m= 51.61*), transfer pricing (m= 54.23*), return on investment (m= 53.37*), residual

income (m= 52.95*) are more used by female owners. Likewise, the quantitative methods for planning and stock control (m= 54.30*) are significantly used by female owners, with the exception of the use of the sales budget which is more used by male owners and managers (m= 53.04*) when compared to female owners and managers. It is also interesting to note that in the comparison of the mean ranks, there is not much difference in respect to the use of standard costing and variance technique between the two selected groups (males = 51.43 and females = 51.61*).

4.4.3.2 Summary of use and extent of use of management accounting practices

To summarise the above findings, to answer research questions 1 and 2, the costing system that is mostly used by the investigated SMEs is traditional costing even though it is rarely used by these entities. More than half of SMEs cited that they do not use costing systems such as target costing, variable costing, job costing, absorption costing, process costing, activity-based costing, and just-in-time costing. With the planning and control techniques, the study found that the sales budget, production budgets, labour and material budget are not often used. The majority of SMEs cited that they do not use management accounting practices surveyed. However, if they do, they are mostly used by female owners in their businesses.

The following section presents and discusses the factors that affect the use of management accounting practices. This addresses the third research question.

4.5 Factors that affect the use of management accounting

This section presents analyses and discusses the findings of the third research question which was to determine the factors that affect the use of management accounting practices within SMEs. These findings are presented in Table 4.16. For the purpose of the study, the words SMEs and business were considered interchangeable.

Table 4.16: The factors that affect the use of management accounting

Statements	Strongly disagree		Disagree		Neither agree nor disagree		Agree		Strongly agree		Mean	SD.
	No	%	No	%	No	%	No	%	No	%		
The industry where your business operates	7	6.9	15	14.9	3	3.0	55	54.5	21	20.8	3.67	1.17
The nature of the business	7	7.0	13	13.0	9	9.0	43	43.0	28	28.0	3.72	1.21
The size of the business	5	5.2	16	16.5	10	10.3	50	51.5	16	16.5	3.58	1.11
Lack of education and skills	3	3.1	4	4.1	9	9.2	21	21.4	61	62.2	4.36	1.02
Lack of technology	3	3.6	9	10.7	31	36.9	23	27.4	18	21.4	3.52	1.06
Cost to employ in-house management accountants	5	5.9	7	8.2	12	14.1	42	49.4	19	22.4	3.74	1.08
Lack of management accounting knowledge	2	2.0	1	1.0	1	1.0	28	28.0	68	68.0	4.59	0.75
Cost to outsource management accounting practices	3	3.3	7	7.7	7	7.7	45	49.5	29	31.9	3.99	1.01

Note: A Likert scale of 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree and 5 = strongly agree was used.

Table 4.16 shows that for almost all the statements, the mean scores ranged from 3.58 to 4.59. This indicates that the middle point in this analysis is between “agree” and “strongly agree” with the statements. The low standard deviations also indicate that the answers chosen by the respondents were clustered closely to the mean scores.

Concerning the factors related to the industry in which the business operates, Table 4.16 indicates that 20.8% of SMEs strongly agreed that the industry where their business operated affected their use of management accounting practices, while more than half (54.3%) of respondents agreed with this statement. Therefore, these findings suggest that the industry which SMEs operate in does affect their use of management accounting practices (m=3.67).

In respect of the nature of the business, the findings in Table 4.16 above indicate that 71.0% (i.e. 43.0% plus 28.0%) of respondents agreed and strongly agreed that the nature of the business does affect SMEs to use management accounting practices. Twenty percent (20%, i.e. 13.0% plus 7.0%) of SMEs disagree and strongly disagreed that the nature of the business affected their use of management accounting practices. These findings suggest that nature of business is one of the factors that affects the use of management accounting practices with a mean score of 3.72.

In respect of the size of the business, Table 4.16 reveals that about 78.0% (i.e. 51.5% plus 16.5%) of SMEs agree and strongly agreed that the size of the business does affect their use of management accounting practices. Only 16.5% of SMEs disagreed with the statement. The findings suggest that the size of the business is one of the factors that affect the use of management accounting practices by SMEs (m=3.58).

The findings relating to the lack of education and skills shown in Table 4.16 shows that 83.6% (that is 62.2% plus 21.4%) of SMEs agreed and strongly agreed that the lack of education and skills affected the use of management accounting practices. About 7.2% (that is 4.1% plus 3.1%) of SMEs disagreed and strongly disagreed that the lack of education and skills affected their use of management accounting practices. These findings suggest that lack of education and skills is play a material role in whether SMEs use the management accounting practices (m=4.36). This item had the second highest mean score of all the items shown in Table 4.16, indicating that lack of education and skills is an important factor affecting the usage of management accounting practices.

With reference to the lack of technology, Table 4.16 indicates that only 48.8% (that is 27.4% plus 21.4%) of SMEs agreed and strongly agreed that the lack of technology does affect their use of management accounting practices. While 10.7% of SMEs strongly disagreed that the lack of technology affected their use of management accounting practices. These findings suggest that the lack of technology has a negative impact on whether SMEs use management accounting practices (m=3.52).

About the costs to employ in-house management accountants, the above findings indicate that 71.8% (49.4% plus 22.4%) of SMEs agreed and strongly agreed that the costs to employ in-house management accountants does affect the use of management accounting practices. Around 14.1% (i.e. 8.2% plus 5.9%) disagreed

and strongly disagreed. These findings suggest that costs to employ in-house management accountants is one of the main factors that affect the use of management accounting practices by SMEs (m=3.74).

Regarding the lack of management accounting knowledge, Table 4.16 indicates that 96% (i.e. 68.0% plus 28.0%) of SMEs agreed and strongly agreed that the lack of management accounting knowledge affects their use of management accounting practices. While 3.0% (i.e. 2.0% plus 1.0%) of SMEs disagreed and strongly agreed. Therefore, the findings suggest that lack of management accounting knowledge is highest factor that affects the use of management accounting practices with a mean score of 4.59 and is thus the main reason affecting the usage of management accounting practices in the SMEs.

Concerning the cost to outsource management accounting practices, the findings in Table 4.16 revealed that 81.4% (i.e. 41.5% plus 31.9%) of SMEs agreed and strongly agreed that the cost to outsource management accounting practices does affect their use of management accounting practices. Basically 11.0% (7.7% plus 3.3%) of SMEs disagreed and strongly disagreed with the statement. These findings suggest that that cost to outsource management accounting practices is one of the major factors that affect the use of management accounting practices by SMEs (m=3.99).

When comparing to the literature, Lucas *et al.* (2013) also indicated that the nature of the business affects the use of management accounting practices of SMEs in the United Kingdom. Other studies highlighted the lack of education within SMEs and the industries in which they operate as important factors affecting the adoption of management accounting practices (Harif *et al.* 2010; Rundora and Shelesho 2014; Sumkaew *et al.* 2012). Nandan (2010) also mentioned the lack of knowledge and expertise by SMEs in Australia.

On the other hand, Karanja *et al.* (2012) found that competition, organisational strategy, size of the firm and critical success factors were the most important factors that hinder the adoption of management accounting practices. Lastly, there was some indication that technology was not the most important factor affecting the use of management accounting practices (m = 3.52). However, this finding is in contrast to Karanja *et al.* (2012: 6) and Ahmad (2012a: 101) who found that the technology

advancement was the highest factor that inhibits the implementation of management accounting practices by Kenyan and Malaysian located SMEs.

4.5.1 Binomial test for the factors that affect SMEs from using management accounting practices

Table 4.17 presents the findings and analyses the findings from the binomial test for factors that affect SMEs from using management accounting practices using two groups. Group 1 represents the respondents who disagreed or were neutral towards the statements. Group 2 represents those respondents who agreed or strongly agreed with the statements. The eight statements on factors that affect SMEs from using management accounting practices were ranked from high to low. This rank is based on the mean scores between 4.00 (frequently) and 5.00 (always).

Table 4.17: Binomial test findings for the factors affecting SMEs in Durban from using management accounting practices

Statement		Category	No.	Observed Prop.	Test Prop.	Exact Sig. (2-tailed)	Rank**
The industry where your business operates	Group 1	<= 3	25	0.25	0.50	0.000*	6
	Group 2	> 3	76	0.75			
	Total		101	1.00			
The nature of the business	Group 1	<= 3	29	0.29	0.50	0.000*	5
	Group 2	> 3	71	0.71			
	Total		100	1.00			
The size of the business	Group 1	<= 3	31	0.32	0.50	0.000*	7
	Group 2	> 3	66	0.68			
	Total		97	1.00			
Lack of education and skills	Group 1	<= 3	16	0.16	0.50	0.000*	2
	Group 2	> 3	82	0.84			
	Total		98	1.00			
Lack of technology	Group 1	<= 3	43	0.51	0.50	0.913	8
	Group 2	> 3	41	0.49			
	Total		84	1.00			
Cost to employ in-house management accountants	Group 1	<= 3	24	0.28	0.50	0.000*	4
	Group 2	> 3	61	0.72			
	Total		85	1.00			
Lack of management accounting knowledge	Group 1	<= 3	4	0.04	0.50	0.000*	1
	Group 2	> 3	96	0.96			
	Total		100	1.00			
Cost to outsource management accounting practices	Group 1	<= 3	17	0.19	0.50	0.000*	3
	Group 2	> 3	74	0.81			
	Total		91	1.00			

Note: * = p-value (Asymptotic significance (2-sided)) is < 0.05. ** Rank is based on the mean scores

Table 4.17 above indicates that, based on the p-values < 0.05, all seven factors (except for the lack of technology (p=0.913)) show a significant difference in how the two sub-groups of the respondents rated the factors that affect SMEs' usage of management accounting practices. The findings suggest lack of technology is not a major factor. Notwithstanding that, other factors significantly affect the SMEs from using the management accounting practices, evidenced by the mean scores of 3.00

and more (see Table 4.16) which show the levels of agreement with the individual factors.

The next section discusses the challenges facing SMEs in order to provide further information on the factors affecting the use of management accounting practices by the respondents.

4.5.2 Challenges facing SMEs in Durban

This section discusses the findings on the challenges faced by SMEs. Part three of section B of the questionnaire asked respondents about other challenges their SMEs are facing. This question also helped to address the third research objective. It was deemed necessary because the challenges can also affect SMEs from adapting and/or implementing the use of management accounting practices. In Table 4.18 which is shown next, all the mean scores range from 2.82 to 3.69. This indicates that the middle point in this analysis is “neither agree nor disagree” and “agree” with the statements.

Table 4.18: Challenges facing SMEs in Durban

Statements	Strongly disagree		Disagree		Neither agree nor disagree		Agree		Strongly agree		Mean	SD.	Rank*
	No	%	No	%	No	%	No	%	No	%			
Financial challenges	6	7.1	3	3.6	11	13.1	55	65.5	9	10.7	3.69	0.97	1
Human resource challenges	13	13.4	11	11.3	9	9.3	46	47.4	18	18.6	3.46	1.29	2
Technological challenges	14	15.2	12	13.0	16	17.4	26	28.3	24	26.1	3.37	1.40	3
Regulatory challenges	19	23.5	12	14.8	21	25.9	15	18.5	14	17.3	2.91	1.41	5
Security challenges	15	18.3	11	13.4	15	18.3	22	26.8	19	23.2	3.23	1.43	4
Environmental challenges	19	22.9	15	18.1	19	22.9	22	26.5	8	9.6	2.82	1.32	6

Note: A Likert scale of 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree and 5 = strongly agree was used.

* Rank is based on the mean scores.

Table 4.18 indicates that a majority of 76.2% (i.e. 65.5% plus 10.7%) of the SMEs agreed and strongly agreed that their businesses are facing financial challenges (m=3.69). Whilst 66% (i.e. 47.4% plus 18.6%) of the respondents agreed and strongly

agreed that their businesses are facing human resource challenges (m=3.46). More than half (54.4%) (i.e. 28.3% plus 26.8%) of SMEs agreed and strongly agreed that their businesses are facing technological challenges (m=3.37). However, SMEs did not seem to be facing environmental challenges and regulatory challenges as these challenges scored 36.1% and 35.8% respectively with mean scores ranging from 1.32 to 1.41.

The results suggest that SMEs in Durban are faced with both internal and external challenges. The internal challenges include financial challenges (76.2% of SMEs in Durban m= 3.69) which was also cited by Mbogo (2011) and Padachi (2012), who viewed financial challenges as a major factor that impedes SME growth. The second ranked challenge were human resource challenges (m = 3.46) which supports the findings of Agwu and Emeti (2014) and Marembo (2013), that human resources are one of the major challenges hindering SMEs. Technological challenges were ranked third amongst the challenges facing SMEs in Durban (m = 3.36); these findings support the findings by Arbor and Quarterly (2010), and Padachi (2012), who individually reported that technology seems to be not a major challenge for SMEs nowadays. Shipulwa's (2016) findings differ as he found that finance and capital, crime and taxes are the highest challenges in Namibian SMEs.

4.5.3 Summary of factors that affect the use of management accounting practices

To summarise, the afore-mentioned findings address the third research question and indicate that the lack of management accounting knowledge and education and skills are the two highest factors that affect the use of management accounting practices by SMEs with mean scores 4.59 and 4.36 respectively (see Table 4.19).

Table 4.19: Summary of factors that affect the use of management accounting practices		
Factors	**Mean**	**Ranking**
Lack of management accounting knowledge	4.59	1
Lack of education and skills	4.36	2
Cost to outsource management accounting practices	3.99	3
Costs to employ in-house management accountants	3.74	4
Nature of the business	3.72	5
Industry	3.67	6
Size of the business	3.58	7
Lack of technology	3.52	8

The other factors investigated had mean scores ranging from 2.82 to 3.69 (see Table 4.18). The three challenges cited by the respondents were financial challenges (m = 3.69), human resource challenges (m = 3.46) and technological challenges (m = 3.37).

The next part of the study addressed the impact of management accounting practices on SMEs' success.

4.6 The impact of management accounting practices on SMEs' success

The fourth research objective was to examine the impact of management accounting practices on the success of SMEs in Durban. This research objective was investigated in two parts. In this section (4.6), 14 possible uses of management accounting practices were listed and respondents were required to indicate on a Likert scale of strongly disagree (scored 1) to strongly agree (scored 5) with the possible uses of management accounting practices (Table 4.20). These responses were further analysed in Table 4.21. Tables 4.22 then shows a correlation of management accounting practices used by SMEs with the impact of management accounting practices

Section 4.7 of this chapter then enquired about the measures of success used by SMEs in Durban (Table 4.23). Finally, section 4.8 shows a correlation between the impact of management accounting practices in SMEs and the success of SMEs (Table 4.24).

The results relating to the 14 statements are shown in Table 4.20. It can be noted that the mean scores range from 2.83 to 4.41, with the low standard deviations indicating that the scoring was closely clustered around the mean.

Table 4.20: Impact of management accounting practices on SMEs in Durban

Statements	Strongly disagree		Disagree		Neither agree nor disagree		Agree		Strongly agree		Mean	SD.
	No	%	No	%	No	%	No	%	No	%		
assists in decision-making	3	3.6	12	14.5	26	31.3	34	41.0	8	9.6	3.39	0.97
help to control costs	4	4.7	4	4.7	27	31.8	36	42.4	14	16.5	3.61	0.98
assists in planning	2	2.0	1	1.0	11	11.1	25	25.3	60	60.6	4.41	0.88
yield an advantage over competitors	6	7.1	17	20.2	43	51.2	12	14.3	6	7.1	2.94	0.96
assists in choosing the best investment opportunities	8	9.6	15	18.1	37	44.6	15	18.1	8	9.6	3.00	1.07
ensure profitability	0	0.0	12	14.5	30	36.1	31	37.3	10	12.0	3.47	0.89
ensure sustainability	0	0.0	10	12.7	26	32.9	30	38.0	13	16.5	3.58	0.91
assists when assessing business performance	1	1.2	4	4.7	20	23.5	22	25.9	38	44.7	4.08	0.99
ensure business growth	5	6.8	15	20.3	31	41.9	15	20.3	8	10.8	3.08	1.06
assists owners and managers to run the business successfully	7	9.0	10	12.8	36	46.2	13	16.7	12	15.4	3.17	1.12
assists in financial reporting	4	5.3	5	6.7	34	45.3	23	30.7	9	12.0	3.37	0.97
helps in developing business strategies	9	11.8	21	27.6	28	36.8	10	13.2	8	10.5	2.83	1.14

Note: A Likert scale of 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree and 5 = strongly agree was used.

Table 4.20 indicates that the respondents were aware of the advantages of using management accounting practices. This is because the mean scores approaching 4.00 and more tend to show the highest levels of agreement. Most respondents

(85.9% i.e. 25.3% plus 60.6%) cited “assist in planning” (m=4.41) as the most important impact. The second largest number, 70.6% (i.e. 25.9% plus 44.7%), of the respondents cited “assists when assessing business performance”, with a mean score of 4.08. More than half (58.9%) of the SMEs cited “help to control costs”, with a mean score of 3.61. The above findings indicate that SMEs which are using management accounting practices do find some usefulness in them.

Less than a quarter (21.4%) of SMEs cited “yield an advantage over competitors” (m=2.94). This suggests that the use of management accounting practices is not considered to be a factor affecting the competitiveness of SMEs. Finally, less than half (49.3%) of the SMEs cited “ensure profitability”, with a mean score of 3.00. Despite these scores, the majority of SMEs have indicated that the use of management accounting practices to somewhat have a positive impact on SMEs.

The following section discusses the binomial test for the impact of management accounting practices by SMEs.

4.6.1 Binomial test for the impact of management accounting practices on SMEs

Table 4.21 presents the findings and analyses the findings from the binomial test. Group 1 represents the respondents who disagreed or were neutral towards the statements on the uses of management accounting practices. Group 2 represents those respondents who agreed or strongly agreed with the statements.

Table 4.21: Binomial test findings for the impact of management accounting practices in Durban SMEs

Statement		Category	No.	Observed Prop.	Test Prop.	Exact Sig. (2-tailed)	** Rank
assists in decision-making	Group 1	<= 3	41	0.49	0.50	1.000	5
	Group 2	> 3	42	0.51			
	Total		83	1.00			
help to control costs	Group 1	<= 3	35	0.41	0.50	0.128	3
	Group 2	> 3	50	0.59			
	Total		85	1.00			
assists in planning	Group 1	<= 3	14	0.14	0.50	0.000*	1
	Group 2	> 3	85	0.86			
	Total		99	1.00			
yield an advantage over competitors	Group 1	<= 3	66	0.79	0.50	0.000*	12
	Group 2	> 3	18	0.21			
	Total		84	1.00			
assists in choosing the best investment opportunities	Group 1	<= 3	60	0.72	0.50	0.000*	10
	Group 2	> 3	23	0.28			
	Total		83	1.00			
ensure profitability	Group 1	<= 3	42	0.51	0.50	1.000	6
	Group 2	> 3	41	0.49			
	Total		83	1.00			
ensure sustainability	Group 1	<= 3	36	0.46	0.50	0.500	4
	Group 2	> 3	43	0.54			
	Total		79	1.00			
assists when assessing business performance	Group 1	<= 3	25	0.29	0.50	0.000*	2
	Group 2	> 3	60	0.71			
	Total		85	1.00			
ensure business growth	Group 1	<= 3	51	0.69	0.50	0.002*	9
	Group 2	> 3	23	0.31			
	Total		74	1.00			
assists owners and managers to run the business successfully	Group 1	<= 3	53	0.68	0.50	0.002*	8
	Group 2	> 3	25	0.32			
	Total		78	1.00			
assists in financial reporting	Group 1	<= 3	43	0.57	0.50	0.248	7
	Group 2	> 3	32	0.43			
	Total		75	1.00			
helps in developing business strategies	Group 1	<= 3	58	0.76	0.50	0.000*	11
	Group 2	> 3	18	0.24			
	Total		76	1.00			

Note: * = p-value (Asymptotic significance (2-sided)) is < 0.05. ** Rank is based on the mean scores in Table 4.21.

Table 4.21 a indicates that, based on the p-values for those statements where the p-value is < 0.05, that there is a difference in how the two sub-groups of the respondents rated the uses of management accounting practices. However, for the following statements, “assists in decision-making”, “to help to control costs”, “to ensure profitability”, “to ensure sustainability” and “to assist in financial reporting”, with p-values > 0.05, the difference for the two sub-groups of the respondents are not statistically significant.

4.6.2 Correlation of management accounting practices used by SMEs with impact of management accounting practices

A Spearman’s rho correlation test was performed to ascertain if there is a relationship between management accounting practices used by SMEs and impact of use of management accounting practices. All variables were tested; however, the findings are only discussed for the results which have significant positive relationships. Positive values indicate a directly proportional relationship between the variables and a negative value indicates an inverse relationship. All significant relationships are indicated by a * or **. Correlation (r) is significant at the 0.05 level (2-tailed) while the ** correlation is significant at the 0.01 level (2-tailed).

The following is a discussion of the correlations of the management accounting practices used by SMEs with the impact of management accounting practices within SMEs. Three tables are presented.

Table 4.22 shows the correlation between the types of costing systems (question 10) and the impact of management accounting practices (question 15).

Table 4.23 shows the correlation between decision support and investment appraisal (question 11) and the impact of management accounting practices (question 15).

Table 4.24 shows the correlation between the planning and control techniques (question 12) and the impact of management accounting practices (question 15).

For the sake of conciseness, the three tables (4.22, 4.23 and 4.24) and discussed together when each impact of management accounting practice is considered. It must also be noted that the scores are based on the perceptions of the respondents as the discussion relating to the first and second research objectives showed that there was low use of the management accounting practices investigated in this research study.

Table 4.22: Impact of management accounting practices and types of costing systems

Types of costing systems		Traditional	Process	Joint and by product	Target	Job	Activity based	Variable	Absorption	Just in time
assists in decision-making	r	-0.052	0.138	0.139	.320**	0.125	0.050	0.071	0.003	0.156
	p	0.638	0.212	0.210	0.003	0.262	0.650	0.523	0.982	0.159
	N	83	83	83	83	83	83	83	83	83
help to control costs	r	-0.127	0.063	0.180	0.212	.376**	0.059	0.064	0.119	0.180
	p	0.248	0.568	0.098	0.052	0.000	0.590	0.559	0.278	0.099
	N	85	85	85	85	85	85	85	85	85
assists in planning	r	-0.035	0.044	-0.090	-0.028	0.087	-0.123	-0.013	0.144	0.022
	p	0.732	0.665	0.374	0.780	0.394	0.225	0.900	0.154	0.826
	N	99	99	99	99	99	99	99	99	99
yield an advantage over competitors	r	0.065	0.040	.419**	.253*	.333**	0.134	0.147	.254*	.444**
	p	0.558	0.717	0.000	0.020	0.002	0.223	0.181	0.020	0.000
	N	84	84	84	84	84	84	84	84	84
assists in choosing the best investment opportunities	r	0.006	.344**	.496**	.560**	.396**	.475**	.489**	0.206	.376**
	P	0.958	0.001	0.000	0.000	0.000	0.000	0.000	0.062	0.000
	N	83	83	83	83	83	83	83	83	83
ensure profitability	r	0.052	.290**	.385**	.498**	.454**	.377**	.318**	.450**	.546**
	p	0.641	0.008	0.000	0.000	0.000	0.000	0.003	0.000	0.000
	N	83	83	83	83	83	83	83	83	83
ensure sustainability	r	-0.076	.272*	0.204	.267*	.288*	.246*	0.087	.266*	.257*
	P	0.503	0.015	0.071	0.018	0.010	0.029	0.444	0.018	0.022
	N	79	79	79	79	79	79	79	79	79
assists when assessing business performance	r	0.035	0.138	-0.183	-0.077	-0.050	-0.025	-0.010	0.121	-0.029
	p	0.750	0.207	0.093	0.484	0.647	0.820	0.925	0.272	0.789
	N	85	85	85	85	85	85	85	85	85
ensure business growth	r	0.019	.375**	.535**	.409**	.379**	.332**	.494**	0.224	.551**
	P	0.870	0.001	0.000	0.000	0.001	0.004	0.000	0.056	0.000
	N	74	74	74	74	74	74	74	74	74
assists in running the business successfully	r	-0.083	0.200	.453**	.545**	.319**	.480**	.469**	0.159	.565**
	p	0.470	0.079	0.000	0.000	0.004	0.000	0.000	0.166	0.000
	N	78	78	0.000	78	78	78	78	78	78
assists in financial reporting	r	0.012	.237*	0.000	.562**	0.164	.298**	.482**	0.156	.608**
	P	0.920	0.040	0.000	0.000	0.160	0.009	0.000	0.181	0.000
	N	75	75	0.000	75	75	75	75	75	75
helps in developing business strategies	r	-0.061	0.171	0.000	.465**	.296**	.285*	.407**	0.130	.489**
	p	0.602	0.140	0.000	0.000	0.010	0.013	0.000	0.262	0.000
	N	76	76	76	76	0.000	76	76	76	76

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 4.23: Impact of management accounting practice and decision support and investment appraisal techniques

Investment appraisal techniques		Relevant costs and revenues	Payback method	Net present value	Internal rate of return	Accounting rate of return	Cost, volume, price analysis	Decisions under risk and uncertainty	Pricing and profitability analysis
assists in decision-making	r	0.089	.273*	0.163	0.065	0.130	0.132	0.146	0.095
	p	0.424	0.012	0.142	0.557	0.243	0.234	0.187	0.395
	N	83	83	83	83	83	83	83	83
help to control costs	r	0.066	.244*	0.179	0.154	0.137	0.172	0.082	.223*
	p	0.548	0.024	0.101	0.158	0.210	0.115	0.458	0.040
	N	85	85	85	85	85	85	85	85
assists in planning	r	-0.077	0.053	0.065	-0.053	-0.039	-0.073	-0.037	-0.071
	p	0.451	0.605	0.524	0.601	0.700	0.474	0.716	0.487
	N	99	99	99	99	99	99	99	99
yield an advantage over competitors	r	.229*	.380**	.519**	.345**	.482**	.383**	.409**	.366**
	p	0.036	0.000	0.000	0.001	0.000	0.000	0.000	0.001
	N	84	84	84	84	84	84	84	84
assists in choosing best investment opportunities	r	.595**	.611**	.513**	.545**	.592**	.450**	.426**	.492**
	p	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	N	83	83	83	83	83	83	83	83
ensure profitability	r	0.198	.348**	.449**	.391**	.405**	.453**	.404**	.458**
	p	0.072	0.001	0.000	0.000	0.000	0.000	0.000	0.000
	N	83	83	83	83	83	83	83	83
ensure sustainability	r	0.054	0.184	0.217	0.172	0.150	0.180	0.103	0.185
	p	0.637	0.105	0.055	0.130	0.186	0.113	0.368	0.103
	N	79	79	79	79	79	79	79	79
assists when assessing business performance	r	-0.139	-0.099	-0.123	-0.188	-0.165	-0.109	-0.167	-0.169
	p	0.205	0.369	0.264	0.085	0.132	0.321	0.127	0.122
	N	85	85	85	85	85	85	85	85
ensure business growth	r	.481**	.535**	.584**	.525**	.579**	.475**	.508**	.493**
	p	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	N	74	74	74	74	74	74	74	74
assists in running the business successfully	r	.403**	.494**	.622**	.581**	.633**	.479**	.561**	.512**
	p	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	N	78	78	78	78	78	78	78	78
assists in financial reporting	r	.459**	.558**	.559**	.473**	.618**	.471**	.518**	.453**
	p	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	N	75	75	75	75	75	75	75	75
helps in developing business strategies	r	.381**	.523**	.534**	.420**	.521**	.465**	.452**	.448**
	p	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	N	76	76	76	76	76	76	76	76

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 4.24: Impact of management accounting practices and planning and control techniques

Planning and control techniques		Sales budget	Production budget	Labour budget	Material budget	Over-heads budget	Standard costing and variances	Transfer pricing	Return on investment	Residual income	Quantitative methods for planning and stock control
assists in decision-making	r	.236*	-0.006	.329**	0.168	0.144	0.153	.267*	0.160	0.097	0.098
	p	0.032	0.959	0.002	0.129	0.194	0.168	0.015	0.149	0.390	0.379
	N	83	83	83	83	83	83	83	83	81	82
help to control costs	r	.267*	0.082	.399**	.267*	0.167	0.017	.221*	.252*	0.105	0.200
	p	0.013	0.453	0.000	0.014	0.126	0.879	0.043	0.020	0.347	0.068
	N	85	85	85	85	85	85	85	85	83	84
assists in planning	r	.353**	0.083	.248*	.200*	-0.097	-0.196	-0.050	0.031	-0.129	0.031
	p	0.000	0.416	0.013	0.048	0.339	0.051	0.620	0.758	0.210	0.763
	N	99	99	99	99	99	99	99	99	97	98
yield an advantage over competitors	r	0.107	-0.155	0.152	-0.019	.487**	.345**	.491**	.510**	.339**	.291**
	p	0.332	0.160	0.167	0.864	0.000	0.001	0.000	0.000	0.002	0.008
	N	84	84	84	84	84	84	84	84	82	83
assists in choosing best investment opportunities	r	-0.077	0.093	.375**	.289**	.547**	.655**	.565**	.515**	.467**	.403**
	p	0.487	0.403	0.000	0.008	0.000	0.000	0.000	0.000	0.000	0.000
	N	83	83	83	83	83	83	83	83	81	82
ensure profitability	r	0.154	0.059	.467**	.326**	.446**	.306**	.510**	.505**	.381**	.458**
	p	0.165	0.599	0.000	0.003	0.000	0.005	0.000	0.000	0.000	0.000
	N	83	83	83	83	83	83	83	83	81	82
ensure sustainability	r	.406**	.456**	.497**	.359**	0.155	0.117	.297**	0.175	0.120	0.182
	p	0.000	0.000	0.000	0.001	0.172	0.305	0.008	0.124	0.298	0.111
	N	79	79	79	79	79	79	79	79	77	78
assists in assessing business performance	r	.355**	0.056	0.089	0.180	-0.139	-0.175	-0.089	-0.154	-0.134	-0.013
	p	0.001	0.609	0.419	0.100	0.204	0.108	0.419	0.159	0.226	0.904
	N	85	85	85	85	85	85	85	85	83	84
ensure business growth	r	0.098	0.086	.389**	0.166	.588**	.564**	.601**	.573**	.432**	.317**
	p	0.407	0.468	0.001	0.157	0.000	0.000	0.000	0.000	0.000	0.006
	N	74	74	74	74	74	74	74	74	72	73
assists in running business successfully	r	0.186	0.126	.243*	0.118	.551**	.602**	.639**	.617**	.528**	.313**
	p	0.102	0.273	0.032	0.302	0.000	0.000	0.000	0.000	0.000	0.006
	N	78	78	78	78	78	78	78	78	76	77
assists in financial reporting	r	.261*	0.121	.390**	.262*	.587**	.593**	.635**	.571**	.434**	.248*
	p	0.024	0.302	0.001	0.023	0.000	0.000	0.000	0.000	0.000	0.033
	N	75	75	75	75	75	75	75	75	73	74
helps in developing business strategies	r	0.068	-0.107	.253*	0.165	.550**	.492**	.609**	.534**	.455**	.230*
	p	0.558	0.357	0.028	0.155	0.000	0.000	0.000	0.000	0.000	0.047
	N	76	76	76	76	76	76	76	76	74	75

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

4.6.2.1 Types of management accounting practices that assist SMEs in decision-making

The results show that target costing (r =.320**, p =0,003) (Table 4.22), the payback method (r = .273*, p = 0,012) (Table 4.23), and the planning and control techniques of the labour budget (r = .329**, p = 0,002) and transfer pricing (r = .267*, p = 0,015) (Table 4.24) are positively correlated with assists in decision making. This indicates that respondents who perceived that target costing, the payback method and the labour budget assist SMEs in decision making. As indicated before, these results must be interpreted with care bearing in mind the actual low usage of these management accounting practices by the respondents.

4.6.2.2 Management accounting practices that help SMEs by controlling costs

The costing system that helps SMEs control costs is job costing (r = .376**, p= 0,000) (Table 4.22). Table 4.23 shows that the payback method (r = .244*, p = 0,024) and the pricing and profitability analysis (r = .223*, p =0,040) help the SMEs control costs. Of the planning and control techniques (Table 4.24), the sales budget (r = .267*, p= 0,013), labour budget (r = .399**, p = 0,000), material budget (r = .267*, p =0,014), transfer pricing (r = .221*, p =0,043) and return on investment (r = .252*, p = 0,020) are correlated with helps to control costs. Similarly, to the above discussion, as few SMEs used these management accounting practices, the respondents perceive that the mentioned practices help in controlling costs. However, when compared to Table 4.20 where the impact of help to control costs was ranked third with a mean of 3.61, it seems surprising that so few of the practices listed were chosen by the respondents as useful in controlling costs.

4.6.2.3 Management accounting practices that assist SMEs in planning

None of the costing systems and decision support and investment appraisal techniques correlated with planning (Tables 4.22 and 4.23). Only the planning and control techniques such as the sales budget (r = .353**, p =0,000), labour budget (r = .248*, p =0,013) and material budget (r = .200*, p= 0,048) correlated with planning. As these latter techniques are focused on planning and control, it is not unexpected that there should be strong correlation for these techniques. However, when compared to Table 4.20 where the impact of assists in planning was ranked first with a mean of

4.41, it was expected that more of the practices listed would have been chosen by the respondents.

4.6.2.4 Management accounting practices that yield a competitive advantage

Five costing systems used by SMEs that are positively correlated with yield a competitive advantage are joint and by product costing (r = .419**, p =0,000), target costing (r =.253*, p= 0,020), job costing (r .333**, p-0,002), absorption costing (r = .254*, p= 0,020) and just in time costing (r = .444, p = 0,000) (Table 4.22).

All the decision support and investment techniques correlated with yield a competitive advantage (Table 4.23). These were relevant cost and revenues (r = .229*, p=0,036), payback method (r= .380**, p =0,000), net present value (r= .519**, p=0,000), internal rate of return (r= .345**, p=0,001), accounting rate of return (r =.482**, p=0,000), cost volume profit analysis (r = .383**, p= 0,000), decisions under risk and uncertainty (r= .409**, p=0,000) and pricing and profitability analysis (r= .366**, p=0,001).

Six out of the ten planning and control techniques correlated with yield a competitive advantage (Table 4.24). These were overheads budgets (r = .487**, p=0,000), standard costing and variances (r = .345**, p=0,001), transfer pricing (r = .491**, p=0,000), return on investment (r = .510**, p=0,000), residual income (r = .339**, p=0,002) and quantitative methods for planning and stock control income (r = .291**, p=0,008).

The fact that so many of the management accounting practices were chosen as useful for yielding an advantage over competitors indicates that the respondents do see a use in these practices in becoming more competitive in the marketplace although this item had a mean of only 2.94 (see Table 4.20) indicating that respondents were neutral towards its possible impact.

4.6.2.5 Management accounting practices that assist when choosing investment opportunities

Seven out of the nine costing systems presented in question ten correlated with choosing the best investment opportunities (Table 4.22) These were process costing (r = .344**, p=0,001), joint and by product costing (r =.496**, p=0,000), target costing (r = .560**, p=0,000), job costing (r = .396**, p=0,000), activity based costing (r =.475**, p=0,000), variable costing (r = .489**, p=0,000) and just-in-time costing (r = .376**, p=0,000).

All the decision support and investment appraisal techniques correlated with assists in choosing the best investment opportunities (Table 4.23). These were relevant costs and revenues (r = .595**, p=0,000), payback method (r = .611**, p=0,000), net present value (r = .513**, p=0,000), internal rate of return (r = .545**, p=0,000), accounting rate of return (r = .592**, p=0,000), cost volume price analysis (r = .450**, p=0,000), decisions under risk and uncertainty (r = .426**, p=0,000) and pricing and profitability analysis (r =.492**, p=0,000).

Eight of the ten planning and control techniques correlated with assists in choosing the best investment opportunities (Table 4.24). These were the labour budget (r =.375**, p=0,000), the material budget (r =.289**, p=0,008), the overheads budget (r =.547**, p=0,000), transfer pricing (r =.565**, p=0,000), return on investment (r =.515**, p=0,000), residual income (r =.467**, p=0,000) and quantitative methods for planning and stock control (r =.403**, p=0,000).

The many correlations in this section indicate that the respondents do see much use in the given management accounting practices for choosing the best investment opportunities. However, Table 4.20 indicates that the respondents were mostly neutral in their perception of this impact (m = 3.00),

4.6.2.6 Management accounting practices that ensure SMEs profitability

All the costing systems, with the exception of traditional costing, presented in question ten correlated with ensure profitability (Table 4.22). These were process costing (r = .290**, p=0,008), joint and by product costing (r =.385**, p=0,000), target costing (r= .498**, p=0,000), job costing (r = .454**, p=0,000), activity based costing (r = .377**, p=0,000), variable costing (r = .318**, p=0,003), absorption costing (r = .450**, p=0,000), and just-in-time costing (r = .546**, p=0,000).

Similarly, all the decision support techniques, with the exception of relevant costs and revenues, presented in question 11 correlated with ensure profitability (Table 4.23). These were the payback method (r = .348**, p=0,001), net present value (r = .449**, p=0,000), internal rate of return (r =.391**, p=0,000), accounting rate of return (r =.405**, p=0,000), cost volume profit analysis (r = .453**, p=0,000), decisions under risk and uncertainty (r = .404**, p=0,000) as well as pricing and profitability (r = .458**, p=0,000).

Eight out of ten planning and control techniques presented in question 12 correlated with ensure profitability (Table 4.24). These were the labour budget (r =.467**, p=0,000), material budget (r =.326**, p=0,003), overheads budget (r = .446**, p=0,000), standard costing and variances (r =.306**, p=0,005), transfer pricing (r= .510**, p=0,000), return on investment (r = .505**, p=0,000), residual income (r = .381**, p=0,000) as well as quantitative methods for planning and stock control (r =.458**, p=0,000).

The respondents perceived a strong link between the above management accounting practices and profitability. This can be contrasted with Table 4.20 where the impact of ensure profitability had a mean score of 3.47. As indicated before, this study is using the perceptions of the respondents. Seeing a list of all the management accounting practices available may have led them to perceive that an enterprise which avails itself of so many practices may be a more successful business.

4.6.2.7 Management accounting practices that ensure SMEs sustainability

Table 4.22 shows the correlation between the costing systems and ensure sustainability. Costing systems which correlate with ensure sustainability are process costing (r = .272*, p=0,015), target costing (r = .267*, p=0,018), job costing (r = .288*, p=0,010), activity based costing (r =.246*, p=0,029), absorption costing (r = .266*, p=0,018), and just-in-time costing (r = .257*, p=0,022).

None of the decision support and investments appraisals techniques correlated with ensure sustainability (Table 4.23).

Only three planning and control techniques correlated with ensure sustainability (Table 4.24). These were the sales budget (r = .406**, p=0,000), the production budget (r =.456**, p=0,000), the labour budget (r = .497**, p=0,000), the material budget (r =.359**, p=0,001), and transfer pricing (r = .297**, p=0,008).

More of the costing systems (Table 4.22) correlated with ensure sustainability than the other management accounting practices listed (Tables 4.23 and 4.24). Ensure sustainability had a mean value of 3.58 (Table 4.20). The impact of management accounting practices on the success of SMEs is discussed in the forthcoming sections.

4.6.2.8 Management accounting practices that assist when assessing business performance

None of the costing systems listed in question ten correlated with assists when assessing business performance (Table 4.22). Likewise, none of the decision support and investment appraisal techniques correlated with assists when assessing business performance (Table 4.23). Only one planning and control technique in the form of the sales budget (r = .355**, p=0,001) correlated with assists when assessing business performance (Table 4.24). This indicates that the respondents did not see any use in the systems and techniques listed in questions 10 to 12 when assessing business performance with the exception of the sales budget.

4.6.2.9 Management accounting practices that assist in ensuring business growth

Seven out of the nine costing systems which were listed in question 10 correlated with ensure business growth (Table 4.22). These were process costing (r = .375**, p=0,001), joint and by product costing (r = .535**, p=0,000), target costing (r = .409**, p=0,000), job costing (r = .379**, p=0,001), activity based costing (r = .332**, p=0,004), variable costing (r = .494**, p=0,000) and just-in-time costing (r = .551**, p=0,000).

All the decision support and investment appraisal techniques which were listed in question 11 correlated with ensure business growth (Table 4.23). These were the relevant costs and revenues (r =.481**, p=0,000), payback method (r =.535**, p=0,000), net present value (r = .584**, p=0,000), internal rate of return (r = .525**, p=0,000), accounting rate of return (r =.579**, p=0,000), cost-volume-price analysis (r =.475**, p=0,000), decisions under risk and uncertainty (r = .508**, p=0,000) as well as pricing and profitability analysis (r =.493**, p=0,000).

Seven out of the ten planning and control techniques listed in question 12 correlated with ensure business growth (Table 4.24). These were the labour budget (r =.389**, p=0,001), overheads budget (r =.588**, p=0,000), standard costing and variances (r= .564**, p=0,000), transfer pricing (r =.601**, p-0,000) return on investment (r = .573**, p=0,000), residual income (r =.432**, p=0,000) as well as quantitative methods for planning and stock control (r = .317**, p=0,000).

Respondents were strongly supportive of the need to use management accounting practices to ensure business growth notwithstanding its low mean of 3.08 shown in

Table 4.20. For a business to grow, it needs to be aware of the many management techniques based on financial information which are at its disposal.

4.6.2.10 Management accounting practices that assist in running the business successfully

Six out of the nine costing systems listed in question 10 correlated with assists in running the business successfully (Table 4.22). These were joint and by product costing (r =.453**, p=0,000), target costing (r =.545**, p=0,000), job costing (r =.319**, p=0,004), activity based costing (r = .480**, p=0,000), variable costing (r =.469** p=0,000) and just-in-time costing (r =.565**, p=0,000).

All the decision support and investment appraisal techniques listed in question 11 correlated with assists in running the business successfully (Table 4.23). These were relevant costs and revenues (r = .403**, p=0,000), payback method (r =.494**, p=0,000), net present value (r =.622**, p=0,000), internal rate of return (r =.581**, p=0,000), accounting rate of return (r =.633**, p=0,000), cost-volume-price analysis (r= .479**, p=0,000), decisions under risk and uncertainty (r =.561**, p=0,000) as well as pricing and profitability analysis (r = .512**, p=0,000).

Seven out of the ten planning and control techniques listed in question 12 correlated with assists in running the business successfully (Table 4.24). These were the labour budget (r =.243*, p=0,032), the overheads budget (r =.551**, p=0,000), standard costing and variances (r =.602**, p=0,000), transfer pricing (r =.639**, p=0,000), return on investment (r =.617**, p=0,000), residual income (r =.528** p=0,000) as well as quantitative methods for planning and stock control (r =.313**, p=0,000).

Similar to the previous section, the respondents were strongly supportive of the many management accounting practices which could aid in the running of a successful business. This is notwithstanding the low mean of 3.17 shown in Table 4.20. This indicates that respondents perceive that listed management accounting practices in questions 10, 11 and 12 are necessary for a successful business.

4.6.2.11 Management accounting practices that assist in financial reporting

Five of the nine costing systems listed in question 10 correlated with assists in financial reporting (Table 4.22). These were process costing (r =.237* p=0,040), target costing (r =.562**, p=0,000), activity based costing (r = .298**, p=0,009), variable costing (r= .482**, p=0,000) and just-in-time costing (r =.608**, p=0,000).

All decision support and investment appraisal techniques listed in question 11 correlated with assists in financial reporting (Table 4.23). These were relevant costs and revenues (r = .459**, p=0,000), payback method (r =.558**, p=0,000), net present value (r =.559**, p=0,000), internal rate of return (r =.473**, p=0,000), accounting rate of return (r =.618**, p=0,000), cost-volume-price analysis (r =.471**, p=0,000), decisions under risk and uncertainty (r =.518**, p=0,000) as well as pricing and profitability analysis (r = .453**, p=0,000).

Table 4.24 shows that nine of the planning and control techniques listed in question 12 correlated with assists in financial reporting. These were the sales budget (r = .261*, p=0,024), labour budget (r =.390**, p=0,001), material budget (r =.262* p=0,023), overheads budget (r =.587**, p=0,000), standard costing and variances (r =.593**, p=0,000), transfer pricing (r =.635**, p=0,000), return on investment (r =.571**, p=0,000), residual income (r =.434**, p=0,000) as well as the quantitative methods for planning and stock control (r =.248*, p=0,000).

The above correlations indicate that the respondents are aware that management accounting practices assist in financial reporting. Businesses, regardless of size, need to be able report their financial results. Good record-keeping facilitates both the preparation of information for costing, budgeting and planning as well as for financial reporting.

4.6.2.12 Management accounting practices that help SMEs in developing business strategies

Five costing systems were positively correlated with helps in developing business strategies (Table 4.22). These were target costing (r =.465**, p=0,000), job costing (r= .296**, p=0,004), activity based costing (r =.285*, p=0,000), variable costing (r =.407**, p=0,000) and just-in-time costing (r = .489**, p=0,000).

All the decision support and investment appraisal techniques listed in question 11 correlated with helps in developing business strategies (Table 4.23). These were relevant costs and revenues (r = .381**, p=0,001), payback method (r =.523**, p=0,000), net present value (r =.534**, p=0,000), internal rate of return (r =.420**, p=0,000), accounting rate of return (r =.521**, p=0,000), cost volume profit analysis (r = .465**, p=0,000), decisions under risk and uncertainty (r =.452**, p=0,000) as well as the pricing and profitability analysis (r =.448**, p=0,000).

Table 4.24 shows that seven out of the nine planning and control techniques listed in question 12 correlate with helps in developing business strategies. These were the labour budget (r =.253*, p=0,028), the overheads budget (r =.550**, p=0,000), standard costing and variances (r =.492**, p=0,000), transfer pricing (r =.609**, p=0,000), return on investment (r =.534**, p=0,000), residual income (r =.455**, p=0,000) as well as quantitative methods for planning and stock control (r =.230*, p=0,000).

For a business to grow and prosper, it must be able to strategise. The respondents perceived the importance of the management accounting practices for helping in developing business strategies. This is notwithstanding its low mean of 2.83 (Table 4.20).

In summary, from the Spearman's rho correlation test results (from 4.6.2.1 to 4.6.2.12) above, it is evident that management accounting practices has a critical role to play in SMEs. The correlations attest that management accounting practices assist SMEs in decision-making, planning, financial reporting and performance measurement. The results also affirm that SMEs perceive that using management accounting practices impact on ensure profitability, sustainability, growth and yield a competitive advantage. Management accounting practices also help SMEs to control costs, formulate strategies and choose the best investment opportunities.

4.7 Success measures used by SMEs in Durban

Part four further enquired about the measures of success used by SMEs in Durban. Success was considered to be linked to sustainability as discussed in the literature review (Lucas *et al.* 2013: 3).

This question was selected to probe further the impact of management accounting practices used by SMEs in order to ascertain whether the use of management accounting practices has some impact on the success of the SME. For the purposes of this study, SMEs' success was determined using seven statements which were listed and respondents could indicate on a Likert scale of strongly disagree (1) to strongly agree (5) for each statement. Table 4.25 presents the findings on the perceptions of the respondents on the measures of success perceived by the SMEs.

Table 4.25: Measures of success of SMEs in Durban

Statements	Strongly disagree		Disagree		Neither agree nor disagree		Agree		Strongly agree		Mean	SD.
	No	%	No	%	No	%	No	%	No	%		
has more income than expenses	4	4.0	8	7.9	7	6.9	60	59.4	22	21.8	3.87	0.98
has more assets than liabilities	0	0.0	9	9.1	7	7.1	53	53.5%	30	30.3	4.05	0.86
has sufficient cash on hand	0	0.0	21	22.6	28	30.1	34	36.6	10	10.8	3.35	0.95
has a good reputation among customers	3	3.2	23	24.7	21	22.6	38	40.9	8	8.6	3.27	1.03
has a good reputation among competitors	9	9.9	29	31.9	32	35.2	15	16.5	6	6.6	2.78	1.05
has a good reputation among its suppliers	18	20.5	20	22.7	21	23.9	23	26.1	6	6.8	2.76	1.24
will remain operating in foreseeable future	4	4.3	7	7.6	28	30.4	44	47.8	9	9.8	3.51	0.93

Note: A Likert scale of 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree and 5 = strongly agree was used.

Table 4.25 indicates that success is perceived mostly by having assets exceeding liabilities with 83.8% (i.e. 53.5% plus 30.3%) of the respondents choosing this option (m= 4.05). The second largest number, 81.2% (i.e. 59.4% plus 21.8%) reported that they use having more income compared to expenses (m= 3.87). The third supported measure related to whether the SME will remain in operation for the near future with 57.6% (i.e. 47.8% plus 9.8%) of the respondents choosing this option (m= 3.51). Only 47.4% (i.e. 36.6% plus 10.8%) of the respondents cited having sufficient cash on hand (m= 3.35). The measures of success with the least support were “has a good reputation among customers”, “has a good reputation among competitors” and “has a good reputation among its suppliers” cited by less than 41% of SMEs (mean scores ranging from 2.76 to 3.27).

To determine whether there is a relationship between the perceived SME success measures with the impact of management accounting practices in SMEs is discussed in the next section.

4.8 The correlation between the impact of management accounting practices in SME and the success of SMEs

A Spearman's rho correlation test was performed to ascertain if there is a relationship between the impact of management accounting practices and SMEs' perceived success measures. All variables were tested and the findings are shown in Table 4.26.

Table 4.26: Correlation between the impact of management accounting practices and measures of SMEs' success

		Has more income than expenses	Has more assets than liabilities	Has sufficient cash on hand	Has a good reputation among customers	Has a good reputation among competitors	Has a good reputation among its suppliers	Remains operating in foreseeable future
assists in decision-making	r	0,029	-0,178	0,043	0,182	0,121	0,039	-0,002
	Sig. (2-tailed)	0,795	0,113	0,707	0,106	0,295	0,742	0,987
	N	82	81	78	80	77	75	78
helps to control costs	r	.226*	0,100	-0,149	.264*	-0,032	0,056	0,007
	Sig. (2-tailed)	0,039	0,369	0,180	0,017	0,777	0,630	0,948
	N	84	83	83	81	80	76	80
assists in planning	r	.345**	.284**	-0,083	0,114	-0,174	-0,044	-0,071
	Sig. (2-tailed)	0,000	0,005	0,434	0,286	0,105	0,689	0,506
	N	99	97	90	90	88	86	89
assists in choosing best investment opportunities	r	-.361**	-.312**	-0,087	.294**	.419**	.291*	-0,049
	Sig. (2-tailed)	0,001	0,005	0,441	0,007	0,000	0,011	0,669
	N	82	81	80	83	79	75	79
yield an advantage over competitors	r	-0,065	-0,166	0,054	.327**	0,054	0,203	-0,034
	Sig. (2-tailed)	0,558	0,136	0,631	0,003	0,632	0,079	0,769
	N	83	82	81	83	80	76	79
ensures profitability	r	0,059	-0,181	-.240*	.339**	0,059	.227*	0,067
	Sig. (2-tailed)	0,595	0,101	0,032	0,002	0,605	0,048	0,561
	N	83	83	80	82	79	76	78
ensures sustainability	r	0,191	0,081	-0,164	0,139	-0,018	-0,033	0,178
	Sig. (2-tailed)	0,093	0,481	0,158	0,221	0,878	0,784	0,124
	N	78	78	76	79	75	72	76
assists when assessing business performance	r	0,192	-0,031	-0,066	-0,108	-0,130	0,044	-0,051
	Sig. (2-tailed)	0,079	0,782	0,565	0,339	0,263	0,712	0,659
	N	85	83	78	81	76	74	77
ensures business growth	r	-0,124	-0,177	-0,087	.276*	.476**	.298*	.234*
	Sig. (2-tailed)	0,294	0,131	0,472	0,017	0,000	0,013	0,048
	N	74	74	71	74	70	69	72
assists in running the business successfully	r	-0,177	-.224*	-0,012	.247*	.325**	.232*	0,124
	Sig. (2-tailed)	0,121	0,050	0,918	0,029	0,005	0,048	0,285
	N	78	77	75	78	74	73	76
assists in financial reporting	r	-0,179	-.233*	-0,091	0,106	0,183	0,197	0,026
	Sig. (2-tailed)	0,123	0,046	0,449	0,364	0,126	0,102	0,828
	N	75	74	72	75	71	70	73
helps in developing business strategies	r	-0,170	-.287*	0,029	0,210	.487**	.337**	0,151
	Sig. (2-tailed)	0,142	0,013	0,808	0,069	0,000	0,004	0,198
	N	76	75	73	76	72	71	74

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Table 4.26 shows that three of the statements regarding the impact of management accounting practices had no significant correlations (positive or negative) to any of the measures of SMEs' success. These were "assists in decision making", "ensures sustainability" and "assists when assessing business performance".

Table 4.26 shows a significant correlation between cost control and SMEs that measure success as having more income than expenses (r =.226*, p =0.039) This suggests that those SMEs that use management accounting practices to control costs are destined to be profitable. There is also a significant correlation between cost control and good reputation amongst customers (r = .264*, p=0.017). This may suggest that SMEs using management accounting practices to control their costs may have reasonable prices which results in a good reputation amongst customers.

There is a significant correlation between SMEs that measure success as having more income than expenses and planning (r =.345**, p=0.000). This may indicate that SMEs that use management accounting practices for planning perceive success to be linked to being profitable. Similarly, there is a significant correlation between more assets than liabilities and planning (r = .284**, p=0.005). This suggests that SMEs that use management accounting for planning perceive success as having a favourable net asset position.

There are significant correlations between SMEs that measure success as having a good reputation amongst customers (r = .294**, p = 0.007), a good reputation among competitors (r = .419**, p = 0.000) and having a good reputation among its suppliers (r = .291*, p = 0.011) and SMEs who perceive that management accounting practices assist in choosing best investment opportunities. This may mean that SMEs using management accounting practices may be choosing customer segments to supply with goods or services to maximize the profits.

There is a significant correlation between SMEs that selected the success measure of good reputation with customers and SMEs that believes that management accounting practices yield competitive advantage over competitors (r = .327**, p = 0.003). This suggests that SMEs that measure success as having a good reputation amongst customers also perceive the impact of management accounting practices to having an advantage over competitors.

SMEs that use as a measure of success having a good reputation amongst customers (r = .339**, p =0.002) and having a good reputation amongst suppliers (r = .227*, p =0.048) significantly correlated with those that believe that an impact of management accounting practices ensures profitability. This means that SMEs that have a good reputation amongst customers increases the propensity of customers to buy goods and services from it thus ensuring profitability. These SMEs may also use their reputation to with suppliers to obtain discounted prices in order to maximize profits.

There are significant correlations between SMEs that selected the success measures of having a good reputation with amongst their customers (r = .276*, p =0.017), good reputation among competitors (r = .476**, p = 0.000), a good reputation with competitors (r = .298*, p = 0.013), a good reputation with suppliers (r = .298*, p =0.013) and remains operating in the foreseeable future (r = .234*, p =0.048) and the impact of ensuring business growth. If SMEs are determining their success by these measures, they also consider that the impact of management accounting practices will facilitate growth.

Similarly, to the above paragraph, there are significant correlations between the success measures of having a good reputation with amongst their customers (r = .247*, p =0.029), a good reputation with competitors (r = .325**, p = 0.005), and a good reputation among suppliers (r = .232*, p = 0.048)) and the impact of assists owners and managers to run the business successfully. SMEs determining their success by these measures, also consider the impact of management accounting practices leads to a successful business.

Finally, there were two positive correlations between the success measures of having a good reputation among competitors (r = .487**, p = 0.000) and a good reputation among suppliers (r = .337**, p = 0.004) and the impact of helps in developing business strategies. SMEs consider the impact of developing business strategies an important determination of the future operating capabilities and for strategising with its competitors in mind.

The other variables in Table 4.26 that did not correlate positively (such as “assists in financial reporting” which had only one statistically significant negative correlation) with the impact of management accounting practices or success were ignored.

To answer the fourth research objective, it can be concluded that SME owners and managers perceive that the investigated management accounting practices do have an impact in the success measures used by the SMEs. The findings also indicated that most SMEs measure success by having assets exceeding liabilities. This was followed by having more income compared to expenses, and whether the SME will remain in operation for the near future.

The next section discusses the findings related to the recommendations made by owners and managers of SMEs on improving the management accounting function.

4.9 Recommendations by owners and managers of SMEs on adopting the use of management accounting practices

This section presents an analysis and discussion on the findings of the fifth research objective which was to ask the respondents to suggest recommendations that could contribute towards the adoption of appropriate management accounting practices to be used by SMEs. Table 4.27 presents these findings.

Table 4.27: The recommendations by SME owners and managers

Statements	Strongly disagree		Disagree		Neither agree nor disagree		Agree		Strongly agree		Mean	SD.
	No	%	No	%	No	%	No	%	No	%		
SMEs should employ management accountants	4	4.4	2	2.2	14	15.4	49	53.8	22	24.2	3.91	0.94
owners and managers should go for management accounting training	1	1.0	0	0.0	0	0.0	39	38.6	61	60.4	4.57	0.61
SMEs should outsource the management accounting function	5	5.7	15	17.0	19	21.6	37	42.0	12	13.6	3.41	1.10

Note: A Likert scale of 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree and 5 = strongly agree was used.

As indicated in Table 4.27, the highest number of respondents, 99% (i.e. 60.4% plus 38.6%), agreed and strongly agreed that owners or managers should go for management accounting training. The second highest number, 78% (i.e. 53.8% plus 24.2%), agreed and strongly agreed that SMEs should employ management accountants. The recommendation that had the lowest support was that SMEs should outsource the management accounting function by 55.6% (i.e. 42.0% plus 13.6%) of the SMEs' owners or managers.

It is interesting to note that in this study a majority (83.6%) of the respondents cited the lack of education and skills as the highest factor that affected SMEs' usage of management accounting practices. However, almost all (99%) SMEs' owners and managers suggested that they should at least attend courses related to management accounting (m=4.57). The above-mentioned findings suggest that SME owners and managers are aware of the lack of education and skills in their respective sectors. The respondents were also asked to suggest other recommendations; however, none of the respondents suggested any additional recommendations.

The next section summarises the findings of chapter four.

4.10 Summary

To summarise the findings of the current study, the key findings on the five objectives are presented. Findings related to the costing systems (research objectives 1 and 2) indicated that albeit the costing systems showed very low use, the most used costing system was the traditional costing system. The other costing systems such as target costing, variable costing, job costing, absorption costing, process costing, activity-based costing, just-in-time costing and lastly, joint and by product costing were rarely used if not used at all by the SMEs. With regards to the planning and control techniques, this study found that the production budgets, labour and material budget were rarely used although there was some usage of the sales budget.

Considering the factors that affect the use of management accounting practices in SMEs (objective 3), the following factors were found to be the major challenges: the industry in which the SMEs operate, the lack of management accounting knowledge, lack of education and skills, costs to outsource management accounting practices and the cost to employ an in-house management accountant. This study also confirmed

that SMEs are facing financial, human resource, technological and security challenges as well.

With reference to the fourth research objective, SME owners and managers perceived that the investigated management accounting practices do have some impact in the success measures used by the SMEs and that most SMEs measure success by having assets exceeding liabilities. This was followed by having more income compared to expenses, and whether the SME will remain in operation for the near future.

The main recommendation (5^{th} objective) concerning the adoption of management accounting practices was that SME owners and managers should go for management accounting training. They could attend short courses or training offered by educational institutions and other government agencies.

The next chapter summarises and concludes on the findings of the current study. It also indicates the limitations of the study and provides recommendations for future research.

CHAPTER FIVE
CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The objective of this study was to investigate the role of management accounting practices in the success of SMEs in Durban. This study adopted a descriptive survey design. A census survey was used resulting in respondents from 102 SMEs operating in Durban. The previous chapter provided the presentation and interpretation of the findings obtained from the SMEs' owners and managers who participated in this study. This chapter presents the summary and conclusions of the dissertation. Based on the findings of the current study, recommendations are provided. The limitations of this study are also outlined and suggestions for further research are also presented in this chapter.

5.2 Summary of the study

Chapter two covered the literature review of the current study. This chapter explained the definitions of key terms used in the current study. This chapter also discussed SMEs' contribution to the economy, challenges facing SMEs, the use of management accounting practices by SMEs and as well as the factors that hinder the use of management accounting practices by SMEs.

Chapter three covered the research methodology adopted in the current study. The limitations of the research methodologies used in this study were also outlined. Chapter three concluded by stating that the research methodology adopted in the current study was appropriate to answer the research questions as well as to achieve the research objectives.

Chapter four of the current study provided the interpretation and discussion of the findings. This chapter first described the background information of the respondents; thereafter, it discussed the findings based on the research objectives of the current study.

As stated earlier, the aim of the study was to investigate the role of management accounting practices in the success of SMEs in Durban. Determining the role of

management accounting practices is important for SMEs, their employees and for South Africa as a whole. To recap, the research objectives were as follows:

1. To identify management accounting practices used by SMEs in Durban.
2. To examine the extent to which management accounting practices are used by SMEs in Durban.
3. To describe the factors that affect the use of management accounting practices in SMEs in Durban.
4. To examine the impact of management accounting practices on SMEs' success.
5. To suggest recommendations that could contribute towards the adoption of appropriate management accounting practices to be used by SMEs in Durban.

Therefore, this study focused on the role of management accounting practices used by SMEs and the factors that affect the use of management accounting. The findings are aimed at encouraging owners and managers of SMEs to adopt management accounting practices in order to sustain their respective businesses. The following section discusses the findings based on the research objectives.

5.3 Key findings of the study

The findings are aligned to the research objectives of this study. Ahead of concluding on findings based on the study's objectives, the biographical information of the respondents is presented in the following section.

5.3.1 Biographical information

In respect of the SMEs surveyed, most SMEs in the study were owned and managed by males. Most of the respondents were owners and managers of their business. Most of the respondents were between 25 years and 35 years and had a tertiary qualification. Furthermore, most of the SMEs have been in operation for more than four years but less than 10 years. The most dominant sector represented is the food and manufacturing industry. The majority of SMEs are operating as sole traders and they employ not more than fifty employees in their enterprises. While most of the SMEs earn less than R1 million in average annual turnover (56.9%), 27 (26.5%) earned between R1m and R3m in annual turnover.

5.3.2 Findings of the research objectives

This section presents the findings based on the research objectives of this study.

5.3.2.1 Findings for objective 1 and 2

Objectives 1 and 2 were to (1) to identify management accounting practices used by SMEs in Durban, and (2) to examine the extent to which management accounting practices are used within SMEs in Durban. These two objectives were analysed together. The results indicated that many of the costing systems are never or rarely used suggesting that the respondents are not gaining any benefits by using costing systems. Although more than half (50.0%) of the SMEs reported that they never used the costing systems, 29.4% of the SMEs reported that they frequently used traditional costing (m=2.47). This result indicates that traditional costing is the most popular management accounting practice for these SMEs. All the other costing systems showed some usage by the respondents, although the level of usage was very low. These findings are consistent with Karanja *et al.* (2012: 12) who reported that most of the Kenyan SMEs preferred traditional costing systems and concluded that most costing systems were less used by most Kenyan SMEs. Lastly, but not least, the SMEs in this study that do use the costing systems were mostly female owned or managed.

The results further indicated that decision support and the investment appraisal techniques are never or rarely used by the respondents. The technique with the most support was for “relevant costs and revenues”. This current study showed a low rate of use of accounting rate of return, internal rate of return, as well as a low usage of net present value (m = 1.48) unlike Maroyi and Van der Poll (2012) who found that 46% of the mining companies investigated in South Africa used the internal rate of return. Similarly, in Malaysia, Ahmad and Zibra (2014) reported that 49% of the SMEs investigated used the internal rate of return. Marembo (2013) also found low usage of net present value in SMEs in South Africa. In contrast, Menya and Gichinga (2013) found the internal rate of return to be used by the more than two-third of Kenyan SMEs and McLellan and Sherine (2013) reported that 77% of Egyptian SMEs used the internal rate of return. This current study also found low usage of cost volume profit analysis in contrast to Ilias *et al.* (2010) reported on Malaysian SMEs. In the United Kingdom, Lucas *et al.* (2013: 8) revealed that none of the SMEs investigated used net present value. This current study found the use of decision support and investment appraisal techniques to be marginally used by the SMEs surveyed. Finally, SMEs that make use of decision supports and investment appraisal techniques were mostly owners and managed by females.

The results also indicated that planning and the control techniques are occasionally, rarely or never used. However, there was some support for the use of the sales budget, production budget, labour budget, and material budget by the SMEs. A reason for this is that these budgets (i.e. sales, production, labour and material) are necessary for the frequent monitoring of the business, and other planning and control techniques would not be that relevant to an SME (for example, transfer pricing). In comparison with the South African study of Maduekwe (2015), he found that 79.35% of the SMEs examined used budgets with the most frequently used budget being the sales budgets. Ahmad (2012b) found that planning and control techniques such as sales budgets, purchasing budgets and production budgets are mostly used by Malaysian SMEs. However, McLellan and Sherine (2013) revealed that 100% the Egyptian companies surveyed used budgeting tools and Gichaaga (2013) revealed that 90.8% of the Kenyan SMEs used budgeting tools.

These findings suggest an awareness of the usefulness of planning and control techniques will aid SMEs in Durban to become mindful of their usefulness within their enterprises, especially the overheads budget. To conclude, the minority of SMEs that use planning and control techniques are owned or managed by females.

An overall conclusion is that most of the SMEs surveyed in this study do not use the management accounting practices investigated, as well as that some of management accounting practices that were used are mostly used by female owned SMEs.

The next section presents the conclusions on the findings of the factors that affect the use of management accounting practices by SMEs.

5.3.2.2 Findings for objective 3

Objective 3 was to examine the factors that affect the use of management accounting practices within SMEs.

In respect of the factors that affect the use of management accounting practices within SMEs, the following factors were found to be the major challenges:

a) Lack of management accounting knowledge by owners and managers

   Amongst the challenges facing SMEs the lack of management accounting knowledge. This is surprising as the majority of owners and managers do have the necessary education and other skills to run their own businesses. However,

management accounting is a specific skill-set, and it is the lack of this specific skill set which provides a challenge to the SMEs investigated.

b) The lack of education and skills by owners and managers

The current study also noticed that the lack of education and skills was the most inhibiting factor amongst the owners and managers of SMEs in Durban. This is surprising in view of the high number of respondents who indicated they had a tertiary education. However, this may have referred specifically to the lack of management accounting skills.

c) The costs to outsource management accounting practices

SMEs indicated the cost to hire or outsource skills or personnel needed to equip their enterprise with the skills to use of management accounting practices is a factor affecting its use. As a result, the use of management accounting practices is being ignored.

d) Financial challenges

The current study found that the SMEs do have financial challenges, although these were not further investigated. Notwithstanding the intervention of Government initiatives such as setting up the Small Enterprise Development Agency (SEDA), SMEs in Durban are still faced by the financial challenges.

The SMEs also cited the industries they operate in as another factor that affects the adoption of management accounting practices. The nature of the business was viewed as another factor that hinders the adoption of management accounting practices, corroborating the findings of Lucas *et al.* (2013:10), while the size of the business was considered to somehow influence the use of management accounting practices as argued by Karanja *et al.* (2012: 7) and Ayadi and Affes (2014: 54). Lastly, technology did not affect the use of management accounting practices as per the study results. However, this finding is in contrast with the results of Karanja *et al.* (2012: 6) and Ahmad (2012a: 101).

5.3.2.3 Findings for objective 4

Objective 4 was to examine the impact of management accounting practices on SMEs' success.

To answer this objective, it can be concluded that SME owners and managers perceive that the investigated management accounting practices do have an impact in the success measures used by the SMEs and that most SMEs measure success by

having assets exceeding liabilities. This was followed by having more income compared to expenses, and whether the SME will remain in operation for the near future. It could be the first two success measures are fairly easy to calculate and no specialised management techniques need to be known. The findings also indicated that some of the SMEs do not use management accounting practices for financial reporting, for profitability, to assist owners or managers to be able to run the business, to ensure the business growth, to assist when choosing best investment opportunities, and to develop business strategies or to have competitive advantage over their competitors.

5.3.2.4 Findings for objective 5

Objective 5 was to suggest recommendations that would contribute towards the adoption of appropriate management accounting practices to be used by SMEs. These recommendations were adapted from previous studies. This was to ascertain what improvements SMEs would like to see within their enterprises and the sector as whole.

In respect of the recommendations concerning the adoption of management accounting practices by SMEs, the respondents recommended that SME owners and managers should attend short courses or trainings offered by educational institutions and other government agencies. This is the better recommendation as owners and managers should have knowledge of management accounting practices themselves if they hope to run a successful small business with opportunities to grow in the future. This was followed by the recommendation that SMEs should endeavour to employ qualified management accountants within their enterprise. Lastly, SMEs should attempt to outsource the management accounting functions if they cannot afford to have it in-house. The findings from this objective provided some suggestions of future research

5.5 Limitations of the research

This section outlines the limitations of the study. These limitations are as follows:

- Only SMEs that are listed in the eThekwini municipality's contractors' database were targeted and this means that other industries are under-represented in this study. Only SMEs operating in Durban were considered, which also excluded SMEs not operating in this area. Therefore, the generalisability of these findings must be exercised with caution.

- A further limitation is that the study only used gender to provide a deeper understanding of the research questions. Gender was chosen in view of the importance that female owners and managers play in the economy and the current emphasis on gender equality.
- Another underlying limitation is that not all variables were investigated in this study. For example, cross-tabulations between the use of management accounting by SMEs and number of years in existence, or the level of education by managers and owners, for example, were not presented. One reason for this is the study found a very low usage of management accounting practices, and these cross-tabulations would not have added more depth to the study.
- The final limitation is that the statistical analysis was fairly simple. A future study could test the variables used in the study more robustly using more sophisticated statistics.

5.7 Recommendations for future research

Future research could adopt a mixed methodology research approach as this could provide more depth to the analysis. Following quantitative data up with qualitative data allows more informed recommendations to be made. It could also help to limit the study to only one segment of SMEs or industry to get more details on each SME category.

As the research focused on the role of management accounting practices as a whole, it would be wise to select only one or two management accounting practices in future research to enable an in-depth understanding of each technique, such as ABC.

Future studies could also make use of a bigger sample as more reliable data would be obtained with a bigger sample. Undertaking a study across industries or across geographical areas will allow for a richer understanding of the use of management accounting practices.

5.8 Final comments

SMEs should adopt management accounting practices as they provide both internal and external strategic competitive strategies that enable business organisations to create and sustain competitive advantages. From the results, it is clear that not all management accounting practices are used by SMEs, with planning and control techniques being the most used techniques. However, not all of them are used, which

is a concern as SMEs operate in a rapidly changing environment. SMEs therefore need to adopt management accounting practices to elevate and sustain themselves.

Management's ability to plan, lead, organise and control is a crucial function in any SME which is the main reason why management accounting practices are needed to facilitate planning and control.

SME owners and managers recommended that positive actions or steps be taken to increase the adoption of management accounting practices. Nearly all the SMEs in this study thought it would be an advantage for them to go for management accounting training, employ management accountants and/or to outsource the management accounting function. It is therefore important that SMEs use some form of management accounting practices in order to ensure profitability, sustainability and growth.

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LIST OF APPENDIXES

APPENDIX A: QUESTIONNAIRE

The role of management accounting practices in the success of Small and Medium-sized Enterprises in Durban.

All responses are anonymous and will be kept confidential

SECTION A: BIOGRAPHICAL INFORMATION		
1.	**In which age group do you belong?**	**Please tick only one**
1.1	25 and under	
1.2	26-35	
1.3	36-45	
1.4	46-55	
1.5	56 and above	
2.	**Please indicate your gender**	**Please tick only one**
2.1	Male	
2.2	Female	
3.	**How would you categorize your occupation or position?**	**Please tick only one**
3.1	Owner	
3.2	Manager	
3.3	Both (owners and manager)	
3.4	Other: (please specify)	
4.	**How would you characterize the industry your business operates in?**	**Please tick only one**
4.1	Legal and financial services	
4.2	Education and training	
4.3	Food and manufacturing	
4.4	Medical and health services	
4.5	Safety and security	
4.6	Marketing and information technology	
4.7	Logistic and transport	
4.8	Retail and wholesale store	
4.9	Other: (please specify)	
5.	**How long has your business been in existence?**	**Please tick only one**
5.1	1-3	
5.2	4-10	
5.3	10-13	
5.4	14-19	
5.5	19-24	
5.6	25 and above	
6.	**What is the form of your business?**	**Please tick only one**

6.1	Sole trader	
6.2	Partnership	
6.3	Close corporation	
6.4	Co-operative	
6.5	Joint venture or Joint associates	
6.6	Franchise	
6.7	Private company (Pty Ltd)	
6.8	Other: (please specify)	
7.	**What is the highest level of education you have completed?**	**Please tick only one**
7.1	Primary level	
7.2	Secondary level	
7.3	High school level	
7.4	Tertiary level	
7.5	Other: (please specify)	
8.	**How many permanent employees is the business employing now?**	**Please tick only one**
8.1	Less than 50	
8.2	51- 100	
8.3	100-150	
8.4	150-200	
8.5	More than 200	
9.	**What is your annual turnover?**	**Please tick only one**
9.1	Less than R200 000	
9.2	R200 001-R1 000 000	
9.3	R1 000 001-R3 000 000	
9.4	R3 000 001-R6 000 000	
9.5	R6 000 001-13 000 000	
9.6	R13 000 001 and above	

SECTION B: COST AND MANAGEMENT ACCOUNTING PRACTICES

The definitions of the various cost and management accounting practices are shown in an appendix to this questionnaire. Items defined in the appendix are indicated by an asterisk.

Part one: Management accounting practices used and the extent of use of management accounting practices

Listed below are some costing systems which are used by businesses?

Please indicate your use where 1 (never) to 5 (always) of the following management accounting practices by placing one tick against each costing system.

Costing systems		Never	Rarely	Occasionally	Frequently	Always
		1	2	3	4	5
10.1	Traditional costing*					
10.2	Process costing*					
10.3	Joint and by product costing*					
10.4	Target costing*					
10.5	Job costing*					
10.6	Activity based costing (ABC)*					
10.7	Variable costing*					
10.8	Absorption costing*					
10.9	just-in-time costing*					
10.10	Other: (please specify and rate)					
10.11	Other: (please specify and rate)					

Listed below are some decision support and investment appraisal techniques which are used by businesses.

Please indicate your use where 1 (never) to 5 (always) of the following management accounting practices by placing one tick against each decision support and investment appraisal technique.

Decision support and investment appraisal		Never	Rarely	Occasionally	Frequently	Always
		1	2	3	4	5
11.1	Relevant costs and revenues*					
11.2	Payback method*					
11.3	Net present value *					
11.4	Internal rate of return*					
11.5	Accounting rate of return *					
11.6	Cost, volume, price analysis *					
11.7	Decisions under risk and uncertainty*					
11.8	Pricing and profitability analysis*					

11.9	Other: (please specify and rate)					
11.10	Other: (please specify and rate)					

Listed below are some information for planning and control techniques which are used by businesses.
Please indicate your use where 1 (never) to 5 (always) of the following management accounting practices by placing one tick against each for planning and control technique.

Planning and control techniques		**Never**	**Rarely**	**Occasionally**	**Frequently**	**Always**
		1	2	3	4	5
12.1	Sales budget*					
12.2	Production budget*					
12.3	Labour budget*					
12.4	Material budget*					
12.5	Overheads budget*					
12.6	Standard costing and variances*					
12.7	Transfer pricing*					
12.8	Return on investment*					
12.9	Residual income*					
12.10	Quantitative methods for planning and stock control*					
12.11	Other: (please specify and rate)					
12.12	Other: (please specify and rate)					

Part two: Factors that affect the use of management accounting practices

Listed below are factors affecting the use of management accounting practices in businesses?

Please indicate your rating from 1 (strongly disagree) to 5 (strongly agree) on whether the following factors influence the use of management accounting practices in your business. Please place one tick against each factor.

Factors		Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
		1	2	3	4	5
13.1	The industry where your business operates					
13.2	The nature of the business					
13.3	The size of the business					
13.4	Lack of education and skills					
13.5	Lack of technology					
13.6	Cost to employ in-house management accountants					
13.7	Lack of management accounting knowledge					
13.8	Cost to outsource management accounting practices					
13.9	Other: (please specify and rate)					
13.10	Other: (please specify and rate)					

Part three: Challenges facing SMEs in Durban

Listed below are some challenges which are faced by businesses.

Please indicate your rating from 1 (strongly disagree) to 5 (strongly agree) on whether these challenges are faced by your business. Please place one tick against each of the challenges.

Challenges		Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
		1	2	3	4	5
14.1	Financial challenges					
14.2	Human resource challenges					
14.3	Technological challenges					
14.4	Regulatory challenges					
14.5	Security challenges					
14.6	Environmental challenges					
14.7	Other challenges: (please specify and rate)					
14.8	Other challenges: (please specify and rate)					

Part four: The impact of management accounting practices

The table below lists some uses of management accounting practices within a business.

Use the table below to indicate your rating of the following uses of management accounting practices within your firm where 1 = (strongly disagree) to 5 = (strongly agree). Place one tick against each statement.

Impact on SMEs:		Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
		1	2	3	4	5
15.1	assists in decision-making					
15.2	help to control costs					
15.3	assists in planning					
15.4	yield an advantage over competitors					
15.5	assists in choosing the best investment opportunities					
15.6	ensure profitability					
15.7	ensure sustainability					
15.8	assists when assessing business performance					
15.9	ensure business growth					

15.10	assists owners and managers to run the business successfully					
15.11	assists in financial reporting					
15.12	helps in developing business strategies					
15.13	other: (please specify and rate)					
15.14	other: (please specify and rate)					

The table below lists success measures your business is using

SMEs Success		**Strongly Disagree**	**Disagree**	**Neither agree nor disagree**	**Agree**	**Strongly Agree**
		1	**2**	**3**	**4**	**5**
16.1	has more income than expenses					
16.2	has more assets than liabilities					
16.3	has sufficient cash on hand					
16.4	has a good reputation among customers					
16.5	has a good reputation among competitors					
16.6	has a good reputation among its suppliers					
16.7	will remain operating in foreseeable future					

Part five: Recommendations by owners and managers of SMEs in Durban

What recommendations would you suggest regarding the adoption and use of management accounting practices?

Please rate the following recommendations by placing a tick against each recommendation where 1= (strongly disagree) to 5= (strongly agree).

Recommendations		Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
		1	2	3	4	5
17.1	SMEs should employ management accountants					
17.2	Owners and managers should go for management accounting training					
17.3	SMEs should outsource the management accounting function					
17.4	Other: (please specify and rate)					
17.5	Other: (please specify and rate)					

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Thank you for your time and participation.

For enquiries contact: Mr Sicelo Cele

Cell: 073 508 5819

Email address: celwane@gmail.com

APPENDIX B: THE LETTER OF INFORMATION AND THE CONSENT LETTER FOR THE SURVEY

LETTER OF INFORMATION

Title of the Research Study: The Role of Management Accounting Practices in the Success of Small and Medium-sized Enterprises in Durban

Principal Investigator/s/researcher: Sicelo Cele

Co-Investigator/s/supervisor/s: Dr Celani Nyide, DBA and

Prof Lesley Stainbank, D Com: CA (SA)

Brief Introduction and Purpose of the Study:

This serves as an invitation to participate in a study conducted in fulfilment of master's degree at Durban University of Technology. The purpose of the study is to investigate the role of management accounting practices in the success of small and medium-sized enterprises in Durban. You are encouraged to ask questions if any of the research material, terminology, and question(s) is unclear or need further explanation.

Outline of the Procedures:

You are responsible for the provision of data required for the study by answering and completing the questionnaire. You must be owner and manager of a small business to be able to provide information regarding management accounting practices within businesses located in Durban. The questionnaire requires less than 35 minutes to complete and consists of Likert type and closed questions.

Risks or Discomforts to the Participant: The proposed study will only require time from you as the study is believed to be free from risks or discomforts. Participation is voluntary and you can withdraw anytime from the study.

Benefits: The study will be beneficial to SME owners and managers in an indirect way if the study results in a published document on the role of management accounting practices in SMEs giving directions and guidelines to future and current entrepreneurs.

Reason/s why the Participant May Be Withdrawn from the Study: You are free to voluntarily withdraw anytime from the study and those with incomplete questionnaire will be automatically withdrawn from study.

Remuneration: Participation in the study will not entitle you to monetary or any other types of remuneration

Costs of the Study: You are not responsible for any costs associated with the study.

Confidentiality: All data collected during the study will be kept confidential and your identity will be anonymous. The questionnaire and all notes collected during the study are to be locked away in filing cabinets for the period required for the study and will be destroyed afterwards. All data collected will be used exclusively for the purpose of the study.

Research-related Injury: No potential injuries from the study and no compensation thereof.

Persons to Contact in the Event of Any Problems or Queries:

For any information regarding the study, please contact the researcher (Sicelo Cele, tell no. 073 508 5819 email: celwane@gmail.com), my supervisor Prof Lesley Stainbank tell no. 033 373 5836 email: lesleys@dut.ac.za) and Dr. Celani Nyide, tell no. 033 845 8882 email: nyidec@dut.ac.za or the Institutional Research Ethics Administrator on 031 373 2900. Complaints can be reported to the Director: Research and Postgraduate Support, Prof S Moyo on 031 373 2577 or moyos@dut.ac.za

CONSENT

Statement of Agreement to Participate in the Research Study:

- I hereby confirm that I have been informed by the researcher, (Sicelo Cele), about the nature, conduct, benefits and risks of this study - Research Ethics Clearance Number: REC 116/16 ,
- I have also received, read and understood the above written information (Participant Letter of Information) regarding the study.
- I am aware that the results of the study, including personal details regarding my sex, age, date of birth, initials and diagnosis will be anonymously processed into a study report.
- In view of the requirements of research, I agree that the data collected during this study can be processed in a computerised system by the researcher.
- I may, at any stage, without prejudice, withdraw my consent and participation in the study.
- I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study.
- I understand that significant new findings developed during the course of this research which may relate to my participation will be made available to me.

Full Name of Participant	**Date**	**Time**	**Signature / Right Thumbprint**

I, Sicelo Cele (name of researcher) herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

Sicelo Cele **Full Name of Researcher**	**Date**	**Signature**
Full Name of Witness (If applicable)	**Date**	**Signature**
Full Name of Legal Guardian (If applicable)	**Date**	**Signature**

Please note the following:

Research details must be provided in a clear, simple and culturally appropriate manner and prospective participants should be helped to arrive at an informed decision by use of appropriate language (grade 10 level
- use Flesch Reading Ease Scores on Microsoft Word), selecting of a non-threatening environment for interaction and the availability of peer counselling (Department of Health, 2004)

If the potential participant is unable to read/illiterate, then a right thumb print is required and an impartial witness, who is literate and knows the participant e.g. parent, sibling, friend, pastor, etc. should verify in writing, duly signed that informed verbal consent was obtained (Department of Health, 2004).

If anyone makes a mistake completing this document e.g. a wrong date or spelling mistake, a new document has to be completed. The incomplete original document has to be kept in the participant's file and not thrown away, and copies thereof must be issued to the participant.

References:

Department of Health: 2004. *Ethics in Health Research: Principles, Structures and Processes*
http://www.doh.gov.za/docs/factsheets/guidelines/ethnics/

Department of Health. 2006. *South African Good Clinical Practice Guidelines*. 2nd Ed. Available at:
http://www.nhrec.org.za/?page_id=14

APPENDIX C: ETHICS APPROVAL

DUT
DURBAN UNIVERSITY OF TECHNOLOGY

Institutional Research Ethics Committee
Research and Postgraduate Support Directorate
3rd Floor, Berwyn Court
Gate 1, Steve Biko Campus
Durban University of Technology

P O Box 1334, Durban, South Africa, 4001

Tel: 031 373 2375
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www.dut.ac.za

2 March 2018

IREC Reference Number: **REC 116/16**

Mr S Cele
C908 Bhekizitha Road
Folweni Township
Umbumbulu
4105

Dear Mr Cele

The role of Management Accounting Practices in the Success of Small and Medium-sized Enterprises in Durban

The Institutional Research Ethics Committee acknowledges receipt of your final data collection tool for review.

We are pleased to inform you that the data collection tool has been approved. Kindly ensure that participants used for the pilot study are not part of the main study.

Please note that FULL APPROVAL is granted to your research proposal. You may proceed with data collection.

Any adverse events [serious or minor] which occur in connection with this study and/or which may alter its ethical consideration must be reported to the IREC according to the IREC Standard Operating Procedure's (SOPs).

Please note that any deviations from the approved proposal require the approval of the IREC as outlined in the IREC SOP's.

Yours Sincerely,

Professor J K Adam
Chairperson: IREC

DUT DURBAN UNIVERSITY OF TECHNOLOGY
2018 -03- 02
INSTITUTIONAL RESEARCH ETHICS COMMITTEE
P O BOX 1334 DURBAN 4000 SOUTH AFRICA