



**A critical assessment of  
management accounting  
practices in small and  
medium-sized clothing  
enterprises in Newcastle,  
KwaZulu-Natal**

Submitted in fulfilment of the requirements of the  
degree of  
**Master of Accounting**  
In the Faculty of  
Accounting and Informatics  
at the Durban University of Technology

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Date Submitted: 2019

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Date: 2019

## **DECLARATION**

I, Sanele Phumlani Vilakazi, 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 All information cited from published or unpublished works have been acknowledged.

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## DEDICATIONS AND ACKNOWLEDGEMENTS

I want to thank:

- **God** almighty, for the grace and strength to finish this work;
- **Prof Lesley June Stainbank**, for her professional supervision and guidance throughout my studies;
- **Dr Celani John Nyide**, my co-supervisor, for his encouragement and professional guidance;
- **Dr Deepak Singh** (statistician), for the assistance and patience in prioritising the quality of the work;
- My former MUT Tutor, **Mr Sicelo Cele** for his encouragement and his support throughout this project;
- My Grandmother, **Mrs Avelina “Gogo V” Vilakazi** and the entire **Vilakazi Family** for their support;
- My daughter **Melokuhle** and my twin brother **Sandile Vilakazi** my Dad **Jabulani Timothy Vilakazi** for their patience and support;
- My colleagues at **Miniso Lifestyle** who encouraged me in one way or another;
- My **friends** and **loved ones** out there who encouraged me in one way or another;
- The **Newcastle Municipality and clothing/textile SMEs**, for granting me an opportunity to complete my project;
- **National Research Foundation (NRF)**, for supporting me financially. The fund was a motivation to complete the study and it assisted me in many ways. I am grateful for the support NRF offered to me; and
- **The Durban University of Technology’s Research Office**, for supporting me financially and assisting me where necessary.

## **ABSTRACT**

The aim of this study was to make a critical assessment of the extent of the management accounting practices (MAPs) in small and medium-sized enterprises (SMEs) in Newcastle, KwaZulu-Natal. The objectives of the study were to determine the extent to which MAPs are employed by Newcastle clothing/textile SMEs, to identify the roles played by MAPs in Newcastle clothing/textile SMEs management, to determine the factors that affect the extent of use of MAPs amongst Newcastle clothing/textile SMEs and to consider the role of MAPs in the performance of the SME. The motivation for the study was driven by the lack of research on the extent of use of MAPs by clothing/textile SMEs in South Africa. The forms of MAPs investigated in this study were the costing systems, the budgeting systems, the performance management tools, the decision support systems, and strategic management accounting. These MAPs are thought to be necessary for the survival and success of SMEs in the modern enterprise environment.

This is a quantitative descriptive survey of 51 clothing/textile manufacturing SMEs in Newcastle, KwaZulu-Natal using a self-administered questionnaire. The results of this study indicate that budgeting systems were the most used MAPs by Newcastle clothing/textile SMEs and that the strategic management accounting (SMA) and performance measurements tools (PMTs) were the least used of the MAPs surveyed. Newcastle clothing/textile SMEs use traditional MAPs; however, they are endeavouring to integrate the modern or newly-developed MAPs such as the use of the decision support systems into their enterprises' administration. The results indicated that the most valued role of MAPs was for planning future strategies, tactics and operations. On the other hand, certain roles of MAPs were considered not to be beneficial to Newcastle clothing/textile SMEs.

Factors that affected the use the MAPs were the high cost to implement MAPs, the complexity of newly-developed or modern MAPs, that the benefits of the MAPs were too difficult to observe, and the lack of information on affordable accounting services. In respect to the performance of the Newcastle SMEs, the results indicated that the MAPs assessed had a moderate influence on the performance of SMEs. The study recommends that SMEs are apprised of the significance of MAPs. SMEs should liaise

with academics, government, and professionals in the commerce field, amongst other initiatives, to implement and monitor their skills development for the success and survival of SMEs in the clothing/textile industry.

**KEY WORDS:** management accounting practises (MAPs), small and medium-sized enterprises (SMEs), clothing and textile industry, Newcastle, KwaZulu-Natal, South Africa

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## **LIST OF ACRONYMS**

ABC – Activity Based Costing
BASA – Banking Association of South Africa
CIMA – Chartered Institute of Management Accountants
DTI – Department of Trade and Industry
DUT- Durban University of Technology
GDP – Gross Domestic Product
GEM – Global Entrepreneurship Monitor
IFRS – International Financial Reporting Standards
IREC - Institutional Research Ethics Committee
IT- Information Technology
MAPs – Management Accounting Practices
PMTs - Performance Measurement Tools
SAIT – South African Institute of Tax Practitioners
SAPA - South African Press Association
SARS – South African Revenue Service
SEDA – Small Enterprise Development Agency
SMA - Strategic Management Accounting
SMEs – Small and Medium-sized Enterprises
SMMTEs – Small, Medium and Micro-sized Tourism Enterprises
SPSS - Statistical Package for the Social Sciences
UNIDO - United Nations Industrial Development Organization



# CHAPTER ONE

## INTRODUCTION

### 1.1 Introduction

This introductory chapter provides the brief background to the study and highlights the research problem, research objectives and significance of this study. The chapter also includes a brief discussion of the research methodology, as well as the organisation of the study. The main purpose of this research is to assess the extent of use of management accounting practices (MAPs) by small and medium-sized enterprises (SMEs) in the clothing and textile industry in Newcastle, KwaZulu-Natal. Using MAPs may enable these SMEs to manage their enterprises effectively (Ntim, Evans and Anthony 2014: 30).

### 1.2 Background to the study

MAPs are an important tool that SMEs' owners or managers can use to promote efficiency and potentially have a positive effect on the SMEs' performance (Ghosh and Chan 1997: 16, Lybaert 1998, Mitchell and Reid 2000: 385). The Chartered Institute of Management Accountants (CIMA) (2002) asserted that "management accounting is a field that provides the enterprise decision-making, formulating planning and performance management systems, and offers proficiency in financial reporting and controls to assist the enterprises in the implementation of an enterprise strategy". Sine and Krisch (2006: 121-132) noted that MAPs vary in businesses as a result of the differences in their services, products and market environment. As soon as a firm has expanded with regard to size and the services they render to their customers, the MAPs direct all internal controls of these SMEs to better their management (Kupper 1997: 464). Nonetheless, the inability of the traditional and cost accounting techniques in provide management with information needed to make sustainable business decisions has not helped SMEs (Fakoya 2013: 252). Empirical studies on management accounting in SMEs have shown a range of different types of MAPs used in such enterprises. Managerial and cost accounting has helped to provide tools and perspectives that assist managers to identify, measure, analyse, interpret, and communicate cost information (Hilton and Platt 2015: 5).

Timmons and Spinelli (2007: 388) and the Global Entrepreneurship Monitor (GEM) (2010) as cited by Shaku (2011: 56), argue that the most prominent reasons why SMEs fail are the lack of cash after a business has started and the lack of the necessary management accounting knowledge to run the business. The Banking Association of South Africa (BASA) (2013) states that these enterprises are the greatest innovative drivers of economic expansion in South Africa and worldwide. SMEs are considered to be important contributors to the economy as strategies for decreasing the unemployment rate, especially as the formal corporate sectors continue to use retrenchment policies (BASA 2013). BASA (2013), and Atawodi and Ojeka (2012: 94) note that in developing countries especially, SMEs are perceived as role players in creating growth and developing economies within the individual countries.

In past years, SMEs have seen an increase in direct assistance from government (Richard 2000: 9). However, Mboniyane and Ladzani (2011: 550) dispute the fact stating that the South African government did not provide sufficient assistance to the SME sector compared to larger or macro-sized enterprises. On the other hand, Oriaku (2012: 20) suggested that the government should offer sufficient financial support to SMEs. In South Africa, SMEs are important in the calculation of Gross Domestic Product (GDP) (DTI 2013). In addition, SMEs in South Africa make about 91% of formalised businesses, provide employment to about 60% of labour force and contributes roughly 34% to the GDP (BASA 2019). Therefore, the failure of these SMEs could reduce the GDP.

The clothing/textile industry is very important for Newcastle as in 2001 it was estimated that approximately 7.2% of Amajuba District's GDP is in the sector of "clothing or textiles" and it came second after metal products (Todes 2001: 69-79). Amajuba District consist of three municipalities Newcastle municipality, Emadlangeni municipality and Dannhauser municipality (Newcastle Business Portfolio 2015). Newcastle municipality has two townships namely Madadeni and Osizweni (Newcastle Business Portfolio 2015). Dannhauser municipality is known for the coal companies and Eskom power stations which distributes power within the Amajuba District residents. On the other hand Emadlangeni municipality dominates more on the livestock, dairy SMEs and fruit and vegetables industry. The current place took place

in the Newcastle municipality geographical area. However, there are issues with regard to the data related to SMEs as an up-to-date register of firms in Newcastle and Madadeni (which firms are in operation and size) is lacking, and no time series data is available. Newcastle is the third largest city in KwaZulu-Natal, South Africa, located in the north-west corner of the province with a total of 363,236 citizens (Census 2011). Based on a more recent community survey by Statistic South Africa (2018) Newcastle municipality's population has increased to 389,117. The city's economy is strong and is dominated by small clothing manufacturing firms (Tikkanen 2018).

The next section discusses the problem statement of this study.

### **1.3 Problem statement**

The problem to be investigated in this research study is that SMEs, particularly those in the clothing/textile industry in South Africa, may be failing due to a lack of use of MAPs such as costing systems, budgeting systems, and performance measurements tools (PMTs), decision support systems, and strategic management accounting (SMA) practices. Despite the importance of SMEs in South Africa and their relatively high failure rates, little research has been performed in South Africa to determine the extent to which these entities employ budgets, PMTs and pricing tools (Nandan 2010). Furthermore, Maduekwe (2015: 5) added that most decision-makers in SMEs in South Africa lack conventional management accounting skills. The SMEs' decision-makers largely rely on unusual techniques such as their gut-feeling, rule of thumb, personal whims, as well as trial-and-error techniques when making their budgeting, performance measurement and pricing decisions, which are inappropriate in the modern competitive business environment (Maduekwe 2015: 5). Given that there are benefits that SMEs can derive by using MAPs, it is important that the extent of use of MAPs be assessed amongst these SMEs.

Mitchell, Gavin and Julias (1998: 30) argued that in the SME research environment, there are the following benefits: SMEs offers a less complex research setting compared to medium-sized businesses; and in SMEs, the environment, role and improvement of MAPs are more observable due to their smaller sizes and more information available. A study by Holmes and Nicholls (1989) in Australia, reported that management accounting and/or its absence is related to the survival and/or

insolvency of SMEs. Many reasons have been provided to explain the high failure rate of SMEs. Noteworthy among these reasons is their inability to make use of essential business management tools such as budgets, PMTs, and pricing tools (Ahmad 2012: 18). Many SMEs fail to prepare budgets or fail to constantly appraise their budget systems and oversee their progress against their budget systems, or are dissatisfied by the ineffectiveness of the budgets developed or the budgeting process (Ahmad 2012:1 8). In addition, most SMEs focus only on financial performance measures but ignore the more strategic non-financial measures (Maduekwe 2015: 6).

For these reasons, SMEs offer an opportunity to make a critical assessment of MAPs. There is an assumption that given their small size, specifically in emerging countries, there is the probability that the SMEs are not using MAPs or are failing to take full benefit of the opportunities that MAPs might produce. The next section covers the research objectives and research questions of this study.

#### **1.4 Research objectives and questions**

The aim of this study is to make a critical assessment of MAPs in Newcastle clothing/textile SMEs. To achieve the aim, the four objectives are: to determine the extent to which MAPs are employed by Newcastle clothing SMEs; to identify the roles played by MAPs in Newcastle clothing SMEs' management; to determine the factors that affect the extent of use of MAPs among Newcastle clothing SMEs; and to determine the relationship, if any, MAPs has on the performance of the firm.

The research objectives can be expressed by the following four research questions.

1. What is the extent of the use of MAPs by Newcastle clothing SMEs?
2. What are the roles of MAPs in Newcastle clothing SMEs' management?
3. What factors affect the extent of use of MAPs by Newcastle clothing SMEs?
4. Is there a relationship between the use of MAPs and the performance of Newcastle clothing SMEs?

#### **1.5 Significance of the study**

A number of theories exist that describe the nature and behaviour of management accounting. Otley (1980) used contingency theory to understand the use of MAPs and

reported that there are no common applicable MAPs that can successfully be used in all businesses. Recent studies (Abdel-Kader and Luther 2006; Ahmad 2012; Fakoya 2013) have also applied contingency theory to explain the behaviour and nature of MAPs in SMEs. South Africa is a developing country and has numerous resources that can assist SMEs to prosper. However, the growth of South Africa's SMEs is lagging behind SMEs in other African developing countries that have fewer resources (Brijtal, Enow and Isaacs 2014). Bringing the importance and the use of MAPs to the attention of SMEs' owners or managers may help in the management of the business and strategy formulation processes, leading to more successful SMEs.

This study intends to add to the present management accounting literature by providing new evidence on the extent of use of MAPs in Newcastle clothing/textile SMEs. The focus on Newcastle clothing/textile SMEs is especially significant because the research of MAPs in the SMEs is limited in South Africa.

## **1.6 Research methodology**

Given that the main purpose of the study is to assess the extent to which MAPs are employed by Newcastle clothing/textile SMEs, a positivist approach was used. Knowledge resulting from positivist research is deemed objective and quantifiable, which falls under the domain of quantitative research (Bruwer 2010: 4). The population in this study consisted of 51 clothing/textile manufacturing SMEs in Newcastle, KwaZulu-Natal. Permission to conduct the study was granted by the Institutional Research Ethics Committee (IREC) of the Durban University of Technology (DUT). In addition, consent letters were signed by the owners or managers of Newcastle clothing/textile SMEs. Data obtained from the survey questionnaires were analysed using the latest version of the Statistical Package for Social Sciences (SPSS).

## **1.7 Organisation of the study**

The dissertation is structured into five chapters, as follows.

**Chapter one - Introduction:** The background to the study is covered in this chapter by highlighting the problem statement, the research objectives and questions, and the significance and organisation of the study.

**Chapter two - Literature review:** The chapter presents an overview of existing literature; this review was structured along the objectives of the study. This chapter covered the following sections: definitions of terms used; importance of SMEs in developing countries; the challenges affecting the success of SMEs; the extent use of MAPs by SMEs; the roles of MAPs in the management of SMEs; and the factors that affect the use of MAPs by SMEs. The gaps in the literature reviewed were also identified and discussed.

**Chapter three - Research methodology:** This chapter outlines the research methodology and explains how the research instrument was formulated. The main sections that are covered in this chapter include: the methodological approach used; research design and methods used; the population; census method; research instrument; the response rate; data preparation and analysis; ethical consideration; the reliability and validity; and the limitations.

**Chapter four - Presentation and discussion of the results:** Chapter four presents and discusses the results on the extent of use of MAPs by Newcastle clothing/textile manufacturing SMEs. The results are presented in an orderly manner in order to answer the research questions.

**Chapter five – Conclusions:** This chapter presents the conclusions drawn from this study's results. The recommendations and the limitations of this study are also discussed; as well as areas for future research.

## **1.8 Summary**

This chapter highlighted the background of this study and explained the aim of assessing the extent of use of MAPs by Newcastle clothing/textile SMEs. It then outlined the research objectives and research questions that are intended to address the aim of this research. The significance of this study was also covered in this chapter. The scope and structure of the dissertation was also highlighted. The next chapter reviews the related literature of this study.

# **CHAPTER TWO**

## **LITERATURE REVIEW**

### **2.1 Introduction**

Chapter one provided the background to this study, the problem statement, and the research objectives and questions. This chapter presents the definitions of key terms used in this dissertation, and provides information on the importance and contribution of SMEs in developing countries. The challenges that affect the success or survival of SMEs are explored. Chapter two also identifies gaps in the literature with regard to the extent of use of MAPs by SMEs, the role of management accounting in the management of SMEs and the factors that hinder the extent of use of MAPs by SMEs.

Von Diether (2015: 2) defined “a literature review as an evaluative report of studies in the related research field. A comprehensive review should define, summarise, assess and simplify the studies”. It further selects a narrow number of studies that are significant to the research area rather than collecting a larger number of studies that are not as closely related to the research topic area (Von Diether 2015: 2). The literature review was done to ascertain what work had already been done in this research area and to identify the gaps in the reviewed literature.

### **2.2 Definitions of terms**

This section firstly discusses definitions of SMEs in developing countries and South Africa and secondly, defines the management accounting practices used in this study.

#### **2.2.1 SMEs**

Definitions of SMEs differ from country to country. Monks (2010: 9) states that in almost every country around the world, there are different criteria used to describe an SME. Monks (2010) adds that even within each country, the definition may differ according to the sector of the SME. Lloyd (2010: 15) argues that defining SMEs is a challenge across the world. Srinivas (2016: 1) suggests that SMEs can be defined by three key-words: small, single and local.

Srinivas (2016: 3) states that “small-sized enterprises are small in nature, either in terms of the number of employees, capital and asset and turnover. Single-enterprises have a single owner who could also be the sole employee. Srinivas (2016: 3) continues indicating that “local-SMEs are essentially local in nature – the market is usually localised to the area where they are located (same city, district or state); or maybe ‘local’ in the sense that they operate from a place of residence or community” (Srinivas 2016: 3).

Table 2.1 outlines the different SME definitions in some developing countries (Abor and Quartey 2010; Monks 2010: 9).

<b>Country</b>	<b>SME criteria</b>
Egypt	Differs with trade, less than 500 employees
Indonesia	Less than 100 employees
Malaysia	Differs, turnover: less than R25m – R 55m and 150 employees
Korea	Manufacturing industry: less than 300 employees and service industry: less than 300 employees
Source: Adapted from Monks (2010: 9)	

A general SME definition by Monks (2010: 9) is that the number of employees should not exceed 300 employees and the annual turnover must be less than R55 million. Monks (2010: 10) added that “the statement of financial position’s assets total should be less than R45 million”. If SMEs are managed properly and assume a normal growth curve, then these enterprises will quickly grow out of the SME category (Monks 2010: 10).

Definitions of SMEs usually describe the number of employees, size of a firm, total annual turnover and statement of financial position’s assets total. The criteria set out above are not too different from the ones scheduled in the National Small Business Act 102 of 1996 in South Africa. Within the South African context, SMEs can be defined using the two sources, namely the South African Revenue Service (SARS) and the National Small Business Act 102 of South Africa, 1996 as amended in 2004 (South Africa 2004).

SARS (2007) defined SMEs in different ways according to certain concessions on which the definition is based. These are as follows:

- For amnesty purposes, a SME is an enterprise with a maximum turnover of R10m.
- For income tax purposes, an SME has total net assets of less than R14m.
- For capital gains tax, an SME has total net assets of under R5m.

However, whether an enterprise is categorised as a SME, is a relevant issue from a South African tax viewpoint, because special tax reductions are available only for SMEs (South African Institute of Tax Practitioners (SAIT) 2016). SAIT (2016) affirmed that there “is no single definition of SMEs included in any of the tax statutes administered by SARS”. In fact, different tax statutes dealing with these enterprises has no reference to the term SMEs at all (SAIT 2016).

The National Small Business Act 102 of South Africa, 1996 as amended in 2004 (South Africa 2004), defined an SME as a small business, “a distinct enterprise, comprising co-operative enterprises and non-governmental entities, managed by one owner or more, that counting its branches or subsidiary enterprises, if any, is largely carried on in any sector or sub-sector of the economy as mentioned in column 1 of the schedule.” The generic classification of SMEs stated in the National Small Business Act is given in Table 2.2.

<b>Size of enterprise</b>	<b>Number of employees: <i>Less than</i></b>	<b>Annual turnover (Rand value): <i>Less than</i></b>
Medium enterprise	100 or 200 employees depending on industry.	R4m or R40m depending on sector.
Small enterprise	50 employees.	R2m or R25m depending on sector.
Very small enterprise	10 or 20 employees depending on industry.	R200K or R500K depending on sector.
Micro enterprise	5 employees.	R150K.

Source: National Small Business Act 102 of South Africa, 1996 as amended in 2004 (South Africa 2004).

In this research study, SMEs are classified as shown in Table 2.3.

<b>Table 2.3: Classification of SMEs in this study</b>		
<b>Sector</b>	<b>Manufacturing</b>	
Size or class	Small	Medium
Total full-time equivalent of paid employees	0-50	51-200
Total annual turnover: <i>Between:</i>	R2 million – R25 million	R4 million – R40million
Source: Adapted from Small Business Act 102 of South Africa, 1996 as amended in 2004 (South Africa 2004).		

Table 2.3 has been modified by leaving out other sectors and focussing only on manufacturing SMEs, as this study focuses on clothing/textile manufacturing SMEs. The next section discusses management accounting.

## **2.2.2 Management accounting**

Management accounting has been given a lot of focus in the past years (Sunarni 2013: 617). Most of the studies focus on specific industries, while some studies explore the extent of use of management accounting by SMEs in a certain geographical region (Alleyne and Weekes-Marshall 2011). Weibenberger and Angelkort (2011) stated that “there are two types of accounting, management accounting and financial accounting. The information provided by management accounting is for use within the firm. Management of a firm uses this information to monitor performance and to control the firm”. On the other hand, financial accounting information is provided to meet the information needs of the stakeholders (Weibenberger and Angelkort 2011). This information shows an enterprise’s financial state and performance (Weibenberger and Angelkort 2011). The focus of this study is on management accounting; therefore, MAPs are discussed below.

MAPs are the fundamental tools for decision-making at any levels of the enterprise (Mayanja 2010: 5). Hilton and Platt (2011) state that “management accounting is a practice of identifying, measuring, analysing, interpreting and collaborating information in pursuit of the enterprise’s objectives”. Kumar (2014: 1) confirms the importance of management accounting by asserting that “the rewards of using management accounting information within an enterprise is to increase productivity and effectiveness, maximise the capacity to make a profit, clarify and simplify financial

reports, controls of cash flows of the enterprise and to make critical business decisions". Catapan, Catapan and Cruz (2012: 74) agree by stating that management accounting is knowledge or skill whose major role is to make available protected data so that the decision-making process can be performed with confidence.

Likewise, Stefanou and Athanasaki (2012: 143) confirm that management accounting is a fundamental technique for useful enterprise management as it offers relevant information to owners and managers for decision-making in regard to the success of the enterprise. Management accounting supports businesses to prioritise and optimise their resources, as one can control costs or expenditure, evaluate performance, determine investments and fix prices as well as improve the overall quality of business (Chand and Dahiya 2010; Lavia Lopez and Hiebl 2014).

The above suggests that management accounting's focus is mainly in planning, measuring performance and controlling activities of the firm, and in assisting managers-owners of the firm to formulate and implement strategies. Owners or managers use MAPs such as product pricing and costing systems, as well as MAPs related to customers to obtain the information for their long-term decision-making strategies (Santos, Gomes, Arroteia and Almeida 2014: 3). In contrast, the usefulness of management accounting is not meant only for owners or managers in the enterprises, but for employees as well (Breuer, Frumusanu and Manciu 2013: 363).

Given that SMEs are important for the country's economy and employment targets, it can be assumed that for firms to plan, measure performance, and control and implement strategies, they have to use MAPs. These MAPs are detailed in section 2.4.

Having defined the key terms of this study, the following section discusses the roles of SMEs in developing economies.

## **2.3 SMEs in developing economies**

This section justifies the importance of SME research by focusing on the role, importance and contribution of SMEs in developing countries. This section covers the significance of SMEs in the South African economy and emphasises the importance of the KwaZulu-Natal manufacturing SME industry. This section also addresses the challenges that affect the survival and success of SMEs.

### **2.3.1 Role, importance and contribution of SMEs: Developing economies context**

The International Finance Corporation (2017) states that an enormous percentage of the economy of developing countries is comprised of SMEs and that these businesses are demonstrative of economic development and job establishments for billions of people around the world. In North America, a large percentage of financial injections into the economy are generated from SMEs operating in different sectors (El Kalak and Hudson 2016). On the other hand, in the West Midlands, England, and United Kingdom, a study by Green and Martinez-Solano (2011) reported that SMEs' goods and services are affordable as well as designed to meet local market's needs. Moctezuma (2017: 256) comments that "in Latin America, the government of Mexico recognises SMEs as important role players in technological improvement". SMEs are important because they create jobs that use low skills and increase the GDP in both developed and developing economies (SBP Alert 2013: 2).

Economic specialists, academics, professional specialists, and policymakers have shown interest in SMEs as they are thought to be the backbone of many economies, the engine for economic growth, a major player in job creation, productivity growth, and source of innovation in both developed and developing countries (Li and Rama 2015; Love and Roper 2015; Aceleanu 2014). Additionally, SMEs are considered to be a vehicle for economic development, and means for reassigning knowledge and technology that leads to the progress in the improvement of life (McMullen and Warnick 2015).

Notwithstanding the challenges faced by SMEs, their role in economic development cannot be disregarded because these firms play a significant role in growing the

economies of their individual countries. Venkatesh and Muthiah (2012) studied the significance and contribution of SMEs to the Indian economy. They found that the government in India realised the significance of the SME industry by including this industry in the five years' economic plan of the country. They also argued that small businesses contribute to export earnings (Venkatesh and Muthiah 2012). Padachi (2012: 5) notes that in Mauritius, SMEs serve as a valuable conduit between the informal economy of family-owned SMEs and the formalised corporate industry.

In the Malaysian economy, SMEs have long been recognised as a mainstay of the country's economy as they inject about 99% of the total enterprises' creation of wealth and provide up to 31% of the country's GDP (Jamil and Mohamed 2011: 201). Ibarra (2012: 164) stated that the existence of Philippinean SMEs is vital in enhancing economic growth; and SMEs provide a robust effect on the economies of all nations and that they are a means of modernisation and technological change.

The importance, contribution, and role of SMEs in African developing countries has also been investigated. Muriithi (2017) noted that in "Africa, the irreplaceable presence of SMEs is also felt". However, "the role that SMEs play in Africa is not just one of economic growth; it extends beyond that to poverty reduction" (Muriithi 2017). In addition, the accountability of African SMEs has grown to include economic growth. Consistent with this, the governments of Kenya, Nigeria, Tanzania, and Zambia have in recent years been actively involved in implementing strategies to create competitive and sustainable SMEs in their individual countries (Ndesaulwa and Kikula 2017).

In Tanzania, SMEs' positive impact on the GDP is projected to be about one-third of the country's economy. It is also projected that up to 20% of the labour-force in Tanzania, more or less 3 million citizens, are hired by SMEs (Kira (2013), as cited in Shipulwa (2016: 16). Relating to Nigeria, Oniyitan (2014) notes that "Nigeria is one of the biggest economic drivers in Africa, and claims that in Nigeria SMEs are the solitary key to create inclusive growth and job creation between successful SMEs for capacity building initiatives". Fatai (2011) argued that the government in Nigeria believes that SMEs absorb more labour whilst utilising a smaller share of capital. It is in this light that SMEs are receiving much recognition and consideration by both government and

the private sector. Nigerian SMEs are usually dispersed and can reach the remotest rural places and as such hire low-income workers (Fatai 2011). Self-employment is often the only income of numerous low-earning people especially in emerging nations where abject poverty is seen (Monks 2010). The above suggested that SMEs in Nigeria are playing a significant role in the economy and the society.

A study by Mbongo (2011: 109) also emphasises the role and importance of SMEs, stating that in Kenya SMEs participate as significant role players in job and wealth creation, income circulation, the increase in technology capabilities and the distribution of the limited resources among a great number of well-organised and active SMEs. Nkwe (2012) recognised that SMEs in Botswana constantly prove themselves to be the engine of economic development and foundation of technology improvements. Likewise, Mensah-Agyei (2012) affirmed that Ghanaian SMEs are locally based and therefore depend upon the community for people to work in the firms. With particular reference to developing countries, SMEs are useful for the creation of employment in the shortest time possible.

To summarise, SMEs are therefore recognised for the importance, contribution and the role they play towards the growth of the economies, especially in developing countries. Notwithstanding the failure rate of SMEs in developing countries, they are still seen as contributors to the economy of the country in which they operate and the promotion of the social well-being of the society (Karanja, Mwangi and Nyaanga 2012; Venkatesh and Muthiah 2012). SMEs are recognised for the affordability of the goods and services they provide. These enterprises are the key role players in the creation of employment, poverty reduction and the growth of an individual country.

Having discussed the role, importance and contribution of SMEs in developing economies, the following section discusses the role and importance of SMEs in the South African context.

### **2.3.2 SMEs: A South African context**

As stated by Mago and Toro (2013: 21), “the definition of SMEs is dissimilar and can be described by the economic development in each country”. South Africa is separated into nine provinces (Lehohla, Manuel and Zuma 2010). The enterprise background and market environment in each province varies because of the differences in population, economic dynamics such as the obtainability of natural and other economic resources and location (Lehohla *et al.* 2010). Thus, this may also apply to SMEs operating in Newcastle municipality.

Monks (2010) asserted that SMEs are essential for the social and economic development of the country as they enhance competitiveness in the market and mobilise surplus funds to more productive areas. Abor and Quartey (2010) noted that SMEs are necessary for increasing the standard of living and stability of a country since they have the ability to reduce poverty. A study by Okubena (2012: 3) highlighted that the SME industry can thus be seen as a means by which individuals earning the least possible income in the community gain right of entry to economic prospects during the circulation of income and wealth. This is important as South Africa is perceived to be among the most unequal economies in the world.

Mahembe (2011) states that South African SMEs represent about 91% of formal businesses and employ more than 60% of the workforce. Maboja (2012: 1) also stated that South African SMEs have an essential role to play in economic wealth creation and job creation. In 2012, SMEs accounted for about 61% of employment in South Africa, which is an increase from 57.3% in 2002 (Nkonde 2012). Ramukumba (2014) found that SMEs account for about 70% of the labour force in the private sector as well as for an estimated 80% of newly created jobs. The United Nations Industrial Development Organization (UNIDO) (2016) also estimated that small enterprises represent around 90% of private-owned industries and contribute up to 50% to job creation and the GDP in South Africa. Although these studies (Ramukumba 2014) have reported different statistics for different years, they do suggest that SMEs have been playing a crucial role in South Africa. Nicolaidis (2011) noted that the creation of new business activities especially by SMEs is a significant driver of the South African economy. Cant and Wiid (2013: 714) also add that SMEs in South Africa play an

essential role in the advancement of South Africa's economy and are the primary sources of employment in many provinces. Furthermore, SMEs create commercial skills that allow previously disadvantaged citizens to not only create job for themselves but then also contribute to economic development as recognised by the South Africa government (Peters, Van Gensen, Hugh Isaacs, Botha and Naicker 2014).

The South African government has initiated various support measures aimed at developing and promoting SMEs (SBP Alert 2013: 3). The support programs are intended to help connect SMEs to the greater development of the country with a key focus on the role and importance of these SMEs (Charbonneau and Menon 2013). In particular, the government of South Africa established Khula Enterprises to improve the SMEs' access to finance and the Small Enterprise Development Agency (SEDA) through the National Small Business Amendment, Act 29 of 2004 to develop, support and promote SMEs (South Africa 2004). The Department of Trade and Industry (DTI) has introduced a South African magazine entitled *Small Business Connect* with its aim "to advance the undertaking of significant opportunity-related communication and enterprise-development resources in the SME sector" (DTI 2013). The South African government has also formed the Ministry of Small Businesses; the emphasis of this new ministry is to create a platform for more growth of SMEs (Greve 2014). Chimucheka (2013: 788) stated that even though these organisations, developments and programmes were put in place by the South African government to promote and assist SMEs, owners or managers still believe that they do not receive sufficient assistance from the South African government. Timm (2011: 48) reported that challenges such as social and negative entrepreneurial approaches, insufficient monetary support, and a sub-standard approach to education and the strict regulatory charter are some of the factors that challenge entrepreneurship in South Africa.

Unemployment is a key challenge in every country. SMEs also contribute to stabilising the unemployment rate in most countries.

Table 2.4 sets out SMEs' contribution to employment in selected countries.

<b>Table 2.4: Employment contribution by SMEs in selected countries</b>				
<b>Country</b>	<b>Number of SMEs</b>	<b>Total population (2011)</b>	<b>SMEs per 1000 people</b>	<b>SMEs employment in percentages %</b>
United Kingdom	4 415 260	63 000 000	73.8	39.6%
China	8 000 000	1 339 700 000	6.3	78.0%
Ghana	25 679	21 499 924	1.2	66.0%
Malawi	747 396	18 628 747	72.5	38.0%
South Africa	900 683	51 770 000	22.0	39.0%

Source: Adapted from Monks (2011).

This current study is based in the KwaZulu-Natal province. KwaZulu-Natal is the third largest province in South Africa, but is the second largest contributor to the South African economy (SME South Africa 2015). KwaZulu-Natal contributes up to 15.7% to the country's GDP, with trade and transport, manufacturing, finance and agriculture industries being important role players (Standard Bank 2014). KwaZulu-Natal SMEs account for 21.6% of South Africa's manufacturing sector and many of the challenges faced by key sectors of the KwaZulu-Natal economy are similar to those experienced elsewhere in the country (SME South Africa 2015). However, despite the importance of small enterprises in the South African economy, many SMEs are unable to survive in the long-term (Maduekwe 2015).

The preceding paragraphs outlined the contribution to and the role of SMEs in the South African economy. The literature also highlighted the contribution by SMEs to the creation of job opportunities and thus the reduction of the unemployment rate in South Africa (Malapane and Makhubele 2013: 197; Cant and Wiid 2013: 714; Peters *et al.* 2014). In the KwaZulu-Natal province, manufacturing SMEs have been recognised for their contribution to the economy (Standard Bank 2014), both in terms of contributing to the gross domestic product and creation of jobs. However, there is little data with regard to SMEs operating in Newcastle in the clothing industry. This study addresses this gap in the literature.

Despite the importance of the SME sector in the South Africa economy, various challenges affect the existence of these SMEs. These challenges are discussed next.

### **2.3.3 The challenges that affect the survival or success of SMEs**

Starting and operating an SME is one thing, but its survival and growth is another (Abduli 2013). According to Kim (2011) most African nations lack the governmental capacity necessary to properly support the development of local SMEs (Kim 2011). Furthermore, Kim (2011) reported that SMEs in Ethiopia are highly taxed resulting in a challenge for Ethiopian SMEs to develop from the local sector. Kim (2011) affirmed that obstacles exist for SMEs, especially in African nations. It is possible that the difficulties faced by SMEs in South Africa are not similar to those faced by SMEs in the rest of the world due to the dissimilarities in the market environment. In South Africa many SMEs may be unsuccessful as they face numerous difficulties (Makhado 2015: 41). Some of the challenges are historical as when the majority of the citizens were excluded from the economy, they were unable to purchase assets for their businesses (Gstraunthaler and Cramer 2011). Rocketlab (2012) suggested that a major reason for South African SMEs' failure is the pointing of fingers at others when things are not working well. Some SME owners or managers tend to blame the banks, the government, their partners or even customers for the ultimate failure of the businesses. Only a few are able to acknowledge that they themselves may be the cause of the firm's downfall (Rocketlab 2012).

Cant, Erdis, and Sephapo (2014: 574) investigated the constraints affecting South African SMEs in the financial industry. Cant *et al.*'s (2014: 574) study indicated that the least critical constraints faced by the respondents were lack of water and lack of technical skills. The lack of financial assistance was considered to be the most critical constraint followed by high transport costs, lack of business information sources, lack of technological devices and lastly intensive competition. SME South Africa (2015) conducted a study in South Africa, and investigated whether SMEs can survive or succeed in the country's often challenging commercial climate. From high interest rates to load shedding, the SME sector has found it difficult to stay in business (SME South Africa 2015).

SMEs in Ghana and South Africa are facing a number of challenges such as the strict legal environment, the lack of a suitable market environment, the lack of finance, poor management skills, the lack of enterprise information and the lack of supportive

bodies, for instance, SME financial and educational support (Abor and Quartey 2010: 224; Mbumbo 2015: 44). Other reasons for South African enterprise failure are a lack of management expertise, insufficient capital re-invested into sustainability, the bad location of a business, ineffective inventory control, overinvestment in fixed assets such as vehicles and equipment, bad credit management, personal use of company funds and unexpected growth (Buys 2012: 13).

To summarise, the lack of capital and access to finance are the main reasons that SMEs fail (Mbumbo 2015: 44, Rocketlab 2012; Cant *et al.* 2014: 574). Other reasons are the lack of education and training of the owners or managers, the lack of business management and the lack of IT and computers. The following section discusses selected challenges that affect SMEs' success.

### **2.3.3.1 Capital and access to finance**

Any business, regardless of its size, requires financial resources in order to be able to operate and to acquire resources for operations and expansions. The "South African banking institutions are still the key bases of investment to establish enterprises, notwithstanding the government interventions that have been put into place" (Dalberg 2012: 04). Sharma and Gounder (2012) found that investors of Indian SMEs use their own money as the source of capital resources for their enterprises. Access to financial support was constrained by banks' interest and fees charged and the demand for collateral (Sharma and Gounder 2012).

Another possible source of finance for SMEs is venture capital. However, Tangwo (2012) contends that venture capital funds in South Africa are able to provide finance only to a small proportion of SMEs. As an example of allowing the environment for SMEs to prosper and enhance access to financial support, the government of Kenya has introduced the Micro and Small Enterprises Act aimed at the Kenyans in establishing more SMEs (Rambo 2013) the Micro and Small Enterprises Act 2012 was enacted to improve the business environment and enable small business to grow (Milgo 2017: 15). In respect of Ghana, many SMEs lack the assets for security in order to obtain financial assistance from the banks (Ackah and Sylvester 2011: 13). This may be a constraint too for South African SMEs.

Due to the high failure rate of SMEs in South Africa, banks might be unwilling to grant loans to SMEs (Standard Bank 2013). It therefore appears that lack of access or unavailability of funds could hinder business success and its survival (Fatoki 2014: 136).

Lack of financial support or availability of funds can be a limitation to business development. Vedera and Kulshreshtha (2010), as cited by Marembo (2013: 31), agree that SMEs cannot quickly adapt to new methods and processes because they might lack capital and funding to pursue the opportunities. Enterprises, less than four years old, tend to rely less on bank financing and more on informal financing because financial services providers safeguard their institutions against risks by increasing collateral prerequisites (Klapper, Laeven and Rajan 2010).

Cant *et al.* (2014: 572) study's secondary objectives were to investigate whether South African SMEs received financial assistance. SMEs were therefore requested to specify whether they had obtained financial assistance from the banks in the past. The results indicated that around 50 or 21.5% of the SMEs reported that they had obtained financial support in the past. The majority (78.5%) of the respondents indicated that they had never obtained financial assistance from banks in the past (Cant *et al.* 2014: 572). SMEs who reported that they had received financial assistance were asked to stipulate the type of monetary assistance they obtained from the banks. The majority of SMEs (56.9%) reported that they had received a bank loan. Additionally, 13.8% of the SMEs had received loans from the members of their families and lastly, 5.2% of the SMEs had received financial assistance from the Department of Social Development (Cant *et al.* 2014: 572). Cant *et al.* (2014: 574) reported that the lack of financial assistance was found to be the biggest challenge for SMEs.

On factors affecting SMES from access funds, Mwangi and Bwisa (2013) found that most of the youth entrepreneurs in Makuyu, Kenya are facing difficulties in accessing credit; due to the great costs of credit such as high loan processing charges, high legal charges, high interest rates, and the high cost of credit insurance. A study by Vuvor and Ackah (2011) on difficulties suffered by SMEs in attaining credit in Ghana revealed that SMEs are unable to provide collateral and other information required by banks

such as audited financial reports. This together with the high cost of a loan in terms of high-interest rates makes it difficult for SMEs to obtain bank loans. Such collateral prerequisites work against SMEs, because of the lack of monetary resources (Mazanai and Fatoki 2012). Gangata and Matavire (2013) studied factors facing SMEs in Zimbabwe in accessing financial support from financial services providers. The study reported that the main challenge facing SMEs is the failure to meet lending requirements such as being able to provide collateral security.

Research conducted by InfoDev (2010), in information communication technology SMEs in Kenya, Tanzania, Uganda and Rwanda, also highlighted that a lack of finance for further research and development is a challenge to information communication technology SMEs. Dalberg (2012: 05) also found that SMEs in Switzerland, Senegal, South Africa, India, Kenya and Denmark have a funding gap with approximately 50% of SMEs rating obtaining finance as a challenge. Financial institutions see SMEs as unreliable enterprises for reasons that include: undefined competitive environment; insufficient accounting records; a more unpredictable market environment in the developing markets; assets not correctly disclosed; poor management of suppliers; and not being prepared in regard to both human and financial resources to endure economic factors (Van Aardt and Fatoki 2012). Haron, Said, Jayaraman, and Ismail (2013) stated that to allow SMEs to contribute to the economic improvement of the country, and for the development and survival of SMEs, financial institutions need to be more accommodating.

A further challenge which SMEs face is the lack of educational and accounting skills. These are discussed next.

### **2.3.3.2 Education and accounting skills**

Amoako (2013: 78) studied the accounting techniques of SMEs in Ghana, using questionnaires. Respondents were asked to rate their accounting skills. Close to 50% of the respondents rated their accounting skills as slightly low, while 10% of respondents rated their accounting skills very low (Amoako 2013: 78, Abdel, Rowena and Robyn 2010). This confirmed the findings of Pietersen (2012: 220) that Ghanaian SMEs' decision-makers lack required skills, training and resources to effectively

manage their cash. This implies that these SMEs did not have the necessary accounting skills.

The GEM Reports of 2001-2010 (GEM 2010) have recognised that the SME industry in South Africa is affected with problems of insufficient management expertise due to deficient skills and education. Similarly, Ingle (2014: 40) asserted that the low education qualifications of business owners and lack of previous experience in managing a business are reasons why SMEs fail in South Africa. Shaku (2011: 181) identified research studies in other developing nations that noted that the lack of accounting education amongst the owners or managers of SMEs as causing their high failure rates. A study by the Chartered Institute of Management Accountants (CIMA) (2012: 6) noted that “medium-sized enterprises use management accounting more than small-sized enterprises. There is a need for the provision of management accounting education for small-sized enterprises’ owners and managers because they do not know how to use MAPs such as budgets, product pricing and costing and many other MAPs for decision-making and effective management of the enterprise” (CIMA 2012: 6).

The DTI (2011) highlighted the lack of relevant education and training as the key factors that have led to low entrepreneurial activities in the country. Chimucheka (2012: 6) agrees that in South Africa, the lack of appropriate educational facilities has affected the management ability of these SMEs. In South Africa, the lack of corporate training is perceived as one of the important factors to entrepreneurship activities (Nieman and Nieuwenhuizen 2014: 31). A recent study by Lekhanya and Mason (2014: 342) on 374 SMEs’ owner-managers in rural KwaZulu-Natal, notes that “people working in rural SMEs in KwaZulu-Natal, including business owner-managers, do not have accounting skills and financial management skills”. Paik (2011) stated that SMEs are more at risk to management limitations as a result of the lack of professional management, low levels of education and management training amongst the majority of owners or managers.

Urban and Naidoo (2012: 147) confirm that poor management skills on the part of business owners and managers is one of the reasons SMEs in South Africa have such

a high failure rate. Fatoki (2012: 186) calls on owners and managers of small businesses in South Africa to take responsibility for their own education, and to attend skills training and development courses organised by universities and government institutions such as SEDA. Chimucheka (2013: 787) notes that SMEs' owners' and managers' education improves management skills. The achievement of any enterprise is also associated with the background of the owners or managers. The low education qualifications of business owners and lack of previous experience in managing a business are also indicated by Ingle (2014: 40) as reasons why SMEs fail in South Africa.

In contrast, a study by Sitharam (2014: 98) on SMEs in KwaZulu-Natal, revealed that the respondents' management teams had high educational levels as 52.78% of respondents had degrees, 34.72% had certificates or diplomas and 6.94% had matric or grade 12. However, not all SME managers/owners possess educational qualifications. Even though there are skilled managers these SMEs still need to overcome certain management challenges within the business operations other than educational and accounting skills.

The next section discusses the business management skills of SMEs.

### **2.3.3.3 Business management skills**

The lack of management skills is also a cause of the failure of SMEs worldwide (Sultan 2010; Dumbu and Chadamoyo 2012; Muogbo 2013). Some evidence of this is provided by Oriaku (2012) who aimed to establish whether the lack of resources and strategic planning were the foremost impediments to the development and success of SMEs in Brazil. Oriaku (2012) confirmed that the SME sector is affected by the lack of a well-developed enterprise vision, mission, and objectives, all of which are linked to business skills.

Digital4Africa (2015) reported that SMEs in Kenya are affected by inadequate management techniques. In addition, employing and absorbing semi-skilled workers and skilled workers is one of the greatest challenges affecting SMEs in Kenya. Okafor (2012) studied the financial management practices of SMEs in Nigeria. Okafor (2012)

noted that managerial planning as a variable affected management in the running of the SMEs. Okafor (2012) also commented that lack of planning by management in all its functional areas is detrimental to the performance of the SMEs.

A study by Chinomona (2013) in South Africa reported that the SMEs lacked both the requisite ethical and management skills. SMEs are not likely to succeed in planning and control, organising and leading; elements that are the pillars of principled management. SMEs, if not well managed, cannot fulfil their roles and compete in a globalised business environment (Eccles, Ioannou and Serafeim 2014). Ghosh and Roy (2011) assert that business management encompasses activities such as monitoring, planning, organising, leading, controlling, business re-engineering and dissemination of information. This implies that SMEs could utilise the MAPs and other theories in management accounting as the definitions embrace the activities mentioned by Ghosh and Roy (2011). If SMEs are not aware of the benefits of using MAPs, they are not being able to fulfil their business objectives.

#### **2.3.3.4 Information technology and computer systems**

Many SMEs are not able to identify the necessary technologies that are cost-effective for their businesses (Green and Martinez-Solano 2011; Ndagu and Obuobi 2010). Some SMEs do not know that certain kinds of technology are available. In those SMEs that are able to identify the relevant technology, their next challenge is to purchase and invest in such technology. It is therefore advisable for SMEs to support training so that they can have skilful personnel to handle change and the jobs to do with information technology (IT) (Green and Martinez-Solano 2011).

Madurapperuma, Thilakerathne and Manawadu (2016: 191) investigated accounting record keeping practices in SMEs in Sri Lanka. Madurapperuma *et al.* (2016: 188) suggest that the lack of IT within SMEs hinders the use of record keeping as most of the respondents did not use IT for record keeping. Small businesses in China and India are also affected by the advancement of technology and product quality (Singh, Garg and Deshmukh 2010). China, with its cheap employment, has an advantage in the labour-intensive, low-cost industries.

On the other hand, key challenges facing Indian SMEs are low-scale production that reduces the capability to minimise costs of products and services and engage in technology improvements (Singh *et al.* 2010). Singh *et al.* (2010) also stated that a majority of purely local SMEs, whose products and services sales are extremely localised and segmented, are opposed to global competition. A computer system can integrate various technology systems and software that could help in managing the business more effectively (Tabot 2015).

Likewise, Makhado (2015: 43) reports the lack of technology as an additional challenge facing South African SMEs. The use of suitable technology is a key element behind a successful SME's competitive advantage (Makhado 2015: 43). Tabot (2015: 66) used a questionnaire survey on 38 South African SMEs in the Western Cape Province. He found that only 35% of the SMEs made use of computers and the related accounting software to manage their cash-flows, whilst 65% of the SMEs did not. This usage is unsatisfactory in view of the use of computers and software at a low cost that can help enterprises manage their cash-flows more efficiently (Tabot 2015: 63).

The results of Tabot (2015) are in line with the results of Pietersen (2012) and Sunday, Burani and Eliabu (2012) who found that most SMEs do not use computers and relevant accounting software to control their cash-flows. Pietersen (2012), Sunday *et al.* (2012) and Tabot (2015) recommended that using computers and related accounting software can improve accounting record keeping within SMEs.

Having discussed the IT and computer system problems in SMEs, the following section discusses the marketing problems facing SMEs.

### **2.3.3.5 Marketing**

A major challenge SMEs face is access to professional marketing and research services. Marketing is an essential aspect but overwhelming model for most enterprises to employ (Van Scheers 2012). Makhado (2015: 42) added that SMEs lack sustainable markets for their products or services. They tend to produce products and propose services that do not have a ready market.

Ansari (2013) investigated the marketing practices of SMEs. He noted that firms are not allocating and spending sufficient amounts of money on marketing as a percentage of total budgets when compared to well-known larger firms. He also argued that the problem of insufficient allocation and spending of funds in marketing activities by small enterprises was acute in developing countries. Neneh and Zyl (2013) studied managers and owners of SMEs, focusing on achieving optimum enterprise performance through enterprise strategies in South Africa. They concluded that marketing practices were the key agent for optimal business performance. Other marketing challenges facing South Africa SMEs are SMEs' poor location, the lack of or deficient marketing techniques, incapability to conduct marketing studies, misinterpretation of the market environment, inadequate products or services and misunderstanding customer trends and demands (Ngwenya 2012: 202). These also impact on the success of these SMEs.

Cant and Wiid (2013: 712) indicated that some of the marketing challenges facing SMEs in South Africa were related to the limited perception of the customers they serve and the potential for enterprise growth, as well as market division. Ogundeji, Akingbade, Saka, Elegunde, and Aliu (2013) argued that there are attitudinal problems on the part of the SMEs to the implementation of proper marketing. These problems have a direct or indirect impact on the marketing practices of SMEs. Jobling and Nanere (2011) argued that "managers in both marketing and non-marketing and senior management positions should gain an idea of marketing practices." Nkwe (2012: 39) also confirmed that small business owners need marketing skills training on how to use the marketing concept efficiently. SME South Africa (2015) noted that sales and inventory distributions are key challenges suffered by most SMEs in South Africa. These enterprises lack marketing-competitive skills or inventory distribution channels to sell their products and render services effectively.

Vedera and Kulshreshtha (2010), as cited by Marembo (2013: 41), stated that most SMEs do not have a clear marketing function, marketing plan and they have poor marketing skills. SMEs frequently have a small product-line and channels which increases the need for marketing. SMEs, both locally and worldwide, are trying to

access suitable markets (Marengo 2013: 41). The following section discusses the challenges of cash flow management among SMEs.

### **2.3.3.6 Cash flow management**

Cash flows are the engine of any business. However, there is evidence that SMEs do not manage their cash effectively (Abioro 2013: 177). The ability to handle cash is an essential component that distinguishes prosperous enterprises from unproductive businesses (Nordmeyer 2013).

Reuters (2011) emphasises that the lack of cash management in SMEs is the main reason for SMEs' failure. Shane's (2012) study reported that up to 50% of sampled SMEs were experiencing cash flow difficulties. Samson, Mary, Yemisi, and Erekpitan (2012) noted that there are no other financial management activities that are more significant than cash flow management because this ensures the liquidity of the enterprise and thus moderates insolvency threats. In Ghana, Mensah-Agyei (2012) reported that 57% of SMEs prepared cash budgets monthly, whilst 87% of the Ghanaian SMEs determined their cash flow balances based on the managers' or owners' perceptions. Mensah-Agyei (2012) concluded that cash flow management was an internal problem of SMEs that needed to be addressed

Sunday *et al.* (2012) reported that most SMEs do not have internal management systems implemented to oversee cash flows. Sunday *et al.* (2012) found that cash controls in Ugandan SMEs was poor. Okello, Okello, and Uwonda (2013) suggest that SMEs should engage competent strategies to design, implement, prepare and estimate cash flows. Wallace (2013) found in the United States that one in every two SMEs fail in the first four years of their existence and that the non-management of cash flows was the most common problem for SMEs' owners and managers. Wallace (2013) clarified that becoming acquainted and understanding cash flow theories would help SMEs to budget and forecast for any unforeseen possibilities.

Having discussed the cash flow management problems of SMEs, the following section discusses the accounting record-keeping problems of SMEs.

### **2.3.3.7 Accounting records**

Yahya and Susela (2011) reported that the main reason for SMEs to outsource accounting services is that they lack the essential resources and skills to carry out accounting tasks in the enterprise. If SMEs do not maintain appropriate accounting reports and records, the long-term sustainability of the enterprise is in question.

A study of 100 SMEs in Zimbabwe by Maseko and Manyani (2011: 179) indicated that 62% of SMEs are not keeping comprehensive financial reports due to poor knowledge on how to measure financial performance. Eighteen (18%) SMEs reported cost and time limitations as factors; whilst 12% reported the lack of guidelines or specific accounting regulations for SMEs (Maseko and Manyani 2011: 180).

Mbroh and Attom (2012) noted that SMEs in Ghana do not use accounting techniques at all. Reasons for this were the low levels of education and scarce knowledge in accounting that made it challenging for the SMEs to practice accounting in their enterprises. Similarly, Pietersen (2012: 36) found in Ghana that 79.9% of SMEs used manual financial record-keeping techniques because they lacked computers and appropriate accounting software to control their working capital.

Mungal and Garbharran (2014: 80) investigated the perceptions of South African SMEs in the Tongaat area on the application of cash management techniques. Of the SMEs sampled, 46.4% reported that they keep financial records and reports, and 44.9% reported that they did not keep any accounting records. Only 7.2% of the respondents reported that nobody in their respective enterprises handled the accounting reports and records. Mungal and Garbharran (2014: 80) thus found that the majority of SMEs did not keep proper financial records and reports in the enterprise.

Brijtal *et al.* (2014: 341) found that more than half of the South African SMEs examined, outsourced the accounting function, using professional accountants to fulfil the accounting activities. Furthermore, more than 60% of those SMEs still depended on external parties to help interpret and use the accounting information for decision making. The existence of external accountants is thus very important to SMEs since

some SMEs are too small to have skilled accounting staff. Maseko and Manyani (2011) point out that SMEs' record keeping "is the backbone of one's enterprise". Keeping of the correct accounting records essentially produces a cost-effective enterprise.

Dalberg (2012) noted that SMEs commonly lack indemnity and financial reports that are obligatory for the application of loans from corporate banks or other financial services. This has an effect on their capacity to acquire financial assistance. It is therefore recommended that SMEs keep detailed accounting records on an annual basis so they achieve the business's objectives and goals.

In a recent study by Madurapperuma *et al.* (2016: 191) who investigated accounting record keeping practices by SMEs in Sri Lanka. The respondents were requested to indicate which system they use to keep their accounting records and reports. The findings indicated that 73% of SMEs did not use IT for keeping their financial records. Furthermore, 44% of SMEs kept manual financial reports and records; and 29% did not keep financial reports and records at all (Madurapperuma *et al.* 2016: 191).

Zhou (2010) recommends the use of accounting software by owners or managers in SMEs, However, he comments that designers of accounting software have yet to provide medium-sized software for SMEs. It should be noted Sage or Pastel is quite suitable for SMEs and that there are a lot of free packages on the internet. Simple records could even be kept using Microsoft Excel. The following section discusses the regulatory environment of SMEs as a challenge for SMEs.

### **2.3.3.8 Regulatory environment**

Ojeka (2011) contended that "even if the SMEs are significant to the growth of any nation, some guidelines that are introduced by the governments in developing nations are in contradiction of the SMEs' expansion and progression". Ojeka (2011) identified tax policies as a barrier to the expansion of SMEs.

Abor and Quartey (2010: 224) also argued that regulatory limitations pose serious barriers to SME development. Likewise, SME South Africa (2012) and SPB (2013) reported that the major regulatory obstacles for SMEs are the rigour of labour laws,

Broad-Based Black Economic Empowerment and SARS inefficiencies. These barriers hamper the success of SMEs and SMEs do not have control over these barriers. GEM (2012: 53) mentioned that in most cases “government policies, financing and government programmes as the most constraining factors for business development in South Africa”.

On the other hand, Cant and Wiid (2013: 712) investigated the challenges affecting SMEs in South Africa. They found that the macro and micro environmental factors had an impact on the performance of South African SMEs. The majority of SMEs agreed that crime affected SMEs (93.2%) and government legislature played a role (81.1%). Furthermore, the respondents agreed that job losses (78.4%), inflation (77.4%) and the interest rate (75.8%) also affected SMEs. The above results suggest that not only government regulations impede the success of SMEs but so does crime. Macroeconomic variables such as inflation are also a challenge in South Africa to SMEs and to its customers. Cant and Wiid (2013: 712) state that inflation increases the cost of goods and reduces disposable income. Maswanganyi (2014) added that the rand in South Africa has depreciated by 5% to the United States dollar since the beginning of 2014.

The following section discusses how inadequate infrastructure affects SMEs.

### **2.3.3.9 Inadequate infrastructure**

Infrastructure is necessary for economic growth. South Africa’s long-standing national development plan may be compromised by poor infrastructure (South African Press Association (SAPA) 2013). This implies that SMEs may need major business strategies to minimise risks caused by external factors.

SME South Africa (2015) reported that “poor transport networks such as roads and rail, lack of electricity, high fuel prices and low internet penetration in rural towns are great impediments preventing the growth of SMEs in Kenya”. Kenyan SMEs also stated that it is difficult to find a reasonably priced and appropriate property to house the enterprises on establishment or expansion to new ventures (SME South Africa 2015).

The next section discusses how the internal and external environment presents a challenge to SMEs.

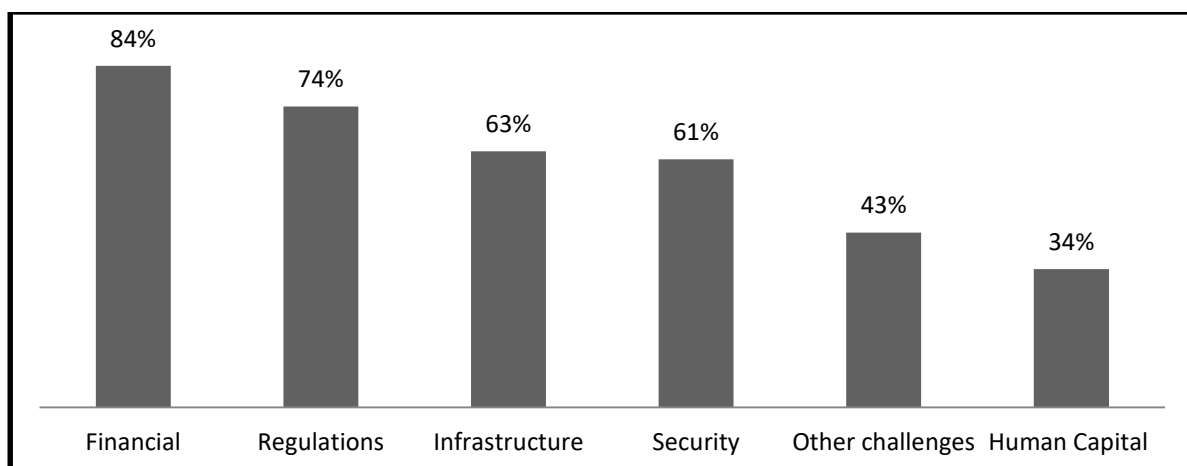
### 2.3.3.10 Internal and external environments

The internal business environment challenges include but are not limited to the following management capabilities and skills, limited commercial knowledge, the lack of enterprise management training and education, and technology skills. On the other hand, in Nigeria Okwu, Bakare and Obiwuru (2013) in his study confirmed that SMEs encounter numerous external and internal environmental challenges. The authors further noted that challenges such as political issues, economic issues, and social technology issues are hindering SMEs external environment. This implies that government interventions on SMEs do not have an impact on reducing the political and economic challenges. Notwithstanding that the SMEs have no control over the external environment challenges.

In respect of Indian SMEs, Zaidi (2013) found that that Indian SMEs are most hindered by the government regulations amongst other external environmental factors. Most SMEs are unsuccessful within their first five years of operations as a result of the internal and external environment challenges (Agwu and Emeti 2014: 102).

Figure 2.1 summarises the internal and external environmental challenges that affect SMEs in Kenya.

**Figure 2.1: The challenges affecting SMEs in Kenya**



Source: Adapted from Karanja *et al.* (2012: 11).

Figure 2.1 above shows that financial challenges at 84% were highest, followed by regulatory challenges at 74%, and infrastructure at 63%. Other challenges (leadership, appropriate support services, and professional networking) which affected the SMEs were at 43%. Human capital challenges (34%) were the lowest challenge that affected SMEs in Kenya (Karanja *et al.* 2012: 11). Even though this study was published in 2012, a recent literature still shows that the financial factor is the most important one that affects the survival and success of SMEs in general (Twango 2012, Cant *et al.* 2014). Next, a summary of the challenges affecting the survival or success of SMEs.

### 2.3.3.11 Summary of the challenges affecting the survival or success of SMEs

Table 2.5 summarises the major challenges that affect the survival or success of SMEs that have been identified in the preceding sections in the first column, followed by the specific challenges in the central column. The various sources are indicated in the last column.

<b>Major challenges</b>	<b>Specific challenges</b>	<b>Authors</b>
Capital and access to finance	The lack of financial resources Collateral requirements Lending requirements Loan processes High risks profile of SMEs	Tangwo (2012), Sharma and Gounder (2012), Cant <i>et al.</i> (2014), Karanja <i>et al.</i> (2012) and Van Aardt and Fatoki (2012).
Education and accounting skills	Reading financial language Low education levels Lack of management training Low level of accounting skills The lack of awareness of trainings provided by government agencies	Abdel <i>et al.</i> (2010), DTI (2011), Chimucheka 2012, Amoako (2013) and Sitharam (2014).
Business management	Managerial deficiencies The lack of well-organised vision Poor business management practices Resource planning	Dumbu and Chadamoyo (2012), Pillai (2010), Ghosh and Roy (2011), Chinomona (2013) and Digital4Africa (2015).
IT and computer systems	Proper technologies The lack of budget to implement The lack of cost-effective technologies	Singh <i>et al.</i> (2010), Madurapperuma <i>et al.</i> (2016) and Tabot (2015).

	The lack of IT personnel's Not using computers	
Marketing	Access to professional marketing Poor marketing skills Insufficient marketing budgets Limited understanding of the markets	Makhado (2015); Ansari (2013); Cant and Wiid (2013) and SME South Africa (2015).
Cash flow management	Cash management The lack of internal control systems The lack of understanding of cash flow concepts	Pietersen (2012:22); Tabot (2015); Mensah-Agyei (2012) and Sunday <i>et al.</i> 2012).
Accounting records	The lack of knowledge The lack of accounting software Cost and time constraints The lack of specific guidelines The lack of accounting personnel	Maseko and Manyani (2011); Pietersen (2012:17); Yahya and Susela (2011); Mungal and Garbharran (2014) and Brijital <i>et al.</i> (2014).
Regulatory environment	The inefficiencies with the SARS Labour laws B-BEEE requirements and policies Government policies Inflation Interest rates	Abor and Quartey (2010); Ojeka (2011) SME South Africa (2012); Karanja <i>et al.</i> (2012); and Maswanganyi (2014).
Inadequate infrastructure	Inadequate levels of infrastructure High costs of renting Difficult to find affordable and suitable properties	Ihua (2009); South African Press Association (2013); Karanja <i>et al.</i> (2012); and SME South Africa (2015).
Internal and external environments	Politics Economic Social technologic Business environment Crime and corruption	Okwu <i>et al.</i> (2013) and Zaidi (2013).

The above selected literature affirms that SMEs are faced with various factors that affect their success or survival. The studies reviewed emphasise the numerous factors facing SMEs in a globalised environment, from low productivity, lack of management capabilities, access to credit, the problem of technology, and regulatory burdens (Lucky and Oluswgun 2012).

The lack of capital and access to finance is seen as a major challenge to the expansion and success of SMEs (Gangata and Matavire (2013), followed by the education and training of the owners or managers and, lastly, the lack of business management skills (Shaku 2011: 181, Chimucheka 2012: 6). While the importance of education and accounting skills is recognised, a large percentage of SMEs owners or managers do not have these skills. Some of the other problems that were discussed included the lack of IT skills, the lack of computers for accounting record keeping, internal and external environment problems and lastly, inadequate infrastructure.

For these SMEs to succeed, they need to have wide-ranging MAPs implemented. Of importance are the MAPs related to strategy and decision-making, as well as management accounting information that relates to costing systems, budgeting systems, and PMTs.

The following section reviews studies on the extent of use of MAPs by SMEs.

## **2.4 The use of MAPs by SMEs**

Not much research has been conducted in South Africa on the extent that SMEs use budgeting systems, PMTs and costing systems (Nandan 2010). Most of the literature has been focused on the use of MAPs by larger enterprises with considerably less attention given to the use of MAPs by SMEs (Armitage, Webb and Glynn 2016: 40). Lavia Lopez and Hiebl (2014: 1) indicate that the use of MAPs in the Northern American SMEs is low and different from larger firms. Furthermore, Lavia Lopez and Hiebl (2014: 5) observe that SMEs do not use MAPs for decision-making but to provide cost information to external parties, such as banks and financial service providers.

Research on the extent of use of specific MAPs by SMEs tends to concentrate on the current trends of MAPs (Ahmad 2012: 245). The gap is broader in the case of SMEs in developing countries where SME owners or managers have little or no management accounting knowledge at all to manage the enterprise. This may inhibit the monetary performance and success of enterprises and subsequent inaccurate decisions, errors in information, and the use of old-fashioned cost drivers (CIMA 2011).

Despite the limited research studies in MAPs, the contribution made by studies in this research field has drawn the interest of academics to investigate MAPs in the SMEs sector, mostly, in developing countries (Ahmad 2012; Mbumbo 2015). The literature reviewed on the extent of use of MAPs share common characteristics which are as follows: SMEs have adopted the use of MAPs, the budgeting systems are the highest used MAPs, SMEs are facing challenges in using MAPs and SMEs that use MAPs have an improved enterprise performance. Furthermore, the distinctiveness of the studies investigated in the current study's literature is that the adoption of the extent use of MAPs differs by the SMEs industry and enterprise operations (Yeshmin and Fowzia 2010; Ahmad 2012; Charafa and Rahmounib (2014; Maduekwe 2015; Tabot 2015). In support of the above, a study conducted 39 years ago that used the contingency theory to investigate the use of MAPs; the author, Otley (1980) noted that there are no common MAPs that are applicable to every enterprise. Individually SMEs used MAPs based on their industry operations. The aforementioned suggest that diffusion of MAPs exist within different nations but may differ across countries and industries; thus suggesting that the results may not be generalisable. These studies are further discussed below.

A Bangladesh study of MAPs by Yeshmin and Fowzia (2010) investigated the use of MAPs in controlling management functions of the firm. The study investigated 151 firms in the manufacturing and service sectors. The authors identified 14 MAPs that were use namely cash flow analysis, budget analysis, financial report analysis, variance analysis, cost volume profit, the funds flow statement, target costing, responsibility accounting, variable costing, and activity based costing (ABC), balanced scorecard and the theory of constraints. Furthermore, the study found that MAPs are often used in the manufacturing sector (73%) in comparison to the service sector (54%). Yeshmin and Fowzia (2010) concluded that the majority of Bangladesh firms favoured quantitative practices, such as budget analysis, cash flow analysis, financial and non-financial report analysis, variance report analysis and cost volume profit analysis.

Charafa and Rahmounib (2014) considered whether Moroccan SMEs were satisfied with ABC. Their results suggested that the ABC users were more effective and more

satisfied with their costing systems, nevertheless, they did not completely benefit from the advantages of ABC. This study by Charafa and Rahmounib (2014) explains how SMEs can use the ABC system to enhance resource allocation and for decision-making.

Ilias, Abd Razek, and Yasoa (2010) observed the adoption of MAPs by Malaysian SMEs in several industries using survey research. Ilias *et al.* (2010) found that the majority (67%) of the 58 SMEs sampled used budgets for planning and control objectives whilst relatively few (12%) used advanced MAPs such as economic value added metrics. Ilias *et al.* noted that the budget was the most used MAP since it is very important to business management. Likewise, Ahmad (2012: 3) investigated the use of MAPs in 160 Malaysian manufacturing SMEs. He reported that the majority of the SMEs used the five MAPs investigated (the costing system, the budgeting system, the performance evaluation system, the decision support system and the SMA) with the performance evaluation system being used more highly than the decision support system and the SMA.

In a study conducted in 46 manufacturing companies in Kenya by Gichaaga (2013: 52), he reported that “information for decision-making practices is the most highly used MAP, followed by strategic analysis, budgeting, performance evaluation, and lastly costing”. He also stated that the most used MAPs among the manufacturing enterprises are the management accounting functions that identify the main aspects that impact performance and risky areas (Gichaaga 2013: 52). In contrast, Ng, Harrison and Akroyd (2013: 94) argue that it is doubtful that the MAPs used by Kenyan SMEs are assisting owners and managers in the management of these SMEs.

Abdelal and McLellan (2011) investigated the effect of performance of SMEs in Egypt in using MAPs. The authors used questionnaires and interviews with the senior financial managers in Egyptian manufacturing SMEs. Furthermore, Abdelal and McLellan (2011) concluded by stating that the Egyptian SMEs believed more to traditional MAPs which were thought to be suitable in an unstable economy. However, the benefits of advanced MAPs have been slightly recognised by managers of Egyptian manufacturing SMEs (Abdelal and McLellan 2011). A Pakistan SME study

by Maqbool-ur-Rehman (2011) explored the effect of the extent of use of MAPs on the enterprise's profitability using a questionnaire. Maqbool-ur-Rehman (2011) reported that under market competition, traditional MAPs are more often used as compared to contemporary (or advanced) MAPs. For example, Pakistan SMEs favoured capital budgeting tools, mainly the payback period and return on sales, for decision-making and also to assess performance by the divisions of the enterprise. These MAPs were found to be essential for the financial management of Pakistani firms.

Similar to Maqbool-ur-Rehman (2011), Uyar (2010: 113) noted that manufacturing companies in Turkey still observe traditional management accounting tools as being significant, with newly developed MAPs such as strategic planning and transfer pricing being seen as less significant. The study also found that the most significant three MAPs are budgeting, planning and control and cost volume profit analysis (Uyar 2010). Yalcin (2012) used a questionnaire to examine the use of MAPs in Turkish manufacturing enterprises, and additionally compared the implementation rates of MAPs with his previous studies in Greece, Finland, India, Japan, and Australia. Yalcin (2012) noted that traditional MAPs, mainly traditional budgeting and costing systems, had greater implementation rates than modern MAPs such as ABC, life cycle costing and target costing. However, he notes that the implementation rates of both traditional and modern MAPs in Turkey were greater compared to his previous studies.

Mbumbo (2015: 1) investigated the management accounting skills of the decision-makers of small, medium and micro-sized tourism enterprises (SMMTEs) in the Western Cape Province in South Africa. Data was accumulated by means of 38 survey questionnaires distributed to SMMTEs. The SMMTEs were asked to rate their capability to use management accounting skills and put them into practice for decision-making purposes using a rating scale of "very poor" to "very good", and "I don't know". Mbumbo's (2015) findings are summarised in Table 2.6 below.

<b>Management accounting skills uses</b>	<b>% stated poor per the rating scale</b>	<b>% stated good per the rating scale</b>
Operations budget	40.5 %	59.5%
Cash budget	26.3%	73.7%
Capital budget	23.7%	76.3%
Product costing pricing	21.1%	78.9%
Cost behaviour and cost allocation	37.8%	62.2%
ABC	36.1%	63.9%
Calculation of profit and loss	16.2%	83.8%
Cost volume profit	29.4%	70.6%
Product life cycle	51.6%	48.4%
Standard costing	45.95	54.1%
Job costing	38.2%	61.8%
Just in time	33.3%	66.75
Variance analysis	39.4%	60.6%
Source: adapted from Mbumbo (2015: 70)		

Mbumbo's (2015) results imply that SMMTEs are well aware of their management accounting skills since the majority of SMMTEs indicated "the good use" of management accounting skills by the decision-makers. Maduekwe (2015) used a questionnaire survey of SMEs in the Western Cape, Cape Metropole, to determine the types of management accounting tools used by SMEs, the purpose for which management accounting tools are used by SMEs, the perceptions of SMEs regarding the effectiveness of these tools and possible issues that could prevent SMEs from using the management accounting tools. Maduekwe (2015) was motivated by a lack of research on the use of management accounting tools by SMEs. He found that most of the sampled SMEs were using the three management accounting techniques investigated, namely budgeting tools, PMTs and pricing tools. The findings by Maduekwe (2015) are consistent with prior research (Ilias *et al.* 2010; Ahmad 2012; Gichaaga 2013), thus it can be concluded that SMEs are still using traditional MAPs rather than more advanced MAPs.

In another Cape Metropole study, Tabot (2015: 63) investigated the working capital practices of SMEs. Convenience sampling was used to distribute 200 questionnaires by approaching fast-moving consumer goods SMEs located in the central business

district. The SMEs were requested to specify by way of a 'yes' or 'no' question on whether the enterprise prepared cash budgets. The findings showed that 60.5% of SMEs prepared cash budgets while 39.5% did not (Tabot 2015: 63).

This current study has similarities with Ahmad (2012) and Maduekwe (2015) in that both studies were carried out in developing countries, South Africa and Malaysia, and they both investigated MAPs and the factors that affect the usage of MAPs by SMEs in developing countries. However, these studies were not conducted in KwaZulu-Natal, nor did they focus on clothing manufacturing SMEs. This study attempts to fill this gap in the literature by assessing clothing manufacturing SMEs in Newcastle, KwaZulu-Natal, as to their awareness and usage of MAPs.

In summary, the literature indicates that in most of the developing countries discussed, most SMEs are still using traditional MAPs, although there are some firms which employ advanced MAPs. The literature also reveals that there is not much adoption of both traditional and advanced MAPs. The extent of use of the specific MAPs is discussed in the following section.

## **2.5 The extent of use of specific MAPs by SMEs**

The preceding section provided an overview of use of MAPs. Janqueria (2010) argued that the use of both advanced and traditional MAPs, work together to direct managers to various aspects of the organisation. Janqueria (2010) suggested that advanced MAPs should be used not to replace but rather to complement traditional MAPs. Several studies (Abdelal and McLellan 2011; Yalcin 2012; Aksarany 2012; Ahmad 2012; Charafa and Rahmounib 2014) examined the adoption or use of MAPs (traditional and advanced) and compared the benefits derived from both MAPs. The conclusions drawn from these studies were largely similar in establishing that traditional MAPs are more commonly implemented than the more recently developed MAPs (Janqueira 2010). Aksarany (2012) also examined the introduction of the modern MAPs in Australia over a period of four years, and concluded that traditional MAPs were widely implemented.

Bogale (2013: 10) investigated the usage of new developed management accounting tools in manufacturing SMEs in Ethiopia. He found that ABC tools, target costing, life cycle costing and just in time were the most used advanced MAPs among 43 manufacturing SMEs. Bogale (2013: 11) affirmed that new developed tools are designed to support production systems and to strive for competitive improvement to meet the challenges of worldwide competition. Furthermore, ABC tools and target costing had the highest rate of implementation, followed by life cycle costing and just in time. These results suggest that there has been an increasing level of awareness among manufacturing SMEs for newly developed management accounting tools. The rate of traditional management accounting tools usage has also increased compared to those in the past (Khurram, Sohail, Muhammad and Zahid 2014: 104). The results of Bogale (2013: 14) indicate that the emphasis on the traditional management accounting tools remains equally important.

Tabitha and Ogungbade's (2016) objective were to investigate the cost accounting tools that are used by manufacturing and service SMEs. The traditional accounting tools of standard costing, absorption costing, and marginal costing were investigated for their lack of appropriateness to make available costing information in the modern market environment that is characterised by sophisticated technology. Nevertheless, despite the criticisms, the empirical evidence shows that traditional MAPs are still being practiced in these industries (Tabitha and Ogungbade 2016).

The next section reviews the specific MAPs assessed in this study.

### **2.5.1 Management accounting practices (MAPs)**

MAPs comprise but are not restricted to the following: costing systems, budgeting systems, PMTs, decision support systems and SMA. These tools provide a foundation for providing appropriate information to observe whether management accounting tools can offer sustainable information for decision-making and how these impact on the financial performance of an enterprise (Matambele 2014: 71). The following sections discuss the MAPs that were selected for this study.

### **2.5.1.1 Costing systems**

Costing systems can be defined as a framework that is used by enterprises to assess the cost of the products or services for their profitability analysis, inventory valuation and cost control. Costing systems include absorption costing, ABC, traditional costing systems and variable costing (Obaidullah 2013).

These systems are intended to scrutinise the costs incurred by the enterprise in order to aggregate and report to management about profits (Bragg 2018). The areas reported upon can be any part of the enterprise, including: customers; departments; products and services and sales regions (Bragg 2018). Berger (2011) asserts that an important part of costing systems is variance analysis that illustrates the difference between the projected and actual cost.

### **2.5.1.2 Budgeting systems**

A budget is a quantifiable expression of a strategy for a well-defined period of time that matches inputs (e.g. staff, premises, equipment costs) to planned output and objectives (Mohd-Noor and Othman 2012; Anohene 2011: 24; Abeywardhana 2017). A budget achieves a definite objective as it expresses the strategic and operating plans of business units, organisation, activities or events in measurable terms. It also enables management to monitor and control operations by setting the standards expected and addressing any deviations from the set standards (Olatunji 2013: 1131). In addition, the budget is useful in promoting forward thinking by managers, and communicating an entity's goals to its employees (Voigt 2010).

Shim, Siegel and Shim (2011) state that budgeting is a forecasting and control system practice as it informs all the associates of the enterprise on what is anticipated from them. The capacity to control cash flows is an essential component that distinguishes successful enterprises from unsuccessful enterprises (Nordmeyer 2013). The significance of cash budgets is to recognise and focus the cash flows of an enterprise so that it can make required changes to cancel out a deficit, if necessary. Badu (2011: 17) emphasised that the categories of budgeting systems used by any enterprise depend on the nature of the business.

### **2.5.1.3 Performance measurement tools (PMTs)**

Performance measurement has been extensively defined. The following description is used to describe the model in relation to management accounting (CIMA 2008: 3): “the process of assessing the proficiency with which a reporting entity succeeds, by the economic acquisition of resources and their efficient and effective deployment of resources, in achieving its objectives”.

Performance measurement tools uses non-financial information and financial information of the enterprise (CIMA 2005). Financial measurement is about determining trends inside the enterprise by making use of financial information (Bruwer 2010: 18). Trevett (2014) considers that setting PMTs in place could provide relevant information in regard to what is taking place currently; it also delivers the starting point for a system of goal setting that will provide support in executing policies for SME development. Burney and Swanson (2010) argue that enterprises ought to therefore develop PMTs to evaluate their performance and to line up management actions with the enterprise’s mission and objectives.

Langfield-Smith, Thorne, and Hilton (2012: 644) define non-financial measures as measures that highlight the strategy, motivate financial performance, are more feasible, are timelier, and lastly are more reasonable and easier to relate to. Performance measurement may be critical to the success of any enterprise and should therefore be controlled effectively (Langfield-Smith *et al.* 2012: 643).

Performance measurement has been increasingly recognised as a vital tool to ensure that SMEs are capable of measuring their activities. Jamil and Mohamed (2011: 201), in explaining the importance of PMTs, noted that PMTs can identify weaknesses, simplify objectives and strategies, and improve performance processes. Jamil and Mohamed (2011: 12) further state that although theories on performance measurement have been created for larger-sized enterprises over the past years, insufficient theories on performance measurement have been tailored for SMEs.

#### **2.5.1.4 Decision support systems**

A decision support system is defined by Chen (2017) as a computerised information system used to support decision-making in an enterprise. These systems allow users to read through and analyse data to compile information that can be used to solve enterprise problems and make better decisions (Harris 2012; Chen 2017). These systems utilise complicated mathematical theories to permit managers to carry out difficult “What-if” analyses (CIMA 2013: 115).

Decision support systems offer enterprises’ owners or managers with appropriate information to support once-off decision making (Rouse 2010). Kompas (2010: 94) states that the enterprise culture has become more documented since decision support systems profile decision-making and actions in an enterprise. Nowduri (2010: 2) argued that a decent information system is required if suitable decisions are to be made since decisions are grounded on available information. Management accounting can generate information that can be used as a reliable foundation for decision-making processes.

#### **2.5.1.5 Strategic management accounting (SMA)**

Bromwich (1990: 28) provided a description that limits SMA to financial information that is “the provision and analysis of financial information on the enterprise’s product markets and competitors’ costs and cost structures and the monitoring of the enterprise’s strategies and those of its competitors in these markets over a number of periods”. SMA is the merging of enterprise objectives with management accounting in making enterprise decisions (Small Business 2016).

SMA is based on the belief that an enterprise should constantly oversee the internal and external measures and trends so that timely changes can be achieved as required in the enterprise (Maroofi 2011). Fowzia (2011: 62) noted that even though Bangladeshi manufacturing enterprises still use traditional MAPs and/or cost accounting tools, the significance of SMA in measuring multidimensional aspects of performance is quickly increasing.

From the above discussion, MAPs are seen to be vital for effective business running and decision-making. The following section discusses the extent of use of MAPs by SMEs in different countries.

## **2.5.2 The extent of use of MAPs by SMEs in the different countries**

The objective of this section is to discuss the extent of use of MAPs by SMEs in different countries.

### **2.5.2.1 Costing systems**

Research in developed and developing countries has investigated the use of costing systems by SMEs. Brierley (2011) assesses the product costing tools of SMEs and larger-sized enterprises in Britain. Not unpredictably, Brierley (2011) found that larger-sized enterprises are more likely to use more complex techniques such as using numerous departmental rates for allocating overhead costs to cost products or using ABC.

A study of MAPs in manufacturing SMEs in Barbados, West Indies by Alleyne and Weekes-Marshall (2011: 58) found that costing systems were frequently used. The most popular costing system used was the separation of variable costs, incremental costs and fixed costs with 100% usage, followed by overhead rates at 67%. The least used costing systems were ABC, and target costing, both below 33% (Alleyne and Weekes-Marshall 2011: 58).

A survey study by Armitage *et al.* (2016: 17) of 22 Canadian and Australian manufacturing SMEs, found the usage of costing systems was very low with only job order costing at 72%. The results further showed that standard costing, variable costing, target costing, and quality costing were least used at a below 30% usage. Moreover, ABC was not used in both Canada and Australia. Tools less likely used for costing systems, were standard costing, variable costing, and quality costing which were all used significantly less by non-manufacturing enterprises.

In a questionnaire survey in Turkey by Uyar (2010: 114), the SMEs were asked to specify the methods they implemented in product costing. According to the responses,

the most widely used costing methods were job costing (31 firms), followed by ABC (19 firms), and process costing (7 firms). Uyar (2010: 114) further states that the use of job costing by Turkey textile manufacturing SMEs is very significant. A recent survey in Turkey by Akmese and Bayrakci (2016:14) investigated the use of management accounting tools and techniques in fast-food operations in the City of Konya. Thirty-seven fast-food operations' business managers participated in the study and indicated that they use management accounting tools. The fast-food operations' managers indicated that they adopted "incremental cost" systems (59%), and the least adapted costing systems were variable cost systems cited by only 37% of the respondents. The majority (81%) of firms cited the importance of use of the cost of quality systems. The above-mentioned study results imply that businesses use the costing systems regardless of the nature of the business.

In a study of 400 Croatian large-sized companies, Ramijak and Rogoslic (2011) observed that the usage of ABC, quality costing, target costing, and balanced scorecard was 40%, 39.4%, 25.8%, and 15.2% respectively. Gichaaga (2013: 49) in Kenya asked respondents to specify the extent to which they agreed with statements regarding the usage of costing MAPs in the enterprise, using a five-point Likert scale ranging from 1 (never) to 5 (very often). The study found an overall mean of 4.06, indicating a high use of costing systems. In comparison to other studies in other countries (Alleyne and Weekes-Marshall 2011; Armitage *et al.* 2016), the Kenyan SMEs had a higher usage of costing systems. Gichaaga's (2013: 49) study indicated that 86.2% used the cost of quality, 85.2% used overhead rates, 84% used separation of costs, 82% used the manufacturing overhead rates, 80.4% used ABC, and lastly 79.8% of the enterprises sampled used target costs. In this study by Gichaaga (2013), the usage of ABC was high in contrast to other studies which have indicated a low usage of ABC.

In a Malaysian survey, Ahmad (2012: 174) found that 83% of SMEs used costing systems, although medium-sized enterprises had a significantly higher usage (86%) than their smaller counterparts (76%). This indicates that regardless of the size of the enterprise, costing systems are important MAPs to use. In South Africa, Maduekwe (2015: 78) found that pricing tools such as cost-plus pricing; market-oriented pricing;

target pricing and discriminatory pricing are frequently used by enterprises who reported usages ranging between 58% - 86%. Enterprises reported a low usage of the following practices: demand-based pricing; loss leader pricing; marginal-cost pricing; pay as you want to pricing; premium pricing; predatory pricing; gut feeling-based pricing and time-based pricing, with usages ranging between 11% and 44%. The above results indicate that traditional MAPs are still in use by SMEs as compared to advanced MAPs.

Similarly, Mbumbo (2015: 70) found that in South African SMMTEs product costing was used by 30 (78.9%) out of 38 SMMTEs sampled, followed by job order costing at 61.8% and lastly standard costing at 54.1%. Mbumbo (2015: 70) concluded that the traditional costing systems are still used by SMMTEs.

The next section discusses budgeting systems.

### **2.5.2.2 Budgeting systems**

Alleyne and Weekes-Marshall (2011: 58) found that budgeting systems were highly used by SMEs with “budgeting for planning, budgeting for controlling and budgeting for strategic analysis” used by all SMEs, followed by zero-based budgeting at 67% and a flexible budget at 33%. This implies that the enterprises sampled were aware of these budgeting systems as the respondents indicated an overall usage of 100% for a number of these systems.

Armitage *et al.* (2016: 50), in Canadian and Australian manufacturing SMEs, found usage of operating budgets by respondents, which included the master, quarterly and rolling budgets. Operating budgets were perceived to be important by 95% of the 22 sampled manufacturing SMEs. In contrast, both flexible budgets and capital budgets were used by very few of the respondents. The level of usage of capital budgets was very low as only 18% of the SMEs used it. Respondents reported that they were more likely to focus on the cash element of the operating budget (Armitage *et al.* 2016: 50). Armitage *et al.* (2016: 51) further found that the flexible budget was the least used MAP with 20 enterprises out of 22 indicated that they did not use it.

Gichaaga (2013: 38) found that 90.8% of the Kenyan SMEs in his sample often used budgeting for strategic planning, 87.4% frequently used zero-based budgeting, 85.2% often used budgeting for controlling costs, 84.0% frequently used flexible budgeting, and 82.8% of the enterprise often used budgeting for “what if analysis”. From the overall MAPs, budgeting was rated as the most highly used MAPs by Kenyan SMEs. Afore-mentioned findings by Gichaaga’s (2013) study uncovered that budgeting systems are often used by small companies; this may imply that the Kenyan SMEs do employ skilled accounting staff to develop the MAPs.

Gichaaga’s (2013) study indicated a highest usage of MAPs comparing to other studies discussed above; his results are drawn from manufacturing companies operating in Kenya. Not surprisingly, in comparison to other countries (Alleyne and Weekes-Marshall 2011; Armitage *et al.* 2016), the Kenyan SMEs had a higher usage of costing systems. This suggest that most SMEs in Kenya have adopted the extent of use in Kenya. These results are drawn from SMEs operating in Kenya. The current study aimed at contributing to the body of literature by assessing the extent of use of MAPs by SMEs in Newcastle, South Africa.

Ahmad (2012: 178) investigated the use of budgets alongside other MAPs in Malaysia. The study showed that 76% of SMEs used a budgeting system, even though medium-sized enterprises had considerably greater usage (81%) than their smaller-sized counterparts (64%). Amongst the numerous types of budgets used, the sales budget was the most popular as it was used by 71% of enterprises, followed by cash flow budgets at 70%, and lastly the financial position budgets and production budgets at 71% and 70% respectively (Ahmad 2012: 178). With regard to other budgeting systems, the study found that flexible budgeting was the most common system as it was used by 63% of the sampled enterprises, followed by incremental budgeting at 59%, and then continuous budgeting at 58%. Ahmad’s (2012: 178) study also shows that there is an understanding of budgeting systems by SMEs.

In South Africa, Maduekwe (2015: 82) found that 79.35% of the sampled SMEs indicated that the businesses used a budget, while 20.65% indicated that the businesses did not use any budget. Looking at the types of budgeting used by these

SMEs, sales budgets were highly used at 83.57%, followed by purchases budgets at 82.19%, cash budgets at 82.19%, and inventory budgets at 67.13%. However, the least used budgets were capital budgets, flexible budgets, incremental budgets, zero-based budgets and marketing budgets with lower than 60% usages by Cape Metropole SMEs (Maduekwe 2015: 84). These findings imply that SMEs in South Africa are well aware of the budgeting systems as 79.35% of the sampled SMEs adopted these MAPs. Similarly, Mbumbo (2015: 70) found that budgeting systems were widely employed by SMEs. Mbumbo's (2015) results showed that 76.3% of the respondents found the capital budget good for decision making, followed by the cash budget with 73.7% of the respondents finding it good. Lastly, the operations budget was least employed with around 59.9% of the respondents indicating that they employed the operations budget. Mbumbo (2015: 70) confirmed that SMMTEs in the Western Cape Province often used management accounting skills.

Among the 37 Turkish fast-food operations that participated in the study by Akmese and Bayrakci (2016: 15), 57% of fast-food operations have used the budgeting system "for planning". This system was also considered to be "important" by 78% of Turkey fast-food operations, and "moderately important" by 18% of the respondents. In the Akmese and Bayrakci (2016: 15) study, another budgeting system that was used was the "budgeting for controlling costs"; with 32% of SMEs indicated that they used it "often" and 13% indicated that they used it "very often". While 81% of fast-food operations' managers also indicated that the "budgeting for controlling" is a very important tool to use. In terms of budgeting practices, it is possible that the SMEs still use the traditional MAPs.

The above discussion has shown that the majority of SMEs use budgeting systems as a management accounting tool. Having reviewed budgeting systems, the next section covers the use of PMTs by SMEs.

### **2.5.2.3 Performance measurement tools (PMTs)**

Despite considerable interest in MAPs in manufacturing SMEs (Gichaaga 2013: 4), there is little research on the development of performance measurements of SMEs. Alleyne and Weekes-Marshall (2011: 58) found that all their respondents used

financial measures. All their respondents also reported that they used non-financial measures associated with customers and related to operations and innovation, and about 67% of respondents reported they used benchmarks. However, Alleyne and Weekes-Marshall (2011: 58) reported a low usage of non-financial measures associated with employees and economic value added, both around 33%. The Canadian and Australian study of Armitage *et al.* (2016) revealed that none of the sampled manufacturing enterprises reported using basic financial measures, customer, internal process and education and growth categories for measuring performance. However, nearly all the respondents indicated the use of a mix of financial and non-financial metrics that they commonly described as key indicators or critical performance measures (Armitage *et al.* 2016: 58).

In Kenya, Gichaaga (2013: 51) found that 88.0% of companies often used non-financial measures related to customers, 87.0% used non-financial measures associated to operations and innovation, and 86.0% used those related to employees. With regard to financial measures, only 85% of companies often used financial measures (Gichaaga 2013: 51). Within the PMTs context of the fast-food operations' businesses in the Akmesse and Bayrakci (2016: 16) study, they indicated that they have applied the "financial measures" practices with a percentage of 27% "very often" and 40% "often". The fast-food operations' managers indicated that this practice is important with regard to businesses with a 70% rate. The fast-food operations' managers also indicated that they applied "non-financial measures related to customers" practices to be important (62 %) and to have used it sometimes (32%). Finally, the fast-food operations considered the "benchmarks" practice important (59%), and have used them sometimes (40%). The survey results showed that the businesses have used both traditional and modern MAPs. These results show that most of the fast-food operations' in the sample are working towards the usage of modern MAPs in order to prepare themselves for the changing environment (Akmesse and Bayrakci 2016: 16).

In Malaysia, Ahmad (2012: 184) indicated that the majority of 160 SMEs sampled reported the use of performance evaluation measures to measure the firm's performance. The extent of use of a collection of performance measures differs from

a minimum of 61% usage up to 79%. The survey reported that the medium-sized businesses have a greater use of these measures as compared to smaller-sized businesses. Amongst the 13 performance measures investigated by Ahmad (2012), operating income, sales growth and on time delivery were the most widely used performance measures with approximately 80% usage. The least used performance measure was the number of warranty claims, indicated by 35% of the total SMEs sampled. This low figure is because some SMEs do not offer warranties to their customers (Ahmad 2012: 184). The manufacturing lead time and the defect rate were moderately used with 50% of the SMEs claiming frequent or very frequent use.

In South Africa, Maduekwe (2015: 86) found that 82.61% of the respondents used PMTs and 17.39% indicated that the businesses do not use these tools. These results are consistent with those of Ahmad (2012). A summary of the results of Maduekwe (2015) on various types of PMTs is shown in Table 2.7.

<b>Table 2.7: Summary of PMTs used by Cape Metropole, South Africa SMEs</b>	
<b>Financial Measures</b>	<b>Percentage that used the PMTs (N=76)</b>
Sales growth	85.14%
Cash flows	85.13%
Operating income	79.73%
Return on investment	52.70%
<b>Non-Financial Measures</b>	<b>Percentage that used the PMTs (N=76)</b>
Response time to customers	71.05%
Survey of customers' satisfaction	69.74%
Number of customers' complaints	59.21%
Employee turnover	57.89%
Job satisfaction survey	48.68%
Growth in market share	47.37%
Defect rate (returned products)	39.47%
Source: Adapted from Maduekwe (2015: 88).	

Table 2.7 indicates the usage of PMTs by Cape Metropole SMEs in percentages. The financial measures most used are the sales growth (85.14%), followed by cash flows (85.13%) and operating income (79.73%). Return on investment was least used with a reported 52.70% usage. The non-financial measures have a low usage when compared to financial measures. The most popular non-financial measure is response

time to customers (71.05%), followed by a survey of customers' satisfaction (69.74%), number of customers' complaints (59.21%), and employee turnover (57.89%). The least used non-financial measures are job satisfaction survey (48.68%), growth in market share (47.37%), and defect rate (returned products) (39.47%).

Mbumbo's (2015: 70) study indicated that the most employed PMTs were the cost volume profit at 70.6%, followed by variance analysis at 60.6%. However, the product life cycle was least employed with around 48.4% of the respondents indicating that they used it. Even though the literature (Ahmad 2012; Mbumbo 2015) indicates that many SMEs in different countries already have PMTs in place, there are still significant factors that affect the implementation of these systems in the SME context. Hashim (2011) noted that "the criteria to measure performance may vary from enterprise to enterprise, sector to sector and nation to nation". Armitage *et al.* (2016) comment that it is clear that enterprises use dissimilar methods due to complex variations that impact on the way they operate. PMTs can be viewed as a critical tool for measuring the financial performance.

The above studies imply that the SMEs are aware of the various PMTs which may be used for the business performance evaluations. Having reviewed PMTs, the following section discusses the use of strategic management accounting.

#### **2.5.2.4 Strategic management accounting (SMA)**

In prior years, several authors have stated that SMA practices have not been adopted widely by practitioners (Nixon and Burns 2012). Falling very neatly with the unclear definition of SMA and the missing link of SMA to the strategic process, a relatively new development in the accounting and strategy literature has occurred with the concept called strategy-as-practice. This concept tackles the practices through which 'strategising' occurs, of which SMA literature has paid insufficient attention (Cuganesana, Dunford and Palmer 2012) and is related to the study of the integration of SMA in the strategic management process that has been called for in the literature (Nixon and Burns 2012).

Ahmad (2012: 191) indicated that in Malaysian SMEs, the use of SMA practices is low amongst the SMEs that reported the use of SMA. Small enterprises have a significantly lower adoption rate than medium-sized enterprises who reported an uptake of between 52% and 56% for each listed technique. Ahmad (2012) also asserted that the use of SMA is very low compared to budgeting systems, costing systems and PMTs. Ahmad (2012: 191) concluded by stating that the reasons for the low adoption of SMA are similar to those reported for the decision support systems by the Malaysian SMEs.

The study in Turkey by Akmese and Bayrakci (2016: 19) noted that the fast-food operations' businesses did not use SMA but tried to integrate some practices (such as long-range enterprise forecasting and the analysis of competitors' strengths and weaknesses) into the enterprise. It can be therefore be assumed that SMA among modern MAPs is not preferred by the SMEs. The next section discusses the usage of decision support systems by the SMEs.

#### **2.5.2.5 Decision support system**

Ahmad's (2012: 186) study on Malaysian SMEs also reported that the overall uptake of decision support systems was moderate. Short-run analysis had a usage rate of up to 60% by the enterprises, with a usage rate of around 50% for the long-run analysis. For the short-run analysis, the following MAPs were included: product profitability analysis at 82% usage, followed by break-even analysis and the stock control model both at 55% as per usage. The least used among the short-run category was customer profitability analysis at 48%. The long-run category included the following MAPs: payback accounting rate of return, net present value and internal rate of return, with all these MAPs being frequently used by SMEs with around 50% usage (Ahmad 2012: 186). Ahmad (2012: 186) reported that medium-sized enterprises have a greater adoption of all MAPs investigated as compared to smaller-sized enterprises. The use of the decision support system and SMA was 26% and 23% greater respectively for medium-sized enterprises. The decision support system was most used by medium-sized enterprises with 86% of the respondents agreed to using it; while the small-sized enterprises usage was below 50% (Ahmad 2012: 186).

Mustafa and Eraid (2016) explored the use of managerial accounting as a tool for decision making by 10 manufacturing SMEs in Albania. They found that the only five management accounting tools for decision-making were applied by the manufacturing enterprises out of eight which were investigated. The use of management accounting as a device for decision-making and the number of Albanian companies using it are shown in Table 2.8.

<b>Tools used</b>	<b>Number of firms applying these tools</b>
The use of financial statements	10
Cash flow analysis	3
Marginal costing	1
Opportunity costing	0
ABC	0
Differential costing	6
Target costing	0
Just in time	3
Source: adapted from Mustafa and Eraid (2016: 50)	

A Turkish survey by Akmese and Bayrakci (2016: 17) found that the fast-food operations in Turkey “have used the practices of product profitability analysis within the context of the information for decision making as very often with a ratio of 16%, as often with a ratio of 29%. Hence, the fast-food operations’ enterprises find the product profitability analysis to be important with a ratio of 62% and moderately important with a ratio of 32%”. Also, it was shown that the fast-food operations’ enterprises did not use capital investments too much as fast-food operations generally work within the franchising system.

In concluding this section with respect of specific MAPs used by SMEs, SMEs are aware of the MAPs but they do lack some basic knowledge. Overall, from the studies reviewed, the use of SMA by SMEs is very low; and few studies that investigated the SMA and decision support systems. Hence, there is a gap in the research area of management accounting that focuses on these two practices.

In the light of the specific MAPs used by SMEs just discussed, the role of MAPs in the management of SMEs is now discussed in the next section.

## **2.6 The role of MAPs in SMEs**

The objective of this section is to review studies that investigated the role for which MAPs are used by SMEs. The role of MAPs is, according to Sharma and Kumar (2011), as follows: planning and forecasting; decision-making; modification of data; data analysis; and management control and communication. Sharma and Kumar (2011) emphasise planning and forecasting, data interpretation and decision-making to be the most important roles of MAPs.

In Barbados, Alleyne and Weekes-Marshall (2011: 55) found that budgeting systems were used by the three sampled manufacturing SMEs for planning, controlling costs, developing long-term strategies and evaluating investments. They found that MAPs were also used to evaluate financial performance and non-financial performance with regards to customers, as well as operations and innovations. Only one Barbados manufacturing SME used the MAPs to evaluate non-financial performance relating to employees. The other roles for which MAPs were used by the respondents included industry analysis, analysis of competitive position, product lifecycle, and an analysis of competitors' pros and cons (Alleyne and Weekes-Marshall 2011: 55). Alleyne and Weekes-Marshall (2011) reported that MAPs had given the SMEs tools for sound business decisions-making that had contributed to cost-cutting measures and the return on shareholders' investments.

Uyar (2010) found that pricing decision-making was the most important purpose for the costing information to be used, followed by the computation of customer profitability and activity analysis. The third purpose for which the costing information was used was for performance measurements, followed by the make or buy decisions, and then the product mix decisions. The least important purpose for which MAPs was used was for adding value to the products manufactured by firms. However, Uyar (2010) did not indicate the percentage of sampled SMEs that used MAPs for various purposes. A study conducted in the Lagos state of Nigeria by Abogun and Fagbemi (2012) reported the perceptions of 110 representatives of manufacturing firms on the

relevance and desirability of the budget planning. They found that 68% of the firms perceived budgets to be useful tools for planning, controlling, decision-making, coordinating, and communications, while 65% of the manufacturing firms perceived budgets as a daily worthwhile exercise that was beneficial (Abogun and Fagbemi 2012).

Sumkaew, Liu, and McLaren (2012: 13) investigated the reasons for using MAPs in Thailand using online questionnaires to 456 listed Thai companies on the Thai Stock Exchange in 2012. Sumkaew *et al.* (2012: 13) reported “that the traditional and the contemporary MAPs are important for most of the listed Thailand companies who rely on reliable information for decision-making. The second reason for using the traditional MAPs is pressure from the headquarters or managers whilst the contemporary MAPs are used for the reason of following competitors” (Sumkaew *et al.* 2012: 13). Fadzil and Rababah (2012) supported the view of Sumkaew *et al.* (2012: 13) that top management support and increasing competition facilitated the application of new developed MAPs such as ABC implementation by Jordanian manufacturing SMEs.

In a Malaysian study, Ahmad (2012: 198) reported that 80% of the SMEs used MAPs to measure and evaluate performance, 76% used the tools to control the firm’s current activities, while 72% employed the tools to optimise on the usage of firm’s resources. Of the SMEs sampled, 69% used the MAPs for planning future strategies, tactics, and operations, as well as reducing subjectivity in the decision-making processes. The least popular purpose for which the SMEs used MAPs was for improving internal and external communication as only 66% used MAPs for this purpose. Ahmad (2012: 198) also found that “level of productivity, product quality, number of deliveries on time, sales growth rate, operating profit growth rate, and cash flow growth rate” were considered to be increasing the performance of the Malaysian SMEs. All these benefits were observed by respondents with all respondents suggesting that performance had been improving (Ahmad 2012: 197). Furthermore, with regard to the role of MAPs, almost every SME reported that MAPs had indeed brought a greater role to their SME’s management.

Ab Rahman, Omar, Rashid, and Ramli (2015: 92) interviewed 16 Kenyan SMEs' decision makers who represented different management levels. They found that a number of MAPs initiatives had been actively adapted to meet certain objectives in the SMEs. One of the objectives was to improve the decision-making processes, and there was a focus to improve communication priorities for tactical action in regard to the firm's internal processes. In addition, Ab Rahman *et al.* (2015: 97) reported that the SMEs had enjoyed strong financial success over the past few years after adopting the use of MAPs in their daily operations. The SMEs continued to look for ways to improve organisational performance and to improve the employees' accountability through the engagement of MAPs. Similarly, Ndwiga (2011) investigated the roles of MAPs in forming and sustaining a competitive benefit in a Kenyan bank using a questionnaire survey and in-depth interviews of 40 respondents. The results indicated that 85% of the respondents perceived MAPs as very important in creating a competitive advantage, 10% indicated that the practices were somewhat important, while the minority of 5% were not sure. These results imply that the extent of use of MAPs by SMEs is very important. However, Ndwiga's (2011) study focused on one listed large bank in Kenya and the results may not reflect the views of owners or managers of SMEs.

In summary, MAPs are effective for the daily running of the enterprise. These practices play a major role in decision-making and also provide owners or managers with relevant cost information and non-cost information. Based on the studies reviewed, it can be argued that SMEs adopted MAPs to meet certain business objectives within their individual firms. Overall MAPs are found to improve communication within the firm and also to improve business decision-making that enhances the firm's performance.

The next section discusses the factors that affect SMEs from using MAPs.

## 2.7 Factors that affect the use of MAPs by SMEs

Only a few studies have been conducted to study the factors affecting the use of MAPs by SMEs. These studies are discussed next.

In a Nigerian study by Okoli (2011) using 148 SMEs, he links appropriate record keeping and profitability of SMEs and finds that owing to insufficient record keeping, SMEs may possibly not evaluate their performance successfully. Okoli (2011) further contends that in order to improve the profitability of SMEs and their stability, there is a necessity for record keeping which will support the owners or managers to keep track of the enterprise's performance. Maseko and Manyani (2011: 171) used a questionnaire survey to investigate the record keeping for performance measurement of 100 SMEs in Bindura, Zimbabwe. The study showed that the majority of SMEs do not keep extensive accounting reports due to a lack of accounting awareness leading to the poor use of accounting information in financial performance evaluations.

Madurpperuma *et al.* (2016: 188) used questionnaires to collect data from 150 SMEs in Sri Lanka. The majority of the respondents (73%) reported that they do not keep accounting records, 44% kept manual records and the minority of 29% did not keep accounting records at all. Madurpperuma *et al.* (2016: 188) concluded that this impedes the success of SMEs in Sri Lanka. Madurpperuma *et al.*'s (2016: 188) study indicates that many SMEs do not have the needed knowledge and skills to use MAPs.

Using an online survey to 456 listed companies in Thailand, Sumkaew *et al.* (2012: 13) reported a number of factors that affect the use of MAPs, including also the reasons why Thai listed companies use MAPs. These reasons for using MAPs are shown in Table 2.9. They include saving costs, saving time, providing reliable information for decision making, following market competitors, pressure from government or from headquarters or managers. The latter was one of highest reasons why listed companies use MAPs. The reasons for "NOT" using MAPs included the high cost of implementation, it was time-consuming, the lack of expertise, resistance to change by implementers or the avoidance of uncertainty surrounding implementation, objections from top management, never heard of it, and finally not reliable or no

economic information. All these reasons were for both traditional MAPs and contemporary MAPs.

Table 2.9 shows the reasons for using and “NOT” using MAPs in Thailand.

<b>Table 2.9: Reasons for using or “NOT” using MAPs in Thailand</b>		
	<b>Traditional MAPs *</b>	<b>Contemporary MAPS *</b>
<b>Reasons for using MAPs</b>		
Save cost	130	89
Save time	32	28
Reliable information for decision making or information need	358	271
Organisational change	40	42
Following market competitor	64	108
Pressure from government	14	8
Pressure from headquarters or managers	164	106
<b>Reasons for “NOT” using MAPs</b>		
High cost of implementing	93	156
Time consuming	166	241
Lack of expertise	213	333
Resistance to change by implementers or avoid uncertainty surrounding implementation	9	7
Objection from top management	208	255
Never heard of it	12	38
Not reliable or No economic information	238	301
Note: *=Number of the respondents answered the questions out of 456 listed companies.		
Source: Sumkaew <i>et al.</i> (2012: 13).		

Padachi (2012) investigated the factors that affected the adoption of formal accounting systems in 145 SMEs in the Mauritian manufacturing sector. Padachi (2012) reported that 91 or 63% of the SMEs were sole traders that led to the low adoption of formal accounting systems. Furthermore, due to the lack of financial management skills, 69% of SMEs maintained minimal accounting records. In contrast, the Canadian and Australian survey by Armitage *et al.* (2016) on the usage of contemporary MAPs, indicated doubts regarding the effectiveness of MAPs to SMEs’ management. They further noted that many of the tools were not perceived as sufficiently adding value

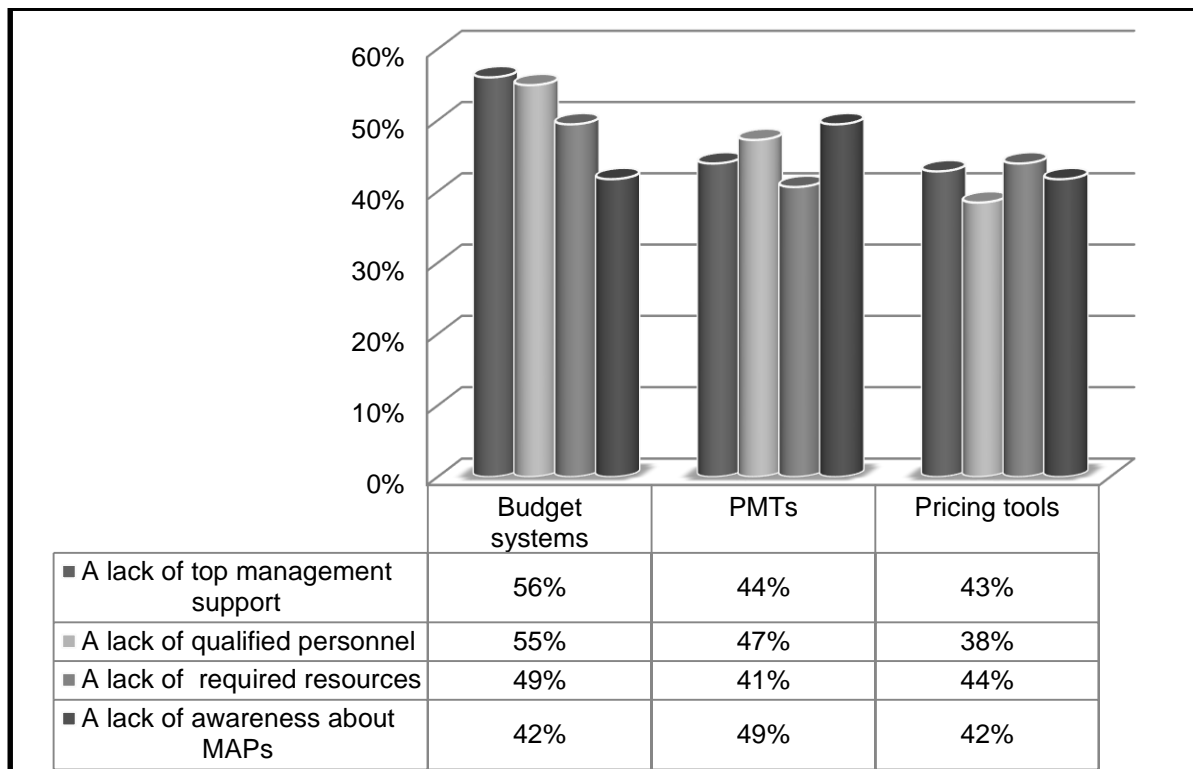
given that they failed the cost-benefit test due to the limited sizes of the SMEs sampled (Armitage *et al.* 2016).

Alsmirat (2013) conducted a study in Jordan on 136 SMEs using a questionnaire to investigate factors that prevented SMEs from preparing monthly management accounts. The results indicated that a lack of resources was an important factor. The most cited factors were that qualified personnel are expensive to maintain at 85%, followed by accounting records were too difficult to understand at 70%. Karanja *et al.* (2012: 10) conducted a study on the adoption of management accounting techniques by SMEs in Kenya using mixed methodologies. Karanja *et al.* (2012: 10) found that internal and external factors cause a low adoption of management accounting techniques in Kenyan SMEs. Internal factors such as the size of the firm, organisational strategy, and age of the firm were high causes of low adoption as noted by respondents with above 70% support by the respondents. External factors such as competition, raw material availability, technology advancement, and existing infrastructural network and other external factors were also causes of low adoption (Karanja *et al.* 2012: 10).

A lack of knowledge and skills among owners and managers in Northern American SMEs is regarded by Lavia Lopez and Hiebl (2014: 19) as one of the reasons why the use of management accounting is low within SMEs as they do not have the necessary training to enable them to implement sophisticated management accounting techniques in the business. On another hand, Brierley (2011) describes the focus on price calculation by owners or managers of small business as a challenge when using proper management accounting tools to achieve business objectives.

Figure 2.2 below summarises the results by Maduekwe (2015: 109) on the factors that inhibit SMEs from using MAPs.

**Figure 2.2: Summary of factors that inhibit SMEs from using MAPs**



Source: Adapted from Maduekwe (2015: 109)

Budget systems are the most used management accounting techniques by SMEs. Factors preventing SMEs from using this MAP were the lack of top management support (56.04%), the lack of qualified personnel (54.95%), the lack of required resources such as computers (49.45%) and the lack of awareness about MAPs (41.76%). Concerning the use of PMTs, the lack of awareness about MAPs was the highest (49.45%), followed by the lack of qualified personnel (47.26%), the lack of top management support (43.96%) and lastly, the lack of required resources such as computers (40.66%). With respect to pricing tools, the factors affecting SMEs use of MAPs were the lack of required resources such as computers (43.96%), the lack of top management support (42.85%), the lack of awareness about MAPs (41.75%) and lastly, the lack of qualified personnel (38.47%).

Mustafa and Eraid (2016: 51) investigated why managerial accounting as a tool for decision-making is not widely used in Albanian manufacturing firms. The findings, from interviews, indicated that there are certain reasons why these techniques are not widely used. These reasons are as follows:

- Not knowing the importance of MAPs;
- Thinking and considering them as a waste of time;
- Lack of skilled staff; and
- Most of the decisions are taken by the owner alone.

The reviewed studies in this section revealed that there are different factors that inhibit SMEs from using MAPs. Key among these factors were the perceptions that MAPs are difficult to implement, the lack of required skills and experience, MAPs are too difficult to understand, and largely irrelevant and costly given the small size of SMEs. Other challenges included inadequate record keeping, the lack of appropriate technology and computers, and MAPs being perceived as not adding value to the SMEs' management.

The literature review has shown that there are factors that affect SMEs from using MAPs; this can have a negative effect on the management of these enterprises.

## **2.8 Gaps identified in the literature review**

The literature review has identified the following gaps in the literature.

- Most of the literature reviewed is not from South Africa, hence the results cannot be generalised to the South Africa context;
- The South African studies reviewed (Makhado 2015; Tabot 2015; Maduekwe 2015), are not in the clothing sector or from Newcastle or KwaZulu-Natal, and hence the results cannot be generalised to SMEs in KwaZulu-Natal;
- Some studies investigated varying issues in regard to MAPs (Mayanja 2010; Matambele 2014; Lavia Lopez and Hiebl 2014; Mistry, Sharma and Low 2014; Mustafa and Eraid 2016), however, there was a limited focus on the extent of use of MAPs;
- Some of the studies reviewed were conducted more than five years ago (Mayanja 2010; Ndwiga 2011; Ramijak, and Rogoslic, 2011; Nixon and Burns 2012; Ahmad 2012; Sunarni 2013), and therefore this current study provides an update on previous studies; and
- Different methodologies and sample designs (Ahmad 2012; Tabot 2015; Makhado 2015; Maduekwe 2015) were used by the different authors.

This current study addresses these gaps in the literature through its research objectives.

## **2.9 Summary**

This chapter has summarised the definitions of SMEs, management accounting and MAPs. Definitions of SMEs vary between countries in the levels of annual turnover and the number of employees. The literature showed that SME managers are not making adequate use of the numerous avenues offered by financial services. Nonetheless, the majority of SMEs reported that they do approach the South Africa banks for loans, but due to some constraints, they cannot acquire these funds (Mwangi and Bwisa 2013; Mazanai and Fatoki 2012).

The literature also indicated that numerous factors are negatively influencing the performance of SMEs. Internal and external factors are significantly associated with the performance of SMEs in KwaZulu-Natal (Sitharam 2014: 98). The present economic condition of South Africa is not good. The exchange rate, high interest rates and competition are believed to be hindering the success and survival of SMEs negatively. The literature on management accounting shows that SMEs have adopted the use of MAPs, even though the emphasis is on the use of traditional MAPs. Few studies have investigated the use of contemporary MAPs. Those conducted show a low uptake or adoption of advanced MAPs (Lavia Lopez and Hiebl 2014: 5; Maqbool-ur-Rehman 2011; Uyar (2010: 113).

The results from previous studies for all MAPs reported a greater usage by medium-sized businesses in contrast to smaller-sized firms (Lavia Lopez and Hiebl 2014: 5). The differences are associated with the use of the decision support systems and SMA. The decision support systems and SMA have low uptake or usage (Lavia Lopez and Hiebl 2014: 5). These practices are not widely used by SMEs and few studies included these practices (Ahmad 2012: 191). With regard to the usefulness of MAPs usage, the literature has shown that overall MAPs are very useful to the management of SMEs (Ahmad 2012; Maduekwe 2015; Lavia Lopez and Hiebl 2014). They also contribute to the success of these SMEs. SMEs are faced many factors that affect the usage of MAPs in different ways. Other challenges indicated in the literature included

inadequate record keeping, the lack of appropriate technology and computers and that MAPs were not perceived as adding value to the SMEs' management (Cant *et al.* 2014; Tabot 2015: 63; Madurapperuma *et al.* 2016).

The chapter concluded by identifying various gaps in the literature reviewed. Given the gaps in the reviewed studies, there is a necessity for more research. Little is known about the types of MAPs that are used by the clothing industry. While previous studies have investigated the extent of use of MAPs by SMEs (Padachi 2012; Armitage *et al.* 2016; Ahmad 2012; Maduekwe 2015), these studies did not address the extent of use of MAPs by clothing manufacturing SMEs in KwaZulu-Natal. Therefore, this study contributes to the literature in assessing MAPs in clothing/textile manufacturing SMEs. The next chapter, Chapter Three, discusses the research methodology adopted in this study.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

Chapter two provided the definition of SMEs, management accounting and MAPs, the importance and the contribution of SMEs in developing economies, the challenges faced by SMEs and lastly, the extent of use of MAPs by SMEs. The chapter further discussed the extent of use of the specific MAPs assessed in this study, the factors affecting the use of MAPs by SMEs and lastly, the role of MAPs in the management of SMEs. Chapter two allowed the gaps in the reviewed literature to be identified.

Chapter three describes the research design and methodology used to address the research objectives of this study. This chapter comprises a discussion of the research method, the target population, the data collection method, the data analysis method used, and the reliability and validity measures. The purpose of the research method is to collect empirical evidence regarding the extent of use of MAPs by Newcastle clothing SMEs.

Thus, this chapter provides the reasons why the chosen research methods were used to assess the extent of use of MAPs by Newcastle clothing/textile SMEs.

The research objectives as set out in chapter one are shown below.

#### **3.2 Research objectives**

Based on the research problem discussed in chapter one, the following objectives were formulated:

1. To determine the extent to which MAPs are employed by Newcastle clothing SMEs.
2. To identify the roles played by MAPs in Newcastle clothing SMEs' management.
3. To determine the factors that affect the extent of use of MAPs among Newcastle clothing SMEs.
4. To determine whether there is a relationship between MAPs and the performance of Newcastle clothing SMEs.

To address the research objectives, a quantitative approach was deemed appropriate. Additionally, the study's research questions informed the research design to be adopted. This is further discussed in the next section.

### **3.3 Research design**

A research design is a method of collecting data and analysing the collected data according to the structure set out for the research methodology (Sekaran and Bougie 2010). The design chosen for this study must, therefore, agree to the above circumstances to be met and also have the ability of supporting the research objectives, simplifying the achievement of the aim of the research and carrying out the research (Quinn 2011). The objective of a good research design is to reduce bias and ensure the reliability of the data gathered (Kothari 2008). Hair, Celsi, Money, Samouel and Page (2011) indicate that there are three types of research designs: investigative (or exploratory); descriptive; and causal. Saunders, Lewis and Thornhill (2009: 140) indicate that "the objective of descriptive research design is to portray an accurate profile of persons, events or situations. The descriptive research design presents a picture of specific details of the situation, social setting or association". Goddard and Melville (2004: 9) argue that the descriptive design contains the study of a precise condition to see if it gives rise to any universal theories and if universal theories arise from the specific condition under inquiry.

Of the three types of research design indicated by Hair *et al.* (2011), the descriptive research design met the need to provide the relevant information to answer the three research questions regarding the extent of use of MAPs by Newcastle SMEs and the role of the MAPs in the management of these SMEs. The descriptive data also provided information on the factors that affect the extent of use of MAPs by SMEs. Having addressed the research design, the following section covers the research method adopted in this study.

### **3.4 Research method**

Research methodology proposes the way in which the research problem investigated may be systematically solved (Kothari 2008: 8). Wahyuni (2012: 72) stated that the research methodology represents the model of research used to conduct a research

study within the framework of a specific paradigm. This study adopted a positivist paradigm using a questionnaire (i.e. a survey) as the research method. This method could have been either a quantitative, qualitative or a mixed-methods approach.

The quantitative research approach was defined by Ghauri and Gronhaug (2005: 120) as findings whose verdicts are primarily the product of statistical summary, analysis, and presentations. Burns and Burns (2008: 14) noted that in the quantitative research approach, variables are clarified in a way that they become quantifiable and require statistical analysis and summarisation. Ragin (2014) stated that the quantitative research approach also allows the measurement of many responses through sets of questions, as the answers to each question can be statistically analysed. On the other hand, the qualitative research approach provides findings through observations and interviews (Ragin 2014). Compared to the qualitative research approach, the quantitative research approach concentrates on the collection of numerical data (i.e. numbers), while qualitative research approach focuses on the collection of non-numerical data (i.e. non-numbers such as words and pictures) (Creswell 2013). The difference between qualitative and quantitative research approach is in the nature of the data collection method; the quantitative research approach relies on the question “how many?” and qualitative on “how?” and “why?” (Punch 2013: 3).

The aim of this study required quantitative data to assess MAPs in SMEs. This approach strives to improve an understanding of the topic through a comprehensive description (Hair *et al.* 2011). Hence, the quantitative research approach was considered appropriate to achieve the research objectives.

### **3.5 Research population**

This section discusses the population of this study. Subsequently, the census method is discussed as it was used as the sampling methodology chosen for the study.

#### **3.5.1 Population of the study**

Malhotra (2004: 314) defined the population of a study as a collective of the components that share a mutual set of features and that embraces the universal group that agrees with the goal of the study problem. For the purpose of this study, the

population comprised of all owners or managers of clothing/textile SMEs in the geographical location of the Newcastle Municipality industrial areas. SMEs in this research were categorised as enterprises engaging both full-time and part-time employees as in the National Small Business Act no. 102 of 1996 and National Small Business Amendment Act no. 29 of 2004 (South Africa 1996; South Africa 2004). The owners or managers of SMEs were drawn from the local sector, namely the clothing manufacturing sector in Newcastle, KwaZulu-Natal.

To obtain a recent list of clothing/textile manufacturing SMEs in Newcastle Municipality area, the SEDA was first contacted but this organisation was unable to assist. However, the Newcastle Municipality was able to assist with the Newcastle Business Portfolio (2013-2014), that had a list of SMEs that operates in the clothing/textile sector. There were only fifty-one listed clothing/textile manufacturing SMEs at the time the research was carried out. The owners or managers of these SMEs were all deemed to be the decision-makers of the SMEs; thus, they were expected to be familiar with the use of MAPs within their respective firms. The names, contact numbers and physical addresses of these SMEs were listed in the Newcastle Business Portfolio (this information is provided in Appendix E). Subsequently, as the targeted population consisted of a small number of clothing/textile manufacturing SMEs, it was decided to use a census method and therefore all 51 SMEs were included in this current study.

Having reviewed the population of the study, the following section discusses the census method.

### **3.5.2 Census method**

Data collected from the entire population, rather than a sample, is referred to as a census survey (Remler and Van Ryzin 2011: 146). The term “census” refers more generally to any study in which data is collected from the entire target population rather than the part of the population studied. With a small population, a census is possible and convenient (Remler and Van Ryzin 2011: 146). The census method is not frequently used in management accounting research; most of the literature discussed in the literature review used different types of sampling methods to find generalisable

conclusions on their research problems (e.g. Ahmad 2012; Gichaaga 2013; Maduekwe 2015).

The advantages and disadvantages of using a census method are listed in Table 3.1.

<b>Table 3.1: Advantages and disadvantages of using a census method</b>	
<b>Advantages</b>	<b>Disadvantages</b>
Provides a true measure of the population (no sampling error)	May be difficult to enumerate all units of the population within the available time.
Benchmark data may be obtained for future studies	Higher costs, both in staff and monetary terms, than for a sample
Detailed information about small sub-groups within the population is more likely to be available	Generally takes longer to collect, process, and release data than from a sample
Source: Adapted from Australian Bureau of Statistics (2013)	

When using a census, comprehensive information about small-size groups within the population studied is probable to be definitely obtainable (Australian Bureau of Statistics 2013). Kothari (2008: 55) asserted that it can be assumed that in such investigation, when all objects are covered, no component of chance is left and greater accuracy of data is achieved; however, this may not be true in practice. Kothari (2008: 55) also emphasised that when the field of inquiry is large, using a census is difficult to practise because of the resources required.

Employing a census study approach resulted in an accurate assessment of the population. A further reason this study used a census is that clothing/textile manufacturing SMEs are also located around Newcastle and Madadeni industrial areas. A geographical map of these areas was obtained from the Newcastle Municipality showing that these areas are plus or minus 15 kilometres from one another, and it was a walking distance between SMEs.

Having reviewed the research population and the census survey, the following section discusses the research instrument used to collect data required for analysis.

### **3.6 The research instrument**

This study used a self-administered questionnaire survey to collect data from the targeted population. A survey questionnaire is a research tool designed for statistical analysis of the responses acquired from research participants through a series of questions in order to gather information from them and answer the research questions (Rhind, Davis and Jowett 2014: 111). Sekaran and Bougie (2010) emphasised that a survey questionnaire is one of the most effective data gathering tools that can be used when an author knows precisely what is required and how to quantify the variables of interest. Rhind *et al.* (2014: 112) stated that questionnaires generally involve low costs and a flexible time and place for responses; hence the respondents can respond to them anywhere and at any time, and answers may be sent by post or email or given face-to-face. The survey questionnaires permit the gathering of an enormous volume of data from a sizable population and the results can be analysed with the aid of an appropriate computer package (Saunders *et al.* 2009: 146).

Questionnaire design is as essential as the nature and wording of the questions asked in the questionnaire (Saunders *et al.* 2009: 371). The questions are considered in such a way that the respondents check one answer from a multiple of answers; sufficiently and evenly spaced apart. McDaniel and Gates (2009: 289) state that a survey questionnaire can be termed as a set of questions intended to produce the data required for completing the objectives of a research study. A self-administered questionnaire survey was chosen for the following reasons; “surveys are relatively inexpensive (especially a self-administered survey) and are beneficial in describing the characteristics” (Cooper and Schindler 2014: 663). In this research the variables of interest were known and as such the self-administered questionnaire was the most suitable. The foremost benefit of this technique is that the author can gather all complete questionnaires within a certain time; avoid any misunderstandings at the time and any doubts on any question can be clarified (Sunarni 2013: 619). The questionnaire was based on the studies by (Ahmad 2012; Maduekwe 2015) to meet the research objectives and the purpose of this study. The questions were selected using judgment to ensure that only meaningful contributions to the objectives of this study were included. This was done to avoid including questions with no relevance to achieving the objectives of this study. The questionnaire was designed around the five

MAPs that were assessed in the study, namely the costing systems, the budgeting systems, the PMTs, the SMA and lastly, the decision support systems. These MAPs were selected based on their individual extent of use by SMEs founded on the literature (Ahmad 2012; Maduekwe 2012).

The content and layout, reasons for the choice of questions, letters of information and consent and pre-testing of the survey questionnaire are discussed in the following sections.

### **3.6.1 Content and layout of the research instrument**

The questionnaire comprised ten pages excluding the letter of information and consent letter. The latter was sent separately to the questionnaire, which explained the motivation for this study. The survey questionnaire began with the main cover page that included an identifying number on the top right corner. (This number was only used for administration purposes as the respondents were assured of anonymity.) It then described the research topic followed by the general business background information questions. Thereafter, questions on the extent of use of MAPs, the role of MAPs in the management of SMEs, the factors that affect the extent of use of MAPs by the SMEs, and the closing questions in regard to the performance of the firms were posed. The questionnaire constituted 25 key questions consisting of 81 specific variables. The questions were grouped into five sections so as to collect data on main points in an organised manner. In addition, the questionnaires were numbered from one to fifty-one on the cover page. The full questionnaire is provided in Appendix A.

The questionnaire constituted five sections which were numbered one to five. These sections and the indicators assessed in each section are shown in Table 3.2.

<b>Table 3.2: Questionnaire sections</b>		
<b>Section</b>	<b>Variable measured</b>	<b>Indicators</b>
<b>1</b>	<b>The background information of the firm</b>	
		The status of the business Years in operation Number of employees Annual sales turnover Target markets Employment of accounting staff Level of education of accounting staff
<b>2</b>	<b>The extent of use of MAPs by SMEs</b>	
<b>Part A</b>		<b>Costing systems</b>  Batch costing Contract costing Job costing Process costing Absorption costing Activity based costing (ABC) Variable costing
<b>Part B</b>		<b>Budgeting systems</b>  Cash flow budget Financial position budget Production budget Purchasing budget Sales budget Flexible budget Incremental budget Zero-based budget Annual budget Continuous rolling budget Monthly budget

<b>Part C</b>		<p><b>PMTs</b></p> <p><b>Financial Measures</b></p> <p>Cash flows</p> <p>Operating income</p> <p>Return on investment</p> <p>Sales growth</p> <p><b>Non-Financial Measures</b></p> <p>Defect rate</p> <p>Employee turnover</p> <p>Manufacturing lead/ cycle time</p> <p>Number of Customers complaints</p> <p>Number of warranty claims</p> <p>On-time delivery</p> <p>Survey of customers' satisfaction</p>
<b>Part D:1</b>		<p><b>Strategic management accounting (SMA)</b></p> <p>Monitoring the cost of production development</p> <p>Strategic costing</p> <p>Competitive price data collection</p> <p>Target costing</p> <p>Strategic factors for price setting</p>
<b>Part D:2</b>		<p><b>Decision support systems</b></p> <p><b>Short-run analysis</b></p> <p>Break-even analysis</p> <p>Customer profitability analysis</p> <p>Product profitability analysis</p> <p>Stock control model</p> <p><b>Long-run analysis</b></p> <p>Accounting rate returns</p> <p>Internal rate of return</p> <p>Net present value</p> <p>Pay back</p> <p>Continuous</p> <p>Mid-term interval</p> <p>Year-end interval</p>
<b>3</b>	<b>The role of Management Accounting Practices (MAPs)</b>	

	<ul style="list-style-type: none"> <li>For controlling current activities</li> <li>For evaluating performance</li> <li>For improving internal and external communication</li> <li>For measuring and optimizing the use of firms' resources</li> <li>For planning the future strategies, tactics and operations</li> <li>For reducing the subjectivity in decision making process</li> </ul>
<b>4</b>	<b>The factors affecting the extent of use of MAPs by SMEs</b>
	<ul style="list-style-type: none"> <li>Unable to understand MAPs</li> <li>The benefits of the MAPs are too difficult to be observed</li> <li>No important benefits perceived from the use of MAPs</li> <li>The firm is too small to implement MAPs</li> <li>The new-developed or modern MAPs are too complex to use</li> <li>High cost to implement MAPs</li> <li>Lack of information on affordable accounting services</li> <li>Lack of education and basic in-house training</li> <li>Lack of top management support</li> <li>Lack of skill-full accounting staff</li> <li>Lack of up-to-date publications about MAPs and new developed practices</li> <li>Lack of computers and technology systems</li> <li>Lack of computer programmes relevant to MAPs</li> </ul>
<b>5</b>	<b>Performance of the firm</b>
	<ul style="list-style-type: none"> <li>Cash flow growth rate</li> <li>Number of deliveries on time</li> <li>Operating profit growth rate</li> <li>Profit</li> <li>Productivity quality</li> <li>Productivity quantity</li> <li>Sales growth rate</li> </ul>

### 3.7 Reasons for question choice

Questions asked in the survey questionnaire had to be relevant to the study's aim and objectives. In the interest of being definite and detailed, and pointing to the relevance of an issue, short and to-the-point questions were used (Gaweseb 2015: 92). Respondents are often unwilling to study an item in order to understand it; thus the questions were easy to be read in order for the respondents to understand the intent of each question and hence provide the answers without difficulties (Gaweseb 2015: 92).

The majority of the questions were closed-ended questions, where the respondents had to select from alternative responses. However, some of the questions asked the respondents to add their comments and rate the comments using the five-point Likert scale provided.

### **3.7.1 Types of questions asked in the questionnaire**

The following are the various types of closed-ended questions that were used in the questionnaire.

#### **3.7.1.1 Dichotomous questions**

A dichotomous question is a question that suggests binary alternative responses to choose amongst them (Cooper and Schindler (2014: 377). This means a question to which there can be only one of two alternatives, most often “yes” and “no” questions.

#### **3.7.1.2 Multiple-choice questions**

A multiple-choice question is a question with more than binary alternative responses to choose amongst them (Cooper and Schindler 2014: 380). Some questions may require one response from more than two alternatives whilst others may require as many responses as applicable. These types of questions were mainly asked in section one of the current study’s survey questionnaire.

The survey questionnaire made use of a five-point Likert scale to rate the responses of the respondents. These types of questions were mostly asked in sections two to five of the survey questionnaire. The five-point response on the Likert scale represent an interval level of measurement. This scale was adopted for the following reasons:

- It excludes the occurrence of response bias among respondents;
- It benefits in measuring attitudes, philosophies and insights;
- It makes the response items standard and comparable amongst respondents; and
- Answers are easy to analyse and code directly from the survey questionnaires (Cant, Gerber- Nel, Nel and Kotze 2005: 113).

A further advantage of using rating scales is that the respondents are more inclined to answer all the questions on the questionnaire (Rhind *et al.* 2014: 111). The above

question types are also faster for the respondents to answer because all the possible responses are given (Gaweseb 2015: 93). Furthermore, the combination of the questions ensured the collection of complete information. This also avoided any predictability of questions and made the respondents focus and provide correct information.

### **3.7.2 Reasons for the questions in the questionnaire**

The reasons for the questions used in the sections of the survey questionnaire are further discussed below.

#### **3.7.2.1 Section one: Background information**

Section one comprised of seven multiple-choice, closed-ended questions that dealt with the background information of the firm. It included questions about the registration status of the business, the years of operations, the number of employees, the annual sales turnover, the target markets, the employment of the accounting staff; and lastly, the level of education of the accounting staff. These questions were considered essential to ensure that only SMEs participated in the survey and that they were sufficiently knowledgeable on the topic being investigated. In addition, the intention was also to be able to use this background information for a deeper analysis of data collected in other sections.

#### **3.7.2.2 Section two: Extent of use of MAPs**

This section addressed the first research question, i.e. to assess the extent of use of MAPs by Newcastle clothing SMEs. This section comprised twelve questions (questions 8 – 22), which constituted 52 indicators. The indicators were selected based on the literature, as the studies by Ahmad (2012), Maduekwe (2015) which investigated MAPs in the SME sector have used these indicators. For the aim and purpose of this study some of the indicators were altered to achieve the research objective. The MAPs were grouped into four major parts as shown in Table 3.2 above. Each part in this section (parts A to D) began with a 'yes' or 'no' question to determine whether the respondent use any of the MAPs. Depending on the response, the respondents were directed to different parts of the questionnaire. Next, section three

of the research questionnaire; that asked the respondents about the role of MAPs in SMEs.

### **3.7.2.3 Section three: Role of Management Accounting Practices (MAPs)**

This section addressed the second research question, i.e. to identify the roles played by MAPs in the management of Newcastle clothing/textile SMEs. This section comprised one question (question 22) and six statements. The statements were based on management accounting roles using the six headings provided by Ahmad (2012). Table 3.2 outlines the indicators used in section three. The reason to adapt the six headings by Ahmad (2012) is that these headings met the research question and the outcomes of the second research objective. The six statements used in this study were clear and relevant to MAPs assessed by this research study, as well resulted in good understanding by the respondents, this was also evidenced from the findings of Ahmad (2012).

### **3.7.2.4 Section four: Factors which affect the extent of use of MAPs**

This section addressed the third research question, i.e. to determine the factors that affect the extent of use of MAPs by Newcastle clothing/textile SMEs. Section four comprised of two questions (namely, question 23 and 24) and sixteen indicators which are listed in Table 3.2. Question 23 asked respondents about the factors that affect the SMEs' usage of MAPs. These factors were adapted from Ahmad (2012).

Question 24 was asked to obtain information about the use of technological equipment by SMEs, as this is an important challenge SMEs are facing. Only two systems were adapted from Ahmad (2012); the computer numerically controlled systems, and the flexible manufacturing systems. If other technological equipment was used by SMEs, a space was provided for respondents to specify the technology equipment that they used and also to rank the technology equipment according to the five-point scale.

### **3.7.2.5 Section five: Performance of the firm**

Section five comprised of one question (question 25), which had six statements. The respondents were requested to elect any changes in terms of the performance of the

firm in the last three years of the operations. The concepts used were based on studies by Jusoh and Parnell (2008) and Ahmad (2012). The reason for this question was to identify any benefits derived from the use of MAPs. The statements used were adapted because of their friendly language for the respondents, they are easy to be understood by the respondents, confirmed from Ahmad (2012) findings.

### **3.8 The letter of information and the consent letter**

The letter of information and the consent letter were used to highlight and explain the purpose of this study (see Appendix B), to reassure the respondents that any information they disclosed would be used exclusively for the aim of this study and that it would be kept confidential and anonymous. There were no risks and costs associated with participating in this study. The respondents were promised a copy of the results of the study and the recommendations drawn from the results. To comply with the requirements of IREC, an explanation of what the research study is all about was provided. It were emphasised that the respondents could withdraw from participating in the survey at any time without any consequences. The letter of information and the consent letter were given to participants who were requested to read and ask questions if they needed further clarity. Once the participants agreed (by signing at the bottom of the consent letter) to complete the survey questionnaire, the survey questionnaire was then distributed to them immediately.

#### **3.8.1 Pre-testing**

The questionnaire was pre-tested to ensure that the language of the questionnaire was clear and understandable to the respondents. The purpose of pre-testing is to reduce any ambiguity in the wording and recognise and remove any mistakes on the survey questionnaire prior to the main survey (Fink 2013: 7). After the guidance of the research supervisors, a few changes were made before the questionnaire was re-examined.

Ten participants of whom four were academics and six were local business owners participated in the pre-testing. The survey questionnaire was sent to them with the letter of information that explained the purpose and outlined the procedures (see Appendix D). During this process, the respondents were also required to comment on

each question and find any possible flaws that would render the survey questionnaire not being user-friendly. This process was also used to test the length of time it took for the respondents to finish the survey questionnaire. Based on the results and comments of the pre-testing, some weaknesses were identified in the questionnaires which included unclear wording or terms used. From the feedback, the terms used were clarified. After the amendments, the questionnaires were resubmitted to the respondents who participated in the pre-testing and all expressed their satisfaction with the changes made.

The description of how data was collected using the questionnaire is discussed in the next section.

### **3.9 Procedure for data collection**

On completion of pre-testing, the data gathering process began with the possible respondents (Tabot 2015: 45). During the primary data collection, 51 questionnaires were personally delivered to the respondents who completed them in their own time. An appointment was made to collect the completed survey questionnaires. This approach was adopted because it presented an opportunity to explain and introduce the research topic to the respondents (Maduekwe 2015: 54). Furthermore, Maduekwe (2015: 54) indicated that this approach saves time and increases the response rate.

The respondents were allowed to fill in the questionnaires in their own time. In some cases, the respondents finalised the questionnaires immediately. Several follow-up visits at an agreed time were to collect completed questionnaires from the respondents who promised to finish the questionnaires at a later time.

The next section discusses the response rate based on the received questionnaires.

### **3.10 The response rate**

Given the comprehensive database of SMEs in the Newcastle industrial areas, a targeted survey of 51 SMEs was set. To achieve this target, a total of 51 questionnaires were delivered to the clothing SMEs. Table 3.3 shows the response rate of this study.

	<b>Number of respondents</b>	<b>Percentage (%)</b>
<b>Targeted respondents (total)</b>	<b>51</b>	<b>100%</b>
Delivered questionnaires	51	100%
Responses received	51	100%
Unusable responses	(3)	(5.88%)
<b>Usable responses</b>	<b>48</b>	<b>94.12%</b>
Note: In total 55 questionnaires were distributed as it will necessary to replace 4 questionnaires as the respondents had lost the original copies.		

The questionnaire was initially circulated to SMEs in December 2017. Follow-ups were undertaken to encourage respondents to participate in the survey. By February 2018, 47% of responses had been received from the respondents, and 14% of these responses were incomplete. The incomplete questionnaires were returned to the respondents who were asked to complete them.

By March 2018, another 20% of the responses were received which were all complete. At that time, it was noted that four of the questionnaires had been misplaced by the respondents; these questionnaires were redistributed with a unique number and the respondents were encouraged to complete these questionnaires. The respondents were formally informed of the deadline for the collection of the completed questionnaires. The last batch of completed questionnaires was received in May 2018, excluding the redistributed questionnaires. The redistributed questionnaires were received in the first week of June 2018. The overall survey thus produced forty-eight usable completed questionnaires. The three unable questionnaires were because the firm had ceased operations, and/or the questionnaire was incomplete.

This study had a higher response rate compared to Ahmad (2012) and Maduekwe (2015). Bose (2001) contended that non-response bias is associated with low response rates and robust variances in the estimates among respondents and non-respondents. The high response rate indicates that non-response bias will not be a limitation in this study. The next section discusses how the data was prepared and analysed.

### **3.11 Data preparation**

Terre Blanche, Durrheim and Painter (2006: 98) state that arranging unrefined data for analysis includes three steps, namely coding, cleaning, and capturing. Coding is a procedure used to classify the responses to a question into meaningful and logical categories (Terre Blanche *et al.* 2006: 98). For the purpose of this study, most questions were closed-ended and therefore each response was coded logically on the questionnaire. Thomas (2004: 81) stated that coding is very important because it gives a structure to the data and prepares it for easy data entry.

After coding data into the anticipated format, the data was cleaned. This was done to ensure that there were no capturing errors. Outlying values (or outliers), which are data points that go beyond the acceptable level of importance for the study (Cooper and Schindler 2014: 437), were checked to ensure that there were no mistakes on the part of the respondents. In the initial analysis, it is important to distinguish valid outliers from mistakes in measurements, editing, and coding and data entry. Thereafter, the data was first captured on EXCEL. The next section covers the data processing.

#### **3.11.1 Data processing**

Data processing was done to achieve completeness, accuracy, and uniformity of the data that had been collected (Brynard and Hanekom 2006: 238). A single expert statistician was consulted to ensure consistency. All questionnaires from respondents had to pass the test of completeness, accuracy, and uniformity. A questionnaire could only be totally excluded only if the aforementioned were not adhered to.

#### **3.11.2 Data analysis**

Data analysis typically comprises the diminishing of gathered data to a controllable size, attaining summaries, observing for associations and employing statistical tools (Zikmund and Babin 2007: 66). The aim of the analysis is to ascertain the several quantities of data by scrutinising the associations between perceptions, constructs, and variables as well as recognising any tendencies or determining any themes (Mouton 2001: 108). The study used the Statistical Package for the Social Sciences (SPSS) version 25 to analyse the data. SPSS involves integrated sequences that allow the user to read data from survey questionnaires and other resources and to handle

them in different ways in order to yield a series of statistical breakdown and reports, jointly with the documentation (Hall 2013). Lastly, the use of the SPSS enabled the data to be analysed descriptively. The statistical analysis was done with the support of a statistician.

### **3.12 Statistical presentation**

The descriptive measures used to present the results were central tendency measures, frequency distributions measures and the dispersion measures. The frequency distributions revealed the number of answers related to a single value of a variable in the questionnaire. Central tendency measures positioned the midpoint of the distribution of the corresponding data using the mean values. An arithmetic mean was also applied to summarise and rank the answers to all the five-point Likert scale questions, mostly in section two to section five of the questionnaire.

McDaniel and Gates (2009: 410) state that the mean value is the total of the values for all interpretations of variables divided by the number of observations. A standard deviation was calculated to control the level of agreement of respondents' responses on a particular statement. The study also made use of binomial and chi-square tests

#### **3.12.1 Binomial tests**

The binomial test is a thorough test to compare the perceived distribution to the anticipated distribution when there are only two groups (GraphPad Software 2015). It is utilised for analysing whether an amount from a particular dichotomous variable is equivalent to an alleged population value (Van Den Berg 2014). Moreover, it is employed when the population is regarded as only two classes (Cooper and Schindler 2014: 482), for example, yes and no or effective and ineffective. The null hypothesis for all the statements would be that there is no difference in the respondents who disagreed or agreed with each statement. That is, if the critical p-value is below 0.05, reject the null hypothesis and if it is above the 0.05, accept the null hypothesis. This test was performed to test the study variables on the factors that affect the Newcastle clothing/textile SMEs in using MAPs.

### **3.12.2 Chi-square tests**

The chi-Square test procedure tabulates a variable into categories and computes a chi-square statistic (SPSS 2004: 11). The statistic obtained from the chi-square test compares the counts of responses. This goodness-of-fit test compares the observed and expected frequencies in each category to test either that all categories contain the same proportion of values (Pallant 2010; Van Den Berg 2014). Chi-square testing uses nominal and ordinal data at usual level of significance of 0.05 or 0.01 (Sekaran and Bougie 2010; Hair *et al.* 2011). The level of significance (the point at which it can be stated with 95% confidence that the difference is not due to chance alone) is set at 0.05 (the standard for most science experiments) (Chimucheka 2012: 133).

In this study the steps in considering the non-response bias was achieved by comparing the population of the study of 151 respondents with the same variables. Because of the categorical nature of the variables, this comparison was done by using the chi-square test and presented in the form of tables. The study data were analysed to accomplish the aim of the study, as well as the research objectives. The quantitative results of this study were presented in an arrangement of tables.

The types of tables and cross tabulation used in the study are briefly described below.

### **3.12.3 Tables used in the research study**

Tables in data analysis present an infinite amount of information in a nutshell clearly, establish associations between variables, distinguish deviations in information and condense the amount of discussion and interpretation in a text (Grove, Burns and Gray 2012).

### **3.12.4 Cross-tabulations**

A cross-tabulation is regarded as the simplest method of unfolding sets of associations. A cross-tabulation is a frequency distribution of answers on two or more set of variables. This means that it tabulates the answers for each of the group and compares those to other variables (Hair *et al.* 2011).

The next section discusses the limitations that were identified in this study regarding the research methodology.

### **3.13 Limitations of the research methodology**

The study focused only on SMEs in the clothing sector in Newcastle, KwaZulu-Natal. The results are therefore not generalisable to SMEs in other sectors, or other parts of South Africa. Even though only the managers and owners were believed to be the decision-makers of these SMEs in this study, in reality, they may not be the only decision-makers of SMEs; therefore this study is limited as some potential decision-makers are excluded. However, the selection of managers and owners is justified as they are the ones likely to be familiar with the use of MAPs such as budgets, costing, PMTs, SMA and decision support systems.

A limitation of using a questionnaire survey especially when it is administered to SMEs decision-makers is their reluctance to participate in a survey owing to their busy schedules. To overcome this, the aim of this study was explained to the respondents when handing over the questionnaire to them. On the completion of the questionnaires, the respondents were reminded again of the objective of this study. In addition to this, some respondents were reassured that any information they divulge will be kept confidential and that they can obtain the results of the study. Finally, only five MAPs were investigated in this study; thus the results may not represent the extent to which SMEs use the overall MAPs in general.

The following section covers an explanation of what is validity and reliability in the context of this study and how validity and reliability were ensured.

### **3.14 Validity and reliability**

The significant features of accuracy are reliability and validity. Reliability is ensured by acquiring numerous quantities on the same themes. The validity of a measuring instrument is the extent to that it measures the variable it is intended to measure. It answers the question of whether or not the methods applied to gather data are actually collecting what one intends to gather (Wagner, Kawulich and Garner 2012). On the

other hand, “reliability discusses how constantly a measuring instrument produces the same results each time the instrument is administered” (Neuman 2011: 208). Reliability forms the constancy of the instrument while validity ensures honesty of the questionnaire (Neuman 2011: 208).

### 3.14.1 External validity and internal validity

Terre Blanche and Durrheim (2004) as cited by Maree (2010: 39) state that internal validity is the level where casual inferences can be drawn from and external validity is the use of the outcomes of the study to a broader environment, or the generalisability to other circumstances. They “are concepts that benefit to verify the truthfulness, credibility, or believability of findings” (Neuman 2011: 208). Internal validity is compromised by such features as an unreliable instrument or the loss of respondents during research (attrition) (Maree 2010: 39).

Table 3.4 summarises how the validity of the questionnaire was achieved.

<b>Table 3.4: Validity</b>	
<b>Characteristic</b>	<b>Method used</b>
<b>Validity</b>	Wording the questions briefly to avoid vagueness Testing correctness of answers to structured questions Examining each question: Will it help to answer the objectives? Containing questions that stated normally agreed on views about MAPs Enquiring how each question fitted with the conclusions in the literature
Source: adapted from Mushonga (2015: 59).	

The designing and improvement of the survey questionnaire were carefully done. This comprised question-wording and question arrangement since they impact the value of data gathered (Babbie and Mouton 2012: 265). Each section of the survey questionnaire had directives to assist the respondents to answer the right section; and also, being aware of the issues that could affect reliability and validity, these issues were minimised to optimise credibility. In addition, the questions in the questionnaire were directly linked to the research objectives and questions, an approach deemed to have enhanced construct validity (Rowley 2002) in Maduekwe (2015: 57). Hence, the survey questionnaire used in this study was planned to achieve valid measurements.

The following section discusses the reliability measures adapted by this study.

### 3.14.2 Reliability

In the survey questionnaire, questions that were not relevant to the research questions were omitted. Questions only covered one aspect at a time and there were no double-barrelled questions asked in the survey questionnaire. Table 3.5 summarises how the reliability of the questionnaires was achieved.

<b>Table 3.5: Reliability</b>	
<b>Characteristic</b>	<b>Method used</b>
<b>Reliability</b>	Including queries that the respondents will grasp easily Dealing with one aspect in each query Making available of clear guidelines in the survey questionnaire Evading leading queries
Source: adapted from Mushonga (2015: 59).	

Reliability is the point where the indicator or test is a constant measure over time, or basically, the participants provide the same responses at a unique time (David and Sutton 2011: 266). Cronbach's Alpha test was performed to define the reliability of the survey questionnaire. A reliability alpha coefficient test determines whether the questionnaire was right in expecting a certain gathering of items to produce interpretable statements about individual differences (Cronbach 1951: 29; Tavakol and Dennick 2011). It checks whether the variables measured were stable or constant.

The Cronbach's alpha coefficients for selected questions in the questionnaire are presented in Table 3.6.

<b>Table 3.6: Cronbach's Alpha Coefficient testing</b>			
<b>Questions in the questionnaire</b>		<b>No. of Items</b>	<b>Cronbach's Alpha</b>
9	Please indicate how often you use the following methods of assigning costs to units produced in your firm?	4	0.523
10	Please indicate how often you use the following costing systems in your firm?	3	0.738
12	Please indicate how often you use the following budgets in your firm?	2	0.594
13	Please indicate how often you use the following budget systems in your firm?	3	0.723
14	Please indicate how often you prepare the following budgets?	2	0.473
16.1	Please indicate how often your firm uses the following financial measures?	2	0.489
16.2	Please indicate how often your firm uses the following non-financial measures?	6	0.724
18	How often does your firm use the following SMA practices?	5	0.848
20.1	Please indicate how often your firm uses the following short-run analysis?	3	0.669
20.2	Please indicate how often your firm uses the following long-run analysis?	4	0.947
21	Please indicate how often you formulate or prepare your firm's strategy?	3	0.700
22	How has management accounting been useful in your firm?	6	0.879
23	To what extent do you agree with the following statements: about the factors that affect your firm's use of MAPs?	13	0.786
24	Please indicate any use of the following technology equipment?	2	0.601
25	During the past 3 years, in your opinion, has your firm experienced decrease or increases?	7	0.916
<b>Average Cronbach's Alpha Coefficient</b>			<b>0.707</b>
Note: The average Cronbach's alpha coefficient/total number of questions			

The computed average Cronbach's alpha coefficient for the questions in the survey questionnaire was 0.707 for all variables. Thus, the responses in the questionnaires were deemed reliable and consistent as the average Cronbach's alpha coefficient that is equivalent to or more than 0.70 is considered a good estimate of internal consistency and reliability (Bruwer 2010: 40). The section below covers the ethical considerations of this study.

### **3.15 Ethical considerations**

Saunders *et al.* (2009: 183) detailed that “ethics refers to the appropriateness of your behaviour in relation to the human rights of those who become the subject of our work, or affected by it”. Further considerations such as a guarantee that no participants were to be placed in any harmful situation or risk following their participation in this study and strictly observing all moral methods provided were a requirement of trustworthiness and reliability regarding the data gathered and additional data analysis (Madsen and Davis 2009: 5). The participants’ right to privacy was kept at all times. Additionally, “any barriers to privacy were made clear to participants, such as notifying them of who may have admission to the data (e.g. the research supervisors and the statisticians)” (Gajjar 2013). Respondents were also made aware of their freedom to withdraw from the study at any time without fear of any consequences.

Approval to conduct a research was obtained from DUT’s IREC prior commencing with data collection. IREC requires that the respondents of such study must be protected against any potential risks that may arise because of participating in the research study. As directed by the DUT policies and procedures regarding ethical issues, all ethical considerations were adhered to in this research study. For the ethical clearance letter, see Appendix C.

The purpose and procedures of this study were highlighted in the letter of information and consent letter. Thereafter, both were explained to the participants during the research process, and both were sent together with the questionnaire. For the letter of information and consent letter, see Appendix B.

#### **3.15.1 Confidentiality and anonymity**

The participants were assured of anonymity as their personal details were not requested in the questionnaires. They were also guaranteed that the confidentiality of their answers would not be disclosed to third parties. Tustin, Lightelm, Martins and Van Wyk (2005) stated that participants should be willing and informed and the data or information they provide must be held in utmost confidence. In addition, the participants were made aware that their information and responses would be

destroyed after five years. Lastly, all the results of this study were used solely for the objective of this study.

The following section provides a brief summary of the key aspects covered in this chapter.

### **3.16 Summary**

The objective of this chapter was to outline the research methodology used to collect data required for analysis and interpretation of the results. The quantitative approach was used and a self-administered questionnaire was used to gather data from a census of 51 owners or managers who were thought to be the decision makers of SMEs. Data analysis and interpretation was done by using descriptive statistics. Descriptive statistics involved the use of tables and measures of central tendency, as well as Cronbach's alpha. The response rate was discussed, as well as the measures to ensure reliability and validity, the limitations of the research methodology, and lastly ethical considerations. The research methodology discussed in this chapter was deemed appropriate to achieve the objectives of this study.

Next, chapter four provides the presentation and discussions of the results of this study and the descriptive and test-statistics used for analysis.

## **CHAPTER FOUR**

### **PRESENTATION AND DISCUSSION OF THE RESULTS**

#### **4.1 Introduction**

Chapter three provided the discussion of the research methodology used in this study. Chapter four presents, interprets and discusses the results of the questionnaire survey undertaken to assess the extent of use of MAPs by clothing/textile SMEs in Newcastle. This chapter commences by re-stating the research objectives. It then presents the respondents' biographical information. It also presents and discusses the results on the extent of use of the five MAPs assessed in this study, the results on the role played by MAPs in the management of SMEs, and the factors that affect the extent of use of MAPs by SMEs. This chapter also presents and discusses the use of the technology equipment, and the performance of the firm in the last three years in operations. Lastly, the chapter provides a summary of the results.

The research objectives are addressed through the analysis of the respondents' responses received from Newcastle clothing/textile manufacturing SMEs. The study's results are also compared to selected literature which was discussed in chapter two.

The following section recaps the research objectives of the study as outlined in chapter 1.

#### **4.2 Restatement of the research objectives**

The main purpose of this study was to assess MAPS in clothing/textile manufacturing SMEs in Newcastle, KwaZulu-Natal. To achieve this purpose four research objectives were formulated: first, to determine the extent to which MAPs are employed by Newcastle clothing SMEs, secondly, to identify the roles played by MAPs in Newcastle clothing SMEs' management, thirdly to determine the factors that affect the extent of use of MAPs among Newcastle clothing SMEs, and lastly, to determine the relationship, if any, between MAPs and the performance of SMEs.

The following section presents, interprets and discusses the biographical information of the respondents. These results are presented in Tables 4.1 to 4.7.

### 4.3 The respondents' biographical information

This section discusses the biographical information of the Newcastle clothing/textile SMEs surveyed. Biographical information is necessary to ensure that the respondents were the right persons to answer the questionnaire and it also allows for a richer analysis of the data. Moreover, this was done to ensure that only targeted SMEs were included in this research study.

#### 4.3.1 The registration status of the firm

Respondents were asked to describe the status of their enterprise. The main purpose of this question was to determine the registration status of the responding firms. These results are shown in Table 4.1.

<b>Types of businesses</b>	<b>Number</b>	<b>Percent</b>
Sole trader	13	27.1
Public company	2	4.2
Close corporation	11	22.9
Partnership	6	12.5
Private company	15	31.3
Unregistered/informal	1	2.0
<b>Total</b>	<b>48</b>	<b>100.0</b>

The results indicated that out of 48 respondents, 15 (31.3%) respondents were registered as private companies. This is followed by 13 (27.1%) respondents who indicated they are registered as sole traders and 11 (22.9%) respondents who indicated they are registered as a close corporation. Six (12.5%) respondents cited partnership, two (4.2%) respondents indicated that they are in public companies and lastly one (2.1%) respondent indicated that the firm is an unregistered or informal business. The two major groups were therefore identified as private companies (31.3%) and sole traders (27.1%).

These results confirmed that the respondents who had responded to the questionnaire were SMEs; however, two respondents were public companies and therefore were not likely to be SMEs. Initially these two companies were categorised as SMEs on the Newcastle Business Portfolio (2013/2014); the postulation is that these SMEs had

spread the risk of ownership among a large group of shareholders. Nevertheless, the results of these two respondents have been included in the discussions which follows.

### 4.3.2 The number of years in operation

As far as the number of years in operation is concerned, these results are shown in Table 4.2.

<b>Table 4.2: The number of years in operation</b>		
<b>Number of years</b>	<b>Number</b>	<b>Percent</b>
1 – 3	13	27.1
4 – 10	17	35.4
11 – 20	17	35.4
> 20	1	2.1
<b>Total</b>	<b>48</b>	<b>100.0</b>

Table 4.2 above shows that 17 (35.4%) respondents have been in operation for between 4 - 10 years and that 17 (35.4%) respondents have been in business for between 10 -20 years. This is followed by 13 (27.1%) respondents who have been in operation for 1 - 3 years. Only one (2.1%) respondent had been in operation for more than 20 years. Forty-seven (97.9%) respondents have thus been in existence for 20 years or less. A little more than a third each (35.4%) had been in existence for between 4 – 10 years and 11 – 20 years each. This implies that once they survive the first three years, SMEs are progressing to the 4 – 20 years' category which is referred to as survivalists (Mbongo 2011). These results indicate that these SMEs have been in existence for a while, which suggests that the responses received were from owners or managers who had rich experience and knowledge about their firms.

The following section presents and discusses the results on the number of employees employed in the firms.

### 4.3.3 The number of employees

This question determined the number of employees employed by the firm. The results are shown in Table 4.3.

<b>Number of employees</b>	<b>Number</b>	<b>Percent</b>
0 – 20	36	75.0
21 – 50	4	8.3
51 – 150	7	14.6
> 150	1	2.1
<b>Total</b>	<b>48</b>	<b>100.0</b>

Table 4.3 indicates that out of the 48 respondents, 36 (75.0%) respondents employed between 0 - 20 employees, seven (14.6%) respondents employed between 51 - 150 employees, four (8.3%) respondents employed between 21 - 50 employees and one (2.1%) respondent employed more than 150 employees.

This further highlights that the right group responded to the survey, as this study targeted SMEs that fall in the SMEs' categories. Furthermore, 47 of the 48 respondents included in this study were all SMEs which were the target population of this study. Only one firm employed more than 150 employees and this firm was a public company.

The following section presents and discusses the results of the annual sales turnover of the firms.

### 4.3.4 The annual turnover

The aim of this question was to establish if the respondents' firms were meeting the SMEs' annual turnover classification requirements. These results are shown in Table 4.4.

<b>Annual turnover</b>	<b>Number</b>	<b>Percent</b>
< R1 000 000	37	77.1
R1 000 000 - R2 000 000	1	2.1
R2 000 000 - R4 000 000	10	20.8
<b>Total</b>	<b>48</b>	<b>100.0</b>

Table 4.4 shows that out of 48 respondents, 37 (77.1%) respondents had less than R1 000 000 annual turnover. This was followed by ten (20.8%) respondents whose firms had between R2 000 000 – R4 000 000 annual turnover, and one (2.1%) respondent whose firm had between R1 000 000 – R2 000 000 annual turnover. The results revealed that all targeted respondents met the requirements and definition of SMEs in South Africa based on turnover (South Africa 2004). The clothing/textile manufacturing sector in Newcastle thus consists mainly of small-sized enterprises with an annual turnover of less than R1 000 000 (i.e. 37 firms out of 48, or 77.1%). (No firms indicated that their turnover exceeded R 4000 000.)

The following section presents and discusses the results of the target market of the firms.

#### 4.3.5 The target market of the firm

A question asked respondents to indicate their firm's target market. These results are shown in Table 4.5.

Target market	Number	Percent
Sell to local communities	25	52.1
Sell to other provinces	8	16.6
Sell to international markets	15	31.3
<b>Total</b>	<b>48</b>	<b>100.0</b>

Table 4.5 shows that out of the 48 respondents, 25 (52.1%) respondents sell their products to the local communities, followed by 15 (31.3%) respondents who sell their products to international markets and lastly, eight (16.7%) respondents who sell their products in other provinces in South Africa. As 25 (i.e. 52.1%) SMEs sell the products locally, this suggests that they have to compete with each other in pricing strategy especially if they are selling a similar product. Makhado (2015: 42) confirmed that a challenge facing SMEs is the lack of workable markets for their products or services. They tend to produce and offer services that do not have a ready market. The above results therefore also suggest that the Newcastle clothing/textile SMEs' products are mostly sold locally. Mensah-Agyei (2012) confirmed that SMEs are locally based and therefore their target markets are based on the communities they operate in.

The following section presents and discusses the results on the employment of accounting staff in the firms. It was necessary to find out the level of education of owners or managers in the SMEs because of the perception that education and training plays an essential role in an enterprise’s development and success and the government should promote the role of education and training in the growth of SMEs.

#### **4.3.6 Employment of the accounting staff and the level of education of the accounting staff**

This section presents and discusses the results on the employment of the accounting staff as well as the level of education of the employed accounting staff. The respondents were asked to firstly confirm with a “yes” or “no” response whether they employed any accounting staff. Table 4.6 summarises the results on the employment of accounting staff.

<b>Table 4.6: Employment of the accounting staff</b>		
<b>Does the firm employ accounting staff?</b>	<b>Number</b>	<b>Percent</b>
Yes	22	51.2
No	21	48.8
<b>Total</b>	<b>43</b>	<b>100</b>
Note: Only 43 respondents answered this question.		

Table 4.6 indicates that 22 (51.2%) respondents out of 43 do employ accounting staff. Whereas, 21 or 48.8% of respondents do not employ any accounting staff in their firms. The results of this study confirmed that not many clothing SMEs in Newcastle employ accounting staff. Chimucheka (2012: 6) notes that in South Africa, lack of appropriate education and training has subsequently reduced the management capacity of SMEs. Nieman and Niewenhuizen (2014: 31) also state that in “South Africa, the lack of corporate education is seen as one of the most significant barriers to entrepreneurial activity”.

Concerning the level of education of the employed accounting staff, Table 4.7 below summarises the results of this question. The aim of this question was to ascertain the level of education obtained by the accounting staff of the firms, as this is well documented as one of the key challenges facing SMEs. Ingle (2014: 40) asserted that the low education qualifications of business owners-administrators and lack of

previous experience in managing a business are reasons why SMEs fail in South Africa.

<b>Level of education</b>	<b>Number</b>	<b>Percent</b>
Lower than Senior Certificate (Matric)	1	4.5
Senior Certificate (Matric)	4	18.3
Undergraduate Certificate	7	31.8
Trade Skills	5	22.7
University Degree or Diploma	5	22.7
<b>Total</b>	<b>22</b>	<b>100</b>

Table 4.7 shows that out of the 22 respondents who employed accounting staff, only seven (31.8%) respondents' accounting staff possess undergraduate certificates. This was followed by five (22.7%) respondents whose accounting staff had developed trade skills within the clothing/textile SME sector and five (22.7%) accounting staff who had university degrees or diplomas. Four (18.2%) of the respondents' accounting staff possessed senior certificates (matric). Only one (4.5%) respondent's accounting staff had a qualification lower than a senior certificate.

Consequently, the majority of the respondents who indicated that they employed accounting staff in their firms, had employed accounting staff with academic qualifications or relevant skills. These results may suggest that for at least 22 of the respondents, there was an effective accounting function within the respondents' firms.

The next section presents, interprets and discusses the results obtained from the respondents to address the research questions established from the research objectives of this study. These objectives were aligned to sections two, three, four and five of the questionnaire.

## 4.4 Types of management accounting practices used by SMEs

This section provides a detailed analysis of the respondents' responses pertaining to the extent of use of MAPs by Newcastle SMEs (i.e. to assess the extent to which MAPs are employed by Newcastle clothing SMEs). The study assessed only five MAPs namely, the costing systems, the budgeting systems, the PMTs, the SMA, and the decision support systems. To achieve the first research objective of this study, the above five MAPs were deemed appropriate as the area of research.

The results of the questions on the extent of use of MAPs by SMEs are presented and discussed in the next section. These questions addressed objective 1 of this study.

### 4.4.1 The extent of use of MAPs by SMEs

Each question in section two of the questionnaire firstly requested that the respondents specify whether ("yes" or "no") they use each practice in their firms. This question was answered by 48 (100%) respondents. Table 4.8 details the results of the extent of use of MAPs by Newcastle clothing/textile manufacturing SMEs. These results show the number of respondents who use the five MAPs; as well as the ranking of MAPs based on the respondents who indicated a "yes" response.

MAPs	Results				Ranking*
	Yes	%	No	%	
Costing systems	25	52.1%	23	47.9%	<b>3</b>
Budgeting systems	42	87.5%	6	12.5%	<b>1</b>
PMTs	12	25.0%	36	75.0%	<b>5</b>
SMA	21	43.8%	27	56.3%	<b>4</b>
Decision support systems	29	60.4%	19	39.6%	<b>2</b>

Note: \* The ranking of MAPs is based on the extent of use only.

The results in Table 4.8 show that out of the five MAPs assessed, budgeting systems are the most used MAP by 42 (87.5%) respondents, followed by 29 (60.4%) of respondents who used decision support systems. This was followed by 25 (52.1%) of respondents who used costing systems. Twenty-one (43.8%) respondents indicated that they use SMA in their firms. Only 12 (25.0%) respondents used the PMTs in their firms; thus, this was the least preferred practice amongst the five MAPs surveyed.

With regards to the respondents who did not use the five MAPs assessed, the results indicated that out of 48 (100%) respondents, 36 (75.0%) respondents indicated that they do not use the PMTs, 27 (56.3%) respondents indicated that they do not use the SMA, 23 (47.9%) respondents indicated that they do not use the costing systems, and 19 (39.6%) respondents indicated that they do not use decision support systems. Lastly, the results indicated that only six (12.5%) respondents specified that they never use the budgeting systems.

In terms of the ranking of the five MAPs under investigation, the most used MAPs are the budgeting systems, followed by the decision support systems. However, costing systems were also used by Newcastle clothing/textile SMEs as they are ranked third by the respondents. As summarised in Table 4.8 above, the ranking of the MAPs is based on the results drawn from only from the respondents who indicated “yes” - they use the MAPs surveyed.

In comparison with previous studies, the current study’s results both agree and disagree with the selected previous studies drawn from the literature review in chapter two of this research study. These studies are presented in Table 4.9 below.

	<b>Costing systems</b>	<b>Budgeting systems</b>	<b>PMTs</b>	<b>SMA</b>	<b>Decision support systems</b>
<b>Author(s) and Country</b>					
1. Ilias <i>et al.</i> (2010) in Malaysia		X (1)			
2. Ahmad (2012) in Malaysia	X (1)	X (2)	X (3)	X (5)	X (4)
3. Yalcin (2012) in Turkey	X (2)	X (1)	X (3)		
4. Uyar 2010 in Turkey		X (1)	X (2)		
5. Gichaaga (2013) in Kenya	X (4)		X (3)	X (2)	X (1)
6. Maqbool-ur-Rehman (2011) in Pakistan		X (1)	X (3)		X (2)
7. Mbumbo (2015) in South Africa	X (2)	X (1)	X (3)		
8. Maduekwe (2015) in South Africa	X (3)	X (1)	X (2)		
9. Tabot (2015) in South Africa		X (1)			
10. This current study	X (3)	X (1)	X (5)	X (4)	X (2)
Note: The rankings of the MAPS in the various studies are shown in brackets.					

As summarised in Table 4.9, the results of this study are compared with the results (and the rankings of MAPs) of previous studies in management accounting. The current study's results are in line with those of Ilias *et al.* (2010) who found that the majority (67%) of the 58 Malaysian SMEs sampled used budget techniques. The study by Uyar (2010) also concluded that the most usage of MAPs by Turkish SMEs are budgeting tools. Similarly, Yalcin (2012) found that in Turkish manufacturing firms traditional MAPs, predominantly traditional budgeting, had higher adoption rates than contemporary MAPs such as ABC, life cycle costing and target costing, which was found to be the second most used. However, in contrast, this study found costing systems to be the third preferred MAPs by Newcastle clothing/textile SMEs after the decision support systems. The current study's results showed that the decision support systems are the second preferred MAPs, which disagrees with the findings of Ahmad (2012) who found that the Malaysian SMEs least preferred the use of decision support systems. The use of budgeting systems by Malaysian SMEs was moderate compared to Newcastle clothing/textile SMEs where it was the most used MAP.

The findings of this study are contrary to Gichaaga (2013: 54) in that the Kenyan SMEs mostly used the SMA. However, this study agrees with the extent of use of the decision support systems which also Gichaaga (2013: 56) reported a greater use of this practices by Kenyan SMEs. Gichaaga (2013: 56) found that "in Kenya that information for decision-making practices is the most highly used MAP, and then followed by SMA, budgeting, PMTs and lastly costing". The current study's results are in line with Maqbool-ur-Rehman (2011) who discovered that under strong market-competition, traditional MAPs were more often used in Pakistan SMEs compared to advance MAPs. Pakistan SMEs highly preferred the budgeting techniques. The above MAPs were found to be essential for the financial management of Pakistani SMEs. These results of this study also agree with Maqbool-ur-Rehman's (2011) finding that the budgeting systems are most preferred; however, the findings do not agree with the use of performance evaluation tools in that this study revealed that PMTs are the least preferred MAP by SMEs in Newcastle.

The current study's results are also in line with the South African studies of Maduekwe (2015) and Tabot (2015). Maduekwe (2015) surveyed SMEs in the Western Cape,

Cape Metropole and reported that the traditional budget and costing are the popular MAPs used. Tabot (2015) reported that most of the Cape Metropole SMEs prepared budgeting systems. Although the above results are consistent with those of Maduekwe (2015) and Tabot (2015); the SMA and the decision support systems were not investigated by these authors. This suggests that budgeting systems are the most preferred MAPs by SMEs.

This section focused on a detailed assessment of studies based on the extent of use of MAPs by SMEs. A comparison between the results of this study and studies conducted in South Africa and in other countries was also made. The empirical evidence shows that traditional MAPs are still being used by most SMEs. Also, the conclusions drawn from previous studies were mostly similar in establishing that traditional MAPs are more commonly used than the more recently developed MAPs.

#### 4.4.2 Test statistics: The extent of use of MAPs

To ascertain whether the scoring patterns per statement were similar per option, a single variable chi-square test was done. These results are shown below in Table 4.10.

	<b>Chi-square value</b>	<b>Df</b>	<b>Asymp. Sig.</b>
Do you use any costing systems in your firm?	0.083	1	0.773
Do you use any budgeting systems in your firm?	27.00	1	0.000*
Does your firm use any performance measurement tools (PMTs)?	12.00	1	0.001*
Does your firm use SMA?	0.750	1	0.386
Do you use any decision support systems in your firm?	2.083	1	0.149
Note: * = p-value (Asymptotic significance (2-sided)) is < 0.05			

A Chi-square p-value between “do you use any budgeting systems in your firm?” and “does your firm use any PMTs?” was 0.000\* and 0.001\* respectively (which is less than the significant value of 0.05). Statements with a  $p < 0.05$  indicate statistically significant differences in the level of the agreement by responding SMEs towards the use of budgeting systems and PMTs. This means that there were significant differences between the scoring patterns for those two statements. In this study the

budgeting systems are the highest used and ranked MAPs, whilst PMTs were the lowest used and ranked MAPs. However, in this study the relationship between the extent of use of budgeting systems and the extent of use of PMTs was not tested.

In conclusion, the results of this study reveal that the Newcastle clothing/textile manufacturing SMEs do use the five MAPs surveyed. Although some of the MAPs investigated had low usage, the results show that a large majority (87.5%) of Newcastle SMEs use budgeting systems. The next section covers the extent of use of the costing systems.

#### 4.4 The extent of use of costing systems

This section provides a detailed analysis of the responses pertaining to the extent of use of costing systems by Newcastle SMEs. For the sake of clarity and shortness, the number of respondents that indicated that their firms use the MAPs either “very often” or “always” were added and reported together in the discussion which follows. The results showed that out of 48 (100%) respondents, only 25 (52.1%) respondents used costing systems. These results are shown in Table 4.11.

<b>Table 4.11: The extent of use of costing systems by SMEs</b>									
<b>Costing systems</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>Total</b>	<b>Mean</b>	<b>Std Dev.</b>	<b>Chi-square p-value</b>
Batch costing	0	6	5	10	4	25	3.48	1.04563	0.345
Contract costing	0	1	3	8	13	25	4.32	0.85245	0.003*
Job costing	0	0	1	10	14	25	4.52	0.58595	0.005*
Process costing	2	9	3	9	2	25	3.00	1.09024	0.029*
Absorption costing	1	3	3	18	0	25	3.52	0.87178	0.000*
Activity based costing (ABC)	7	9	4	5	0	25	2.28	1.10000	0.501
Variable costing	3	10	1	11	0	25	2.80	2.0000	0.008*
<b>Total</b>						<b>25</b>			
Note: A Likert scale of 1= never; 2= not often; 3= sometimes; 4= very often; and 5= always was used. * = p-values are <0.05 and are therefore statistically significant.									

Table 4.11 shows that out of the 25 respondents who use costing systems, 24 (96.0%) respondents use job costing (m = 4.52), followed secondly by 21 (84.0%) (i.e. 8 plus 13) respondents who use contract costing (m = 4.32). The third preferred costing

system was absorption costing used by 18 (72.0%) respondents ( $m = 3.52$ ), and batch costing used by 14 (56.0%) (i.e. 4 plus 10) respondents ( $m = 3.48$ ).

Eleven (44.0%) respondents reported using variable costing ( $m = 2.80$ ) and another eleven (44.0%) respondents reported using process costing ( $m = 3.00$ ). The results indicated that the ABC is the least preferred costing system by Newcastle clothing/textile SMEs with only five (20.0%) respondents using this costing system ( $m = 2.28$ ). Table 4.11 thus shows a preference for job costing and contract costing as both of the means exceeded 4.00 (i.e. very often). Furthermore, the chi-square results indicate that there is a statistically significant difference between the scoring of the respondent with regards to contract costing, job costing, process costing, absorption costing and variable costing. The analysis from the chi-square test further reported that there is statistically significant difference in how the respondents scored the statements relating to the extent of use of extent of use of the costing systems. All the p-values are below 0.05, except for the batch costing and ABC. However, the relationship between these two practices was not tested.

Upon comparison with the prior literature, the findings for the costing systems are contrary to previous studies. The differences are perhaps explained by variances in the size of SMEs, type of sector, and the national settings of the participants and the participants in the literature. The results of this study disagree with the findings of Mbumbo (2015) who reported that less than 62% of Western Cape Province's SMEs use job costing. However, these SMEs are operating in the tourism sector, which could be the reason for less use of job costing, compared to clothing/textile SMEs.

On the other hand, the results agree with Uyar (2010) who found that there is a statistically significant difference on the usage of the job costing by Turkey textile manufacturing companies. Uyar (2010) concluded that the use of job costing could be a result of the offers or contracts that the Turkey clothing SMEs obtain from their customers. Notwithstanding that Uyar (2010) study focused on Turkey SMEs, these results suggest that clothing or textile SMEs are likely to use job costing in their industry. It is interesting to note that this was drawn from two different geographical areas South Africa and Turkey; and from SMEs operating in different industries. Table

4.11 further indicates that ABC was the least used costing system by Newcastle clothing/textile manufacturing SMEs. The results of this study are in line with the findings by Alleyne and Weekes-Marshall (2011) who reported that ABC was the least used costing system by three Barbados manufacturing firms. However, the results disagree with the findings of Bogale (2013) who reported that the ABC was the most used management accounting technique amongst Ethiopian manufacturing SMEs.

#### 4.4.1 Tests for an association between the number of years of operation and selected use of the costing systems

Table 4.12 shows a cross-tabulation between the number of years in operation by the firm and the use of costing systems.

<b>Table 4.12: The number of years of operation and the use of costing systems.</b>									
<b>Costing systems</b>	<b>1-3 years</b>		<b>4-10 years</b>		<b>11-20 years</b>		<b>&gt;20 years</b>		<b>Total</b>
Yes	6	46%	4	29%	13	76%	1	100%	25
No	7	54%	12	71%	4	24%	0	0	23
<b>Total</b>	<b>13</b>	<b>100%</b>	<b>17</b>	<b>100%</b>	<b>17</b>	<b>100%</b>	<b>1</b>	<b>100%</b>	<b>48</b>
The result of the Fisher Exact test was 0.024**.									

Table 4.12 shows that SMEs in existence more than ten years (14) are more likely to use costing systems (14 out of 25, or 56%). Fisher's exact test was done to determine whether there was a statistically significant association between the variables. This result is also shown in Table 4.12. The p-value between "do you use any costing systems in your firm?" and "for how many years has your firm been operating?" is 0.024\*\*. This suggests that there is a significant association amongst the two variables. That is, the number of years of operation did play a significant role in terms of whether the costing systems were used.

In conclusion, the above results indicate that the majority of firms use the costing systems covered in this study. The most often used costing system was job costing and contract costing. Absorption and the batch costing were also used by the respondents. On the other hand, process costing and ABC were the least used costing systems. The lower use of ABC is in line with the previous studies. In addition, this study found that the number of years in operation had some effect on whether or not costing systems were used.

The next section presents and discusses the results on the extent of use of budgeting systems.

## 4.5 The extent of use of budgeting systems

This section provides an analysis of the responses in regard to the extent of use of budgeting systems by Newcastle SMEs. For the sake of clarity and shortness, the number of respondents that showed that their firms use the MAPs either “very often, 4” or “always, 5” were added and reported together in the discussion which follows.

These results are shown in Table 4.13.

<b>Table 4.13: The extent of use of budgeting systems by SMEs</b>										
	1	2	3	4	5	Total	Mean	Std Dev.	Chi-square p-value	
<b>Budgets</b>										
Cash flow budget	0	0	0	21	21	42	4.50	0.50606	1.000	
Financial position budget (balance sheet)	17	15	3	7	0	42	2.00	1.08200	0.006*	
Production budget	1	0	5	26	10	42	4.07	0.67690	0.000*	
Purchasing budget	2	0	3	14	23	42	4.38	0.82499	0.000*	
Sales budget	0	0	1	21	19	41	4.44	0.54994	0.000*	
<b>Budget systems</b>										
Flexible budget	14	13	2	12	1	42	2.36	1.28446	0.001*	
Incremental budget	20	10	5	6	1	42	2.00	1.18938	0.000*	
Zero-based budget	10	21	2	2	7	42	2.40	1.36256	0.000*	
<b>Frequency of budget preparation</b>										
Annual budget	0	0	1	17	24	42	4.55	0.55005	0.000*	
Continuous/rolling budget	11	10	5	15	1	42	2.64	1.28446	0.007*	
Monthly budget	0	0	1	14	27	42	4.62	0.53885	0.000*	
<b>Total</b>						<b>42</b>				
Note: A Likert scale of 1= never; 2= not often; 3= sometimes; 4= very often; and 5= always was used.										
* = p-values are <0.05 and are therefore statistically significant.										

Table 4.13 indicates that out of 48 (100%) respondents, only 42 (87.5%) respondents indicated that they used budgets. The most used budgets were the cash flow budget used by 42 (100%) (i.e. 21 plus 21 respondents), followed by the sales budget used by 40 (97.6%) respondents (i.e. 21 plus 19 respondents) and the purchasing budget used by 37 (88.1%) respondents (i.e. 14 plus 23 respondents). The fourth most often used budget was the production budget used by 36 (85.7%) respondents (i.e. 26 plus 10 respondents). All mean scores approximated 4.00 or more indicating the higher levels of usage. However, the financial position budget (balance sheet) was not used by most respondents ( $m = 2.00$ ). The aforementioned results agree with the findings of Ahmad (2012) who stated that the cash flow budget and the sales budget were the most often used budget systems by Malaysian SMEs. Similarly, Maduekwe (2015) reported that the cash flow budget and the sales budget were the most often budgets used by Cape Metropole SMEs.

There was not much support with regards to the actual budget systems. Table 4.13 shows that the mean scores approximated 2.00 indicating the lower levels of usage. The flexible budget system and the zero-based budget system was used by 13 ( $m = 2.36$ ) (i.e. 12 plus 1 respondents) respondents and nine ( $m = 2.40$ ) respondents (i.e. 7 plus 2 respondents) respectively. Seven ( $m = 2.00$ ) respondents (i.e. 6 plus 1 respondent) indicated they used the incremental budget system. Despite the above results, a budget is either based on zero-balances (starting from scratch) to forecast the forthcoming accounting periods; or incremental balances from previous accounting periods. The zero-based budget and incremental budget systems individually seem to be least used budgeting systems by Newcastle clothing/textile SMEs; in contrast, they are essentially the first principles of developing any budgeting system. Furthermore, the results of the chi-square test analysis indicate that all the p-values are below 0.05, except for the cash flow budget. This indicates that there is a statistically significant difference in how the respondents scored the statements relating to the extent of use of budgeting systems.

The third question of Part B required the respondents to specify how often they prepared the budgets in their firms. As summarised in Table 4.13, the results showed that the preparation of a monthly budget ( $m = 4.62$ ) and an annual budget ( $m = 4.55$ )

were the most preferred budget preparation periods or intervals by 41 (97.6%) respondents (i.e. 17 plus 24 respondents). The continuous/rolling budget was the least preferred period or interval for budget preparations as only 16 (38.1%) respondents (i.e. 15 plus 1 respondent) preferred this interval ( $m = 2.64$ ).

#### 4.5.1 Tests for an association between the use of any budgeting systems in the firm and the target market of the firm

A cross-tabulation was performed between the “do you use any budgeting systems in your firm” and the “target market of the firm”. These results are shown in Table 4.14.

<b>Budgeting systems</b>	<b>Sell to local communities</b>	<b>Sell to other provinces</b>	<b>Sell to international markets</b>	<b>Total</b>
Yes	23	4	15	42
No	2	4	0	6
<b>Total</b>	<b>25</b>	<b>8</b>	<b>15</b>	<b>48</b>

The result of the Fisher Exact test was 0.003\*\*.

Fisher's exact test was done to see whether there was a statistically significant association between these variables. The result is shown in Table 4.14. The p-value between “do you use any budgeting systems in your firm?” and the “target market of the firm” is 0.003\*\*. This indicates that there is a significant association between the two variables. This suggest that the market of the firm did play a significant role in terms of whether the firm uses budgeting systems. The majority of Newcastle SMEs sell their goods most in local markets; this could result in a demanding market competition. Maqbool-ur-Rehman (2011) concluded that under market competition, budgeting tools are often used by Pakistan manufacturing SMEs.

In conclusion, among the clothing/textile manufacturing SMEs in Newcastle, the use of the cash flow budget was the most preferred amongst the budgets. The least preferred budget systems were the zero-based budget and the incremental budget. These results are in agreement with studies by Maduekwe (2015), Ahmad (2012), and Abdel-Kader and Luther (2006), which found that the zero-based budget was the least used budgeting systems. Moreover, the annual budget and the monthly budget were the most preferred budget preparation periods by Newcastle clothing/textile

manufacturing SMEs. The next section presents and discusses the results on the extent of use of the PMTs.

#### 4.6 The extent of use of performance measurement tools (PMTs)

This section provides a comprehensive analysis and discussion of the responses in regard to the extent of use of PMTs by Newcastle SMEs. For the sake of clarity and shortness, the number of respondents that showed that their firms use the MAPs either “4=very often” or “5=always” were added and reported together in the discussion of the results. These results are shown in Table 4.15.

<b>Table 4.15: The extent of use of PMTs by SMEs</b>									
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>Total</b>	<b>Mean</b>	<b>Std Dev.</b>	<b>Chi-square p-value</b>
<b>Financial Measures</b>									
Cash flows	0	0	0	8	3	11	4.27	0.46710	0.132
Operating income	0	0	0	8	3	11	4.27	0.46710	0.132
Return on investment	0	6	1	2	2	11	3.00	1.26491	0.147
Sales growth	0	0	0	7	4	11	4.36	0.50452	0.366
<b>Average mean</b>							<b>3.98</b>		
<b>Total</b>						<b>11</b>			
<b>Non-Financial Measures</b>									
Defect rate	1	4	1	5	0	11	2.91	1.13618	0.200
Employee turnover	2	7	0	1	1	11	2.27	1.19087	0.029*
Manufacturing lead/ cycle time	0	1	1	8	1	11	3.82	0.75076	0.004*
Number of customers' complaints	0	0	0	7	4	11	4.36	0.50452	0.366
Number of warranty claims	0	1	2	6	2	11	3.82	0.87386	0.147
On-time delivery	0	0	0	8	3	11	4.27	0.46710	0.132
Survey of customers' satisfaction	0	0	0	6	5	11	4.45	0.52223	0.763
<b>Average mean</b>							<b>3.70</b>		
<b>Total</b>						<b>11</b>			
Note: A Likert scale of 1= never; 2= not often; 3= sometimes; 4= very often; and 5= always was used.									
* =p-values are <0.05 and are therefore statistically significant.									

Table 4.15 shows that out of 48 (100%) respondents, only 11 (22.9%) respondents use PMTs. Financial measures were the most often used compared to the non-financial measures. Concerning the extent of use of the financial measures, cash flows, the operating income, and the sales growth were often used PMTs by eleven (100%) respondents and with means of 4.27, 4.27 and 4.36 respectively. The least used financial measure was the return on investment used by only four (36.4%) respondents ( $m = 3.00$ ).

These results are in line with the findings of Ahmad (2012) who stated that more than 70% of Malaysian SMEs use financial measures, such as the sales growth, operating income, and cash flow analysis. Similarly, Maduekwe (2015) reported that 73% of Cape Metropole SMEs preferred financial measures such as sales growth, operating income as well as cash flow analysis.

As far as the non-financial measures are concerned, the results indicated that the survey of customers' satisfaction, the number of customers' complaints, and on time delivery were the most used by eleven (100%) respondents with mean scores of 4.45, 4.36, and 4.27 respectively. The fourth and fifth most used non-financial measures were the manufacturing lead/cycle time used by nine (81.8%) ( $m = 3.82$ ) respondents, followed by eight (72.7%) ( $m = 3.82$ ) respondents who used the number of warranty claims. The defect rate and employee turnover were the least used non-financial measures, used by only five (45.5%) ( $m = 2.91$ ) and two (18.1%) ( $m = 2.27$ ) respondents respectively. In addition to the above results, a chi-square test was performed and used to test the statistical significance of the data. The p-values for employee turnover and manufacturing lead/cycle time are the only variables below 0.05. This suggests that there was a significant difference in how the respondents perceived the extent of use of the other PMTs.

It is interesting to note that the survey of customers' satisfaction (a non-financial measure) was the most used and employee turnover the least used. The high use of this non-financial measure is perhaps a reflection of the need to improve production quality. The preceding results agree with those of Ahmad (2012) and Maduekwe (2015) who found that measures related to customers were the most utilised non-

financial measures and that the employee turnover was the least utilised non-financial measure by Malaysian and Cape Metropole SMEs respectively. These results also agree with Gichaaga (2013) who found that 88.0% of SMEs used non-financial measures associated with customers and that 85.0% of the respondents used financial measures.

The results of the chi-square test shown in Table 4.15 shows that only two items were statistically significant in how they were scored by the respondents. These were employee turnover and the manufacturing lead/cycle time which had p values of <0.05.

#### **4.6.1 Tests for an association between the “uses of any performance measurement tools (PMTs)?” and “the employment any accounting staff”**

A cross-tabulation was performed between “do you employ any accounting staff?” and “does your firm use any PMTs?” These results are shown in Table 4.16.

<b>Table 4.16: Employment of accounting staff and the use of PMTs</b>			
<b>PMTS</b>	<b>Yes</b>	<b>No</b>	<b>Total</b>
Yes	11	1	12
No	11	20	31
<b>Total</b>	<b>22</b>	<b>21</b>	<b>43</b>

The result of the Fisher Exact test was 0.002\*\*.

A Fisher's exact test was done to determine whether there was a statistically significant association between the variables. Table 4.16 shows that a p-value between “do you use any PMTs in your firm?” and “do you employ accounting staff?” is 0.002\*\*. This means that there is a significant association between the two variables. That is, the employment of accounting staff did play a significant role in terms of whether the PMTs were used by Newcastle clothing/textile SMEs. The lack of qualified accounting staff was evidenced as one of the major challenges facing SMES in the literature (Amoako 2013; Sitharam 2014). The PMTs is the least used MAPs in this current study, however, the SMEs that had employed the accounting staff are likely to use PMTs.

In conclusion, the above results revealed that there are a number of SMEs use both financial and non-financial measures in their enterprises. On the other hand, the dependence on the financial measures (average mean score of 3.98) is higher compared to the non-financial measures (average mean score of 3.70). The low use of the non-financial measures agrees with previous studies but possibly will also be influenced by the size of the firm as it is a challenge for small-sized firms to employ as many performance measures as compared to medium-sized enterprises (Jamil and Mohamed 2011; Langfield-Smith *et al.* 2012). Moreover, as non-financial measures are more newly-developed measures, their extent of use may not be as well-known in contrast to the traditional measures which have been used by many firms. These reasons may influence the low use of non-financial measures established in this study.

The results on the extent of use of SMA are presented and discussed in the next section.

#### **4.7 The extent of strategic management accounting (SMA)**

This section provides a detailed analysis and discussion of the responses in regard to the extent of use of SMA by Newcastle SMEs. A question first asked the respondents if they used SMA. The results indicated that out of the 48 (100%) respondents, 21 (43.8%) respondents use SMA. Table 4.17 sums up the results on the extent of use of SMA by Newcastle clothing/textile manufacturing SMEs answered by the 21 respondents who use SMA. The question asked respondents to indicate their use of SMA by using a Likert scale of 1 = never to 5 = always. For the sake of clarity and shortness, the number of respondents that indicated that their firms use the MAPs either “4=very often” or “5=always” were added and reported together in the discussion which follows. These results are shown in Table 4.17.

<b>SMA is used for:</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>Total</b>	<b>Mean</b>	<b>Std Dev.</b>	<b>Chi-square p-value</b>
Monitoring the costs that occur across stages of product development	0	3	5	9	4	21	3.67	0.96609	0.267
Strategic costing in determining the firm's strategy	2	5	2	7	5	21	3.38	1.35927	0.345
The systematic collection of data on competition's price reactions, demand reactions and the market environment?	0	2	5	8	6	21	3.86	0.96362	0.312
Target costing in the design of new products	2	3	2	9	5	21	3.58	1.28730	0.082*
Taking into account any strategic factors when setting the price	0	1	2	8	10	21	4.29	0.84515	0.011*
<b>Total</b>						<b>21</b>			
Note: A Likert scale of 1= never; 2= not often; 3= sometimes; 4= very often; and 5= always was used. * = p-values are <0.05 and are therefore statistically significant.									

Table 4.17 shows that 18 (85.7%) respondents (i.e. 8 plus 10 respondents) indicated that they very often consider any strategic factors when setting the price of their products (m = 4.29). This was followed by 14 (66.7%) respondents (i.e. 8 plus 6 respondents) who reported that they use the systematic collection of data on competition's price reactions (m = 3.86) and target costing in the design of new products (m = 3.57). Lastly, 13 (61.9%) respondents (i.e. 8 plus 6 respondents) indicated that they monitor the costs that occur across stages of product development (m = 3.67) and the market environment (m = 3.86). These results suggest that the SMEs using SMA believed that the use of SMA is effective judging by their frequent use of SMA. In addition to above results, the chi-square analysis reported that only target costing was statistically significant at  $p < 0.05$ . This indicates that how the respondents' perceived target costing was statistically significant.

In comparison with previous studies, these results agree with the findings by Ahmad (2012) who reported that more than half (52%) of sampled Malaysian SMEs utilised

SMA practices. Ahmad (2012: 191) further concluded that overall, the use of SMA is very low.

#### 4.7.1 Tests for an association between the “use of any SMA” and “number of years in operation”

A cross-tabulation was performed between “For how many years has your firm been operating” and “does your firm use SMA?” The first question was asked to determine the size of the Newcastle clothing/textile SMEs. These results are shown in Table 4.18.

<b>SMA</b>	<b>1-3 years</b>	<b>4-10 years</b>	<b>11-20 years</b>	<b>&gt;20 years</b>	<b>Total</b>
Yes	6	3	11	1	21
No	7	14	6	0	27
<b>Total</b>	<b>13</b>	<b>17</b>	<b>17</b>	<b>1</b>	<b>48</b>

The results of the Fisher Exact test was 0.018\*\*.

Table 4.18 shows that the p-value from Fisher’s Exact test between “for how many years has your firm been operating?” and “does your firm use SMA?” is 0.018\*\*. That is, “the years of operating” did play a significant role in terms of whether the SMA was used by Newcastle clothing/textile SMEs. The belief was that the more years the SMEs have been in operations, the more they are likely to use the SMA.

#### 4.7.2 Tests for an association between the “use of any SMA” and “number of employees”

A cross-tabulation was performed between “How many employees are in your firm?” and “does your firm use SMA?” These results are shown in Table 4.19 below.

<b>SMA</b>	<b>0-20</b>	<b>21-51</b>	<b>51-150</b>	<b>&gt;150</b>	<b>Total</b>
Yes	9	1	2	0	12
No	27	3	5	1	36
<b>Total</b>	<b>36</b>	<b>4</b>	<b>7</b>	<b>1</b>	<b>48</b>

The results of the Fisher Exact test was 0.816.

Table 4.19 shows that the p-value from Fisher's Exact test between "for how many employees are in your firm?" and "does your firm use SMA?" is 0.816. That is, "the number of employees in the firm?" did not play any significant role in terms of whether the SMA was used by Newcastle clothing/textile SMEs. As the number of employees was used to measure the size of the SMEs, the results in Table 4.19 indicate that the size has no influence whether SMEs use SMA.

The next section discusses the results on the decision support systems.

#### **4.8 The extent of use of decision support systems**

This section provides a detailed analysis and discussion of the responses pertaining to the use of decision support systems by Newcastle SMEs. A question posed indicated that 29 respondents (60.4%) out of 48 (100%) use decision support systems. These 29 respondents were then asked how often they used the decision support systems, which were divided into short-run analysis and the long-run analysis, in their firms using a Likert scale of 1 = never to 5 = always. For the sake of clarity and shortness, the number of respondents that indicated that their firms use the MAPs either "very often, 4" or "always, 5", were added and reported together in the discussion that follows.

These results related to the extent of use of decision support systems are summarised in Table 4.20 below.

<b>Table 4.20: The extent of use of decision support systems by SMEs</b>									
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>Total</b>	<b>Mean</b>	<b>Std Dev.</b>	<b>Chi-square p-value</b>
<b>Short run analysis</b>									
Break-even analysis	0	2	3	18	6	29	3.97	0.77840	0.034*
Customer profitability analysis	0	2	6	13	8	29	3.93	0.88362	0.066
Product profitability analysis	0	0	4	14	11	29	4.24	0.68947	0.000*
Stock control model	0	1	1	11	16	29	4.45	0.73612	0.034*
<b>Average mean</b>							<b>4.15</b>		
<b>Long-run analysis</b>									
Accounting rate of return	13	10	0	4	2	29	2.03	1.29512	0.012*
Internal rate of return	10	13	0	3	3	29	2.17	1.31119	0.014*
Net present value	10	10	2	4	3	29	2.31	1.36548	0.033*
Pay back method	14	7	1	4	3	29	2.14	1.43238	0.001*
<b>Average mean</b>							<b>2.16</b>		
<b>Total</b>						<b>29</b>			
Note: A Likert scale of 1= never; 2= not often; 3= sometimes; 4= very often; and 5= always was used.									
* = P-values are <0.05 and are therefore statistically significant.									

Table 4.20 shows that as far as the short-run analysis is concerned, the most preferred practice is the stock control model with 27 (93.1%) respondents (i.e. 11 plus 16 respondents) who indicated that they always use this practice (m = 4.45). This was followed by 25 (86.2%) respondents (i.e. 14 plus 11 respondents) who indicated they used product profitability analysis (m = 4.24). The results also indicated that the customer profitability analysis (m = 3.93), and the break-even analysis (m = 3.97) were often used by 21 (72.4%) (i.e. 13 plus 8 respondents) and 21 (82.8%) (i.e. 18 plus 6) respondents respectively.

The results also revealed that the long-run analyses were least used; these practices were the net present value (m = 2.31), the payback method (m = 2.14) and the accounting rate of return (m = 2.03) used by only seven (24.1%), seven (24.1%) and six (20.7) respondents respectively. The fourth least preferred system (m = 2.17) was the internal rate of return used by only six (20.7%) respondents. The chi-square test was used to test the statistical significance of the data. All the p-values are below

0.05, except for customer profitability analysis. This means that there was a significant difference in how the respondents perceived the extent of usage of the customer profitability analysis.

In comparison with previous studies, the above results are in line with the findings of Ahmad (2012), who found that amongst the MAPs surveyed, decision support systems had the lowest uptake by Malaysian SMEs. Ahmad (2012) concluded that only a moderate number (50%) of Malaysian SMEs used decision support systems. In conclusion, the results of this study suggest that this category of MAPs is part of the new or modern MAPs which tend to use sophisticated calculations. Generally, it was established that a moderate number of respondents make use of short-run decision support analysis practices; and that the same respondents infrequently use long-run decision analysis practices.

#### **4.8.1 Tests for an association between the “use of any decision support systems” and “the employment any accounting staff”**

A cross-tabulation was performed between “does your firm use any decision support systems” and “for how many years is your firm in operations” These results are shown in Table 4.21.

<b>Decision support systems</b>	<b>Yes</b>	<b>No</b>	<b>Total</b>
Yes	21	8	29
No	1	13	14
<b>Total</b>	<b>22</b>	<b>21</b>	<b>43</b>

The result of the Fisher Exact test was 0.000\*\*.

A Fisher's exact test was performed. Table 4.21 shows that the p-value between “employment of accounting staff” and “do you use any decision support systems in your firm?” is 0.000\*\*. This association was chosen because the employment of accounting staff was associated with the use of MAPs within SMEs (Ahmad 2012). This means that there is a significant association between these variables. That is, the employment of accounting staff did play a significant role in terms on whether the decision support systems were used. Sitharam (2014) highlighted that the lack of qualified staff is a challenge that KwaZulu-Natal SMEs is facing. In this study the use

of decision support systems was associated with the employment of the accounting staff; that is, the SMEs that have accounting staff in their firms are likely to use the decision support systems.

A Fisher's exact test was also performed between use of any decision support systems and other variables such as the highest level of education (1.000), target market of the firm (0.074), the number of employees in the firm (0.194), the number of years in operations (0.447), the annual turnover (0.099), and the business status of the firm (0.247); no significant association was found between any of these variables examined. This suggested the afore-mentioned variables did not have any association relationship in whether SMEs used MAPs.

The next section presents and discusses the results of how the responding SMEs formulate the firms' strategy.

#### 4.8.2 The formulation of the firm's strategy

Question 21 asked respondents "how often do you formulate or prepare your firm's strategy". The following three periods or intervals were assessed: continuously, mid-term interval, and the year-end interval. For the sake of clarity and shortness, the number of respondents that indicated that their firms formulate the firm's strategy either "very often, 4" or "always, 5" were added and reported together in the discussion that follows. These results are shown in Table 4.22.

<b>Formulation of firm's strategy</b>									
<b>Frequency</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>Total</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Chi-square p-value</b>
Continuously	0	3	1	19	6	29	3.97	0.82301	0.000*
Mid-term interval	0	3	8	18	0	29	3.51	0.68768	0.002*
Year-end interval	0	0	2	4	23	29	4.72	0.59140	0.000*
<b>Total</b>						<b>29</b>			

Note: A Likert scale of 1= never; 2= not often; 3= sometimes; 4= very often; and 5= always was used.  
 \* = p-values are <0.05 and are therefore statistically significant.

Table 4.22 shows that out of 29 respondents, only 27 (93.1%) respondents (i.e. 23 plus 4 respondents) formulate their firms' strategy on a year-end interval ( $m = 4.72$ ), followed by 25 (86.2%) respondents (i.e. 19 plus 6 respondents) who continuously formulate their firm's strategy ( $m = 3.97$ ), and lastly, 18 (62.1%) respondents who preferred the mid-term interval. Thus, out of the three periods or intervals assessed, the results suggested that the mid-term interval is the least preferred period of strategy formulation by Newcastle clothing/textile SMEs ( $m = 3.51$ ) and the year-end interval is the most popular interval with 23 respondents indicating that it was always used. The results of the chi-square test showed that the p-values for all the statements regarding frequency were  $< 0.05$ , indicating that the respondents rated the frequency of the formulation of the firm's strategy significantly differently.

A summary of the results relating to the first research objective is shown at the end of this chapter. The results on the role played by MAPs in the management of SMEs are presented and discussed in the next section. This following section addresses the second research objective of this study.

## **4.9 The role of management accounting in the management of SMEs**

This section addresses the second research objective which was to identify the roles played by management accounting in Newcastle clothing SMEs' management. This section provides a detailed analysis and discussion of responses pertaining to the roles played by management accounting in the management of Newcastle clothing/textile manufacturing SMEs.

### **4.9.1 The role of management accounting practices in the management of SMEs**

Forty-seven (97.9%) respondents out of 48 (100%) respondents answered this question. For the sake of clarity and shortness, the number of respondents that indicated that their firms use the MAPs either "4=very often" or "5=always" were added and reported together in the discussion that follows. The results of this question are summarised in Table 4.23.

<b>Table 4.23: The role of MAPs in the management of SMEs</b>									
<b>Roles</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>Total</b>	<b>Mean</b>	<b>Std Dev.</b>	<b>Chi-square p-value</b>
For controlling current activities	9	15	6	8	9	47	2.85	1.42918	0.308
For evaluating performance	14	19	6	8	0	47	2.17	1.04921	0.030*
For improving internal and external communication	10	30	3	4	0	47	2.02	0.79371	0.000*
For measuring and optimising the use of the firm's resources	14	13	7	8	5	47	2.51	1.36529	0.164
For planning the future strategies, tactics and operations	9	21	6	7	4	47	2.49	1.21355	0.001*
For reducing the subjectivity in decision making process	13	24	3	6	1	47	2.11	1.02648	0.000*
<b>Total</b>						<b>47</b>			
Note: A Likert scale of 1= strongly disagree; 2= disagree; 3= neither agree nor disagree; 4= agree; and 5= strongly agree.									
* = p-values are <0.05 and are therefore statistically significant.									

Table 4.23 shows respondents' levels of agreement on the roles played by MAPs in the SMEs management. The mean scores for all the items are less than 3 indicating low levels of agreement with the suggested statements. The most appreciated role in the management of SMEs is for controlling the current activities with 17 (36.2%) respondents (i.e. 9 plus 8 respondents) agreeing to the statement (m = 2.85). This was followed by 13 (27.7%) (i.e. 8 plus 5 respondents) and 11 (23.4%) respondents (i.e. 7 plus 4 respondents) who appreciated measuring and optimising the use of the firm's resources (m = 2.51) and for planning the future strategies, tactics and operations (m = 2.49) respectively. On the other hand, the results revealed that the least appreciated roles of MAPs in the management of SMEs were for evaluating performance (m = 2.17), for reducing the subjectivity in decision making process (m = 2.11) and for

improving internal and external communication ( $m = 2.02$ ) indicated by eight (17.0%), seven (14.9%), and four (8.5%) respondents respectively.

The respondents were given an opportunity to specify if they perceived any different roles for the use of MAPs. Out of 47 (97.9%) respondents, only seven (14.9%) respondents provided additional roles for the use of MAPs which were not covered in the questionnaire. These roles were for improving financial reporting, for setting the costs, for identifying poor production, for budget planning and forecasting, for filling out any documents of the business, for the allocation of wages into products and for stock control.

The results of the chi-square test indicated that only two roles were statistically significant in how they had been answered by the respondents with  $p$  values of  $<.05$ . These were for evaluating performance and for improving internal and external communication. This indicates that there was a significant difference in how the respondents rated these two roles.

The above results have similarities to the findings of Abogun and Fagbemi (2012) in Lagos manufacturing SMEs. They reported that 68% of respondents perceived management accounting tools useful for planning, controlling, decision making, and communicating. However, Abogun and Fagbemi (2012)'s study found more usefulness of the roles of MAPs as to compare to Newcastle clothing/textile SMEs. Once more, Ab Rahman *et al.* (2015) reported that the most appreciated roles of MAPs by Kenyan SMEs were for improving decision-making processes and improving communication for tactical actions. These current results also in line with a Canadian and Australian study by Armitage *et al.* (2016) on the usage of contemporary MAPs, which indicated doubts about the helpfulness of MAPs in the SMEs' day-to-day management.

The mean scores of between 2.00 and 3.00 shown in Table 4.23 indicate that MAPs are not perceived to be useful to the management of Newcastle clothing/textile SMEs. In conclusion, the clothing/textile manufacturing SMEs in Newcastle did not agree with the surveyed roles of MAPs in the management of their SMEs.

The question of whether these variables are significant in the management of SMEs is presented and discussed the next section.

#### 4.9.2 Tests for a correlation between “the roles of MAPs in the management of SMEs” and “the use of selected MAPs”

Apart from the frequencies and the mean scores discussed above, a Spearman rho correlation test was also performed. All significant associations between the roles of MAPs in management and the use of SMA are indicated by a \* or \*\*. The use of SMA was selected because of the information these MAPs contribute to the internal reports of the business. These practices were adapted from the study by Ahmad (2012), this was done because SMA practices are not used by SMEs. These results are shown in Table 4.24.

		<b>Absorption costing</b>	<b>Variable costing</b>	<b>Purchasing budget</b>	<b>Defect rate</b>
Monitoring the costs that occur across stages of product development	Correlation Coefficient	0.099	-0.047	-0.034	0.406
	Sig. (2-tailed)	0.678	0.844	0.883	0.244
	N	20	20	21	10
Strategic costing in determining the firm's strategy	Correlation Coefficient	.539*	0.018	.460*	0.304
	Sig. (2-tailed)	0.014	0.940	0.036	0.393
	N	20	20	21	10
The systematic collection of data on competition's price reactions, demand reactions and the market environment	Correlation Coefficient	0.170	0.115	-0.034	0.395
	Sig. (2-tailed)	0.474	0.629	0.884	0.258
	N	20	20	21	10
Target costing in the design of new products	Correlation Coefficient	.651**	0.326	0.298	0.498
	Sig. (2-tailed)	0.002	0.161	0.190	0.143
	N	20	20	21	10
Taking into account any strategic factors when setting the price	Correlation Coefficient	.503*	.535*	0.186	.711*
	Sig. (2-tailed)	0.024	0.015	0.420	0.021
	N	20	20	21	10

Note: \*\* = Correlation is significant at the 0.01 level (2-tailed) and \* = Correlation is significant at the 0.05 level (2-tailed).

With regard to the roles of MAPs in the management of SMEs, the results indicated that the correlation value between “strategic costing in determining the firm’s strategy” and “absorption costing” is 0.539\*. This is a significant positive correlation the two variables mentioned. Similarly, the correlation value between “strategic costing in determining the firm’s strategy” and “the purchasing budget” is .460\*. This also indicates a positive significant correlation between the two variables. The results also indicated a positive significant correlation (.651\*\*) between the “target costing in the design of new products” and “absorption costing”. The correlation value between “taking into account any strategic factors when setting the price” and the “absorption costing” is .503\*. This implies a positive significant correlation between these variables. Similarly, the correlation value between “taking into account any strategic factors when setting the price” and “variable costing” is .535\*. This implies a positive significant correlation between these variables. There was also a correlation between “taking into account any strategic factors when setting the price” and the “defect rate” is .711\*. This implies a positive significant correlation between these variables. Another correlation test was also performed between the roles of MAPs in the management of SMEs and the use of other types of MAPs; however, there were no positive significant associations found between any of the variables examined.

In conclusion, amongst the role played by MAPs in the management of SMEs, the correlation coefficient test showed a positive significant statistical association between the selected variables. A summary of the results relating to the second research objective is shown at the end of this chapter.

The results on the factors that affect SMEs from using MAPs are presented and discussed in the next section. This following section addresses the third objective of this study.

## 4.10 Factors which affect the extent of use of management accounting practices

This section provides a detailed analysis and discussion of the responses pertaining to the factors that affect Newcastle clothing/textile manufacturing SMEs from using MAPs. This section addresses the third research objective which was to determine the factors that affect the extent of use of MAPs among Newcastle clothing SMEs. The respondents were asked to agree or disagree with various statements using the five-point Likert scale of 1 = strongly disagree to 5 = strongly agree. The respondents were also given an opportunity to specify other factors other than those listed in the questionnaire. For the sake of clarity and shortness, the number of respondents that factors as being “4=very often” or “5=always” were added and reported together in the discussion that follows.

### 4.10.1 Factors which affect the extent of use of MAPs in Newcastle clothing SMEs

The results of the question asking for respondents’ opinions on the factors that affect the use of MAPs are shown in Table 4.25.

<b>Factors</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>Total</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Rank</b>	<b>Asymp. Sig.</b>
Unable to understand MAPs	0	8	8	29	3	48	3.56	0.84818	12	0.000*
The benefits of the MAPs are too difficult to be observed	0	1	7	20	20	48	4.23	0.77842	9	0.000*
No important benefits perceived from the use of MAPs	0	3	12	22	11	48	3.85	0.85027	11	0.002*
The firm is too small to implement MAPs	0	0	0	25	22	47	4.46	0.50437	3	0.662
The new-developed or modern MAPs are too complex to use	0	0	2	28	18	48	4.33	0.55862	5	0.000*
High cost to implement MAPs	0	0	0	19	29	48	4.60	0.49420	1	0.149
Lack of information on affordable accounting services	0	0	4	24	20	48	4.33	0.63021	6	0.001*

Lack of education and basic in-house training	0	0	0	24	24	48	4.50	0.50529	2	0.000*
Lack of top management support	0	0	1	18	29	48	4.58	0.53924	4	0.000*
Lack of skillful accounting staff	1	4	7	14	22	48	4.08	1.06857	10	0.000*
Lack of up-to-date publications about MAPs and new developed practices	1	0	4	29	14	48	4.17	0.66311	7	0.000*
Lack of computers and technology systems	5	21	22	0	0	48	2.35	0.66811	13	0.003*
Lack of computer programmes relevant to MAPs	1	2	3	33	9	48	3.98	0.78522	8	0.000*
<b>Total</b>						<b>48</b>				
Note: A Likert scale of 1= strongly disagree; 2= disagree; 3= neither agree nor disagree; 4= agree; and 5= strongly agree.										
* = p-values less than 0.05.										

In the following discussion, the mean scores were used to provide a ranking of the factors affecting the use of MAPS. As far as the factors that affect the use of MAPs are concerned, the first two main factors were the “high cost to implement MAPs” and “the lack of education and basic in-house training” identified by 48 or 100% of respondents (i.e. 19 plus 29; and 24 plus 24 respectively) as an affecting factor. The third factor was that “the firm is too small to implement MAPs” with 47 or 97.9% of respondents (i.e. 25 plus 22) citing this factor. The fourth and fifth factors were the “lack of top management support”, and “the new-developed or modern MAPs are too complex to use” cited by 47 or 97.9% (i.e. 18 plus 29) and 46 or 95.8% of respondents (i.e. 28 plus 18) respectively. The sixth cited factor to which 44 or 91.7% of respondents (i.e. 24 plus 20) perceived as affecting the use of MAPs was that there is a “lack of information on affordable accounting services”.

The seventh cited factor was “the lack of up-to-date publications about MAPs and new developed practices” with 43 or 89.6% of respondents (i.e. 29 plus 14) this factor. In eighth place, 42 or 87.5% of respondents (i.e. 33 plus 9) agreed that there is the “lack of computer programmes relevant to MAPs”; and followed by 40 or 83.3% of respondents (i.e. 20 plus 20) that agreed that “the benefits of the MAPs are too difficult to be observed” (ninth). Whereas, 36 or 75.0% of respondents (i.e. 22 plus 14) agreed

that there is a “lack of skilful accounting staff” in their firms (10<sup>th</sup>) and 33 or 68.8% of respondents (i.e. 22 plus 11) agreed that there are “no important benefits perceived from the extent of use of MAPs” (11<sup>th</sup>). Lastly, 32 or 66.7% of respondents (i.e. 29 plus 3) that agreed that they are “unable to understand MAPs” (see Table 4.25) (12<sup>th</sup>).

The “lack of computers and technology systems” was perceived as the lowest factor amongst the factors surveyed (13<sup>th</sup>). Twenty-two (22 or 45.8%) of the respondents “neither agreed nor disagreed” with the statement; followed by 21 or 43.8% of respondents who “disagreed” with the statement, and lastly, five or 10.4% of respondents who “strongly disagreed” with the statement. This was further confirmed by the mean score of 2.35 which also showed that the “lack of computers and technology systems” was the lowest affecting factor. A number of the statements showed statistically significant differences in how the respondents scored the statements (with p values of <0.05). However, in most instances the respondents’ scores were expressing either agreement or disagreement, even though at different levels of support.

The respondents were given an opportunity to specify any different factors than those surveyed. Only three (6.3%) respondents reported different factors and strongly agreed that these factors affected their usage of MAPs. These factors are “the lack of required skills and resources”, “the lack of awareness programmes”, and that “the information regarding MAPs is not easily obtained”. The results of this study can be compared to the findings of Alsmirat (2013) who investigated factors that hindered Jordanian SMEs from preparing monthly management accounts, among other questions. The most reported factors were that qualified accountants are expensive (85%); followed by accounting records were too difficult to understand (70%); and the lack of accounting staff (57%). The difference in results may be due to the fact that Alsmirat’s (2013) was conducted in Jordan and thus the factors affecting SMEs in Jordan could be different to those affecting SMEs in Newcastle, KwaZulu-Natal, given that the South African government provides support to SMEs. On the other hand, a study by Phenya (2011) found that the majority of SME owners or managers in the Mpumalanga Province lacked financial management skills and relevant tertiary education.

In addition, a cross-tabulation was performed between the “lack of computers and technology” and the “level of education of the employed accounting staff”. These results are shown in Table 4.26.

<b>Table 4.26: Level of education of the employed accounting staff and the lack of computers and technology</b>						
<b>The lack of computers and technology</b>	<b>&lt;Senior Certificate (Matric)</b>	<b>Senior Certificate (Matric)</b>	<b>Undergraduate Certificate</b>	<b>Trade Skills</b>	<b>University Degree or Diploma</b>	<b>Total</b>
Disagree	0	2	5	3	4	14
Neither disagree nor agree	1	2	2	2	1	8
<b>Total</b>	<b>1</b>	<b>4</b>	<b>7</b>	<b>5</b>	<b>5</b>	<b>22</b>
The results of the Fisher Exact test was 0.641**.						

A Fisher's exact test was performed between the “lack of computers and technology” and the “level of education of the employed accounting staff”. Table 4.26 shows that the p-value between the “lack of computers and technology” and the “level of education of the employed accounting staff” is 0.641\*\*. This means that there is a significant association between these variables. That is, the more qualified the respondent, the less the lack of computers and technology was seen as a factor affecting the use of MAPs.

The following section presents and discusses the binomial test for the factors affecting the use of MAPs by SMEs.

#### **4.10.2 Binomial test for the factors affecting the use of MAPs by SMEs**

Table 4.27 presents the results and analyses the results from the binomial test. Group 1 represents the respondents who disagreed or were neutral towards the statement. Group 2 represents those respondents who agreed or strongly agreed with the statements.

<b>Table 4.27: Binomial test results for the factors affecting SMEs from using MAPs</b>							
		<b>Category</b>	<b>N</b>	<b>Observed Prop.</b>	<b>Test Prop.</b>	<b>Exact Sig. (2-tailed)</b>	<b>No.</b>
Unable to understand MAPs	Group 1	<= 3	16	0.33	0.50	0.029*	<b>1</b>
	Group 2	> 3	32	0.67			
	Total		48	1.00			
The benefits of the MAPs are too difficult to be observed	Group 1	<= 3	8	0.17	0.50	0.000*	<b>2</b>
	Group 2	> 3	40	0.83			
	Total		48	1.00			
No important benefits perceived from the use of MAPs	Group 1	<= 3	15	0.31	0.50	0.013*	<b>3</b>
	Group 2	> 3	33	0.69			
	Total		48	1.00			
The firm is too small to implement MAPs	Group 1	<= 3	0	0.00	0.50	0.000*	<b>4</b>
	Group 2	> 3	47	1.00			
	Total		47	1.00			
The new-developed or modern MAPs are too complex to use	Group 1	<= 3	2	0.04	0.50	0.000*	<b>5</b>
	Group 2	> 3	46	0.96			
	Total		48	1.00			
High cost to implement MAPs	Group 1	<= 3	0	0.00	0.50	0.000*	<b>6</b>
	Group 2	> 3	48	1.00			
	Total		48	1.00			
Lack of information on affordable accounting services	Group 1	<= 3	4	0.08	0.50	0.000*	<b>7</b>
	Group 2	> 3	44	0.92			
	Total		48	1.00			
Lack of education and basic in-house training	Group 1	<= 3	0	0.00	0.50	0.000*	<b>8</b>
	Group 2	> 3	48	1.00			
	Total		48	1.00			
Lack of top management support	Group 1	<= 3	1	0.02	0.50	0.000*	<b>9</b>
	Group 2	> 3	47	0.98			
	Total		48	1.00			
Lack of skillful accounting staff	Group 1	<= 3	12	0.25	0.50	0.001*	<b>10</b>
	Group 2	> 3	36	0.75			
	Total		48	1.00			
Lack of up-to-date publications about MAPs and new developed practices	Group 1	<= 3	5	0.10	0.50	0.000*	<b>11</b>
	Group 2	> 3	43	0.90			
	Total		48	1.00			
	Group 1	<= 3	48	1.00	0.50	0.000*	<b>12</b>

Lack of computers and technology systems	Total		48	1.00			
Lack of computer programmes relevant to MAPs	Group 1	<= 3	6	0.13	0.50	0.000*	13
	Group 2	> 3	42	0.88			
<b>Total</b>			<b>48</b>	<b>1.00</b>			
Note: * = p-value (Asymptotic significance (2-sided)) is < 0.05.							

Table 4.27 shows that, based on the p-values, for all 12 factors surveyed, the null hypothesis was rejected. This means that there is a difference in how the two sub-groups of the respondents rated the factors.

The results on the use of the technology equipment by the Newcastle clothing/textile SMEs are presented and discussed in the next section.

#### 4.11 The use of technology equipment

Question 24 further asked whether the respondents used any technology equipment. A five-point Likert scale of 1 = “never used” to 5 = “always used” was provided in the questionnaire. The technology equipment surveyed were computer numerically controlled machines and flexible manufacturing systems. Respondents could also add any other equipment they used and score accordingly. These results are shown in Table 4.28.

	1	2	3	4	5	Total	Mean	Std Dev.	Chi-square p-value
Computer numerically controlled machines	0	0	3	41	4	48	4.02	0.38535	0.000*
Flexible manufacturing systems	0	1	2	15	29	47	4.53	0.68687	0.000*
<b>Total</b>						<b>48</b>			
Note: A Likert scale of 1= never; 2= low use; 3= moderate use; 4= high use; and 5=always use, was used. * = p-values are <0.05 and are therefore statistically significant.									

Table 4.28 shows that out of 48 (100%) respondents surveyed, 45 (93.8%) respondents (i.e. 41 plus 4 respondents) used computer numerically controlled machines (m = 4.02) with 44 (91.7%) respondents (i.e. 29 plus 15 respondents) also

indicating the use of flexible manufacturing machines ( $m = 4.53$ ). The respondents were given an opportunity to specify any other different technology equipment they used. Out of 48 (100%) respondents surveyed, only four (8.3%) respondents indicated the use of different technology equipment. Technology equipment mentioned was manual leather and fabric layer cutting, hydraulic die cutting pressure, a needle detector and a manual table for quality inspection.

A chi-square test was calculated to see whether there was a statistically significant association amongst the variables. A significant result was shown with  $p < 0.05$ . The p-values of the use of technology equipment were 0.000\* for both types of technology equipment surveyed. This means that there is a difference in how the respondents rated the use of technology equipment.

In summary, the above results revealed a broad use of technology equipment by the respondents' firms, specifically, computer numerically controlled machines. This high use of technology equipment could increase the use of MAPs amongst the SMEs.

The question as to whether variables meaningfully affected the extent of use of equipment are confirmed in the next section.

#### **4.11.1 Tests for an association between the use of technology equipment and selected use of MAPs**

Apart from the frequencies and the mean scores discussed above, a Spearman rho correlation test was also performed. All significant associations between the use of technology equipment and selected MAPs are indicated by \*\*. These results are shown in Table 4.29.

**Table 4.29: Tests for an association between the use of technology equipment and selected use of MAPs**

		<b>Taking into account any strategic factors when setting the prices</b>	<b>Purchasing budget</b>	<b>On-time delivery</b>	<b>Internal rate of return</b>	<b>Net present value</b>
Computer numerically controlled machines	Correlation Coefficient	0.238	.311*	.770**	0.087	-.403
	Sig. (2-tailed)	0.313	0.045	0.006	0.653	0.030
	N	20	42	11	29	29
Flexible manufacturing machines	Correlation Coefficient	.492*	0.091	0.261	.456*	.408*
	Sig. (2-tailed)	0.028	0.572	0.438	0.013	0.028
	N	20	41	11	29	29

Note: \*\* = Correlation is significant at the 0.01 level (2-tailed) and \* = Correlation is significant at the 0.05 level (2-tailed).

The results of the correlation analysis shown in Table 4.29 indicated that the correlation value between “purchasing budget” and “computer numerically controlled machines” is 0.311\*. This is a significant positive association between the two variables mentioned. In addition, the positive correlation value between “on-time delivery” and “computer numerically controlled machines” is .770\*\*.

Concerning the use of flexible manufacturing machines, the results indicated a positive significant (.492\*) association between “taking into account any strategic factors when setting the prices” and “flexible manufacturing machines”. The correlation value between “net present value” and “flexible manufacturing machines” is 0.456\* and the correlation value between “net present value” and “computer numerically controlled machines” is .408\*. These positive correlations suggest that to some extent the use of technology equipment does encourage the use of MAPs by Newcastle clothing/textile SMEs.

A summary of the results relating to the third research objective is shown at the end of this chapter. The next section covers the results on the performance of firms based on

the last three years in operations and the firms' usage of MAPs. This following section addresses the fourth research objective of this study.

#### 4.12 Performance of the firm

This section represents and discusses the respondents' opinions on the performance of the firm based on the last three years in operations. The respondents were asked to indicate their opinions of whether their firm's performance has decreased or increased using various indicators. Table 4.30 below summarises the results of the respondents' opinions on the performance of the SMEs for the last three years.

<b>Table 4.30: Respondents' opinions on the performance of the firm</b>									
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>Total</b>	<b>Mean</b>	<b>Std Dev.</b>	<b>Chi-square p-values</b>
The cash flow growth rate	0	3	24	13	8	48	3.54	0.84949	0.003*
The number of deliveries on time	0	7	8	23	10	48	3.75	0.95650	0.000*
Operating profit growth rate	0	9	23	6	10	48	3.35	1.02084	0.000*
The productivity quality	0	3	19	24	2	48	3.52	0.68384	0.000*
The productivity quantity	0	6	13	25	4	48	3.56	0.82272	0.027*
The annual net profit	1	12	11	20	4	48	3.29	1.00970	0.003*
The sales growth rate	0	13	9	20	6	48	3.40	1.02604	0.000*
<b>Total</b>						<b>48</b>			
Note: A Likert scale of 1= decreased significantly; 2= decreased slightly; 3= no change; 4= increased slightly; and 5= increased significantly was used.									
* = p-values are <0.05 and are therefore statistically significant.									

Table 4.30 suggests that respondents' perceptions of the performance of the firm, measured in terms of the number of deliveries on time (m = 3.75) has increased when compared to the other performance indicators, as all other indicators have mean scores lower than 3.75. Nevertheless, the overall mean scores of between 3.00 and 4.00 suggest that performance has only slightly increased for the surveyed SMEs.

Therefore, for the majority of respondents, there has not been a significant increase in the performance of their firms in the last three years. A single variable chi-square test was also done to see if there was a statistically significant difference in the variables. The chi-square test results, from Table 4.30, shows that all five of the variables had significantly different patterns across their scoring with p-values of less than 0.05 (level of significance). This implies an uneven distribution of the scoring by the respondents which may reflect some fundamental differences in the SMEs surveyed.

The question of whether the extent of the use of MAPs significantly improved the performance of the firm in the past three years is addressed in the next section.

#### **4.12.1 Tests for an association between the extent of use of MAPs and the various measurements of performance**

To test whether there was an association between the extent of use of MAPs and the various measures of performance, correlations were performed. A Spearman rho correlation test was performed on the data. Positive values indicate a directly proportional association between the variables. The next section discusses the extent of use of the five MAPs and the various measures of performance of the Newcastle clothing/textile SMEs.

##### **• The use of the costing systems and the various measures of performance**

The Spearman rho correlation test was performed between the extent of use of the costing systems and the various measures of performance; these results are shown in Table 4.31 below.

**Table 4.31: Tests for an association between the use of the costing systems and the various measurements of performance**

		<b>Batch costing</b>	<b>Contract costing</b>	<b>Job costing</b>	<b>Absorption costing</b>
Operating profit growth rate	Correlation Coefficient	.500*	0.054	.585**	.355*
	Sig. (2-tailed)	0.011	0.797	0.002	0.219
	N	25	25	25	25
The productivity quality	Correlation Coefficient	.531**	-0.075	0.144	0.294
	Sig. (2-tailed)	0.006	0.721	0.493	0.330
	N	25	25	25	25
The productivity quantity	Correlation Coefficient	.684**	0.058	0.212	.421*
	Sig. (2-tailed)	0.000	0.782	0.310	0.036
	N	25	25	25	25
The annual net profit	Correlation Coefficient	0.389	0.108	.400*	0.097
	Sig. (2-tailed)	0.055	0.607	0.048	0.645
	N	25	25	25	25
The sales growth rate	Correlation Coefficient	0.211	-0.113	0.318	0.004
	Sig. (2-tailed)	0.312	0.590	0.121	0.983
	N	25	25	25	25
Note: ** = Correlation is significant at the 0.01 level (2-tailed) and * = Correlation is significant at the 0.05 level (2-tailed).					

Regarding the operating profit growth rate, the results of the correlation analysis shown in Table 4.31 indicated a positive significant correlation value between “batch costing and “operating profit growth rate” of .500\*. The correlation value between “job costing” and “operating profit growth rate” is .585\*\*. The results also indicated a positive significant (.355\*) association between “absorption costing” and “operating profit growth rates”. Firms experiencing an increase in the operating profit growth rate and are therefore also using batch, job and absorption costing.

Concerning the production quality, there was a positive significant correlation between batch costing and the production quality of .531\*. Another positive significant

association was found between batch costing and productivity quantity (.684\*\*). Likewise, the correlation between the absorption costing and the production quantity is .421\*. Concerning the annual net profit, a significant correlation (.400\*) was found between a job costing and the annual net profit. In conclusion, the results suggest that, to some extent, the use of costing systems did play an important role in the performance of the firm in the past three years.

- **The use of the budgeting systems and the various measures of performance**

The Spearman rho correlation test was performed between the extent of use of the various budget systems and the various measures of performance; these results are shown in Table 4.32.

		<b>Cash flow budget</b>	<b>Financial position budget</b>	<b>Production budget</b>	<b>Purchasing budget</b>
Operating profit growth rate	Correlation Coefficient	0.056	-0.030	.355*	.405**
	Sig. (2-tailed)	0.723	0.851	0.021	0.008
	N	42	42	42	42
The productivity quality	Correlation Coefficient	0.013	-0.020	.388*	.528**
	Sig. (2-tailed)	0.934	0.900	0.011	0.000
	N	42	42	42	42
The productivity quantity	Correlation Coefficient	0.214	-0.200	0.271	.312*
	Sig. (2-tailed)	0.174	0.204	0.083	0.044
	N	42	42	42	42
The annual net profit	Correlation Coefficient	0.135	-0.100	.393*	.491**

	Sig. (2-tailed)	0.394	0.528	0.010	0.001
	N	42	42	42	42
The sales growth rate	Correlation Coefficient	-0.211	0.096	.309*	.392*
	Sig. (2-tailed)	0.179	0.546	0.046	0.010
	N	42	42	42	42
Note: ** = Correlation is significant at the 0.01 level (2-tailed) and * = Correlation is significant at the 0.05 level (2-tailed).					

Regarding the operating profit growth rate, the results of the correlation analysis showed in Table 4.32 indicates a positive significant correlation value between “production budget” and “the operating profit growth rate” of .355\*. The correlation value between “purchasing budget” and “the operating profit growth rate” is .405\*\*. This suggests that there is a positive relationship between the production budget and the operating profit growth rate.

Concerning the productivity quality, a positive significant correlation between “production budget” and “the productivity quality” is .388\*. Additionally, a positive significant association was found between purchasing budget and productivity quantity (528\*\*) Likewise, the correlation between the “purchasing budget” and “the productivity quantity” is .312\*. This suggests that there is a positive relationship between the purchasing budget the greater the productivity quantity and quality.

With reference to the annual net profit, the results of the correlation analysis showed a positive correlation value between “production budget” and “the annual net profit” of .393\*. A positive significant correlation (.491\*\*) was also found between the “purchasing budget” and “the annual net profit”. The results in Table 4.32 also showed a positive significant correlation value between “production budget” and “the sales growth rate” of .309\*. The correlation value between “purchasing budget” and “the sales growth rate” is .392\*. These positive correlations indicate a relationship between the variables, although the direction of the relationships was not tested.

In conclusion, the results suggest that to some extent the use of budgeting systems did play an important role in the performance of the firm in past three years, specifically, the use of the production budget and the purchasing budget.

- **The use of the performance measurements tools (PMTs) and the various measures of performance**

The Spearman rho correlation test was performed between the extent of use of the PMTs and the various measures of performance; these results are shown in Table 4.33 below.

<b>Table 4.33: Tests for an association between the use of the PMTs and the various measurements of performance</b>							
		<b>Cash flows</b>	<b>Operating income</b>	<b>Sales growth</b>	<b>Manufacturing lead/ cycle time</b>	<b>On-time delivery</b>	<b>Survey of customers' satisfaction</b>
Operating profit growth rate	Correlation Coefficient	0.239	-0.479	0.443	0.043	0.239	0.214
	Sig. (2-tailed)	0.478	0.136	0.172	0.900	0.478	0.527
	N	11	11	11	11	11	11
The productivity quality	Correlation Coefficient	0.194	-0.516	0.239	-0.064	0.194	0.289
	Sig. (2-tailed)	0.568	0.104	0.479	0.853	0.568	0.389
	N	11	11	11	11	11	11
The productivity quantity	Correlation Coefficient	0.530	-0.530	0.420	0.380	0.151	.677*
	Sig. (2-tailed)	0.094	0.094	0.198	0.250	0.657	0.022
	N	11	11	11	11	11	11
The annual net profit	Correlation Coefficient	-0.041	-0.165	0.458	-0.454	-0.041	0.184
	Sig. (2-tailed)	0.904	0.628	0.157	0.161	0.904	0.588
	N	11	11	11	11	11	11
The sales growth rate	Correlation Coefficient	-0.151	-0.151	0.280	-0.380	-0.151	0.000
	Sig. (2-tailed)	0.657	0.657	0.404	0.250	0.657	1.000
	N	11	11	11	11	11	11
Note: ** = Correlation is significant at the 0.01 level (2-tailed) and * = Correlation is significant at the 0.05 level (2-tailed).							

The results of the correlation analysis shown in Table 4.33 indicated a positive significant correlation value between the “survey of customers’ satisfaction” and “the productivity quantity” of .677\*. No positive significant associations were found between any of the other variables examined.

In conclusion, the results suggest that the use of PMTs did not play any significant role in the performance of the firm in the past three years.

- **Strategic management accounting (SMA) and the various measures of performance**

The Spearman rho correlation test was performed between the extent use of the SMA and the various measures of performance; these results are shown in Table 4.34.

		<b>Monitoring the costs that occur across stages of product</b>	<b>Strategic costing in deter-mining the firm’s strategy</b>	<b>The systematic collection of data on competition’s price reactions, demand reactions</b>	<b>Target costing in the design of new products</b>	<b>Taking into account any strategic factors when setting the</b>
Operating profit growth rate	Correlation Coefficient	0.040	0.060	0.202	0.126	0.253
	Sig. (2-tailed)	0.865	0.797	0.379	0.586	0.269
	N	21	21	21	21	21
The productivity quality	Correlation Coefficient	-0.184	-0.045	0.126	0.198	0.232
	Sig. (2-tailed)	0.424	0.846	0.586	0.391	0.312
	N	21	21	21	21	21
The productivity quantity	Correlation Coefficient	-0.089	-0.076	0.110	0.024	0.212
	Sig. (2-tailed)	0.702	0.744	0.636	0.918	0.355
	N	21	21	21	21	21
The annual net profit	Correlation Coefficient	-0.156	-0.133	0.098	0.038	0.263

	Sig. (2-tailed)	0.498	0.565	0.673	0.869	0.249
	N	21	21	21	21	21
The sales growth rate	Correlation Coefficient	-0.012	-0.033	0.222	-0.033	0.188
	Sig. (2-tailed)	0.958	0.886	0.332	0.888	0.414
	N	21	21	21	21	21
Note: ** = Correlation is significant at the 0.01 level (2-tailed).						

The correlation analysis shown in Table 4.34 indicated that there were no positive significant correlation values between all the variables examined. In conclusion, the results suggest that the use of SMA did not play any role in the performance of the firm in the past three years.

- **The use of the decision support systems and the various measures of performance**

The Spearman rho correlation test was performed concerning the extent of use of the decision support systems and the various measures of performance; these results are shown in Table 4.35

<b>Table 4.35: Tests for an association between the use of the decision support systems and the various measurements of performance</b>					
		<b>Stock control model</b>	<b>Accounting rate return</b>	<b>Internal rate of return</b>	<b>Net present value</b>
Operating profit growth rate	Correlation Coefficient	0.013	-0.160	0.091	-0.163
	Sig. (2-tailed)	0.947	0.407	0.639	0.399
	N	29	29	29	29
The productivity quality	Correlation Coefficient	-0.084	-0.070	0.109	-0.058
	Sig. (2-tailed)	0.663	0.718	0.572	0.764
	N	29	29	29	29
The productivity quantity	Correlation Coefficient	-0.194	-0.286	-0.083	-0.142
	Sig. (2-tailed)	0.312	0.132	0.668	0.461
	N	29	29	29	29
The annual net profit	Correlation Coefficient	-0.030	0.121	0.227	-0.012
	Sig. (2-tailed)	0.878	0.532	0.237	0.950
	N	29	29	29	29
The sales growth rate	Correlation Coefficient	-0.232	0.174	.443*	0.107
	Sig. (2-tailed)	0.225	0.367	0.016	0.582
	N	29	29	29	29
Note: ** = Correlation is significant at the 0.01 level (2-tailed).					

The results in Table 4.35 showed a positive significant correlation value between “internal rate of return” and “the sales growth rate” of .443\*. No other positive significant associations were found among any of the other variables examined.

In conclusion, the results suggest that to the use of decision support systems did not play any important roles in the performance of the firm in the past three years. The next section provides a summary of this chapter.

### **4.13 Summary**

This chapter covered the presentation and discussion of the results of a questionnaire survey undertaken to assess the extent of use of MAPs by Newcastle clothing/textile manufacturing SMEs. The analysis and discussion in this chapter were aligned to the sections of the survey questionnaire used in this study, as well as the research objectives which has driven this study.

This study found that the most of the SMEs are privately owned manufacturing firms and have been in operation for 4-10 years. The results also indicated that the majority of SMEs employ between 0-20 employees in their firms. This suggested that the Newcastle clothing/textile SMEs are dominated by small-sized enterprises. These results are in line with the findings of Census (2011), which affirmed that the clothing/textile sector in Newcastle is mostly dominated by small-sized enterprises. A majority (72%) of the clothing/textile SMEs in Newcastle had less than R1 000 000 turnover per annum and 58% of the SMEs sell their products to local communities. A more than half (51.2%) of the Newcastle clothing/textile SMEs employed accounting staff, possibly because the majority of SMEs are small-sized manufacturing firms.

Regarding the extent of use of MAPs by SMEs (objective 1, i.e. to determine the extent to which MAPs are employed by Newcastle clothing SMEs), amongst the five types of MAPs surveyed, budgeting systems were the most popular practices, and all the respondents prepared budgets on a monthly and annual basis. The next popular practices were the decision support systems, followed by the costing systems, then the SMA, and lastly, the PMTs practices. A short-run analysis was more preferred compared to long-run analysis. The results of this study suggest that the PMTs and the SMA are part of the modern MAPs which tend to be too complex to understand by SMEs.

Only the minority of clothing/textile manufacturing SMEs valued the role played by MAPs in the management of their firms (objective 2, i.e. to identify the roles played by MAPs in Newcastle clothing SMEs' management). Overall the roles of MAPs that were investigated were identified as not adding any significant value in the management of Newcastle clothing/textile SMEs. Controlling the current activities was the most

appreciated role amongst the roles surveyed. This was confirmed by the mean scores below 3, which was an indication of the level of disagreement with the statements.

Notwithstanding, the role played by MAPs in these firms, various factors affected these SMEs from using the five MAPs assessed (objective 3, i.e. to determine the factors that affect the extent of use of MAPs among Newcastle clothing SMEs.). Most SMEs found the “high cost to implement MAPs” and “the lack of education and basic in-house training” as barriers to the use of MAPs. Amongst the other factors that affected SMEs use of MAPS was that the newly-developed or modern MAPs were found too complex to use by SMEs, followed by the lack of information on affordable accounting services. However, a minority (45.8%) of SMEs indicated the lack of the skilful accounting staff, the lack of computer and technology systems, and that their firms are too small to implement the MAPs. Regarding the use of technology equipment, the results revealed that a majority (93.8%) of SMEs use computer numerically controlled machines.

On the subject of the performance of the firm in the past three years (objective 4, i.e. to determine whether there is a relationship between the use of MAPs and the performance of SMEs), the Newcastle clothing/textile manufacturing SMEs had seen no change in the following areas: the number of on-time deliveries; productivity quantity; and the cash flow growth. However, for some of the SMEs, there has been a slight increase in the investigated performance indicators in the last three years. This suggested that the surveyed SMEs do not use the MAPs to ensure the growth in their firms’ production outcomes. The greater use of MAPs might enhance the performance of the firm as the MAPs assist the owners in the management of SMEs. The correlations analysis between MAPs and performance of the firm was performed and found to be very marginal for the Newcastle clothing/textile SMEs.

The following chapter covers the summary, conclusions, limitations, and areas for future research of this study.

## **CHAPTER FIVE**

### **CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

Chapter four provided a detailed presentation and interpretation of the results obtained from owners and managers of the Newcastle clothing/textile SMEs who were selected to participate in this study. The results were analysed using descriptive statistics. The data was collected through a self-administered questionnaire which included closed-ended questions. SMEs, particularly those in clothing/textile industry in South Africa, may be failing due to a lack of use of MAPs such as costing systems, budgeting systems, PMTs, decision support systems, and SMA practices. Despite the importance of SMEs in South Africa, little research has been performed in South Africa to establish the extent to which these SMEs use the budget systems, the PMTs and the pricing tools (Nandan 2010). Given that there are benefits that SMEs can derive by using MAPs, it is important that the extent of use of MAPs be assessed amongst these SMEs.

The purpose of this study was to assess the extent to which the clothing/textile manufacturing SMEs in Newcastle, KwaZulu-Natal use MAPs. Three research objectives were formulated: first to determine the extent to which MAPs are employed by Newcastle clothing SMEs; secondly, to identify the roles played by MAPs in Newcastle clothing SMEs' management; and thirdly, to determine the factors that affect the extent of use of MAPs among Newcastle clothing SMEs.

This chapter presents a summary and conclusion in respect of how the study's objectives were achieved. Based on the results of this study, recommendations are provided. The limitations of the study and suggestions for further research are also made.

The next section presents a summary of the study.

## 5.2 Summary of the current study

A literature review was conducted in Chapter two to describe the definition of key terms, role, and importance of SMEs internationally and locally, the extent of use of MAPs by SMEs, and factors affecting the use of MAPs by SMEs. The studies reviewed indicated that there is no single description of SMEs. A general definition is that the number of employees should not exceed 300 and the turnover should not exceed R55 million (South Africa 1996; Monks 2010: 9).

Irrespective of the failure rate of SMEs, their importance in the economy is well documented in the literature. One key importance was their contribution to the GDP. Thus, SMEs are recognised for their importance, contribution and the role they play towards the growth of the economies, especially in the developing countries. SMEs are also recognised for the creation of employment, poverty reduction and the growth of an individual country. Most SMEs use the support programs initiated by their country's government to assist in developing the SMEs. The literature revealed that there are several challenges that affect the success of SMEs. The lack of capital and access to finance is the main reason that the SMEs fail (Tangwo 2012; Sharma and Gounder 2012; Cant *et al.* 2014; Karanja *et al.* 2012; Van Aardt and Fatoki 2012). Among other challenges highlighted in the literature were the education and training of owners and managers, the lack of marketing skills, information technology, and the regulatory environment, as well the inadequate infrastructure.

Most SMEs in developing countries still use the traditional MAPs. With regards to the more advanced MAPs, the literature revealed that few SMEs have adopted these MAPs. The results from the extent of use of MAPs also indicates that MAPs are mostly used by medium-sized firms in contrast to small-sized firms. Amongst the types of MAPs, the budgeting systems were the most used by SMEs, followed by the costing systems and lastly, the PMTs. The SMA and the decision support systems are less adopted by most SMEs. The literature also revealed that the importance of management accounting has increased due to the advantages associated with using MAPs. Management accounting was confirmed to be one of the important tools for decision-making.

The reviewed literature revealed that overall, management accounting is very useful in the management of SMEs. MAPs also add to the growth and the success of the SMEs. Regarding the factors that affect SMEs from using MAPs, several factors were highlighted in the literature such as high cost to implement MAPs, technology, the lack of qualified accounting staff, and the lack of support by owners or managers. Chapter two concluded by identifying the various gaps in the literature which provided the motivation for this study to be undertaken.

Chapter three described the research methodology and the data collection methods used to address the research objectives. The chapter described the research design used, the population and the census method. The quantitative approach was deemed appropriate for this study and a self-administered survey questionnaire was utilised as a data gathering tool. The targeted population was 51 Newcastle clothing/textile manufacturing SMEs. The chapter then discussed the content and the layout of the questionnaire, which was organised in five sections. The pre-testing of the questionnaire, data collection procedures, the data analysis and the measures used to ensure validity and reliability were also discussed. SPSS version 25.0 was used to statistically analyse the collected data.

Chapter three also outlined the limitations of the research methods and instrument used, as well as the ethical considerations of this research. The chapter concluded by reiterating that the research design used in this study was considered suitable to address the research objectives of the study.

Chapter four analysed and discussed the results of the questionnaire survey that addressed the three research objectives of this study. The results of this study were tailored to meet the objectives of this study; hence, chapter four discussed how the objectives were achieved through such results.

This next section summarises the results of the first research objective, i.e. to assess the extent to which MAPs are employed by Newcastle clothing SMEs.

## **5.5 Research objective 1: To determine the extent to which MAPs are employed by Newcastle clothing SMEs**

The results of this study are allied to the objectives of this study. Hereafter this section discusses how the objectives were achieved through the results of the study. Most SMEs in Newcastle use the MAPs assessed, in particular, the budgeting systems and the costing systems. This is in line with the literature that emphasised that most SMEs preferred the use of traditional MAPs (Abdelal and McLellan 2011, Maqbool-ur-Rehman 2011, Yalcin 2012; Ahmad 2012, Charafa and Rahmounib 2014, Maduekwe 2015). The extent of use of the decision support systems in this study was higher than the findings in the aforementioned studies. However, the low use of the SMA in this study is similar to the studies reviewed.

The next section summarises the conclusions of the extent of use of the costing systems.

### **5.5.1 The extent of use of costing systems**

The results on the costing systems used by Newcastle clothing/textile manufacturing SMEs to manage their businesses showed that 46% of the SMEs use costing systems. Of these, 24 (96.0%) use the job costing, 21 (84.0%) use the contract costing, 18 (72.0%) use the absorption costing, and 14 (56.0%) use the batch costing. Less used costing systems were variable costing and process costing used by 44.0% SMEs for each. ABC was found to be least preferred costing system by Newcastle SMEs with only five or 2.0% of respondents using this practice.

The higher use of job costing and contract costing could be motivated by the various job offers and contract offers the SMEs accept from customers. Notwithstanding that the Newcastle clothing/textile manufacturing SMEs do use the costing systems. The fact that only half 25 (52.1%) of SMEs use the costing systems suggest that the SMEs are not aware of the practices that could assist in managing their firms' pricing techniques. This could imply that there are factors affecting the majority of SMEs from using the costing systems.

The next section summarises the conclusions of the extent of use of the budgeting systems.

### **5.5.2 The extent of use of budgeting systems**

As far as budgeting systems are concerned, the results of this study show that 42 (87.5%) of Newcastle clothing/textile manufacturing SMEs surveyed use these practices. Out of these, all SMEs (100%) use the cash flow budget, 40 (97.6%) use the sales budget, while 37 (88.1%) use the purchasing budget, and the production budget was used by 36 (85.7%) Other budgeting systems were least preferred or used by SMEs. Specifically, only 31% of SMEs used the flexible budget system and the zero-based budget system was used by 13 SMEs. Seven respondents indicated they use both the incremental budget system and the financial position budget.

The higher use of the cash flow budget could be that most businesses exist to maximise the profits and the owners' equity. The lowest usage of the incremental budget suggests that Newcastle clothing/textile manufacturing SMEs are not aware of the usefulness of the incremental budget practice. This practice is the first approach for any budget; which only a few SMEs have cited the use.

The results of the mean scores showed that the preparation of an annual budget ( $m = 4.55$ ) and monthly budget ( $m = 4.62$ ) were the most preferred intervals by SMEs. The continuous/rolling budget was the least preferred ( $m = 2.64$ ) interval for budget preparation by the clothing/textile manufacturing SMEs in Newcastle. The study concludes that most of the SMEs in Newcastle prepare monthly budget reports, as well as annual budget reports.

The next section summarises the conclusions of the extent of use of the PMTs.

### **5.5.3 The extent of use of performance management tools (PMTs)**

The results on the extent of use of the PMTs show that 44% of Newcastle clothing/textile manufacturing SMEs used these practices. The measures were divided into two, financial measures and non-financial measures. With regard to the financial measures that were mostly in use, 100% of the SMEs used cash flows, the operating income, and the sales growth rate. The least used financial measure was the return on investment used by only 36.4% of the respondents.

Only 11 respondents used non-financial measures. The most highly used non-financial measures were the survey of customers' satisfaction, the number of customers' complaints, and on time delivery used by 11 (100%) respondents. The other most used non-financial measures were the manufacturing lead/cycle time used by nine respondents, and then eight respondents who used the number of warranty claims. The defect rate and employee turnover were the least preferred non-financial measures, used by only five and two respondents respectively. It can be concluded that the use of PMTs by Newcastle SMEs is very low, however, the use of financial measures (average mean score of 3.98) is greater than the use of non-financial measures (average mean score of 3.70). In addition, there was no significant correlations established between the extent use of MAPs and the performance of the firm.

This study concluded that all the customer related practices were more preferred by Newcastle clothing/textile manufacturing SMEs. On the other hand, the cash flow analysis was the most preferred financial measure with 100% of the SMEs citing that they used this practice. The study also concluded that employee turnover was the least preferred practice. These results are in line with the findings by Ahmad (2012) and Maduekwe (2015).

The next section summarises the conclusions of the extent of use of the SMA.

#### **5.5.4 The extent of use of strategic management accounting (SMA)**

As far as the SMA practices are concerned, the results of this study showed that only 21 (43.8%) of the Newcastle clothing/textile manufacturing SMEs used these practices. Of these, 18 (85.7%) respondents indicated that they always take into account any strategic factors when setting the price. Fourteen or 66.7% of the respondents reported that they used the systematic collection of data on the competition's price reactions and the target costing in the design of new products. Lastly, 13 (61.9%) respondents indicated that they monitor the costs that occur across stages of product development, demand reactions and the market environment.

These results suggest that the SMEs using SMA believed that the use of SMA is effective judging by their frequent use of SMA. Overall, it can be concluded that the SMA is the lowest used MAPs among the five MAPs surveyed in Newcastle SMEs. The test statistics indicated that there is no significant association between the variables examined. That is, the level of education of the employed accounting staff did not play any significant role in respect of whether the SMA was used or not.

The next section summarises the conclusions of the extent of use of the decision support systems.

### **5.5.5 The extent of use of decision support systems**

The decision support systems' results showed that only 29 (60.4%) of the Newcastle clothing/textile manufacturing SMEs cited that they used these practices. The practices under this heading were divided into two categories: short-run analysis, and long-run analysis. With regard to the short-run analysis, 100% of the SMEs cited that they used the stock control model; this was followed by 86.2% respondents who indicated they used product profitability analysis. The results also indicated that the customer profitability analysis and the break-even analysis were often used by 82.8% and 72.4% respondents respectively.

Among the decision support systems, the long-run analyses were the least used practices. Specifically, the net present value, the payback method and the accounting rate of return were used by only six or 28.6%, five or 17.2% and four or 13.8% respondents respectively. Lastly, the fourth least preferred decision support system was the internal rate of return used by only three (10.3%) respondents. However, the use of short-run analysis (average mean value of 4.15) was greater than the use of the long-run analysis (average mean value of 2.16); this was measured using the average mean scores. Thus, it can be concluded that these practices fall under the recently developed MAPs which are sophisticated for small-sized SMEs.

The low use of MAPs such as the SMA and the PMTs could be ascribed to the inadequate of qualified accounting staff by the SMEs with only 45.8% of the SMEs employing qualified accounting staff. In addition, a significant use of traditional MAPs

(budgeting systems and costing systems) by Newcastle clothing/textile SMEs may be supported by the fact that information on these practices is more easily obtainable in contrast to the use of modern MAPs (SMA and PMTs) which may be seen as more uncertain, less practical and costly. Besides that, the size of the firms may be a key factor in these results. However, the study concludes that the decision support systems in this study were found frequently used by Newcastle clothing/textile SMEs, in contrast to the findings of Ahmad (2012) who found that Malaysian SMEs least preferred the use of decision support systems.

The next section summarises the conclusions of the research objective 2, i.e. to identify the role of MAPs in the management of SMEs.

## **5.6 Research objective 2: To identify the role of management accounting practices in the management of SMEs**

With regard to the role of MAPs in the management of Newcastle clothing/textile manufacturing SMEs, the results of this study showed that the most valued roles were for controlling the current activities, measuring the use of the firm's resources, and for planning the future strategies, tactics and operations. On the other hand, the results revealed that the lowest valued roles of MAPs in the management of SMEs were for evaluating performance, for reducing subjectivity in decision-making process and for improving internal and external communication indicated by eight (17.0%), seven (14.9%), and four (8.5%) respondents respectively.

Forty-seven (97.9%) of Newcastle clothing/textile manufacturing SMEs surveyed did not support the roles of MAPs that were listed in the survey. Of these, seven (14.9%) cited roles other than those in the survey. Specifically, these roles were for improving financial reports, for helping in setting the costs, for determining the slow moving products, for budget planning and forecasting, and for allocation of wages into products. The results suggested that MAPs were identified as not adding any value to the management of Newcastle clothing/textile SMEs. These results agree with a Canadian and Australian study by Armitage *et al.* (2016) on the usage of contemporary MAPs, which indicated doubts about the effectiveness of MAPs to SMEs' day-to-day management.

The next section summarises and concludes the results on the performance of SMEs.

### **5.6.1 The performance of the firm**

Section Five of the questionnaire asked respondents for their perceptions on their performance using various indicators. This was done to ascertain whether MAPs had made any contribution to the performance of Newcastle clothing/textile SMEs. The results suggest that respondents' perceptions of the number of deliveries on time was moderately greater when compared to other performance indicators, as all other indicators had mean scores above than 3. The results suggest that there has been no change, over that performance is slightly increasing for some of the surveyed SMEs. Therefore, for the majority of respondents, there has not been a significant increase in the performance of their firms in the last three years. In addition, the analysis of the correlation between the use of MAPs and performance was performed; and the performance of Newcastle clothing/textile SMEs was found to be moderate. This suggested that the use of five MAPs investigated by the current study enhances the performance of the SMEs.

The next section summarises the conclusions of the research objective 3, i.e. to assess the factors that affect the extent of use of MAPs in Newcastle clothing/textile SMEs.

### **5.7 Research objective 3: To assess the factors which affect the extent of use of MAPs in Newcastle clothing SMEs**

Concerning the factors that affect the Newcastle clothing/textile manufacturing SMEs from using MAPs, the results of this study indicated that a majority (100%) cited "the high cost to implement MAPs" and that there is "the lack of education and basic in-house training" in their firms. Another two-thirds agreed and strongly agreed that the following factors affect their SMEs from using MAPs: "the firm is too small to implement MAPs"; "the lack of top management support"; "the new-developed or modern MAPs are too complex to use"; "the lack of information on affordable accounting services"; "the lack of up-to-date publications about MAPs and new developed practices"; "the lack of computer programmes relevant to MAPs"; and "the benefits of the MAPs are

too difficult to be observed". High mean scores approximating 4 and more, are a strong indication that these SMEs use of MAPS are affected by these factors.

More than 60% of respondents agreed that there is "the lack of skilful accounting staff" in their firms. This was supported by the results from section one of the questionnaire which asked whether SMEs employ accounting staff. The results indicated that half (51.2%) of SMEs employed accounting staff. To conclude, the results suggest that even the employed accounting staff do not possess the required accounting skills.

Thirty-three (33) (68.8%) respondents perceived that there are "no important benefits perceived from the extent of use of MAPs" and 32 (66.7%) respondents indicated that they are "unable to understand MAPs". "The lack of computers and technology systems" was perceived the lowest factor amongst the 13 factors. Thus, Newcastle clothing/textile manufacturing SMEs are using computers and other technology systems.

The majority of Newcastle clothing/textile manufacturing SMEs are therefore affected by various factors which prevent them from using MAPs efficiently. Even so, only a minority cited the lack of computers and technology systems. This is expected as clothing/textile SMEs typically use computers programmes to design their products.

The questionnaire further enquired about the extent of use of technology systems by the surveyed SMEs. All SMEs cited that they always use computer numerically controlled machines, with only 67% of the SMEs using flexible manufacturing machines. Amongst the 48 clothing/textile manufacturing SMEs surveyed, only 21% of the SMEs were using different technology equipment, specifically, manual leather and fabric layer cutting, hydraulic die cutting pressure, needle detectors, and manual tables for quality inspection. The next section outlines the contributions made by this research study.

## **5.8 Research objective 4: to determine whether there is relationship between the use of MAPs and the performance of the firm**

Section Five of the questionnaire asked respondents for their perceptions on their performance using various indicators. This was done to ascertain whether MAPs had made any contribution to the performance of Newcastle clothing/textile SMEs. The results suggest that respondents' perceptions of the number of deliveries on time was moderately greater ( $m = 3.75$ ) when compared to other performance indicators, as all other indicators had mean scores lower than 3.75. The results suggest that there has been no change, over that performance is slightly increasing for some of the surveyed SMEs. Therefore, for the majority of respondents, there has not been a significant increase in the performance of their firms in the last three years. The results on correlation between the extent of use of MAPs and the performance of SMEs indicated no significant correlation between these variables.

The next section outlines the contributions made by this research study.

## **5.8 Contribution of the research study**

This study contributes to the management accounting literature by being the first study to assess the extent of use of MAPs by SMEs in clothing or textile manufacturing sector in Newcastle, KwaZulu-Natal. This study thus provides new empirical evidence in South Africa, specifically KwaZulu-Natal on the extent of use of MAPs by Newcastle clothing/textile manufacturing SMEs.

The significance of the study is discussed in the next section.

## **5.9 Significance of the research study**

The results of this study provide information on the extent of the use of MAPs in a specific location, Newcastle, KwaZulu-Natal. The results could also be used to improve any government initiative programs when developing new ways to reduce the current rate of failure by SMEs in developing countries. Concerning the decision makers of SMEs, the results may make them aware of the need to use MAPs to manage their businesses effectively and to increase the survival and the success of their respective firms. The results indicated that MAPs are not found to be playing any essential role

in the management of the SMEs; which then affects the performance of the firm. It is therefore, significant for SMEs to start to be attentive of the improvements and advantages MAPs could bring in their management of their businesses.

The results of this study may also be useful to academics who may be interested in replicating this survey in other sectors and geographical areas. The survey could be even be escalated to large firms to confirm the validity of the results. The next section discusses the recommendations of the study.

### **5.10 Recommendations**

1. This study assessed the extent of the use of MAPs by clothing/textile manufacturing SMEs in Newcastle, KwaZulu-Natal. From the applied viewpoint, the study recommends that an awareness among SMEs of the importance of MAPs must be put in place. This can be done through business online courses, business magazine and other related business sources.
2. The study recommends that enterprise workshops, webinars, seminars and/or conferences should start addressing the importance of the extent of use of MAPs and other related accounting techniques.
3. On other hand, the recommends that owners and managers of SMEs in South Africa must take initiatives with regard to their education and training, and make sure they attend skills training and development courses organised by universities, government and other SME agencies (Fatoki 2012: 186).
4. The current study recommends that Newcastle SMEs adopt the use of other MAPs such as SMA that will assist the management of Newcastle SMEs in the strategy formulation processes.
5. Government should also provide incentives to encourage SMEs decision makers to attend business management workshops which will enhance their business management skills. These workshops are currently organised by

SEDA. The good delivery of education and business training will allow the government to address any non-financial limitations (Peters *et al.* 2014: 1130).

6. The results of this study suggest that to succeed appropriate measures of the financial performance are compulsory; enterprises therefore need to use the PMTs as well as other value-based techniques suggested in the literature.

The next section addresses the limitations identified in this study

### **5.11 Limitations of the study**

This study has several limitations which are presented below:

Firstly, the results of this study only provide the views of SMEs' decision makers in Newcastle, which may not be generalisable to other decision makers in other parts of South Africa.

Secondly, the study assesses the extent of use of MAPs, namely the costing systems, the budgeting systems, the PMTs, the SMA and the decision support systems. Therefore, other types of MAPs were not included in this study.

Thirdly, the survey of this study comprised only a small number of SMEs. An assumption is that the respondents filled in the questionnaire honestly in all respects as there was no mechanism in place for verifying or checking that the respondent's statements and opinions were truthful.

Finally, more sophisticated statistical analyses may add more value to this study; in particular, determining a statistical link between performance and MAP adoption.

Despite the aforementioned limitations, the results of this study contribute to the literature on the extent use of MAPs by SMEs. The next section presents the suggestions for future research.

## **5.12 Suggestions for future research**

The limitations of this study lead to the following suggestion for future studies.

Firstly, the study assumes that owners and managers are only decision makers, but in reality, this is not the case. Future studies could include other individuals who deemed to be part of the decision-making.

Secondly, this study only focused on five MAPs. Future research could assess the extent of use of other types of MAPs such as investing decision-making practices and profitability measurement practices.

Thirdly, this study focused only on the clothing or textile manufacturing sector in Newcastle, KwaZulu-Natal. Future research could focus on other sectors, other geographical locations and maybe even on larger firms which were excluded in this study.

Fourthly, future research could be conducted on a bigger scale or even on the extent of use of MAPs in various sectors at the same time. This could enhance the generalisability of this study results.

Finally, a qualitative method could be adopted by future studies assessing the extent of the use of MAPs, specifically with regard to the factors that affect SMEs from using MAPs by probing the viewpoints of SMEs in interviews. The results of such studies could lead to a better understanding of these factors.

Research in this field could be advanced by comparing studies of the South African situation on the extent of use of MAPs to other developing countries.

Having discussed the conclusion of the current study, the following section discusses an overview of this study.

### **5.13 Overview of the study**

The aim of this study was to firstly assess the extent of use of MAPs by clothing/textile manufacturing SMEs in Newcastle, KwaZulu-Natal, secondly to understand the role of MAPs in the management of SMEs, and lastly, to assess the factors that affect the use of MAPs by SMEs.

A literature review was undertaken on these research areas and therefore, gaps were identified and discussed. To achieve the objectives of this study, 51 clothing/textile manufacturing SMEs were identified and surveyed using 51 self-administered questionnaires. The survey only elicited 48 (94.12% response rate) usable questionnaires. This was deemed adequate for the analysis, presentation and discussion of the results of this study. The collected data was analysed using SPSS version 25 to obtain the descriptive analysis.

The results were presented using tables and discussed accordingly. The results were discussed in detail and conclusions were drawn from the results of this study. The study suggested that future research is undertaken in different sectors, geographical areas and that other different types of MAPs be investigated.

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## LIST OF APPENDIXES

### Appendix A: The survey questionnaire

Questionnaire No.: \_\_\_\_\_

**A critical assessment of management accounting practices in small and medium-sized clothing enterprises in Newcastle, KwaZulu-Natal.**

<b>Section 1: The profile of the firm</b>
---

**In this section please tick only one box per question.**

**1. What is the status of the business?**

Sole trader	[ ]	Partnership	[ ]
Public company	[ ]	Private company	[ ]
Close corporation	[ ]	Unregistered/informal	[ ]

**2. For how many years has your firm been operating?**

1-3 years	[ ]	10-20 years	[ ]
4-10 years	[ ]	More than 20 years	[ ]

**3. How many employees are in your firm?**

0-20	[ ]	21-50	[ ]
51-150	[ ]	More than 150	[ ]

**4. What is the annual sales turnover of the firm?**

Less than R1000 000	[ ]	R1 000 000-R2 000 000	[ ]
R 2 000 000-R 4 000 000	[ ]	More than R4 000 000	[ ]

**5. What is target market of the firm?**

Sell to local communities	[ ]	Sell to other provinces	[ ]
Sell to international markets	[ ]	other (please specify)	[ ]

**6. Do you employ any accounting staff?**

Yes	[ ]
No	[ ]

If **Yes** proceed to question 7 and if **No** proceed to section 2.

**7. What is the highest level of education of your accounting staff? (If you have more than one member of accounting staff, answer with the most qualified staff member in mind.)**

Lower than Senior Certificate (Matric)	[ ]	Senior Certificate (Matric)	[ ]
Undergraduate Certificate	[ ]	Trade Skills	[ ]
University Degree or Diploma	[ ]	other (please specify)	[ ]

## Section 2: The extent of the use of management accounting practices

### **PART A: COSTING SYSTEMS\***

**8. Do you use any costing systems in your firm?** (Please tick the appropriate box)

Yes	[ ]
No	[ ]

If **Yes** proceed to question 9 and onwards. If **No** proceed to part B, question 11.

**For the following questions, please place one tick against each statement.**

9. *	Please indicate how often you use the following methods of assigning costs to units produced in your firm.				
	Never	Not often	Sometimes	Very often	Always
9.1 Batch costing*					
9.2 Contract costing*					
9.3 Job costing*					
9.4 Process costing*					

10.	Please indicate how often you use the following costing systems in your firm.				
	Never	Not often	Sometimes	Very often	Always
10.1 Absorption costing*					
10.2 Activity based costing (ABC) *					
10.3 Variable costing*					

### **PART B: BUDGET SYSTEMS\***

**11. Do you use any budgeting systems in your firm?** (Please tick the appropriate box)

Yes	[ ]
No	[ ]

If **Yes** proceed to question 12 and onwards. If **No** proceed to part C, question 15.

For the following questions please place one tick against each statement.

12.	Please indicate how often you use the following budgets in your firm.				
	Never	Not often	Sometimes	Very often	Always
12.1 Cash flow budget					
12.2 Financial position budget (i.e. balance sheet)					
12.3 Production budget					
12.4 Purchasing budget					
12.5 Sales budget					

13.	Please indicate how often you use the following budget systems in your firm.				
	Never	Not often	Sometimes	Very often	Always
13.1 Flexible budget*					
13.2 Incremental budget*					
13.3 Zero-based budget*					

14. Please indicate how often you prepare the following budgets.

	Never	Not often	Sometimes	Very often	Always
14.1 Annual budget					
14.2 Continuous/rolling budget					
14.3 Monthly budget					

**PART C: PERFORMANCE MEASUREMENTS TOOLS (PMTs)\***

15. Does your firm use any performance measurement tools (PMTs)? (Please tick the appropriate box) (See question 16 for examples of PMTs)

Yes	[ ]
No	[ ]

If **yes** proceed to question 16 and if **no** proceed to part D, question 17.

For the following question please place one tick against each statement.

16.	Please indicate how often your firm uses the following PMTs.				
	Never	Not often	Sometimes	Very often	Always
<b>16.1 Financial Measures*</b>					
16.1.1	Cash flows				
16.1.2	Operating income				
16.1.3	Return on investment				
16.1.4	Sales growth				
<b>16.2 Non-Financial Measures *</b>					
16.2.1	Defect rate				
16.2.2	Employee turnover				
16.2.3	Manufacturing lead/ cycle time				
16.2.4	Number of customers complaints				
16.2.5	Number of warranty claims				
16.2.6	On-time delivery				
16.2.7	Survey of customers satisfaction				

\* Financial and Non-financial measures are often used as very simple tools to describe the performance of the business.

#### **PART D: STRATEGIC MANAGEMENT ACCOUNTING (SMA) & DECISION SUPPORT SYSTEMS\***

17. Does your firm use SMA? (Please tick the appropriate box?)

Yes	[ ]
No	[ ]

If **yes** proceed to question 18, if **no** proceed to question 19.

For the following questions, please place one tick against each statement.

18.	How often does your firm use the following SMA practices?				
	Never	Not often	Sometimes	Very often	Always
18.1	*Monitoring the costs that occur across stages of product development?				
18.2	Strategic costing in determining the firm's strategy?				
18.3	The systematic collection of data on competition's price reactions, demand reactions and the market environment?				
18.4	Target costing in the design of new products?				

18.5 **Taking into account any strategic factors when setting the price?					
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\*For example, the cost of installation, operations, support, maintenance & disposals.

\*\*For example the cost of competitor price reaction, elasticity, market growth and demand.

19. Do you use any decision support systems in your firm? (Please tick an appropriate box)

Yes	[ ]
No	[ ]

If **yes** proceed to question 20 and onwards, if **no** proceed to Section 3.

20.	Please indicate how often you use of the following practices in your firm (please place one tick against each statement).				
	Never	Not often	Sometimes	Very often	Always
<b>20.1 Short-run analysis</b>					
20.1.1	Break-even analysis				
20.1.2	Customer profitability analysis				
20.1.3	Product profitability analysis				
20.1.4	Stock control model				
<b>20.2 Long-run analysis</b>					
20.2.1	Accounting rate return				
20.2.2	Internal rate of return				
20.2.3	Net present value				
20.2.4	Pay back				

For the following question, place one tick against every statement.

21.	Please indicate how often you formulate or prepare your firm's strategy?				
	Never	Not often	Sometimes	Very often	Always
21.1	Continuously				
21.2	Mid-term interval				
21.3	Year-end interval				

### Section 3: Role of Management Accounting

For the following questions, please place one tick against every statement to record your opinion.

22.	How has management accounting been useful in your firm?					
		Strongly Disagree	Disagree	Neither disagree nor agree	Agree	Strongly Agree
22.1	For controlling current activities					
22.2	For evaluating performance					
22.3	For improving internal and external communication					
22.4	For measuring and optimizing the use of the firm's resources					
22.5	For planning the future strategies, tactics and operations					
22.6	For reducing the subjectivity in decision making process					
22.7	Other (please add any other uses and score accordingly)					
22.8	Other (please add any other uses and score accordingly)					

**Section 4: Factors which affect the extent of use of management accounting practices**

The factors listed in question 23 can affect your firm's use MAPs.

**23. To what extent do you agree with the following statements: about the factors that affect your firm's use of MAPs? Please place one tick against every statement to record your opinion.**

Factors that affect the use of MAPs	Strongly Disagree	Disagree	Neither disagree nor agree	Agree	Strongly Agree
<b>23.1</b> Unable to understand MAPs					
<b>23.2</b> The benefits of the MAPs are too difficult to be observed					
<b>23.3</b> No important benefits perceived from the use of MAPs					
<b>23.4</b> The firm is too small to implement MAPs					
<b>23.5</b> The new-developed or modern MAPs are too complex to use					
<b>23.6</b> High cost to implement MAPs					
<b>23.7</b> Lack of information on affordable accounting services					
<b>23.8</b> Lack of education and basic in-house training					
<b>23.9</b> Lack of top management support					
<b>23.10</b> Lack of skilful accounting staff					
<b>23.11</b> Lack of up-to-date publications about MAPs and new developed practices					
<b>23.12</b> Lack of computers and technology systems					
<b>23.13</b> Lack of computer programmes relevant to MAPs					
<b>23.14</b> Other (please add any other uses and score accordingly)					
<b>23.15</b> Other (please any other uses and score accordingly)					

**24. Please indicate any use of the following technology equipment by placing one tick against every statement to indicate your answer.**

	<b>Never used</b>	<b>Low use</b>	<b>Moderate use</b>	<b>High use</b>	<b>Always used</b>
<b>24.1</b> Computer numerically controlled machines					
<b>24.2</b> Flexible manufacturing systems					
<b>24.3</b> Other (please add and any other uses and score accordingly)					

**Section 5: Performance of the firm**

For the following question, please place one tick against every statement to record your opinion.

25.	During the past 3 years, in your opinion, has your firm experienced decreases or increases in:					
		Decreased significantly	Decreased Slightly	No change	Increased Slightly	Increased significantly
25.1	The cash flow growth rate					
25.2	The number of deliveries on time					
25.3	Operating profit growth rate					
25.4	The productivity quality					
25.5	The productivity quantity					
25.6	The annual net profit					
25.7	The sales growth rate					

\*\*\*\*\* END \*\*\*\*\*

***Thank you for your support and participation.***

***Any enquiries can be directed to:***

***Mr Sanele Phumlani Vilakazi***

***Cell phone: 084 489 4483***

***Email address: sanelevila69@gmail.com***

**Appendix: A.**

**Definition of management accounting practices**

*Management accounting practices (MAPs) are sets of techniques aimed at providing managers with financial information to help them make decisions and maintain effective control over business resources. They include, but are not limited to, the following: costing systems, budgeting systems, performance measurement tools (PMTs), decision support systems and strategic management accounting (SMA). For the purposes of this study only the MAPs defined below will be used.*

**Definitions of specific management accounting practices**

**-Costing systems**

*This is a framework used by firms to estimate the cost of their products for profitability analysis, inventory valuation and cost control. Examples are absorption costing; activity based costing and variable costing.*

**-Budgeting systems**

*These are budgets used for planning future performance, planning the future financial position, and controlling cost. Examples are flexible, incremental or zero-based budgets.*

### **-Performance measurement tools (PMTs)**

*These are tools that provide managers and employees with information to assist in managing the operations. These can be financial (such as cash flow measure) or non-financial (such as defect rate).*

### **-Decision support system**

*This is the collection, storage and processing of financial and accounting data used by internal users to report information to investors.*

### **-Strategic management accounting (SMA)**

*This is the provision and analysis of financial information on the firm's product markets and competitors' cost and cost structures.*

- **Explanations of costing systems**

#### **Batch costing**

-a system where the cost of making a product is calculated by the batch rather than by the individual item, including comparing the costs of different sized batches made under different conditions.

#### **Contract costing**

-is the tracking of costs associated with a specific contract with a customer.

#### **Job costing**

-Is a method of recording the costs of a manufacturing job, rather than process?

#### **Process costing**

-is a method for collecting and assigning manufacturing costs to the units produced; is used when nearly identical units are mass produced.

#### **Absorption costing**

-a method of calculating the cost of a product or firm by taking into account indirect expenses (overheads) as well direct costs.

#### **Activity based costing**

-is a costing methodology that identifies activities in the firm and assigns the manufacturing cost to all products and services according to the actual consumption by each.

#### **Variable costing**

-are those costs that vary depending on a firm's production volume; they rises as production increases and fall as production decreases.

- **Explanations of budget systems**

#### **Flexible budget**

-is a budget that adjusts or flexes for changes in the volume of activity.

#### **Incremental budget**

-is a budget prepared using a previous period's budget or actual performance as a basis with incremental amounts added for new budget period.

#### **Zero-based budget**

-is a method of budgeting in which all expenses must be justified for each new period.

## Appendix B: The letter of information and the consent letter for the survey



### LETTER OF INFORMATION

**Title of the Research Study:** “A Critical Assessment of Management Accounting Practices Used by Small and Medium-sized Clothing Enterprises in Newcastle, KwaZulu-Natal”

**Principal Investigator/s/researcher:** Sanele Phumlani Vilakazi, B. Tech: CMA.

**Co-Investigator/s/supervisor/s:** Prof. Lesley Stainbank, CA (SA,) and Dr. Celani J. Nyide, DBA.

#### **Dear Participant,**

You are kindly invited to participate in a research study titled “A Critical Assessment of Management Accounting Practices Used by Small and Medium-sized Clothing Enterprises in Newcastle, KwaZulu-Natal.” This study is being conducted by Sanele Phumlani Vilakazi (**Principal investigator**), a master’s student at Durban University of Technology (DUT). This study aims to assess the extent of use of the Management Accounting Practices (MAPs) by clothing SMEs in Newcastle. MAPs are important because they assist businesses with planning, controlling, coordinating, evaluating and strategising their performance in an informed manner.

Because you are a decision-maker of a KwaZulu-Natal SMEs, your opinions are very valuable for this study. Your participation in this study is voluntary and you are free to withdraw your participation at any time without obligation. The information provided will be kept in strict professional confidence. You are not required to reveal your identification information as all responses will be recorded anonymously.

**Brief Introduction and Purpose of the Study:** Before you decide to participate in this study, it is important that you understand why the research is being done and what it will involve. Please take the time to read the following information carefully before signing at the bottom of the page. Be advised to ask questions if there is anything that is not clear or if you need more information. The purpose of this study is to critically assess the use of MAPs by SMEs in Newcastle. The field of the study falls within the subject discipline of Cost and Management Accounting. The final report will contribute to the literature available of management

accounting in South Africa (SA) and worldwide in general.

**Outline of the Procedures:** Your expected time of commitment for this study is: not less than 20 minutes also not longer than 40 minutes. You will be given a questionnaire during this time, none of these questions need effort. You need to answer according to your opinion as a SME owner/manager, give your own views and ask where you need clarity regarding the questions.

**Risks or Discomforts to the Participant:** The risks of this study are minimal. These risks are similar to those you experience when disclosing work-related information to others.

**Benefits:**

There will be no direct benefit to you for your participation in this study. However, I hope that the information obtained from this study may lead to answers for the study questions. Also gives you other forms of MAPs you were not aware of.

**Reason/s why the participant May be Withdrawn from the Study:** There are no foreseeable reasons why participants may refrain to complete the questionnaire. If it happens you do not want to complete the questionnaire, you may withdraw anytime.

**Remuneration:** There is no monetary compensation to you for your participation in this study.

**Costs of the Study:** There are no costs to you for your participation in this study.

**Confidentiality:** Please do not write any identifying information on your questionnaire. Your responses will be anonymous. As you wish to contribute with your answers, be advised to be free to do so and be reminded that all your responses will be highly confidentially and will be only be used for the purpose of this study.

Every effort will be made by the researcher to preserve your **confidentiality** including the following:

Assigning code names/numbers for participants that will be used on all researcher notes and documents.

- Notes, questionnaire, and any other identifying participant information will be kept in a locked file cabinet in the personal possession of the researcher. When no longer necessary for research, all materials will be destroyed.
- The researcher and the members of the researcher's committee will review the researcher's collected data. Information from this research will be used solely for the purpose of this study and any publications that may result from this study. Any final publication will contain the names of the public figures that have consented to participate in this study (unless a public figure participant has requested anonymity): all other participants involved in this study will not

be identified and their anonymity will be maintained.

- Each participant has the opportunity to obtain a copy of their questionnaire. **Participants should tell the researcher if a copy of the questionnaire is desired.**

**Research-related Injury:** There are no foreseeable research injuries, but once the participant has any complaints regarding research-related injuries they will be attended to with immediate effect.

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

Please contact the researcher Sanele Phumlani Vilakazi at 084 489 4483, E-mail: sanelevila69@gmail.com or my academic supervisors: Prof. Lesley Stainbank CA (SA) based in Riston Campus of Durban University of Technology can be contacted on LesleyS@dut.ac.za, 031 373 5836 or Dr. Celani J. Nyide, based on Riverside campus of DUT, can be contacted on nyidec@dut.ac.za, 033 845 8882 or the Institutional Research Ethics Administrator on 031 373 2375. Complaints can be reported to the Director: Research and Postgraduate Support, Prof. S Moyo on 031 373 2577 or moyos@dut.ac.za.

Complaints can be reported to the Director: Research and Postgraduate Support, Prof. S Moyo on 031 373 2577 or moyos@dut.ac.za.

**General:**

Potential participants must be assured that participation is voluntary and the approximate number of participants to be included should be disclosed. A copy of the information letter should be issued to participants. The information letter and consent form must be translated and provided in the primary spoken language of the research population e.g. isiZulu.



**CONSENT**

**Statement of Agreement to Participate in the Research Study:**

- I hereby confirm that I have been informed by the researcher **Sanele Phumlani Vilakazi** about the nature, conduct, benefits and risks of this study - Research Ethics Clearance Number: **IREC 041/17**.
- 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 Participant Name of**  
**Date Time Signature /**  
**Right**

**Thumbprint**

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

\_\_\_\_\_

**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*: <https://www.doh.gov.za/docs/factsheets/guidelines/ethnics/>

Department of Health: 2006. *South African Good Clinical Practice Guidelines*. 2nd Ed. Available at: [https://www.nhrec.org.za/?page\\_id=14](https://www.nhrec.org.za/?page_id=14)

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- 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)

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If anyone makes a mistake completing this document e.g. a wrong date or spelling mistake, a

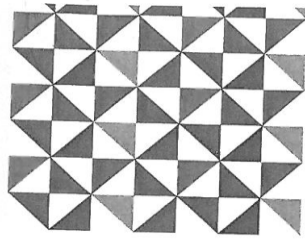
new document has to be completed. The incomplete original document has to be kept in the participant's file and not thrown away, and copies thereof must be issued to the participant.

**References:**

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

Department of Health. 2006. *South African Good Clinical Practice Guidelines*. 2nd Ed.  
Available at: [https://www.nhrec.org.za/?page\\_id=14](https://www.nhrec.org.za/?page_id=14)

## Appendix C: Ethics approval



**Institutional Research Ethics Committee**  
Research and Postgraduate Support Directorate  
2<sup>nd</sup> Floor, Berwyn Court  
Gate 1, Steve Biko Campus  
Durban University of Technology

P O Box 1334, Durban, South Africa, 4001

Tel: 031 373 2375

Email: [lavishad@dut.ac.za](mailto:lavishad@dut.ac.za)

[http://www.dut.ac.za/research/institutional\\_research\\_ethics](http://www.dut.ac.za/research/institutional_research_ethics)

[www.dut.ac.za](http://www.dut.ac.za)

18 September 2017

IREC Reference Number: **REC 137/16**

Mr S P Vilakazi  
P O Box 50937  
Osizweni  
2952

Dear Mr Vilakazi

**A Critical Assessment of Management Accounting Practices used by Small and Medium-sized Clothing Enterprises in Newcastle, KwaZulu-Natal**

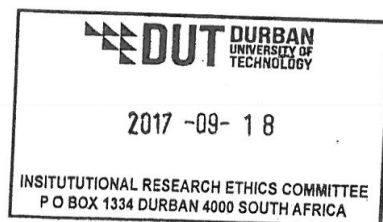
The Institutional Research Ethics Committee acknowledges receipt of your final data collection tool for review.

We are pleased to inform you that the questionnaire 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.

Yours Sincerely,

\_\_\_\_\_  
Professor J K Adam  
Chairperson: IREC



## Appendix D: The letter of information and the consent letter for the pre-test



### LETTER OF INFORMATION

**Title of the Research Study:** “A Critical Assessment of Management Accounting Practices Used by Small and Medium-sized Clothing Enterprises in Newcastle, KwaZulu-Natal”

**Principal Investigator/s/researcher:** Sanele Phumlani Vilakazi, B. Tech: CMA.

**Co-Investigator/s/supervisor/s:** **Prof.** Lesley Stainbank, CA (SA,) and **Dr.** Celani J. Nyide, DBA

#### **Dear Participant,**

You are kindly invited to participate in a research study titled “A Critical Assessment of Management Accounting Practices Used by Small and Medium-sized Clothing Enterprises in Newcastle, KwaZulu-Natal.” This study is being conducted by Sanele Phumlani Vilakazi (**Principal investigator**), a master’s student at Durban University of Technology (DUT). This study aims to assess the extent of use of the Management Accounting Practices (MAPs) by clothing SMEs in Newcastle. MAPs are important because they assist businesses with planning, controlling, coordinating, evaluating and strategising their performance in an informed manner.

You are selected to assist the researcher with ensuring that the wording of the questions in the questionnaire is clear and understandable to the intended respondents. You are required to identify any possible weaknesses that would render the questionnaire not being user-friendly. Your participation in this process is voluntary and you are free to withdraw your participation at any time without obligation. The information provided will be kept in strict professional confidence. You are not required to reveal your identification information as all responses will be recorded anonymously.

**Brief Introduction and Purpose of the Study:** Before you decide to participate in this study, it is important that you understand why the research is being done and what it will involve. Please take the time to read the following information carefully before signing at the bottom of the page. Be advised to ask questions if there is anything that is not clear or if you need more

information. The purpose of this study is to critically assess the use of MAPs by SMEs in Newcastle. The field of the study falls within the subject discipline of Cost and Management Accounting. The final report will contribute to the literature available of management accounting in South Africa (SA) and worldwide in general.

**Outline of the Procedures:** Your expected time of commitment for this study is: not less than 20 minutes also not longer than 40 minutes. You will be given a questionnaire during this time, none of these questions need effort. You need to answer according to your opinion as a SME owner/manager, give your own views and ask where you need clarity regarding the questions.

**Risks or Discomforts to the Participant:** The risks of this study are minimal. These risks are similar to those you experience when disclosing work-related information to others.

**Benefits:**

There will be no direct benefit to you for your participation in this study. However, I hope that the information obtained from this study may lead to answers for the study questions. Also gives you other forms of MAPs you were not aware of.

**Reason/s why the Participant May Be Withdrawn from the Study:** There are no foreseeable reasons why participants may refrain to complete the questionnaire. If it happens you do not want to complete the questionnaire, you may withdraw anytime.

**Remuneration:** There is no monetary compensation to you for your participation in this study.

**Costs of the Study:** There are no costs to you for your participation in this study.

**Confidentiality:** Please do not write any identifying information on your questionnaire. Your responses will be anonymous. As you wish to contribute with your answers, be advised to be free to do so and be reminded that all your responses will be highly confidentially and will be only be used for the purpose of this study.

Every effort will be made by the researcher to preserve your **confidentiality** including the following:

Assigning code names/numbers for participants that will be used on all researcher notes and documents.

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- The researcher and the members of the researcher's committee will review the researcher's collected data. Information from this research will be used solely for the purpose of this study

and any publications that may result from this study. Any final publication will contain the names of the public figures that have consented to participate in this study (unless a public figure participant has requested anonymity): all other participants involved in this study will not be identified and their anonymity will be maintained.

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Please contact the researcher Sanele Phumlani Vilakazi at 084 489 4483, E-mail: sanelevila69@gmail.com or my academic supervisors: Prof. Lesley Stainbank CA (SA) based in Riston Campus of Durban University of Technology can be contacted on LesleyS@dut.ac.za, 031 373 5836 or Dr. Celani J. Nyide, based on Riverside campus of DUT, can be contacted on nyindec@dut.ac.za, 033 845 8882 or the Institutional Research Ethics Administrator on 031 373 2375. Complaints can be reported to the Director: Research and Postgraduate Support, Prof. S Moyo on 031 373 2577 or moyos@dut.ac.za.

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**CONSENT**

**Statement of Agreement to Participate in the Research Study:**

- I hereby confirm that I have been informed by the researcher **Sanele Phumlani Vilakazi** about the nature, conduct, benefits and risks of this study - Research Ethics Clearance Number: \_\_\_\_\_.
- 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, \_\_\_\_\_ (name of researcher) herewith confirm that the above participant has been full informed about the nature, conduct and risks of the above study.

\_\_\_\_\_  
**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)

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<https://www.doh.gov.za/docs/factsheets/guidelines/ethnics/>

Department of Health. 2006. *South African Good Clinical Practice Guidelines*. 2nd Ed.  
Available at: [https://www.nhrec.org.za/?page\\_id=14](https://www.nhrec.org.za/?page_id=14)

### Appendix E: List of Newcastle Clothing/textile SMEs

No.	Business name	Address	Contact
1	Champ Cooperative Clothing	35 Begonia Ave Schunshoogte Newcastle 2140	0343181888
2	Clothing manufacturing industry	3 Murchison Street Newcastle 2140	<a href="mailto:newcastle.kzn@nbc.org.za">newcastle.kzn@nbc.org.za</a>
3	BMD Textiles (Pty) Ltd. T/A All wear	55 Albert Wessels Drive Newcastle 2140	<a href="mailto:phil@newcastle.co.za">phil@newcastle.co.za</a>
4	Africa Hong Kong Manufacturing (Pty) Ltd	60 Albert Wessels Drive Newcastle 2140	<a href="mailto:afrihk@telkomsa.net">afrihk@telkomsa.net</a>
5	All-beauty Jerseys (Pty) Ltd	55 Albert Wessels Drive Newcastle 2140	0343757505
6	A-One Knitting and Clothing (Pty) Ltd	54 A Albert Wessels Drive Newcastle 2140	0343756151
7	Ever beauty Sweater Factory CC	55 Albert Wessels Drive Newcastle 2140	<a href="mailto:everbeauty@hotmail.com">everbeauty@hotmail.com</a>
8	Faw Cheng Trading	24 Stephenson Street Newcastle 2140	0725516986
9	Glory Flair 168 Textile CC	68 Albert Wessels Drive Newcastle 2140	0343758955
10	Gold Shu-Lin Clothing CC	55 Albert Wessels Drive Newcastle 2140	0343758966
11	HWA Shin Export and Imports CC	12 Davy Street Newcastle 2140	0343757962
12	Join Link Trading CC	70 Yellow Street Newcastle 2140	0313749005
13	Kouming Property	66 Albert Wessels Drive Newcastle 2140	0343756868
14	Lead Long Textile CC	56 C Albert Wessels Drive Newcastle 2140	0343758360
15	Lilac Clothing and Trading CC	2 C Macadam Street Newcastle 2140	0343758643
16	Mooi Enterprise CC	68 Yellow Street Newcastle 2140	<a href="mailto:mooi.entrprise@vodamail.co.za">mooi.entrprise@vodamail.co.za</a>

17	Moot Enterprise	69 Yellow Street Newcastle 2140	0343749319
18	Mpangele CO-OP	19 A Gutenberg Street Newcastle 2140	<a href="mailto:simon@newcastle.co.za">simon@newcastle.co.za</a>
19	National Bargaining Council Clothing Manufacturing	3 Murchison Street Drive Newcastle 2140	0343264912
20	Ni-Sheng Trading CC	40 Red Street Newcastle 2140	0343745988
21	Sen Wei	25 A Stephenson Street Newcastle 2140	0343758968
22	Top Dress Clothing	No 9 Gutenberg Street Newcastle 2140	0343758585
23	Xiangtat Clothing	60 Blue Street Newcastle 2140	<a href="mailto:xiangtatplam@yahoo.com">xiangtatplam@yahoo.com</a>
24	Best Corp One	13 Anderson Street Newcastle 2140	0343757571
25	Flurish Clothing	18 C Stephenson Street Newcastle 2140	0343756292
26	Great Wall	17 B Stephenson Street Newcastle 2140	N/A
27	HLK CC	58 A Albert Wessels Drive Newcastle 2140	<a href="mailto:hkplk@gmail.com">hkplk@gmail.com</a>
28	Honestiest Enterprise	15 A Gutenberg Street Newcastle 2140	0343756987
29	Hong Feng Clothing	18 B Stephenson Street Newcastle 2140	0343756668
30	May Flower Clothing	21 Stephenson Street Newcastle 2140	0343758703
31	New Ever Industrial CC	18 A Stephenson Street Newcastle 2140	0343757420
32	Shu-Lin Clothing	55 Albert Wessels Drive Newcastle 2140	0343758966
33	Star Fair Public Company	16 B Stephenson Street Newcastle 2140	0724031318
34	Valulie	16 E Stephenson Street Newcastle 2140	0343757599
35	Kelly SA INT. Trading CC	70 Paterson Street Newcastle 2140	0343755986

36	Top Well Industrial (Pty) Ltd	31 Kirkland Street Newcastle 2140	0343755881
37	Gem Store	29 Murchison Street Newcastle 2140	0726182446
38	Grandselect 9 (Pty) Ltd.	19 Kirkland Street Newcastle 2140	0343128881
39	Alteration Specialist	12 Murchison Street Newcastle 2140	0343126670
40	Dmaharaji Fashion Design CC	19 Kirkland Street Newcastle 2140	0737928556
41	JJ Upholstery	6 Terminus Street Newcastle 2140	0733162020
42	Exomen Trading Enterprise CC	F 832 Section 6 Madadeni, Newcastle 2140	0791004859
43	Onwards	11 Edison Street Newcastle 2140	0343756638
44	Jichi Trading CC	26 Stephenson Street Newcastle 2140	<a href="mailto:vivi@celtico.co.za">vivi@celtico.co.za</a>
45	Contempo Newcastle (Pty) td	48 Newcastle 2140	0343123951
46	Fitwell Tailors and Outfitters	14 Allen Street Newcastle 2140	0343125257
47	Jing Ying Trading	63 Marconi Street Newcastle 2140	0343758688
48	FTT CC	16 Allen Street Newcastle 2140	<a href="mailto:abujareer@gmail.com">abujareer@gmail.com</a>
49	Kelly ChuneTrading	2 Kirkland Street Newcastle 2140	0796343939
50	Legends Clothing Co	101 Allen Street Newcastle 2140	<a href="mailto:Aandrew679@gmail.com">Aandrew679@gmail.com</a>
51	Mathirs Uniforms	55 Montague Street Newcastle 2140	0343124363

Note: Adapted from the Newcastle Business Portfolio 2013-2014.