

FACTORS AFFECTING THE ROLE OF MANAGEMENT ACCOUNTING  
IN MANUFACTURING ORGANISATIONS IN NAMIBIA AND IN THE  
EASTERN CAPE PROVINCE OF SOUTH AFRICA

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FACTORS AFFECTING THE ROLE OF MANAGEMENT ACCOUNTING IN  
MANUFACTURING ORGANISATIONS IN NAMIBIA AND IN THE EASTERN CAPE  
PROVINCE OF SOUTH AFRICA

BY

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## **DECLARATION**

I, Hendrina Kangala, student number 214300498, hereby declare that this treatise in partial fulfilment of the degree of Master of Technology: Cost and Management Accounting is my own original piece of work. I declare that it has not previously been submitted for assessment to another university or for another qualification.

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Hendrina Kangala

## **ACKNOWLEDGEMENTS**

I am utterly thankful to God Almighty, for his promise and yet another proof of his grace as I come to the finishing line of this milestone in my career.

*“Surely goodness and mercy shall follow me all the days of my life; and I will dwell in the house of the Lord forever.”* Psalm 23:6.

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## **ABSTRACT**

Manufacturing is one of the important sectors needed to improve the economies of Namibia and South Africa. However, the manufacturing sectors of both countries are not performing as planned. Management accounting is one of the requirements needed for a successful organisation. With the aim of reducing costs, improving decision making, profits and customer satisfaction, the main role of management accounting in manufacturing companies of Namibia and the Eastern Cape Province of South Africa is to control cost, forecast and budget, make decisions, report internally, improve profits and manage working capital. This study used an online survey to examine the factors that affect the effectiveness of management accounting in executing this role. The findings of the study revealed that management accounting is affected by the external environment, developments in technology and customer satisfaction. It also found that organisational structure, relationships with stakeholders and management accounting reporting were internal factors affecting management accounting. Specific skills like numerical and analytical skills were also identified as important to the role of management accounting. Based on contingency and role theories, this research aims to find those factors which can be controlled to improve the effectiveness of management accounting systems in manufacturing organisations, and as a result improve the success of those organisations on which these systems are contingent.

## **LIST OF ABBREVIATIONS**

SEDA	– Small Enterprise Development Agency
DTI	– Department of Trade and Industry
GDP	– gross domestic product
NMA	– Namibian Manufacturers' Association
NMMU	– Nelson Mandela Metropolitan University
NDP4	– Fourth National Development Plan
US	– United States of America
CIMA	– Chartered Institute of Management Accountants
IFRS	– International Financial Reporting Standards
CFO	– Chartered Financial Officer
IMA	– Institute of Management Accountants
ABC	– activity-based costing
ACCA	– Association of Chartered Certified Accountants
COSO	– Committee of Sponsoring Organisations
NDP2	– Second National Development Plan
ERP	– enterprise resource planning
IT	– information technology
NEF	– Namibian Employees Federation
IFAC	– International Federation of Accountants
SME	– small and medium enterprises
SAICA	– South African Institute of Chartered Accountants
ICAN	– Institute of Chartered Accountants of Namibia
ICT	– Information Communication Technology
SPSS	– Statistical Package for the Social Sciences

## TABLE OF CONTENTS

<b>DECLARATION .....</b>	<b>i</b>
<b>ACKNOWLEDGEMENTS .....</b>	<b>ii</b>
<b>ABSTRACT.....</b>	<b>iii</b>
<b>LIST OF ABBREVIATIONS .....</b>	<b>iv</b>
<b>LIST OF FIGURES .....</b>	<b>x</b>
<b>LIST OF TABLES .....</b>	<b>xi</b>

### CHAPTER 1

#### INTRODUCTION AND METHOD OF STUDY

<b>1.1 INTRODUCTION .....</b>	<b>1</b>
<b>1.2 PROBLEM STATEMENT .....</b>	<b>1</b>
<b>1.3 RESEARCH OBJECTIVES .....</b>	<b>3</b>
1.3.1 Main objective .....	3
1.3.2 Sub-objectives .....	3
<b>1.4 RESEARCH METHODOLOGY .....</b>	<b>4</b>
1.4.1 Population and sample of the study .....	4
1.4.2 Research design and data collection .....	5
1.4.3 Data analysis .....	5
1.4.4 Validity and reliability .....	6
1.4.5 Ethical considerations .....	6
<b>1.5 DELIMITATIONS OF THE STUDY .....</b>	<b>6</b>
<b>1.6 SIGNIFICANCE OF THE STUDY .....</b>	<b>7</b>
<b>1.7 DEFINITION OF KEY TERMS .....</b>	<b>8</b>
1.7.1 Factor .....	8
1.7.2 Manufacturing organisation .....	8
1.7.3 Management accountant .....	8
1.7.4 Management accounting system .....	9
<b>1.8 RESEARCH ASSUMPTIONS .....</b>	<b>9</b>
<b>1.9 CHAPTER OUTLINE .....</b>	<b>9</b>

<b>1.10</b>	<b>CHAPTER SUMMARY .....</b>	<b>10</b>
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## CHAPTER 2

### LITERATURE REVIEW

<b>2.1</b>	<b>INTRODUCTION .....</b>	<b>11</b>
<b>2.2</b>	<b>THE ROLE OF MANAGEMENT ACCOUNTING .....</b>	<b>12</b>
	2.2.1 Formulation of business strategy .....	13
	2.2.2 Decision making and control .....	14
	2.2.3 Performance management and value enhancement .....	15
	2.2.4 Efficient use of resources .....	16
	2.2.5 Corporate governance, risk management and internal control .....	16
	2.2.6 Safeguarding of assets .....	18
<b>2.3</b>	<b>EFFECTIVENESS OF MANAGEMENT ACCOUNTING .....</b>	<b>18</b>
<b>2.4</b>	<b>MANUFACTURING ORGANISATIONS AND MANAGEMENT ACCOUNTING .....</b>	<b>19</b>
<b>2.5</b>	<b>FACTORS THAT AFFECT MANAGEMENT ACCOUNTING .....</b>	<b>21</b>
	2.5.1 The external business environment .....	22
	2.5.2 Competition and the effect of organisational strategies .....	22
	2.5.3 The organisational structure and decentralising management accounting .....	23
	2.5.4 Customer satisfaction .....	24
	2.5.5 Developments in technology .....	25
	2.5.6 Communication and management accounting .....	26
	2.5.7 The demand and supply management accounting services .....	27
	2.5.8 The skills and personalities of management accountants .....	29
<b>2.6</b>	<b>CHAPTER SUMMARY .....</b>	<b>29</b>



## CHAPTER 3

### RESEARCH METHODOLOGY

3.1	INTRODUCTION .....	31
3.2	RESEARCH PHILOSOPHIES .....	32
3.3	RESEARCH APPROACH .....	33
3.4	THE CHOICE OF RESEARCH METHOD .....	33
3.5	RESEARCH DESIGN AND TIME FRAME .....	34
3.6	DATA COLLECTION METHODS .....	35
3.7	STRUCTURE OF THE QUESTIONNAIRE .....	37
3.8	ADMINISTRATION OF THE QUESTIONNAIRE .....	38
3.9	POPULATION OF THE STUDY AND SAMPLING .....	38
3.10	PILOT STUDY .....	41
3.11	THE VALIDITY OF DATA .....	42
3.12	THE RELIABILITY OF DATA .....	42
3.13	ETHICAL CONSIDERATIONS .....	43
3.14	DATA ANALYSIS .....	44
3.15	CHAPTER SUMMARY .....	44

## CHAPTER 4

### PRESENTATION OF FINDINGS

4.1	INTRODUCTION .....	45
4.2	RESPONDENT INFORMATION .....	46
	4.2.1 The experience of respondents .....	47
4.3	EXTERNAL AND INTERNAL COMPANY ASPECTS .....	48
	4.3.1 The effect of the conditions of the external environment .....	48
	4.3.2 The external environmental conditions that affect manufacturing organisations .....	48
	4.3.3 Aspects mostly valued by customers .....	49
	4.3.4 The effect of organisational strategies on respondents' motivation .....	50
	4.3.5 The role of organisational strategies on motivating other employees .....	50
	4.3.6 The importance of the organisational structure .....	51
4.4	COMPETITION .....	52

<b>4.5</b>	<b>INTERACTION WITH OPERATIONS AND COMMUNICATION</b> .....	<b>53</b>
4.5.1	Management accountants' interactions with the operations department .....	53
4.5.2	Communication, understanding operations and management expectations .....	54
4.5.3	Forms of presentations for management accounting reports .....	55
4.5.4	Preparing management accounting reports for different levels of management .....	56
4.5.5	The relationship between management and management accountants .....	57
<b>4.6</b>	<b>MANAGEMENT ACCOUNTING AND INNOVATION</b> .....	<b>58</b>
<b>4.7</b>	<b>TECHNOLOGY AND MANAGEMENT ACCOUNTING</b> .....	<b>59</b>
4.7.1	Management accountants and developments in technology .....	59
4.7.2	Financial software packages .....	60
4.7.3	The advantages and disadvantages of financial software packages .....	61
4.7.4	The benefits of technology .....	62
<b>4.8</b>	<b>PRACTICAL SKILLS</b> .....	<b>64</b>
<b>4.9</b>	<b>MANAGEMENT ACCOUNTING SKILLS</b> .....	<b>64</b>
<b>4.10</b>	<b>MANAGEMENT ACCOUNTING AS A BRANCH OF ACCOUNTING</b> .....	<b>66</b>
<b>4.11</b>	<b>THE EFFECTIVENESS OF MANAGEMENT ACCOUNTING</b> .....	<b>67</b>
4.11.1	Measures of effectiveness in management accounting .....	67
4.11.2	Respondents' opinions of the effectiveness of management accounting .....	69
4.11.3	Other factors that affect management accounting .....	69
<b>4.12</b>	<b>THE PRACTICE OF MANAGEMENT ACCOUNTING</b> .....	<b>70</b>
<b>4.13</b>	<b>CHAPTER SUMMARY</b> .....	<b>72</b>

## CHAPTER 5

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

<b>5.1</b>	<b>INTRODUCTION .....</b>	<b>73</b>
<b>5.2</b>	<b>RESEARCH SUMMARY .....</b>	<b>73</b>
	5.2.1 Factors that affect the role of management accounting .....	73
	5.2.2 The role of management accounting in manufacturing organisations .....	75
	5.2.3 The effectiveness of management accounting .....	75
<b>5.3</b>	<b>CONCLUSION .....</b>	<b>76</b>
<b>5.4</b>	<b>RECOMMENDATIONS .....</b>	<b>76</b>
<b>5.5</b>	<b>LIMITATIONS OF THE STUDY .....</b>	<b>78</b>
<b>5.6</b>	<b>RECOMMENDATIONS FOR FUTURE RESEARCH .....</b>	<b>78</b>
<b>5.7</b>	<b>CHAPTER SUMMARY .....</b>	<b>79</b>
	<b>REFERENCE LIST .....</b>	<b>80</b>
	<b>APPENDICES .....</b>	<b>93</b>

## LIST OF FIGURES

FIGURE 4.1 Respondents' experience .....	47
FIGURE 4.2 The effect of the environment on decision making .....	48
FIGURE 4.3 External conditions that affect decision making .....	49
FIGURE 4.4 Most valued aspects by customers .....	49
FIGURE 4.5 Organisational strategies and motivation .....	50
FIGURE 4.6 Organisational strategies and other employees .....	51
FIGURE 4.7 The importance of the organisational structure .....	51
FIGURE 4.8 The effect of competition in different areas .....	52
FIGURE 4.9 Communications and understanding operations and management expectations .....	55
FIGURE 4.10 The different forms of presentations used .....	55
FIGURE 4.11 Respondents' attitudes towards innovation .....	59
FIGURE 4.12 Keeping up to date with developments in technology .....	60
FIGURE 4.13 The benefits of technology .....	63
FIGURE 4.14 Respondents' knowledge in different subjects .....	64
FIGURE 4.15 Measures of effectiveness in management accounting .....	68
FIGURE 4.16 Effectiveness of management accounting ratings .....	69

## LIST OF TABLES

TABLE 3.1 Differences between quantitative and qualitative research methods .....	34
TABLE 4.1 Demographic profile of respondents .....	46
TABLE 4.2 Respondents and interacting with operations .....	53
TABLE 4.3 Preparing management accounting reports .....	56
TABLE 4.4 Respondent ratings of their relationship with management .....	57
TABLE 4.5 Respondents' use of a financial software packages .....	61
TABLE 4.6 Advantages and disadvantages of software systems .....	62
TABLE 4.7 Skills important to management accountants .....	65
TABLE 4.8 Respondents' practise of management accounting .....	67
TABLE 4.9 Respondents' practice of management accounting .....	71

## CHAPTER 1

### INTRODUCTION AND METHOD OF STUDY

#### **1.1 INTRODUCTION**

According to the Small Enterprise Development Agency (SEDA) (2012:16), manufacturing is an important base that has built economies, even those that are now dominated by the tertiary sector. Manufacturing contributes to development through job creation, export and currency improvement. It is needed especially if African countries are to compete with the rest of the world. The Namibia Economist (2011) named manufacturing as the future driver of Namibian growth. In the same way, the South African Department of Trade and Industry (DTI) (2013:12) has identified its manufacturing sector as an important driving force of innovation and productivity.

The production of goods needed by customers, production and distribution efficiency and the ability to promote the goods and services of an organisation effectively to attract customers is essential if manufacturing companies in Africa are to keep up with sophisticated manufacturing countries like China. Myreliid (2013:2) associates these organisational must-have factors with an effective management accounting system. So management accounting is one of the important requirements needed for manufacturing organisations to be profitable and successful. Management accounting aims to meet the needs of management, to stimulate the achievement of organisational objectives (Sunarni, 2013:618). To achieve its objectives, an organisation needs a focused management team, among other crucial factors like financing.

Manufacturing organisations need to make operational decisions such as what products to sell; whether to make or buy these products; and the transportation methods to be used. Management accountants collect and compile information that is used by management to make these decisions. According to Correia, Langfield and Thorne (2008:6), management accountants focus on the effective use of organisational resources to aid management in boosting customer and shareholder values. Management accounting supports the efficient use of these resources and helps to determine strategies that focus on finding unique ways of operation, which enables the organisation to gain an advantage over competitors. Effective

management accounting systems identify strategies that lead organisations to high profits and provide the knowledge needed to become competitive (Ndwiga, 2011:104). This illustrates the importance of management accounting in manufacturing organisations. According to SEDA (2012:13), South African manufacturing companies need to excel in manufacturing niche market strategies to achieve competitiveness. An understanding of the factors that may improve or cause the management accounting practice to slack should thus be deemed vital if manufacturing companies are to prosper.

## **1.2 PROBLEM STATEMENT**

According to the Windhoek Observer (2014), a Namibian Ministry of Finance publication indicates that Namibia is not improving at the same pace as many other economies, although it was ranked higher in the 2013-14 Global Competitiveness Index Report (from 92 out of 144 countries to 90 out of 148 countries). Although the manufacturing sector has great potential in South Africa, its current performance rate is not favourable. The sector's contribution to GDP declined from 15.3% in 2004 to 13.9% in 2014 (Greve, 2015). One of the challenges facing the manufacturing sector is a rise in labour and production costs, resulting in an increase in the selling prices of certain goods, causing alternative imports to be cheaper and preferable (SEDA, 2012:13). Development and globalisation have also brought about competition between firms from different countries, which has therefore affected business. Waweru, Hoque and Uliana (2004:675) take note of keen competition in the modern business environment; which compels businesses to be on par with current technology, pay attention to product quality and provide proper customer service.

These are a few factors exerting pressure on manufacturing companies in Namibia and South Africa. The effectiveness of management accounting depends on the practice facilitating successful entities in a world where organisations are affected by these factors. Management accounting is affected by the features of the current environment, the people in the organisation and other factors that affect the organisation, like its customer base. The success of manufacturing companies in overcoming these problems will be determined by the actions of management and their effectiveness. Teerooven and Bhagtaraj (2008:205) validated this connection when they found a significant positive relationship between quality management

accounting systems (management accounting systems with sufficient levels of the collective dimensions of management accounting [Teerooven & Bhagtaraj, 2008:190]) and managerial performance. So an understanding of the factors that may have an effect on the quality and success of management accounting is needed to improve the performance of manufacturing organisations in Namibia and South Africa.

### **1.3 RESEARCH OBJECTIVES**

#### **1.3.1 Main objective**

The main objective of this study is to analyse the factors that affect the effectiveness of management accounting in manufacturing organisations in Namibia and the Eastern Cape Province of South Africa.

The initial focus of the study was only on Namibian manufacturing organisations. However due to the small size of the Namibian economy (Namibian Manufacturers' Association [NMA], 2014:8), the Eastern Cape was included as part of the study.

#### **1.3.2 Sub-objectives**

In addition to the main objective, the study has these sub-objectives:

- To determine the role of management accounting in manufacturing organisations in Namibia and the Eastern Cape.
- To determine whether manufacturing organisations in Namibia and the Eastern Cape have adopted a modern management accounting practices that keep up with changes in business.
- To determine the views of management accountants with regard to measures of the effectiveness of their role.

A number of studies exist which focus on the development of management accounting practices in developing countries (Ding and McKinstry [2012:99-1190], Waweru *et al* [2004:675-704] and Sunarni [2013:616-626]). Although they are closely linked to this study, the study aims to analyse the factors that influence the operations of management accountants. The researcher aims to uncover such factors that influence the effectiveness (or lack thereof) of management accounting



practices. In developing countries, little is known about the management accounting practices in use, their developments or their basic challenges (Zheng, 2012:91).

The business environment is not perfect. So perfection in business operations cannot be expected. However, an understanding of factors that have the potential to affect business and reshape the branch of accounting that facilitates decision making might improve business operations. Management accounting supports management in making decisions (Myrelid, 2013:4). These decisions may be either strategic or operational; however both have the possibility to affect the future of an organisation (Voipio, 2014:1).

## **1.4 RESEARCH METHODOLOGY**

A choice is made between qualitative and quantitative research approaches. Qualitative research involves an understanding of the different explanations given by different individuals to give meaning to a specific problem. Data collection instruments that may be used for a qualitative approach are document examinations, interviews and observations (Creswell, 2009:175). Quantitative research on the other hand tests the exclusive influence of an element on an outcome. Creswell (2009:4) refers to the quantitative research approach as a means of impartially testing theories by examining the connection among measurable variables. Punch (2000:57) lists questionnaires, standardised measuring instruments, *ad hoc* rating scales and observation schedules as data collection instruments for quantitative data.

Because of its ability to collect large quantities of data (White, 2013:4), a quantitative approach was adopted for this study to collect data from the demarcated sample of a large population of manufacturing companies in Namibia and the Eastern Cape.

### **1.4.1 Population and sample of the study**

The population of this study comprised manufacturing companies in Namibia and in the Eastern Cape. Bryman (2012:186) states the invariable need for sampling in quantitative research. To ensure the feasibility of this study, only a part of the population was used to collect data. The study made use of non-probability sampling methods, in which company participants were selected based on judgment (Saunders, Lewis & Thornhill, 2009:233). Management accountants or officials who

perform management accounting roles in the selected manufacturing organisations formed the sample for the study. Specific details of sampling will be discussed further in Chapter 3.

#### **1.4.2 Research design and data collection**

Creswell (2009:3) defines a research design as the plans and processes that distance research ideas from broad assumptions and plans to detailed methods of data collection and analysis. The design of research provides guidance for data collection and it is based on its appropriateness to the research problem besides the researcher's knowledge of the topic and preferences (Jankowicz, 2005:197).

According to Creswell (2009:145), a survey design gathers numeric descriptions of trends, attitudes, or views of a population through studying its sample. This study adopted a cross-sectional survey design, to collect quantifiable data at a single point in time and analyse the factors that affect the role of management accounting (Bryman, 2012:60). An online survey was used to collect data for this study. Internet surveys are a cheaper and faster substitute for other quantitative data collection methods like postal surveys (Denscombe, 2003:42).

Surveys use questionnaires to collect data (Zikmund, 2000:60). Questionnaires are effective for use in research when the study is clearly defined theoretically and the research questions are specific and easy to understand (Horn, 2009:107). However Denscombe (2003:59 & 148) notes the lack of effort it takes to ignore or delete an online questionnaire, especially if proper channels are not followed by the researcher. For this reason respondents to the study were contacted telephonically and by e-mail to request their participation in the study beforehand.

#### **1.4.3 Data analysis**

Data analysis transforms data into information (Hofstee, 2006:117). The collected data was analysed with the assistance of the Nelson Mandela Metropolitan University's Statistical Department.

#### **1.4.4 Validity and reliability**

A study is valid if its purposes, questions and methods are jointly uniform and its findings are based on supportive evidence (White, 2011:233). The findings of this study were assessed against existing studies on management accounting to determine similarities and differences. White (2011:235) implies a relationship between validity and reliability in the sense that realistic research should be both valid and reliable; although in case of a trade-off, validity should take precedence. Reliability refers to the consistency of the results obtained from the instruments of the study (Hart, 2005:346). A uniform questionnaire was used, to present the same questions in the same manner to the participants. Any differences in the answers of the respondents are therefore not due to differences in questionnaires or the style of questions used.

#### **1.4.5 Ethical considerations**

According to Oliver (2008:115), it is necessary for a researcher to ensure that research participants are treated with care, sensitivity and respect.

For ethical considerations:

- participation in the study was voluntary. Consent to conduct the survey was obtained from the respondents. A letter of request for participation was also e-mailed to respondents, in which they were notified of the integrity of the study and its compliance to ethics.
- the researcher contacted the sampled organisations telephonically to obtain the details of the most appropriate person to receive the questionnaire.
- reasonable time was given to allow for the completion of the questionnaire.

### **1.5 DELIMITATIONS OF THE STUDY**

To ensure that the research is of a manageable size, it was necessary to demarcate the areas of the study to manufacturing organisations in Namibia and in the Eastern Cape Province of South Africa. This does not however mean that research on factors that affect the role of management accounting in organisations within other industries or regions is not of importance.

Respondents to the study were also limited to management accountants or individuals who perform the basic roles of management accountants in the organisation. Although it can sometimes be unusual for an organisation to have an employee with the title “management accountant”, there is always someone within the organisation who performs the functions of a management accountant (Sunarni, 2013:619).

## **1.6 SIGNIFICANCE OF THE STUDY**

According to Deloitte and Touche (2013:2), manufacturing is the answer to the question as to whether South Africa and indeed Africa will survive the globally competitive times of today. Although manufacturing is already the main contributing sector in Namibia (Namibia Economist, 2011), Namibia’s Fourth National Development Plan (NDP4) identified it as one of the main focus sectors leading to industrial development in the country’s ideal economic structure by the year 2030 (National Planning Commission, 2012:21). A study of the factors that affect the branch of accounting that helps increase competitiveness could therefore unveil the possible challenges that face manufacturing organisations as well as possible solutions to these challenges. According to Ndwiga (2011:15), the degree to which the factors that may have an effect on management accounting are known, can improve growth in an organisation as well as in the general economy.

The findings of this study will reveal and provide an understanding of factors that affect management accounting, which:

- might help those in management obtain insight into the role of management accountants as value creators, including factors that may have an effect on this role. This might stimulate management’s interest and support towards management accountants. Lambert and Sponem (2012:579) found management less supportive of traditional management accountants than they are towards business-partner contemporary management accountants that are known to add value.
- might help aspiring management accountants to understand what is expected of them and possibly close the gap between what management accounting graduates can offer and what is expected of them. Employers of management

accounting graduates are concerned about employing competent and valuable employees who will increase the value of their entities (Roodt, 2009:1).

Mahar (2001, cited by Roodt, 2009:16) found a lack of growth in management accounting research in the US, which resulted in a decline in its share in overall accounting research. Sleihat, Al-Nimer and Almahamid (2012:218), and Haldma and Laats (2002:380) stated the need for more research in the field of management accounting in developing countries. This paper intends to contribute to the available literature aimed at filling this gap.

## **1.7 DEFINITION OF KEY TERMS**

### **1.7.1 Factor**

According to Longman Dictionary (2001:208), a factor means one of the several things that affect a situation or something that happens.

### **1.7.2 Manufacturing organisation**

The Concise Oxford English Dictionary (2006) defines manufacturing as the act of making something on a large scale using machines. It also defines an organisation as an organised group of people with a particular purpose. This may be for example a business or government department.

A manufacturing organisation may therefore be defined as an organised group of people with the particular purpose of making something on a large scale.

### **1.7.3 Management accountant**

A management accountant is a person who contributes to management's decision-making processes by collecting and processing data that relates to a business's costs, sales, and the profitability of its individual activities (Chartered Management Institute, 2003:212). A management accountant executes the roles of management accounting.

#### 1.7.4 Management accounting system

According to CIMA (2010:207) a management accounting system comprises people, accounting knowledge and records of resources used as inputs, in a collective combination with processes to become outputs in the form of mathematical techniques of analysis and reports that are accounted to the responsible people. A management accounting system is the arrangement used by an organisation to collect data, record it, analyse it, summarise it and report to enable decision making.

### 1.8 RESEARCH ASSUMPTIONS

The study focuses on the role of management accounting in manufacturing organisations, although it is assumed that literature that applies to other organisations is also relevant to manufacturing.

It is also assumed that the organisations selected as the population for the study practise management accounting and the factors that affect the role of management accounting in these organisations are uniform in varying degrees.

### 1.9 CHAPTER OUTLINE

This study is structured into five chapters, explained below:

**Chapter 1: Introduction and method of the study** – introduces the study and explains its background, problem statement and the objectives of the study. The significance of this study is also included in this chapter.

**Chapter 2: Literature review** – this chapter comprises a review of literature on the role of management accounting, its effectiveness as well as factors which might have an effect on management accounting in manufacturing organisations.

**Chapter 3: Research methodology** – describes the research methodology adopted for the study. The chapter outlines the methods, research design and data collection procedures chosen for the study, as well as justifications for these choices.

**Chapter 4: Presentation of findings** – presents the findings of the study and analyses the results obtained from the survey to provide meaning and understanding of the findings with reference to the literature.

**Chapter 5: Conclusion and recommendations** – presents a summary of the findings as well as conclusions, based on the objectives of the study. The chapter also focuses on recommendations and possible areas of further research.

#### **1.10 CHAPTER SUMMARY**

This chapter introduced the study of factors that affect the role of management accounting in manufacturing organisations in Namibia and the Eastern Cape. An online survey design was used for the quantitative research approach. The chapter also discussed the significance of the study, as well as an outline of the chapters covered in the study.

## CHAPTER 2

### LITERATURE REVIEW

#### 2.1 INTRODUCTION

Accounting is an information system that measures business activities, processes information into reports for communication to decision-makers (Harrison & Horngren, 2001:4, cited by Botes, 2009:12). The users of accounting information can be business owners, management, investors, creditors, financial advisers, government bodies, employees and the general public. Drury (2012:6) explains the two main streams of accounting that were developed to suit the needs of different users of accounting information, namely:

- **Financial accounting** is concerned with the provision of information to people outside the organisation and reports on information that relates to past activities of the organisation as a whole. It is a statutory requirement for public companies to produce these reports. Financial accounting reports are guided by the International Financial Reporting Standards (IFRS), which are also used in other countries to ensure international uniformity (Thomas & Ward, 2012:22). These accounting standards ensure that the reports produced are objective and verifiable.
- **Management accounting** provides information to people within the organisation. Its reports are future oriented, usually focused on small parts of the organisation and are not based on any external criteria but on the specific needs of management. These reports can therefore be subjective and optional. Unlike financial accounting reports that are annual or semi-annual, management accounting reports are prepared frequently at daily, weekly or monthly intervals.

Although these two fields are different, they are closely related and depend on each other (Botes, 2009:14). As a bookkeeper, a management accountant guarantees the fairness of financial data in a business unit as well as internal practice compliance with policies and procedures (Sathe, 1983:31, cited by Lambert & Sponem, 2012:566). According to Bhattacharyya (2011:10), the value of an organisation's management accounting information depends on the quality of its financial and cost accounting systems.



Management accountants are found, but not exclusively, in the finance department of an organisation in which they support business or operations in harmony with their financial/accounting expertise (Voipio, 2014:6). The titles accountant, (business) controller, finance manager and chief financial officer (CFO) have been used widely in literature to refer to management accountants.

## **2.2 THE ROLE OF MANAGEMENT ACCOUNTING**

The role of management accountants has changed over the years, allowing them to be involved actively in working with management to make decisions and use information instead of only collecting it (Burns & Baldvinsdottir, 2005:749). This change was triggered by the less fulfilling traditional management accounting techniques in the face of global competition and the ever-changing conditions that surround business (Wu & Boateng, 2010:98). Management accountants have moved from obedient business dealings toward strategic business partnerships; now supervising corporate governance and risk management, internal control, financial reporting and managing cost to improve competitiveness and promote business success (The Institute of Management Accountants [IMA], 2008:1). Kaplan and Atkinson (1998, cited by Sunarni, 2013:618) agree that management accountants have become additional members of management teams who concentrate on satisfying the needs of management at all levels to achieve their organisations' main objectives.

To fulfil the contemporary role of management accounting, management accounting techniques also had to change. According to Sunarni (2013:621), the role of management accounting in an organisation, as well as the techniques used to carry out this role, determine the organisation's management accounting practices. Ndwiga (2011:16) explains how standard costing, life-cycle costing, activity-based costing (ABC), target costing and Kaizen costing were designed to combine traditional skills with innovative costing methods.

This contemporary role of management accountants can however not be ascertained, because authors like Lambert and Sponem (2012:588), Voipio (2014:1) and Graham, Davey-Evans and Toon (2012:85) describe it ambiguously. The literature shows a lack of detachment from the traditional management accounting

role. Voipio (2014:1) notes a diversity and uncertainty in the role of management accountants, although certain features can be linked with it. Management accountants have become focused on business direction and on advisory and strategic fellowship (Voipio, 2014:7). However, they still perform financial reporting and focus on variances; activities that are identified with the traditional role. Traditional techniques like budgeting are still in use alongside the contemporary advanced methods of activity-based costing and balanced scorecards (Burns & Vaivio, 2001:390). Graham *et al* (2012:84) and Parker (2002) therefore both refer to the transformed role of management accountants as a supplement to but not a substitute for the traditional role of the controller.

CIMA (2005, cited by CIMA, 2008:53) defines management accounting as the integration of accounting and financial management philosophies to create, protect, preserve and increase value for stakeholders in any enterprise. Management accounting is essential to management as it identifies, generates, presents, interprets and uses information which is relevant for:

- formulating the business strategy to direct business
- planning, decision making and controlling operations
- performance management and value enhancement
- efficient use of resources
- corporate governance, risk management and internal control, and
- safeguarding assets

It can be gathered from the definition that the success of the role of a management accountant depends on the use of relevant information which assists management to fulfil these roles.

### **2.2.1 Formulation of business strategy**

Strategic management accounting places emphasis on information which relates to factors that are external to the entity, as well as non-financial and internally generated information (CIMA 2005, cited by Jack, 2009:2). Wandjiva (2011:56) highlights the importance of having a strategy as a roadmap for any organisation to succeed in executing its objectives.

To obtain information used to formulate strategies, management accountants consider those factors with the potential to affect the organisation decisively, wherever or in whatever form they may be. According to the Association of Chartered Certified Accountants (ACCA) (2010:4), strategic management accounting focuses on external environmental factors like suppliers, customers, competitors and the economy in general. KPMG (2013:8) highlights the need for reliable information in executing organisational strategies.

To convert its strategies into action, an organisation needs to plan, budget and forecast productively (KPMG, 2013:2). Gates (2010:3) defines strategic planning as the process of outlining the plans of an organisation to realise its mission. Outlining the cost of plans prepares management for action. According to CIMA (2006:4), a budget articulates the expected costs for planned activities over a defined period. A budget communicates responsibilities to different individuals and departments, to ensure that everyone understands their role in contributing to the achievement of the organisation's objectives (CIMA, 2006:5). A budget therefore projects the future, which gives decision-makers expectations on which evaluation is based. Forecasting estimates future events using past information (Gor, 2009:142). So a forecast drives performance by evaluating the progress of initiatives and activities against the targets set in the budget (KPMG, 2013:4). The strategy is the actual method an organisation sets to achieve its mission, as a result of planning (Gates, 2010:3). A strategy defines the different activities to be accomplished for an organisation to reach its goals; with a consideration of the established plans, the resources available, and the forecasted opportunities and threats.

### **2.2.2 Decision making and control**

Organisations need to make decisions all the time in their affairs. According to CIMA (2008:8) decision making has become an important foundation for competitive advantage and value creation. Etzioni (1964, cited by Lambert & Sponem, 2012:568) notes how management accountants influence management decision making only indirectly, as other support functions also provide information to higher levels in the organisation for decision making. Yet Seal, Garrison and Noreen (2012:4) state the importance of management accounting information to planning, directing and controlling; activities that are needed for decision making.

According to Lambert and Sponem (2012:566), the decision-making supporting role of management accountants is mainly aimed at helping operational managers. During the planning stage, management accountants provide information like sales volumes, profit margins and cost alternatives that are weighed and compared against benchmarks to make the best decision (Seal *et al*, 2012:4). After choosing its most favourable option, management then sets off to implement it. Management accounting information is then used for management control to determine whether activities are conforming to plans; which allows for employee motivation and corrective action to plans and operations (ACCA, 2010:4).

### **2.2.3 Performance management and value enhancement**

Chalatharawat (2009:18) found that accounting information improves the attitudes and behaviours of employees, which enhances their commitment, job satisfaction and employee efforts. Performance management ensures that the personal goals of employees are in line with the strategic objectives of the organisation. Freifeld (2013) highlights the importance of goal alignment to organisational and employee success. Supervisors communicate their expectations to subordinates, define satisfactory performance for such expectations and then continuously monitor and evaluate their performance (Gliddon, 2004:28). Employee skills and proficiencies are evaluated in relation to current and future job requirements, which allows for appropriate training and employee development (Gliddon, 2004:29). This motivates employees as it recognises their achievements and encourages them to develop their skills. Conversely, performance management has at times been accused of causing conflict between personal and organisational objectives, enhancing focus on short-term results and discouraging team building (Gliddon, 2004:28). However, Lawler (2012) finds it impossible to forsake performance management due to its significance in managing talent.

Management accountants use performance management information to guide management on how to use resources efficiently and effectively to create value (Correia *et al*, 2008:7). Value is created when shareholders make a profit on the shares they have acquired in the company. According to Livesey (2006:1), value outweighs profitability because it considers the organisation's strategic position and social influence. Cairney *et al* (2011:468) note the direct proportion of shareholder

value to the level of sales, profit margins and planning period. This means that by helping the organisation achieve its objectives through increased sales and profit, reduced costs and efficiency in planning, management accountants contribute to improving shareholder value. However, Seal *et al* (2012:13) point out the need to balance shareholder and customer value because of their interdependency. A company may cut costs to increase profit but indirectly damage shareholder value through decreased customer satisfaction (Seal *et al*, 2012:13). So an understanding of the power of this relationship is needed in the value management advisory role.

#### **2.2.4 Efficient use of resources**

According to Kadhikwa and Ndalikokule (2007:6), productivity entails a relationship between the outputs produced and the resource inputs used to complete the assignment. However, essential inputs like motivated employees, finances, raw materials and production facilities are insufficient (Sirmon & Hitt, 2003:339). So efficiency is needed in using these resources so as to obtain more outputs from them. According to Nandan (2010:69), management accounting information is used to manage assets and make better input allocation decisions for improved resource usage; a practice that Sirmon and Hitt (2003:352) find imperative if an organisation is to gain and maintain competitive advantage.

#### **2.2.5 Corporate governance, risk management and internal control**

The need for directors to be more attentive in their organisations' business dealings was motivated by the business failures of the 1990s. According to Higgs (2003:11), corporate governance provides the backbone and procedures that lead the activities of the company towards the interests of its owners. Corporate governance prevents unforeseen and unaccounted business failures that result from mismanagement of funds and carelessness in decision making. So good corporate governance improves business (Derrocks, 2010:38).

Non-executive directors use management accounting information to assess risk, scrutinise strategy and monitor the behaviours of executive directors to ensure control (Seal *et al*, 2012:721). So management accountants need to be impartial in

their involvement in corporate governance, to be able to provide reliable information to both management and the board.

The uncertainty of the business environment may exert risk on the organisation. To create value, there is a need to subdue risks (CIMA, 2014:14). Risk management promotes the identification of risks before they strike to ensure that measures are in place to reduce their severity, if not to remove the possibility of their occurrence. According to Kleffner, Lee and McGannon (2003:65), risk management improves decision making by creating awareness to risks, which comforts the board of directors. This shows the importance of risk management to corporate governance. The organisation can either be reactive or proactive to risk. The proactive approach to risk management is preferred over being reactive, as it is more of a preventive measure. It is also cheaper, and is efficient in minimising the likelihood and incidence of risk occurrence (Stroie & Rusu, 2011:230). Rasid, Rahman and Ismail (2011:581) found management accounting roles like statement analysis, budgeting and strategic planning to be important in managing risk.

According to Adewale (2014:265), internal control aims to achieve the organisation's objectives, which entails keeping appropriate records, ensuring adherence to managerial procedures and seeing that all actions are in line with strategy. CIMA (2009) listed the conduct of internal business audits as an internal control function among the roles of management accountants. Internal accounting control comprises methods of authorisation and accountability, the protection of assets and accurate record-keeping (Adewale, 2014:254). Internal financial controls also allow an organisation to adhere to company policies, safeguard its assets, control fraud and errors, improve accuracy and completeness of accounting records, as well as to prepare reliable financial information timeously (Ernst & Young, 2014:1). Internal controls work hand in hand with corporate governance and risk management to ensure that activities do not deviate from goals to cause losses that would be prevented with the right controls. Adewale (2014:256) identified internal control as the organisation's basic guard in protecting assets and managing risks.

### **2.2.6 Safeguarding of assets**

According to Sunarni (2013:621), management accountants plan fixed-asset investments in both medium- and large-scale companies in Indonesia, although large companies attach more value to the task. The organisation needs to use these assets in a manner that maximises their return and protects them from being used to benefit specific individuals. In pursuing improved profits, good accounting controls help to minimise waste, unintentional errors and fraud (Adewale, 2014:254). Safeguarding assets entails preventing or promptly detecting unapproved acquisitions, the use or disposal of vulnerable resources and information, which may lead to asset misappropriation and the manipulation of records (Committee of Sponsoring Organisations of the Treadway Commission [COSO], 2011:66) to conceal the suspicious mismatches that may have been caused. Management accountants assist in this process by providing useful information to manage assets (Breuer, Frumuşanu & Manciu, 2013:364).

### **2.3 EFFECTIVENESS OF MANAGEMENT ACCOUNTING**

An effective management accounting system is one that succeeds in improving the organisation's activities and services to achieve objectives. An effective management accounting system is a combination of competent people, clear values, active performance management structures and enthusiastic activities (CIMA, 2014:4). The success of a profit-making entity is determined by its momentum in making profit.

CIMA (2014:4) states that management accounting cannot advance a company all by itself, although an effective management accounting system is a necessity in contributing to the success of an organisation. Management accounting provides management with information. The effectiveness of an accounting information system in an organisation is determined by its influence on improved decision making, the production of quality accounting information, performance appraisal, internal controls and simplified transactions (Sajady, Dastgir & Nejad, 2008:49).

Davis and Albright (2004:150) found the introduction of the balanced scorecard in a bank branch enhancing to its financial performance. Nevertheless, Foster and Young (1997, cited by Davis & Albright, 2004:150) recognise a lack of management

accounting research papers that are aimed at assessing the effectiveness of new management accounting techniques over the traditional methods. Effectiveness is reached when desired results are achieved (Longman Dictionary 2001:188). So the success of management accounting can be measured in terms of the benefits of accomplishing its roles. These may be for example: better decisions, improved performance, successful cost-cutting, increased efficiency and customer satisfaction. Porntip (2011) associates effective management accounting systems with quality decisions and improved performance.

## **2.4 MANUFACTURING ORGANISATIONS AND MANAGEMENT ACCOUNTING**

Livesey (2006:7) defines manufacturing as a pool of activities needed to develop, produce and supply goods and services to customers. This definition of manufacturing goes beyond general manufacturing assumptions of producing goods, because according to Livesey (2006:7), modern manufacturers undertake substantial research and development to design and deliver different services concerning their products. This is to ensure delivery of quality products, in a world where customer choices are no longer entirely influenced by product prices.

Manufacturing is seen as one of the most important factors needed for African countries to advance onto the level of the successful countries in the world. Namibia's National Development Plan 2 and Vision 2030 both yearn for an improved involvement of the manufacturing sector in realising the country's development policy objectives (Kadhikwa & Ndalikokule, 2007:4). According to the South African Department of Trade and Industry (DTI) (2013:12), manufacturing creates demand for services like IT, financial services, logistics and security as inputs and should therefore be the centre of a successful economy. So South Africa, like Namibia, sees its manufacturing sector as the key to growth, valuable economic activities and improved exports (DTI, 2013:11).

However, the manufacturing sector is not performing as planned. Kadhikwa and Ndalikokule (2007:4) express concern over the attainability of Namibian manufacturing goals due to the low current level of its manufacturing growth rate and the sector's economic contributions in comparison with other countries, like South Africa. Oddly however, South Africa's Gauteng Province (2012:4) expressed concern



over the decline in South African manufacturing, which is causing increased reliance on imports and a decline in global competitiveness. Kadhikwa and Ndalikokule (2007:19) and Deloitte and Touche (2013:2) both identify high electricity costs as one of the main factors deleterious to competitiveness in manufacturing sectors in both Namibia and South Africa; with the latest electricity shortage and regular blackouts in South Africa worsening the situation (The Namibian, 2015). There is a need to reduce or overcome the effects of these negative factors if the manufacturing sector is to meet its anticipated economic contributions.

According to Kadhikwa and Ndalikokule (2007:4), diversifying the Namibian manufacturing sector is one of the main strategies needed to improve the sector, in line with the country's industrial development policy. Management accounting can be beneficial in this regard. Slavkova (2006:2) found management accounting to be one of the success factors needed to diversify the agricultural sector in Ukraine. Jarrar and Smith (2011:54) also found the use of the balanced scorecard enhancing to the performance of diversified firms, through facilitating the benefits of innovation in these firms. According to Tarasovich and Lyons (2009:26), an increased involvement of the finance department in innovation, projects and people relations improved the sales growth and competitiveness of Unilever. Because of these benefits, management accounting can be deemed essential to the manufacturing sector in Namibia and South Africa.

Namibia and South Africa both have manufacturing companies of varying types and sizes (The Namibian Manufacturers' Association [NMA] [2014:53-153] and SEDA [2012:35]). Due to the varying needs of different companies, the role of management accounting is not universal. Joshi (2001:85) attributes management accounting differences between Indian and Australian firms to cultural differences. According to Sunarni (2013:624), medium-scale manufacturing companies in Yogyakarta, Indonesia, associate management accountants with profit increment, while larger companies signify the same profession with budgeting. Conversely, professional publications and academia both find the value of management accountants in their budgeting and costing abilities other than in advisory and interpretation skills (Parker, 2002).

Regardless of these differences, the main focus of any management accounting system is to facilitate organisational activities to meet objectives. Mindful of these

possible differences in the role of management accounting, the factors that affect the practice of management accounting and its effectiveness will be examined next.

## **2.5 FACTORS THAT AFFECT MANAGEMENT ACCOUNTING**

The contingency approach to management accounting is based on the grounds of organisational individuality in management accounting systems; from which they are chosen based on their relevance in specific organisational circumstances but not on any universal accounting system that is deemed appropriate in any state of affairs (Otley, 1980:413, cited by Ding & McKinstry, 2012:103). An organisation practises management accounting to help it resolve and adjust the firm to adapt to the conditions that affect it.

The contingency theory is somewhat similar to the role theory. The role theory suggests that roles in an organisation are influenced by the expectations of those hiring or the supervisors; expectations that are subjective to organisational factors (like size and structure), the characteristics of the role occupant and the relationship between the hired employee and the hirer (Byrne & Pierce, 2007:471). According to the role theory, an organisation's management accounting system is determined by senior employees, based on what they deem complementary to the situations surrounding the organisation. This, like the contingency theory, portrays individuality in management accounting systems of different organisations.

Since management accounting systems are designed to cater for the firm's specific needs, it is sensible for factors that affect the firm also to have an effect on its management accounting. According to Teerooven and Bhagtaraj (2008:188), factors that affect the firm, like a change in its ownership structure, increased competition, changes in technology and fluctuating consumer behaviour, increase the need for an effective management accounting system. Waweru (2008:26), supported by Ding and McKinstry (2012:99) also found changes in a firm's internal and external environment influential in developments of its management accounting system. These factors are discussed in more details in the sections that follow.

### **2.5.1 The external business environment**

The external environment affects organisations through different spheres; from the products they sell to the methods used and the customers they sell to. The economic, political, and social factors of the external environment can have an overpowering influence over the organisation – shaping its structure and processes, as well as its information systems and thus also management accounting (Ming-te & Farrel, 1990, cited by Waweru 2008:26). However, Collier, Berry and Burke (2006:5) found the environmental perceptions of decision-makers irrelevant in influencing their choices of basic risk management practices. So the effects of the environment on business vary according to different situations in different organisations.

According to Odada and Godana (2002:19), the production of food and beverages accounts for 50% of Namibian manufacturing, which highlights the importance of agriculture to manufacturing in Namibia. So environmental and seasonal factors that affect farming and agriculture may also affect manufacturing, through raw material supply. For example, land degradation due to the deteriorating seasonal droughts that the semi-arid Namibian climate endures yearly have a negative effect on the comparative advantage of the country's beef industry (Chiriboga, Kilmer, Fan & Gawande, 2008:27).

### **2.5.2 Competition and the effect of organisational strategies**

The effects of the external environment on manufacturing vary in their severity across different manufacturing sectors. Due to the lack of rain, the Namibian maize milling industry now has continuous reliance on South Africa for raw materials, despite reported improvements in maize harvests (Schlechter, 2014). According to New Era (2013), the dependence on imports for raw materials has stiffened competition between importers and domestic maize producers. This competition is even likely to worsen now that South Africa, the second-largest producer of white maize in the world, is also affected by drought and is also relying on imports for supplies (News24:2015). According to Botes (2009:76), high competitive markets need management accounting systems that are flexible and quick to respond to identified opportunities and threats (Botes, 2009:76). So management accountants need to be aware of events in the business environment to provide relevant

information on which decisions are based. Those that thrive have the ability to read and act speedily in response to the signals of change (Reeves & Deimler, 2011).

According to Ding and McKinstry (2012:115), changes in business guide the organisation towards appropriate strategies for achieving its goals. Although there is a need for the strategies of an organisation to suit its situation, it is important that they comprehend the different people working to achieve them. Kasurinen (2002:325) found differences between the goals of a project and the organisation's common goals likely to increase the risk of resistance toward the project's implementation. So there is a need to set achievable strategic goals that are optimistic but realistic in motivating employees, in addition to achieving spectacular financial results (Hemp, 2005:23). However, Thorén (2004:139) contradicts this when he finds belief systems insignificant in influencing behaviour and growth in the organisation.

### **2.5.3 The organisational structure and decentralising management accounting**

There is a need to consider the structure of the organisation when responding to factors that affect the organisation. The organisational structure is the window through which change is implemented. The structure allows for financial control of divisions and "cost centres" through responsibility accounting (Ding & McKinstry, 2012:103). So an organisation needs a structure that best incorporates its departments for an effective flow of information and collective focus on objectives.

A structure that decentralises the management accounting department is beneficial. Sihlali (2015:27) emphasises the importance of teamwork in risk management to achieve great results. Being in a team requires everyone to understand the activities that keep the company in operation. According to CIMA (2008:9), management accountants need to understand everyday operations so as to recognise relevant information. The acquaintance of management accountants with operations also enables them to link different functions and effectively provide corresponding information to meet the changing needs of managers from different functions (Pierce & O'Dea, 2003:287). However, care should be taken in this instance because the interactions of management accountants with other departments may taint objectivity in their advisory and consultation functions (Lambert & Sponem, 2012:586). So

achieving a balance between the involvement of management accountants in operations and objectivity can be a challenge, although it is possible with exceptional management accountants, those whom Sathe (1983, cited by Pierce & O'Dea, 2003:283) identified as "strong" controllers.

Byrne and Pierce (2007:493) found management's understanding of the benefits that emanate from the interactions of management accountants with operations likely to increase active participation of management accountants in operations. To be actively involved in operations requires good relationships between operations managers and management accountants. Ma and Tayles (2009:489) also found lack of value and management support for their role demotivating to management accountants, causing them to lose interest in operations and fail in their business-focused role. So the role of management accountants depends on how well internal patrons understand the needs and demands of management accountants (Voipio, 2014:15), and the spirit of teamwork is vital to the role of management accounting in manufacturing organisations.

Not only management accountants benefit from interaction with operations managers. Pierce and O'Dea (2003:283) found a link between management participation in management accounting and better reception of accounting information. This is likely to have great benefits in the area of decision-making. According to Drucker (2001:101), manufacturing needs to become a system in which the decisions of an organisation are made to exploit the strengths and capabilities of its manufacturing system. Since decision making is influenced by the personalities, prejudices and self-interests of the participants in the process (CIMA, 2008:11), management's understanding of management accounting information is likely to affect decision making positively and result in their organisation's success.

#### **2.5.4 Customer satisfaction**

The firm operates to please stakeholders, whose expectations may influence business. Waweru (2008:35) notes how the pursuit of better shareholder value, product quality and efficient delivery may change a firm's profit and production planning systems. Manufactured goods are made for customers, which justifies the necessity of prioritising their needs. According to the United Nations (2003:104),

manufacturing companies in Uganda have started to adopt a culture of quality and efficiency, although it is still limited to a few. Concentrating on quality represents a sustainable competitiveness strategy which focuses on combining production and service delivery; an orientation which is not easy to replicate like product- and process-based manufacturing (Martinez, Bastl, Kingston & Evans, 2010:450). Waweru *et al* (2004:689), Hyvönen (2005:117) and Joshi (2001:104) all found customer satisfaction among the common non-financial performance measures used in companies of the developing countries South Africa, Australia and India.

### **2.5.5 Developments in technology**

Automation improves efficiency in meeting customer demands. According to Kadhikwa and Ndalikokule (2007:6), the economies of Hong Kong, Korea, Singapore and Taiwan (also known as the four tigers) are flourishing because of their fast pace and efficiency in incorporating technology in their manufacturing sectors, when compared with their competitor countries. However, these developments in manufacturing technology affect management accounting (Isa & Foong, 2005:36). According to Migiro (2011:6), management accounting information is used to guide investments in equipment and technology. For these decisions, management accountants evaluate the cost of new equipment in comparison with their benefits. The contemporary role of management accountants requires them to keep up with developments in manufacturing technology (CIMA, 2010:2). This will enable management accountants to recognise potential in technology and avoid making investment decisions that are based on short-term uncertainty and profitability.

An organisation gains resilience in the market when it succeeds at doing what its competitors cannot do. Sustainable growth springs from innovation (Hamel & Getz, 2005:26). According to Bisbe and Otley (2004:729), management accountants have an influence on the effect of innovation on performance. Seal *et al* (2012:715) encourage the move towards radical thinking and innovation to add value, away from restrictive incremental budgets. So the support of management accountants is needed in considering novel ideas to achieve individuality and competitiveness for their organisations. This will require open minds with regard to investments in research and development.

Besides its effect on manufacturing processes, technology also benefits information systems. According to Burns and Vaivio (2001:389), developments in information technology have improved the collection, measurement, analysis and delivery of information. So the use of automated business processes is becoming a norm because of their great benefits. Business software systems like enterprise resource planning (ERP) have beneficially standardised business procedures, improved efficiency and made integrated information available across the organisation (Grabski, Leech & Sangster, 2008:1). Burns and Vaivio (2001:390) note the self-sufficiency of business managers in undertaking management accounting tasks like budgeting, with the use of technology. Apart from ERP, Excel programs and other software systems simplify the work of accountants. However, Breuer *et al* (2013:364) found a limited number of specialised management accounting software programs. Waweru *et al* (2004:683) also found limited supplies of computer facilities in South Africa, which might hamper the use of software systems.

In the fast-paced world of technology, organisations need instant information to make decisions and seize opportunities before their competitors. Botes (2009:80) notes the current phase of reporting in which management accounting reporting has shifted to real time reporting; it is no longer periodic. With information technology, management accountants can readily make information available throughout the organisation (Sunarni 2013:619). However, accountants responding to Graham *et al* (2012:83) find constraints in using IT systems due to the exorbitant amount of maintenance time they require and that they do not really produce the specific reports that accountants sometimes want. Problems with maintenance could be due to the lack of the (management) accountant's input in the choice of accounting software systems used (Marriott & Marriott, 2000:486). Disadvantages of software systems could also be caused by a deficit in the skills needed to operate them, which Moghaddam *et al* (2012:1347) note are greatly needed.

#### **2.5.6 Communication and management accounting reporting**

The need for instant information increases the necessity of proficient communication. Nandan (2010:73) notes the gap in expectations between management and accountants. Pierce and O'Dea (2003:286) also reported a lack of awareness among management accountants of what management expects from them. This problem

can be overcome with improved communication between departments in an organisation (Drucker, 2001:99). There is therefore a need for cooperation and improved communication of management accounting information. Nandan (2010:72) found less financially literate managers likely to understand accounting information better when it is presented in graphic forms, diagrams, figures, ratios, charts or tables with accompanying descriptions of financial performance, specific affairs for the business and a view of future improvements.

The validity of management accounting information can be increased if both management and management accountants agree on the nature, timing and format of information required (Pierce & O'Dea, 2003:287). The effectiveness of information is achieved if it is received by the right people in the right scope. Different levels of management have different information needs due to diversity in management scales (Correia *et al*, 2008:7). So there is a need for management accountants to provide relevant reports to different managers and avoid information overload, as this might cause managers to disregard important information due to human information processing limitations (Correia *et al* 2008:21). A survey of 720 organisations in Australia found that reports of not more than 10 pages were more effective at delivering management accounting information (Correia *et al* 2008:21).

### **2.5.7 The demand and supply of management accounting services**

Sometimes, demand for (management) accounting services is not as high as accountants are willing and able to contribute (CIMA, 2008:9). There may be a lack of value placed on the role of management accounting in some organisations. In Mauritius, according to Soobaroyen and Poorundersing (2008:189), management accounting is considered a subset of the dynamic financial accounting function. On the other hand, participants in the survey by Collier *et al* (2006:6) on risk management exhibited a lack of confidence in the role and abilities of management accountants when they perceived management accounting skills inappropriate for risk management; and only recognising their analytical and presentation skills essential for a supporting role. Nonetheless, Voipio (2014:3) comments on the distinct connection and linkage of management accountants to management, in comparison with their financial accounting associates. So undermining management



accountants is a waste of skills in the organisation, although Lambert and Sponem (2012:585) strikingly advise against a strong management accounting function because of the possibility that it might relax managers and shift their focus from important things like innovation and taking risks.

Waweru (2008:35) found the shortage of accountants and lack of management interest to be the two main distractors of change in management accounting systems in Canada. The deficiency of accountants also affects South Africa and Namibia, according to the Namibian Employers' Federation (NEF) (2010:20); with a shocking 1:6 285 ratio of professional accountants to the total Namibian population in that year. In addition to the lack of professionals, practising accountants may be less qualified for their role. Mathews (2001:119) highlights that accountants have inadequate skills for fulfilling the diversely demanding modern role. Mathews (2001:119) further explains that accounting training mainly emphasises data capturing; a skill that today has no importance, unlike data analysis and decision making.

According to Nandan (2010:73), the lack of accountants has led to non-accounting professionals providing cheap and usually poor-quality accounting services. Professionals from various disciplines, like IT specialists and production managers with solid financial knowledge, have also been called competitors of management accountants as they increasingly take on their roles, reducing the demand for management accountants (Burns & Vaivio, 2001:391). This calls for appropriate training and experience; a responsibility that lies with both accountants and educational institutions. Incorporating business- and management-oriented subjects like strategy, practical IT and change management in accounting programs might save the accounting profession (Burns & Vaivio, 2001:391).

Accounting professional bodies train, formalise and define the specialised role of accountants (Voipio, 2014:10). These bodies exist to ensure ethical behaviour, accountability and compliance with legislation and business standards like the Companies Act and industrial regulations. The professional codes of ethics of both the International Federation of Accountants (IFAC) and the Chartered Institute of Management Accountants (CIMA) all urge management accountants to act in accordance with the fundamental principles of integrity, objectivity, confidentiality, professional behaviour and competence, and due care (CIMA, 2010:4). However,

concentrating on meeting these standards can sometimes shift the attention from what is important. The pressure of abiding by the rules and regulations of accounting bodies sometimes blurs the judgment of management accountants, which affects the relevance of their information (Pierce & O'Dea, 2003:282).

### **2.5.8 The skills and personalities of management accountants**

Mastery of a variety of skills and certain traits is needed to achieve the diverse role of management accounting. Since they make sense of numbers to provide meaning and reasoning that is used in making decisions, the ability to integrate financial and non-financial information effectively is necessary for a management accountant (Yazdifar & Tsamenyi, 2005:192). However Pierce and O'Dea (2003:285) found that management accountants focused excessively on numerical outcomes, while they lacked the necessary knowledge and skills needed for a broader business perspective. So contemporary management accountants need to combine their financial expertise with the ability to provide informed advice with business awareness (Voipio, 2014:97). Sufficient business knowledge develops the interactions of management accountants with operational managers; which Byrne and Pierce (2007:491) associate with innovation, better decisions and improved business results.

Management accounting reports provide useful information to decision-makers in an organisation. However, managers participating in the survey of Pierce and O'Dea (2003:286) found management accountants inflexible and overprotective of their reports. This taints teamwork and knowledge diversity as it inhibits the spread of necessary information, preventing others in the organisation from contributing. To become members of the team, management accountants need good attitudes and personalities (Lambert & Sponem, 2012:567). Approachability, flexibility, knowledgeability, as well as good interpersonal and communication skills, are also required (Byrne & Pierce, 2007:489).

## **2.6 CHAPTER SUMMARY**

Management accounting has a variety of important functions that are capable of helping an organisation succeed in its endeavours. This chapter discussed the

various roles of the practice, and its relation to manufacturing. Factors that may affect the effectiveness of management accounting, depending on how they are dealt with in an organisation, were also discussed. Chapter 3 discusses the research methodology used to carry out this study.

## CHAPTER 3

### RESEARCH METHODOLOGY

#### 3.1 INTRODUCTION

The research methodology of this study was briefly defined in Chapter 1. Chapter 3 extensively explains the views, approaches and the methods used to study the factors that affect the effectiveness of management accounting in manufacturing organisations.

According to Rajasekar, Philominathan and Chinnathambi (2006:2), research is the use of independent and logical analysis to find information and discover suppressed facts about matters. Saunders *et al* (2009:107) also associate research with knowledge development. Saunders *et al* (2009:107) state that although knowledge development may not always be in the extreme sense like developing a new theory, any type of research adds to the knowledge that is already available on a subject being studied. So research, regardless of differences in the way it is undertaken, uncovers information about certain topics to further educate the reader.

Saunders *et al* (2009:106) refer to a research study as an onion where the first layers have to be peeled off to get to the centre; where the question of the appropriate research instruments is found. The following sections discuss the following layers of the research onion (Saunders *et al*, 2009:106), which were used as guidance to define a suitable methodology for this study:

- research philosophy
- research approach
- the choice of the research method
- research design and time frame, and
- the techniques and procedures used

Rajasekar *et al* (2006:5) state that research methodology refers to the specific methods used to carry out a research study successfully. The research methodology analyses the means and techniques used to solve a research problem. Collis and Hussey (2003:55) further define research methodology as the overall style adopted to carry out a research study, from theoretical support to collecting and analysing the data.

The procedures used to carry out research are selected, based on their appropriateness in dealing with certain features of investigations and specific research problems (Denscombe, 2003:3). In making methodology decisions, it is important to consider the different choices available carefully, as the decision made can make or break a research study, depending on its suitability to solving the problem. According to Llewellyn (1993, cited by Voipio 2014:31) the research methodology over the methods adopted has a significant influence on the nature of results that the study generates. In turn, the methodology adopted is influenced by the researcher's theoretical perceptions (Gray, 2009:17).

### **3.2 RESEARCH PHILOSOPHIES**

These are the researcher's views on the origin and existence of theory as well as its relation to research. According to Curtis and Curtis (2011:11), the research epistemology philosophically classifies knowledge and explains the broad nature of research. A researcher can have either objective or subjective views about research.

The objectivistic epistemology believes in the existence of impartial truth (Gray, 2009:18). Constructivists on the other hand, believe in the creation of meaning, based on the interactions of subjects with the world (Gray, 2009:18). Subjective research generally deals with people's beliefs, feelings and emotions; which justifies its association with humanistic research (Denscombe, 2003:97). This study perceived an objective view, as it sought to discover facts on the existing management accounting systems and the factors that affect it. So the study was conducted with an expectation of discovering objective facts, not fabricated opinions from the respondents (Gray, 2009:18).

According to Gray (2009:18), objectivism agrees with the positivistic theoretical perspective. Positivism is associated with observations of accumulated facts that are generalised, on which research inquiry is based (Gray, 2009:19). Positivistic researchers are known to eliminate bias and subjective influences of the researcher from their studies (Curtis & Curtis, 2011:12). This explains the need for theories that positivistic studies use as a basis to validate their claims.

### **3.3 RESEARCH APPROACH**

According to Saunders *et al* (2009:61), a research approach determines the study's stance and purpose in reviewing previous literature. Deductive theory is the research approach in which theory guides research, whereas theory results from research when the inductive approach is used (Bryman, 2012:19). Currently available knowledge is used in the deductive approach to form a theoretical opinion on a certain field through academic examinations, which is then tested empirically to form analytical inferences of the findings to the theory (Bryman, 2012:24). Conversely, the inductive approach bases theory on collected empirical data and its interpretation, without confirming a standing hypothesis (Voipio, 2014:31). The deductive approach is especially associated with positivism, while constructivists and qualitative researchers lean more onto the inductive approach (Saunders *et al*, 2009:126).

The deductive approach was used in this study, using the examined literature on the factors that affect the effectiveness of management accounting as a basis for data collection. The examination of sources of data collected by different people apart from the researcher is called secondary data analysis (Gray, 2009:497). Secondary data used in this study was obtained from books, journals, the internet, commercial publications and other research papers. According to Badenhorst (2008:114), the deductive approach is more likely to produce certainty in its results instead of probabilities. However, Voipio (2014:31) found excessive focus on inferring from theory likely to cause unnecessary concentration on finding empirical evidence that supports the theory, while side-lining valuable findings that do not conform. Objectivism in deductive research works to eliminate these claims.

### **3.4 THE CHOICE OF RESEARCH METHOD**

According to Badenhorst (2008:92), qualitative research uses describing words to find meaning for human action, whereas Efron and Ravid (2013:71) define quantitative research as the test of effectiveness and influence that an independent variable exerts on a dependent variable. Quantitative research proves or discredits the relationship between variables identified in literature. A combination of the two methods can also be used. For example, the combined use of a questionnaire and interviews as data collection techniques make a mixed method research study

(Seabi, 2012:88). Table 3.1 illustrates the differences between quantitative and qualitative research.

**TABLE 3.1 DIFFERENCES BETWEEN QUANTITATIVE AND QUALITATIVE RESEARCH METHODS**

	<b>Quantitative methods</b>	<b>Qualitative methods</b>
<b>Epistemological positions</b>	Objectivist	Constructivist
<b>Relationship between researcher and subject</b>	Distant or outsider	Close or Insider
<b>Research focus</b>	“Facts”	Meaning
<b>Relationship between theory and research</b>	Deduction or confirmation	Induction or emergent
<b>Scope of findings</b>	Nomothetic	Ideographic
<b>The nature of data</b>	Based on numbers	Based on text

Source: Gray (2009:200)

The sections previously covered in this chapter discussed the differences in Table 3.1, apart from the scope of findings. According to Gray (2009:202), the scope of findings establishes the range of coverage of the findings of the study. Quantitative studies usually cover a wider spectrum, while qualitative studies are more concerned with the intensity of the findings, rather than their generalisation (Gray, 2009:202).

The choice between quantitative and qualitative methods in business and management research determines the data collection techniques and data analysis procedures used in a study (Saunders *et al*, 2009:151). A quantitative research method was chosen for this study, to find the connection or lack thereof between the factors identified in literature and the effectiveness of management accounting.

### **3.5 RESEARCH DESIGN AND TIME FRAME**

Saunders *et al* (2009:141) refer to this topic as the research strategy. However, most authors like Ferreira (2012:35) and Bryman (2012:45) give similar descriptions when they refer to the research design. The research design is the arranged structure of executing research methods and the way of analysing acquired data (Bryman, 2012:45). The research design explains the tactics and strategies used to collect

data for the study. Seabi (2012:84) lists case studies, surveys, experiments, descriptive and *ex post facto* designs as some of the different strategies that can be used to carry out research.

A survey design allows for a focused collection of comprehensive and tangible data from a wider setting at a specific point in time (Denscombe, 2003:6). According to Gray (2009:34), academic survey designs are mostly associated with cross-sectional time frames in which the study is conducted over a short-term scale and data is collected at a single point in time. Surveys therefore allow for a speedy collection of data on a large scale.

This study focused on manufacturing companies in Namibia and the Eastern Cape, so it not only covers a wider spectrum, but it also covers real subjects with measurable and recordable information. For these reasons, a survey research strategy was adopted to analyse the factors that affect the role of management accounting in these organisations (Denscombe, 2003:6). Surveys are used to explain possible relationships between variables (Saunders *et al*, 2009:144). This is another reason to justify the choice of a survey design for a study that focused on analysing factors that are related to and affect the effectiveness of management accounting. According to Saunders *et al* (2009:144), a survey strategy gives the researcher independence and improved control over the research process. Surveys are also associated with reduced research costs as they generate results that represent a larger population, through the use of sampling. On the other side of the coin however, Saunders *et al* (2009:144) find the process of carrying out a survey – from sampling to data analysis – time-consuming to the researcher.

### **3.6 DATA COLLECTION METHODS**

Bryman (2012:45) highlights the insufficiency of choosing a research design without complementary methods of data collection. Hence, the research study is in vain without an outline and a clear definition of the methods to be used in collecting its data, regardless of the precision adopted in defining its design.

Bryman (2012:46) defines a research method as the procedure followed to collect data. Research methods are the various means of executing research which allow the researcher to gather information and gain insights into a specific issue as well as



enable other researchers to recreate previous research by following the same methods (Blignaut, 2013:32). According to Denscombe (2003:7), certain methods are more complementary to specific research designs than they are to others. The researcher should therefore be careful to choose a method that is in harmony with the guiding research design. Observations, interviews, document examinations and questionnaires are examples of data collection techniques that are used to carry out research (Bryman, 2012:45).

This study used a self-administered questionnaire to collect data. According to Gray (2009:337), a questionnaire presents respondents with the same questions, arranged in the same predetermined order. Questionnaires are used to collect data and explore relationships between variables, from a relatively large audience (Gray, 2009:338). According to Curtis and Curtis (2011:124), self-administered questionnaires have the advantage of being carried out without the help of the researcher, provided that they have been created carefully. This helps maintain the objectivity of the study (Bryman, 2012:233). Self-administered questionnaires also eliminate the need for the researcher to have any interviewing skills, not to mention the effects and bias associated with interviews (Bryman, 2012:233). However, the inflexibility of questionnaires and the lack of interaction between the researcher and respondents can be a disadvantage as it removes the researcher's chance to probe and clarify the responses provided, as in the case of interviews (Hofstee, 2006:133).

Gray (2009:229) explains the three types of self-administered questionnaires: postal, delivery and collection, as well as online questionnaires. These are different in terms of their sampling procedures, time and other cost requirements, as well as data analysis (Curtis & Curtis, 2011:123). Due to the diverse population of Namibian and Eastern Cape manufacturing companies, a self-administered online questionnaire was seen as a fit research tool for this study.

According to Saunders *et al*, (2009:364), online questionnaires are suitable for large samples, and they are beneficial for their use of speedy and automated data analysis procedures. Online questionnaires are also cheap, convenient to respondents and take less time to administer, as they are processed and stored as soon as they are filled out (Gingery, 2011). However, online questionnaires are restricted to respondents with access to the internet, those with the knowledge and experience of using computers, as well as those motivated to complete the survey (Gray,

2009:231). To minimise these weaknesses, care was taken to only choose those companies that show proof of reasonable operations, and are therefore likely to have access to the internet as a sample for the study.

### **3.7 STRUCTURE OF THE QUESTIONNAIRE**

Denscombe (2003:152) emphasises the importance of clarity and concision in a questionnaire. From the wording of the questionnaire to the style of questions asked, the researcher needs to consider the sensitivity of the questions, as well as their relevance in meeting the objectives of the study (Denscombe, 2003:152). As expected in the deductive research approach, this study's questionnaire was created with reference to the review of literature discussed in Chapter 2. In constructing the questionnaire, focus was given to relevant questions to achieve the objectives of the study without taking too much of the respondents' time.

The questionnaire comprised of two sections. Section A aimed to determine demographic information on the respondents. Questions in this section requested the respondent's country of operations, qualifications and the manufacturing sectors in which their companies operate. Section B was designed to meet the objectives of the study. It aimed to confirm as well as answer questions identified in literature on factors that affect management accounting. The section also required respondents to rate the importance and usage of certain management accounting roles and techniques in their organisations, to determine the modernity of the management accounting practices used. Questions on measures of effectiveness in management accounting were also covered in this section.

Bryman (2012:246) identifies the two types of questions used in questionnaires. Open-ended questions are those to which respondents give an answer however they wish; while closed questions present respondents with a set of fixed options to choose from as a response (Bryman, 2012:246). Both open-ended and closed questions were used in the questionnaire, although precedence was given to closed questions. Hofstee (2006:133) advises against the excessive use of open-ended questions in a questionnaire, due to difficulties in interpreting them. However, when used to a minimum, open-ended questions allow respondents some form of control to express themselves in their answers, which helps put them at ease (Hofstee,

2006:133). Hofstee (2006:133) further explains that making respondents comfortable is likely to increase the chances of yielding more detailed and accurate responses. A five-point Likert scale that grades options in variable degrees was used for most closed-type questions. For example, to determine their level of agreement on a certain matter, respondents were required to choose between “strongly disagree” at one end (1 on the scale) and “strongly agree” at the other end (5 on the scale).

### **3.8 ADMINISTRATION OF THE QUESTIONNAIRE**

According to Gray (2009:230), an online questionnaire is sent to the respondents – either as an attachment to an e-mail or via a website. For this study, respondents’ e-mail addresses were used to provide access to the questionnaire. Saunders *et al* (2009:397) advise researchers not to get e-mail addresses from online directories to avoid using irrelevant emails that create spams. The researcher contacted the sampled companies telephonically to request participation in this study. E-mail addresses of eligible participants from each company were also obtained this way. Contacting potential respondents telephonically also served as a way of notifying them to expect the e-mail with a link to the questionnaire (Saunders *et al*, 2009:397). A request letter with the link to the questionnaire (Appendix 1) was sent to prospective participants by e-mail. As advised by Saunders *et al* (2009:397), the letter and link were both sent as part of the e-mail, not as an attachment.

The following link was used for the questionnaire:

<http://forms.nmmu.ac.za/websurvey/q.asp?sid=1439&k=waotoovtf>

Possible respondents from the Eastern Cape were contacted between 1 and 5 June 2015. Possible Namibian respondents were contacted between 29 June and 3 July 2015. As advised by Saunders *et al* (2009:400), a reminding e-mail (Appendix 2) was sent to potential respondents who had agreed to participate in the study a week after the initial e-mail was sent. The survey was open for participation until 31 July 2015.

### **3.9 POPULATION OF THE STUDY AND SAMPLING**

According to Morgan and Sklar (2012:69), the population of the study is made up of everyone of interest to the study. These are the subjects of focus, to which the

findings of the study are generalised. Manufacturing companies in Namibia and the Eastern Cape made up the population for this study.

In cases where it is not credibly possible to collect data from the whole population, a realistic part of the population is used instead (Denscombe, 2003:11). A sample is a smaller group that comprises subjects that are part of the total population, chosen to represent the whole population (Morgan & Sklar, 2012:69). The chosen sample is subjected to tests and data collection methods to obtain results that are generalised to the whole population.

According to Denscombe (2003:12), probability and non-probability sampling are the two types of sampling techniques used in research. All cases are known and have the same chances of being selected to be part of a probability sample (Saunders *et al*, 2009:213). Non-probability sampling removes the effect of randomness which eliminates the chance of selection for some cases (Curtis & Curtis, 2011:127). Probability sampling is mostly preferred in quantitative research for better representation of the population (Morgan & Sklar, 2012:70).

However, probability sampling may be difficult to use in cases with very large population sizes, where it may not be realistically possible to get hold of every subject in the population (Morgan & Sklar, 2012:70). According to Curtis and Curtis (2011:130), probability sampling needs a complete sample frame, listing all the cases in the population from which the sample is drawn. Curtis and Curtis (2011:130) further agree with Morgan and Sklar (2012:70), on the difficulty and high costs of obtaining a complete sample frame in cases of large populations. This problem was experienced in this study.

The researcher was unable to obtain a formal and complete list of manufacturing companies from either SEDA Eastern Cape or the Namibian Ministry of Industrialisation, Trade and SME Development. So business directories were used to provide the sampling frame for this study. For Namibian companies, a list was compiled from the Namibian Manufacturers' Association (NMA) (2014:52-133) manufacturing and processing directory. A list of Eastern Cape manufacturing companies was obtained using the Yellow Pages (2015) website, as well as the list of members of the Manufacturing Circle (2011). Due to this constraint of an

incomplete sampling frame, a non-probability sampling technique was used for this study.

Purposive sampling was used to choose the sample of the study. According to Gray (2009:152), a purposive sample is chosen based on one or more qualities that are defined as suitable representations of the sample. To select the Namibian sample, companies that form part of the sample frame were screened to determine their level of establishment. This is because the NMA directory listed all its members – including micro-enterprises, which proved difficult to contact. In an attempt to limit the likelihood of selecting companies which would not be reachable to take part in the study, research was conducted on the listed companies. It was assumed that companies that have some form of existence elsewhere besides the NMA directory or online business directories like [www.namdirectory.com](http://www.namdirectory.com), [www.brabys.com](http://www.brabys.com), *et cetera* were likely to be established and provide relevant information for the study. An appropriate sample should comprise relevant participants with the ability to provide significant data and substantial information for the study (Efron & Ravid, 2013:62). Company factors like familiar product brands, established websites and other forms of marketing like media coverage were used to select Namibian manufacturing companies.

Eastern Cape manufacturing companies were selected in a similar manner. Research was conducted on the companies listed by Yellow Pages (2015) under manufacturing companies in the Eastern Cape. This was to ensure that the sample chosen for this study comprised valid possible respondents. Research was conducted on the websites of the listed companies, the products they sold and media coverage. In a few instances, telephone calls were also made to the listed companies to confirm whether they were manufacturing companies operating in the Eastern Cape. As in the case of the Namibian sample, micro-organisations were not considered part of the sample for the Eastern Cape.

Although the relevance of conclusions made from data collected from a non-probability sample will most likely depend on the researcher's data collection and analysis skills, inferences can be made with reliance to the size of the sample and its satisfactory representation of the population (Saunders *et al*, 2009:235). For this reason, a sufficient sample was considered for the study.

According to Efron and Ravid (2013:64), it is important to consider the size of the sample in quantitative research. Accordingly, Saunders *et al* (2009:127) highlight the necessity of a sufficient sample size for generalising deductive research. Saunders *et al* (2009:218) further advise a minimum sample size of 30 subjects. In agreement, Denscombe (2003:24) advised against sample sizes of fewer than 30 subjects for surveys. According to Denscombe (2003:24), most survey research sample sizes range between 30 and 250 subjects. During the sampling process, Denscombe (2003:24) calls researchers to be attentive in choosing a sample that qualifies as a better representative of the population.

After considering the size of the population and the risk of non-responses associated with surveys (Bryman, 2012:199), 250 companies, as recommended by Denscombe (2003:24), were chosen as a sample for this study. The sample was evenly divided between Namibian and Eastern Cape manufacturing companies; with 125 companies from each. The cost of carrying out the survey was also considered in choosing the size of the sample for this study. The size of the sample is constricted by the availability of resources such as time and money (Queensland Treasury, 2015).

### **3.10 PILOT STUDY**

This study aimed to produce results that are objective, valid and replicable (Gray, 2009:131). To test the validity of the questionnaire, a pilot study was carried out on a small group of participants who volunteered to complete the questionnaire. Hofstee (2006:134) emphasises the need for a small pilot run before questionnaires are sent out to respondents. A pilot study was carried out between 22 and 25 May 2015, to ensure that the questionnaire served its purpose of meeting the objectives of the study. The purpose of the pilot study was also to detect and fix any faults in the questionnaire that would confuse the respondents, as well as those mistakes that were likely to cause problems with data analysis later on in the study. Respondents were chosen from NMMU's Applied Accounting Department for the pilot study. These individuals possess the required knowledge of management accounting and were able to understand and analyse the questionnaire, as well as identify any issues with regard to the clarity of the questionnaire. The results of the pilot study were then exported to Excel for a trial analysis. According to Hofstee (2006:134), the

questionnaire is vulnerable to mistakes, which may be easier to fix earlier than later. So piloting is necessary, especially in self-administered questionnaires, as there is no opportunity of clarifying any misunderstandings, as in the case of interviews (Bryman, 2012:263).

### **3.11 THE VALIDITY OF DATA**

According to McNiff and Whitehead (2006:157), validity refers to the value placed on the claims made by the results of the study, based on whether they are authentic and dependable. For purposes of validity, the questionnaire was designed carefully to ensure relevance of the questions analysing the factors that affect the role of management accounting in manufacturing organisations. So the questions asked were matched to the literature reviewed (Gray, 2009:155).

According to Gray (2009:156), the application of a similar test to different participants in different settings strengthens the validity of a study. External validity refers to the extent to which the results and conclusions of the study would hold to subjects in other places or at different times (Trochim, 2006). The fact that this study focuses on management accountants in two different regions, Namibia and the Eastern Cape, reinforces its validity.

Validity is also achieved through ensuring that the subjects chosen for the study have appropriate similarities with regard to what the study is testing (Gray, 2009:156). To examine the factors that affect the effectiveness of management accounting in manufacturing companies, the study used the employees of manufacturing companies whose responsibilities relate to the role of the management accountant in an organisation, as identified in Chapter 2. This ensured that respondents were familiar with the terms used in the questionnaire.

### **3.12 THE RELIABILITY OF DATA**

A good research study is required to comply with the standards of both validity and reliability (Curtis & Curtis, 2011:72). A study is valid and reliable when it produces results that are capable of being reproduced, while at the same time providing relevant answers to its research questions. Bryman (2012:59) refers to validity and reliability as measures of quality in research.

Efron and Ravid (2013:151) define reliability as the consistency of results and the extent to which the same results will be obtained if the same population is subjected to the same test. Cross-sectional research studies are most likely to be replicable, provided that the methods and processes that were employed in the study are made clear to allow for repetition (Bryman, 2012:60).

The literature places a degree of caution on the reliability of web-based surveys. Saunders *et al* (2009:363) expressed concern at the researcher's lack of control over respondents to web-based questionnaires, as well as the difficulty of ensuring that the right people take part in answering the questionnaire. However, questionnaires that involve contact through e-mail create a form of control because of the fact that most e-mail users read and respond to their own mails (Saunders *et al*, 2009:363). This reliability control technique was used in this study. The fact that participation requests were sent to e-mail addresses that were obtained by contacting possible respondents telephonically, ensured that the link to the questionnaire was sent to the appropriate people to take part in the study.

### **3.13 ETHICAL CONSIDERATIONS**

To ensure that the ethics of research were followed in this study, the necessary steps were followed to obtain ethical clearance from the NMMU Research Ethics Committee. Denscombe (2003:134) urges researchers to respect the rights and dignity of participants.

Bryman (2012:135) discusses the following classifications of ethical principles that researchers need to consider:

- the possibility of harming participants
- ensuring that participants are well aware of anything they agree to do
- avoiding using deception to get responses
- confidentiality and maintaining participants' privacy

According to Curtis and Curtis (2011:15), voluntary informed consent is the most important aspect in research ethics. There is also a need to acquaint respondents with the objectives of the study. Educating respondents about the study enables them to agree on what they know, which is likely to reduce the possibility of potential claims of harm caused to respondents (Curtis & Curtis, 2011:15). Potential



respondents for this study were contacted telephonically and notified of the objectives of the study. Their consent to take part was then obtained, although some declined to take part. Respondents were reminded that their participation was voluntary and that they had the freedom to withdraw from the survey at any time, if they wished to.

To protect the data obtained from the survey with regard to privacy, the anonymity of the respondents was maintained (Denscombe, 2003:143). To achieve this, the questionnaire of this study was designed without questions of identity or any information that might link the answers to a particular respondent.

### **3.14 DATA ANALYSIS**

According Gray *et al* (2007:2), data collected for the study is analysed to determine its meaning, define its significance and be generalised to the population of the study. Saunders *et al* (2009:416) advise quantitative researchers to seek assistance with data analysis. With the support of NMMU's statistical department, data obtained from the survey was analysed with descriptive, reliability and inferential statistical procedures. For these methods, Statistica version 12 and SPSS version 22 software programs were used. The results were analysed to find answers and valid patterns that were linked to literature. During data analysis, it is essential to connect the data obtained with the objectives of the study (Morgan & Sklar, 2012:120). The findings of the study were then presented using graphs and charts; with descriptive narrations explaining their meanings. Raw data is transformed into charts and tables for sense to be made out of it (Denscombe, 2003:242).

### **3.15 CHAPTER SUMMARY**

This study adopted a quantitative approach which carried out an online survey to analyse the factors that affect the role management accounting in manufacturing organisations. As is expected in the deductive approach, the literature reviewed in Chapter 2 provided a base for the study's research questions. A purposively chosen sample of manufacturing companies was subjected to these questions for the survey. The findings of the study will be presented in Chapter 4.

## CHAPTER 4

### PRESENTATION OF FINDINGS

#### **4.1 INTRODUCTION**

This study examines the factors that affect the role of management accounting in manufacturing organisations. To realise the objectives of the study, an online questionnaire was used to collect data from the sampled manufacturing companies in Namibia and the Eastern Cape. This chapter analyses the data collected from the survey and discusses the findings of the study in relation to literature. The presentation of the research findings include an evaluation of the meaning of the data obtained (Gray *et al*, 2007:49).

Of the 250 companies that were e-mailed the link to the questionnaire, 73 took part in the study. This provides a response rate of 29.2%. According to Penwarden (2014), the average response rate for e-mail surveys is 24.8%. Fincham (2008:2) also found the approximate response rate to e-mail surveys to be within the range of 25% to 30%. For their study on Brazilian manufacturing companies, Carneiro, Da Rocha and Da Silva (2011:116) obtained a response rate of 15.5% from their survey. Based on research, a response rate of 29.2% is therefore acceptable.

In examining data and research results, a distinction is made between qualitative and quantitative data. Qualitative research consists of words and tends to be associated with detailed descriptions of data (Denscombe, 2003:233). Quantitative research, on the other hand, produces numerical data that is statistically analysed based on the specific focus of the study (Denscombe, 2003:233). Data produced from the survey of this study is quantitative in nature. To present the findings of the study clearly, tables, pie charts and bar graphs were used in the chapter. Short descriptions were provided to further explain these figures and relate the findings to literature previously discussed in Chapter 2 of the study. The sections that follow discuss the findings, in the order in which the questions were presented in the questionnaire.

Question 1.7 (which required the number of employees in respondents' organisations) and question 4.4 (which required the number of respondents' subordinates) were deemed insignificant to the objectives of the study, so these questions are not included in the analysis of the findings.

## 4.2 RESPONDENT INFORMATION

This section aimed at determining an understanding of the basic information of the respondents and their organisations. Table 4.1 presents a summary of demographic profiles of respondents.

**TABLE 4.1 DEMOGRAPHIC PROFILE OF RESPONDENTS**

<b>COUNTRY</b>	<b>FREQUENCY</b>	<b>PERCENTAGE</b>
Namibia	40	55
South Africa (Eastern Cape Province)	33	45
<b>Total</b>	<b>73</b>	<b>100%</b>
<b>GENDER</b>	<b>FREQUENCY</b>	<b>PERCENTAGE</b>
Male	31	43
Female	41	56
Missing values	1	1
<b>Total</b>	<b>73</b>	<b>100%</b>
<b>QUALIFICATION</b>	<b>FREQUENCY</b>	<b>PERCENTAGE</b>
Grade 12	16	22
Undergraduate	24	33
Postgraduate	33	45
<b>Total</b>	<b>73</b>	<b>100%</b>
<b>PROFESSIONAL BODIES</b>	<b>FREQUENCY</b>	<b>PERCENTAGE</b>
None	50	68
SAICA	5	7
ACCA	5	7
ICAN	2	3
CIMA	8	11
Other	3	4
<b>Total</b>	<b>73</b>	<b>100%</b>
<b>MANUFACTURING SUB-SECTORS</b>	<b>FREQUENCY</b>	<b>PERCENTAGE</b>
ICT & electronics	2	3
Automotive & parts	9	12
Plastic & rubber	5	7
Mining & metals	2	3
Building supplies	8	11
Chemicals, gas & air-conditioning	4	5
Clothing, textile, footwear & leather	6	8
Milling, food & beverages	6	8
Publishing, printing & stationery	3	4
Agriculture, forestry & fishing	10	14
Other	18	25
<b>Total</b>	<b>73</b>	<b>100%</b>

It can be seen from Table 4.1 that most of the respondents (55% or 40) operate from Namibia. Most (56% or 41) of the respondents were female.

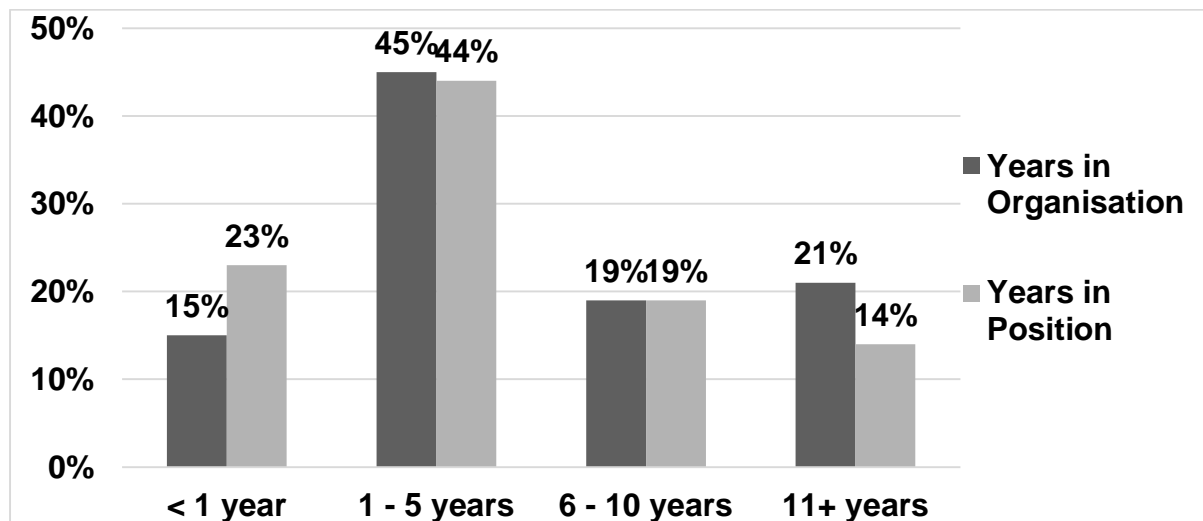
Most (78% or 57) of the respondents at least have undergraduate qualifications. However, although they form the minority, a significant 22% (16) of the respondents have only Grade 12. This confirms the shortage of educated management accountants discussed in the literature (Nandan, 2010:73). Most (68% or 50) of the respondents are also not members of any professional body, so it is likely that these respondents do not get the specialised training offered by these bodies, which may have a negative effect on the role of management accounting.

The diversity of the respondents' sub-sectors of operation will allow for generalising of the findings across the different segments of manufacturing within the population.

#### 4.2.1 The experience of respondents

The aim of determining the experience of respondents in their organisations and positions was to estimate their level of knowledge and understanding of their organisations and positions. Responses to this question are shown in Figure 4.1.

**FIGURE 4.1 RESPONDENTS' EXPERIENCE**



According to Figure 4.1, most (85%) of the respondents have worked in their organisations for more than a year, while 77% have more than a year's experience in their positions. So these respondents are likely to have reliable knowledge and information on the factors that affect their management accounting roles in their organisations.

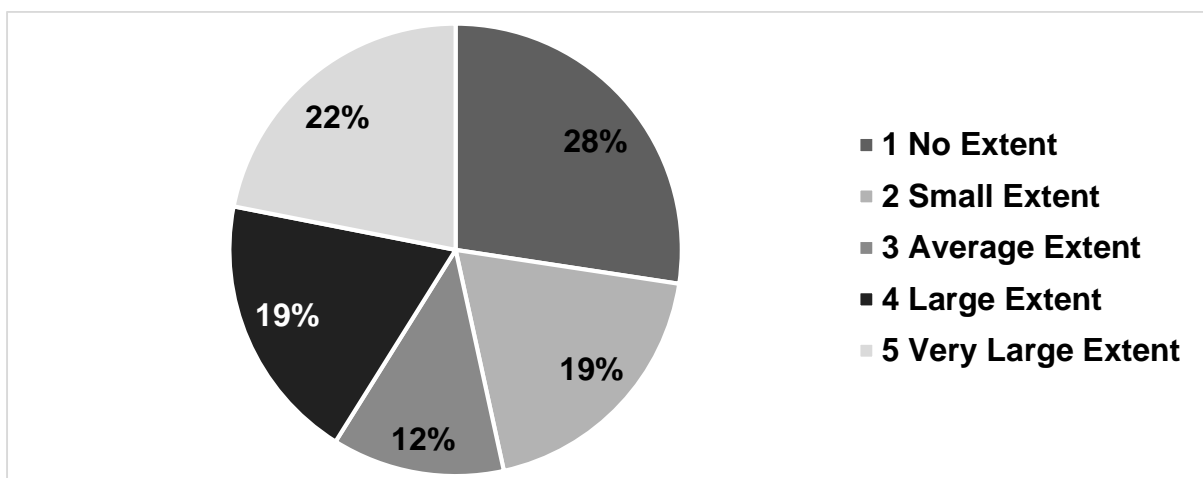
### 4.3 EXTERNAL AND INTERNAL COMPANY ASPECTS

The purpose of these questions was to determine the external and internal factors that affect decision making.

#### 4.3.1 The effect of the conditions of the external environment

Figure 4.2 illustrates the responses to the question concerning the degree to which the conditions of the external environment influence the respondents' decisions.

**FIGURE 4.2 THE EFFECT OF THE ENVIRONMENT ON DECISION MAKING**



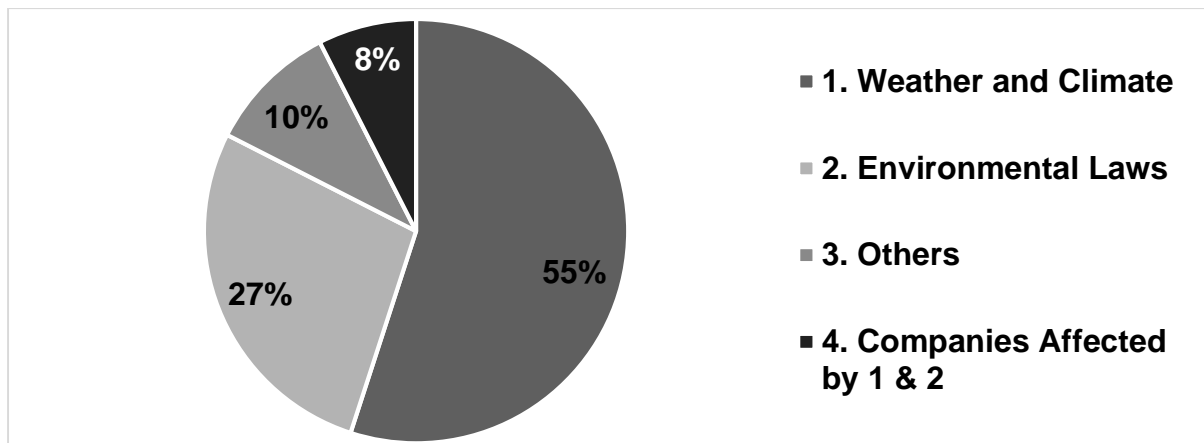
In agreement with Waweru (2008:26), Figure 4.2 shows that most (72% or 53) respondents are affected by conditions of the external environment to some extent. These include 22% (16) of the respondents who are affected to a very large extent.

#### 4.3.2 The external environmental conditions that affect manufacturing organisation

Since this question was optional, only 75% (40) of the respondents affected by environmental conditions responded. The conditions listed were summarised into four groups, as shown in Figure 4.3.

According to Figure 4.3, 55% (22) of the 40 respondents are affected by conditions related to weather and climate. Only 10% (four) of the respondents are affected by industry-specific conditions (For example fishing laws, phosphate mining, *et cetera*). These are labelled "others".

**FIGURE 4.3 EXTERNAL CONDITIONS THAT AFFECT DECISION MAKING**



### 4.3.3 Aspects mostly valued by customers

This question required respondents to choose one aspect that is most valued by their customers. The bar graph in Figure 4.4 depicts the results.

**FIGURE 4.4 MOST VALUED ASPECTS BY CUSTOMERS**

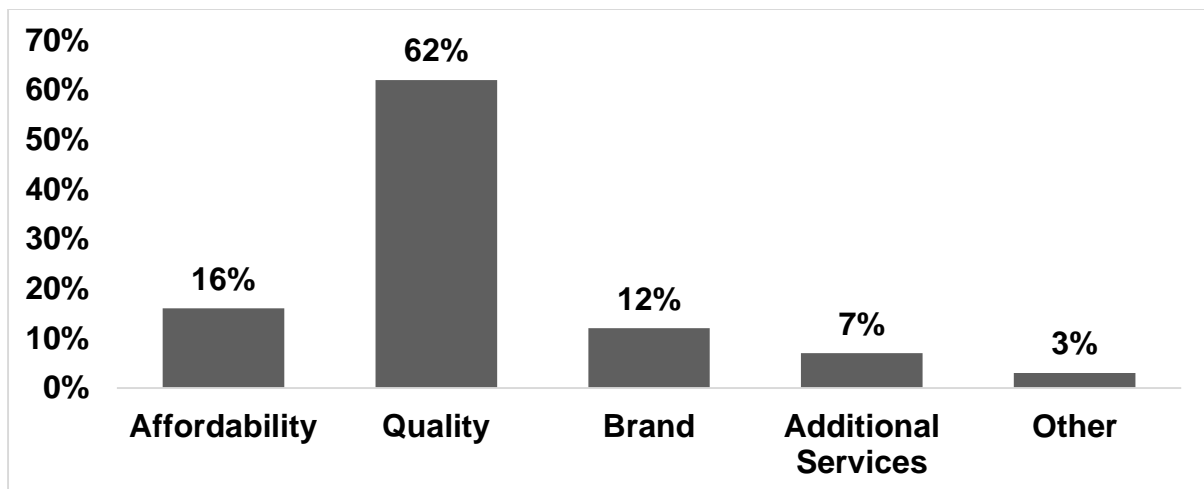
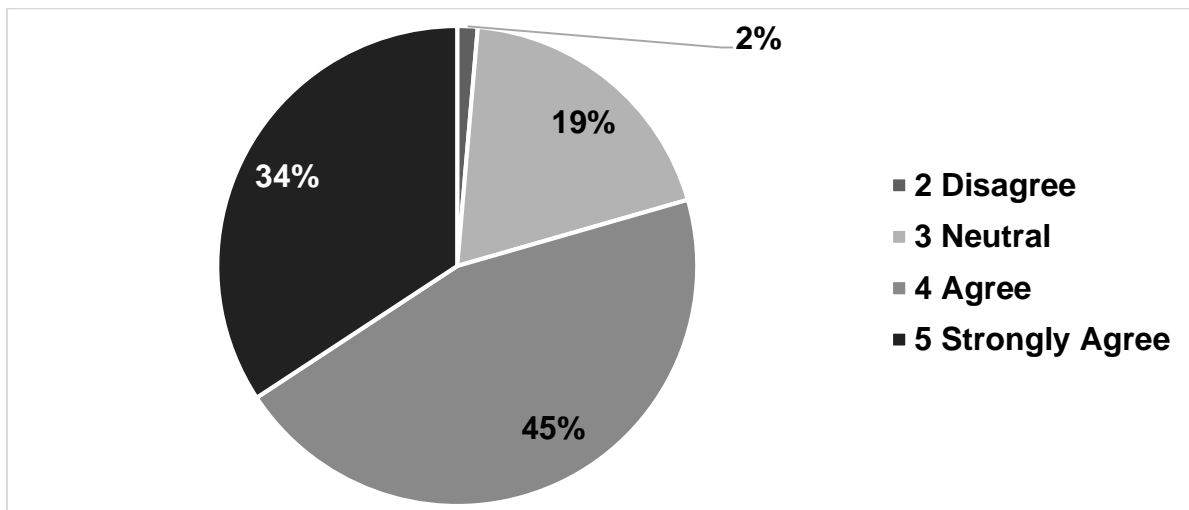


Figure 4.4 shows that most of the respondents (62% or 45) are most valued by the quality of their products. Seven per cent (five) of the respondents are valued for additional services to products, while 3% (two) for other aspects. Those who chose “other” are valued for a combination of quality, affordability and additional services. In agreement with the literature, the findings highlight the importance of quality in manufacturing (United Nations, 2003:104).

#### 4.3.4 The effect of organisational strategies on respondents' motivation

This question required respondents to rate their level of agreement with regard to this statement: "The strategies of the organisation motivate me enough to align my personal goals with the goals of the organisation." Figure 4.5 illustrates the responses.

**FIGURE 4.5 ORGANISATIONAL STRATEGIES AND MOTIVATION**



Of the respondents, 79% (58) agree that they are motivated by their organisations' strategies. Only one (2%) disagrees with the statement and none of the respondents disagreed strongly (level 1). This is likely to have a positive outcome in the role of management accounting.

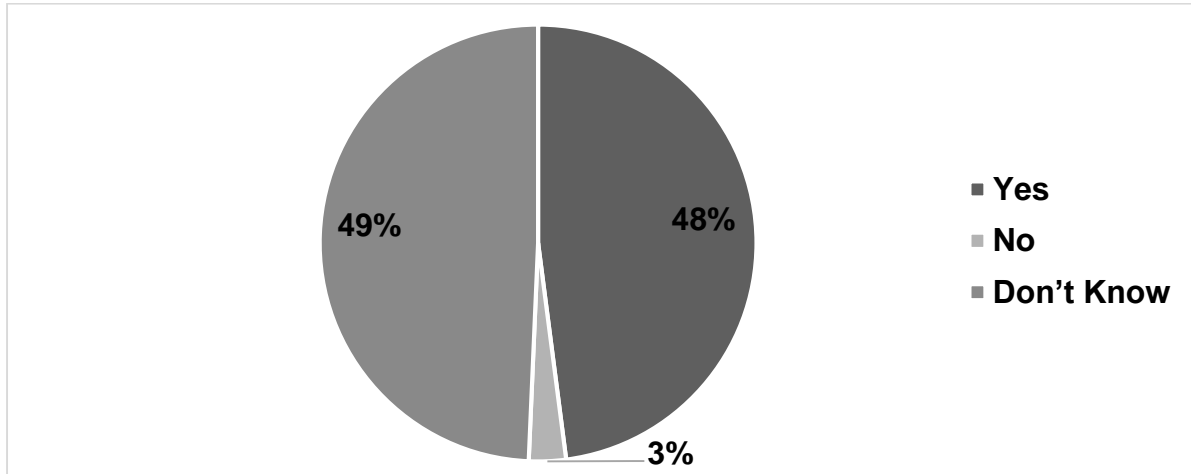
#### 4.3.5 The role of organisational strategies on motivating other employees

Figure 4.6 illustrates the responses to the question: "Do the same strategies that motivate respondents have similar effects on their colleagues?"

As illustrated in Figure 4.6, most (49% or 36) of the respondents do not know whether their colleagues are motivated by their organisational strategies. There is therefore a chance that management accountants take part in setting strategies that do not motivate employees. Hemp (2005:23) advises against strategies that do not inspire employees to align their personal goals with the goals of the organisation. This could also have a negative outcome on goal congruence, which according to Freifled (2013) is important in performance management. Forty-nine per cent (36) of

the respondents who do not know, in addition to the 3% (two) who chose no, are therefore likely to affect the role of management accounting negatively.

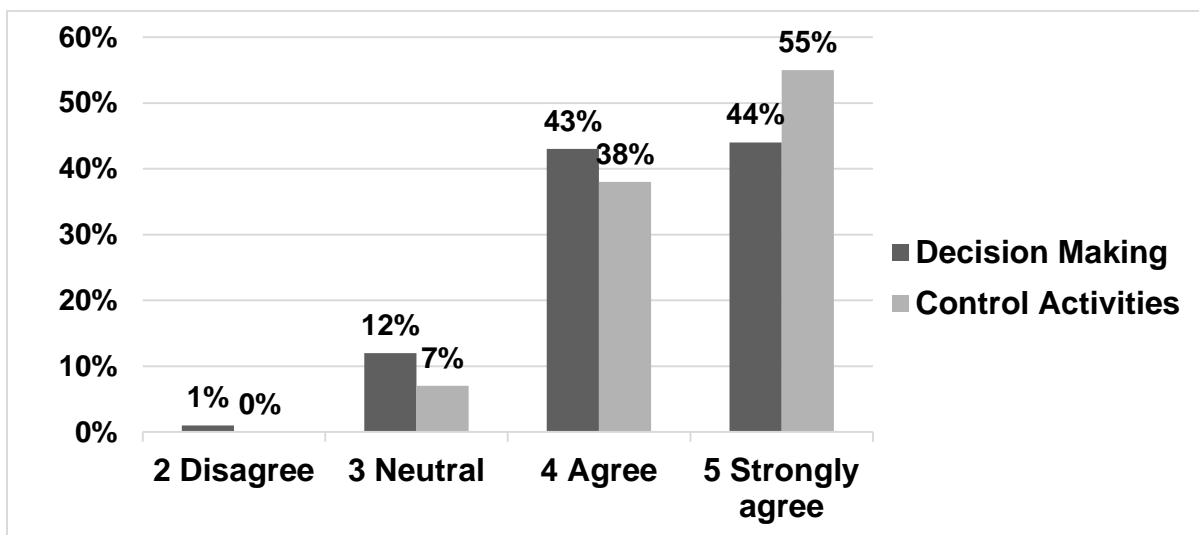
**FIGURE 4.6 ORGANISATIONAL STRATEGIES AND OTHER EMPLOYEES**



#### 4.3.6 The importance of organisational structure

To determine the role of the organisational structure, questions 2.8 and 2.9 required respondents to rate their agreement with statements concerning the importance of the organisational structure on decision making and control activities. Figure 4.7 illustrates the responses to these questions.

**FIGURE 4.7 THE IMPORTANCE OF THE ORGANISATIONAL STRUCTURE**



None of the respondents disagreed strongly with the two statements (level 1). A total of 87% (64) of the respondents agree that the organisational structure is important with regard to decision making (level 4 and 5), while 93% (68) agree with the

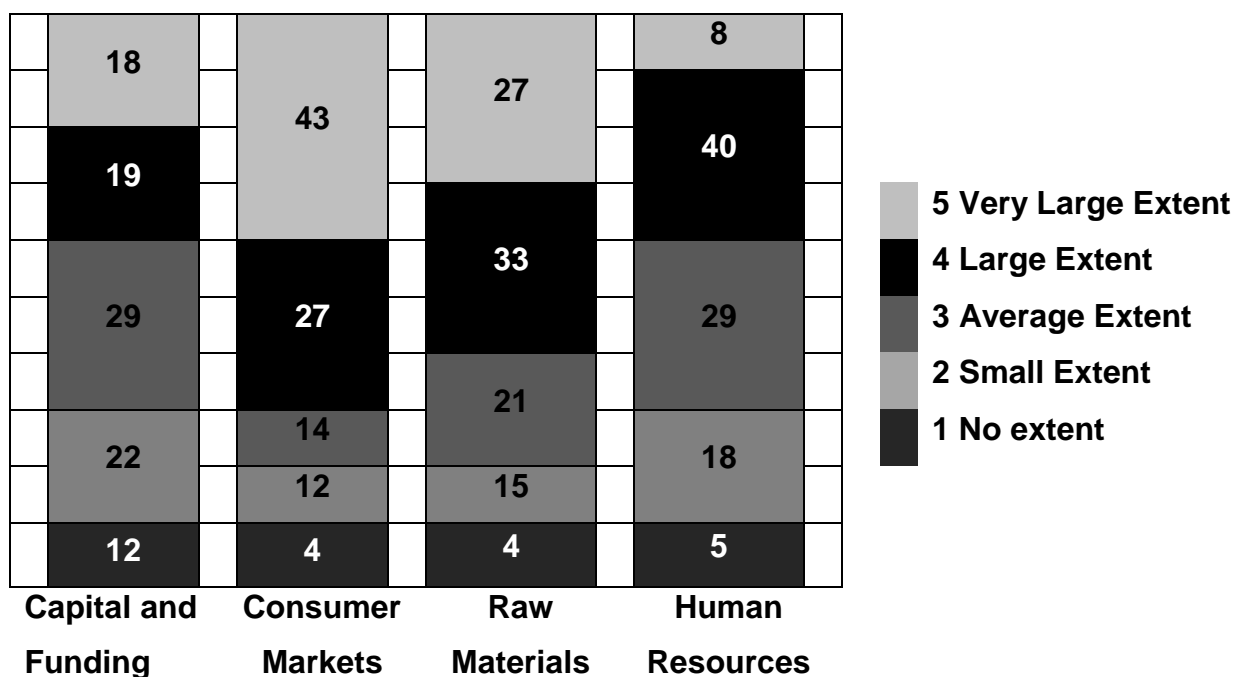


importance of the organisational structure for control purposes. So the organisational structure is used for decision making and control activities, although it is mostly used for control purposes.

#### 4.4 COMPETITION

Questions in this section required respondents to rate the degree to which they are affected by competition in areas of capital and funding, consumer markets, raw materials and human resources. Figure 4.8 illustrates the responses.

**FIGURE 4.8 THE EFFECT OF COMPETITION IN DIFFERENT AREAS**



According to the figure, manufacturing companies are affected by competition in all four areas, although consumer markets and raw materials have the most significant effects. Most (70% or 51) of the respondents are affected by competition in consumer markets to an above-average extent (levels 4 and 5), whereas 16% (12) compete over customers to a small extent or none (levels 2 and 1). Of the respondents, 60% (44) are affected by competition over raw materials to an above-average extent, while 19% (14) are affected to a small extent or none. The other 48% (35) of the respondents compete over human resources to an above-average extent, whereas 23% (17) are affected to a small extent or none. Only 37% (27) of

the respondents are affected by competition over capital and funding to an above-average extent, while 34% (25) are affected to a small extent or none.

Chapter 2 discussed how manufacturing companies in Namibia and the Eastern Cape Province in South Africa are affected by competition over customers and raw materials, so these findings agree with the literature discussed in Chapter 2.

#### 4.5 INTERACTION WITH OPERATIONS AND COMMUNICATION

Questions in this section focused on the relationship and interactions of management accountants with others in the organisation. Byrne and Pierce (2007:491) associate good communications between management accountants and operational managers with increased innovation, better decisions and improved results.

##### 4.5.1 Management accountants' interactions with the operations department

These questions aimed to determine the attitudes of respondents towards working with operations. Question 4.1 required respondents to indicate their interactions with the operations department in their organisations. Question 4.2 required respondents to rate their level of agreement with the statement: "It is possible to closely work with operations and still stay objective."

**TABLE 4.2 RESPONDENTS AND INTERACTING WITH OPERATIONS**

<b>Respondents' interactions with operations</b>	<b>Frequency</b>	<b>Percentage</b>
We meet to solve any issue that requires my input	31	43
I take part in all the decisions they make	6	8
I take part in all their significant decisions and projects	12	16
The manager provides me with information to report	19	26
I do not work closely with the operations	5	7
<b>Total</b>	<b>73</b>	<b>100%</b>
<b>Independence is possible with decentralisation</b>	<b>Frequency</b>	<b>Percentage</b>
Disagree	3	4
Neutral	17	23
Agree	36	50
Strongly Agree	17	23
<b>Total</b>	<b>73</b>	<b>100%</b>

Of the respondents, 59% (43% and 16%) only get involved in operation activities when needed or in case of significant decisions. These respondents are likely to have a positive effect on management accounting in their organisations. However, respondents with very low levels of interaction with their operations department (19% and 5%), as well as 8% of the respondents who have a hands-on approach to take part in every operational decision, may have a negative effect on the role of management accounting.

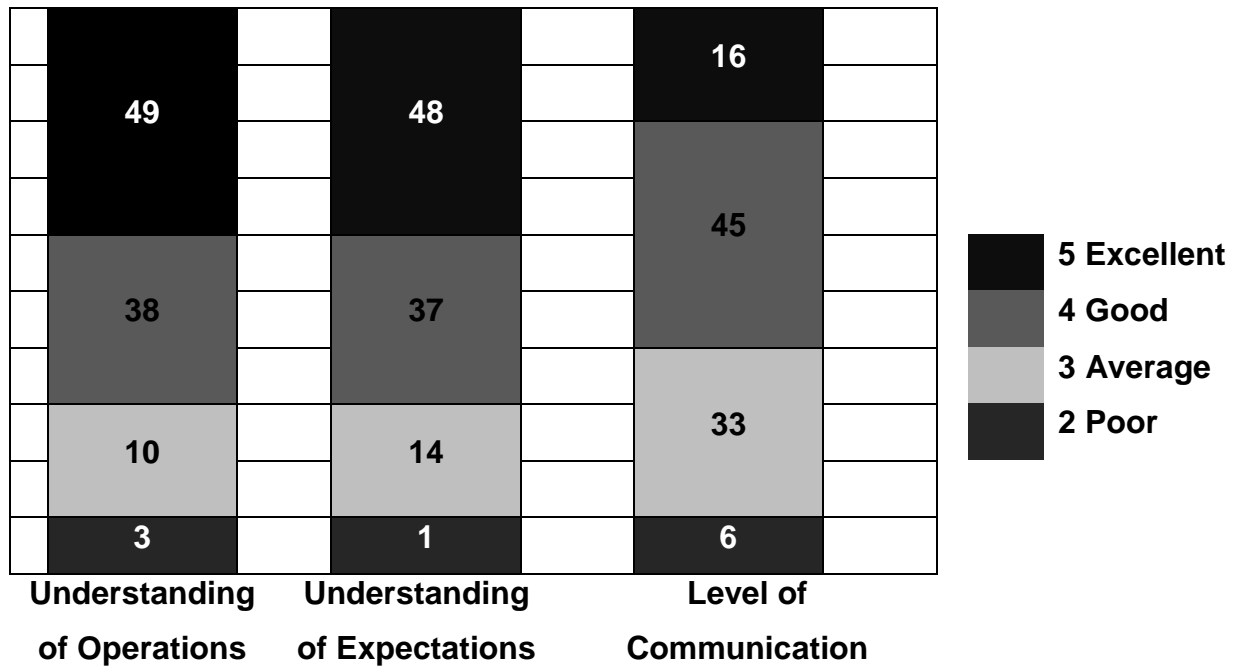
Table 4.2 also shows that in agreement with Sathe (1983, cited by Pierce & O’Dea, 2003:283), most (73% or 53) of the respondents agree that it is possible for management accountants to be decentralised and still stay independent. No one strongly disagreed with the statement (level 1). Overall, the findings show a positive attitude by respondents towards working with operations.

#### **4.5.2 Communication, understanding operations and management expectations**

For questions 4.3 and 4.6, respondents were required to rate their level of understanding of business operations and management expectations respectively. Question 4.5 required respondents to rate their level of satisfaction with communication in their organisations. Drucker (2001:99) emphasised the need for effective communication for an enhanced flow of information between departments. Figure 4.9 illustrates the responses to these questions.

According to Figure 4.9, 87% (64) of the respondents have an above-average understanding of operations (level 4 and 5) and only 3% (two) have a poor understanding of their business operations. Contrary to the findings of Pierce and O’Dea (2003:286) regarding the lack of awareness of management expectations among management accountants, most (85% or 62) respondents have an above-average understanding of what management expects of them (level 5). Only one (1%) has a poor understanding of management expectations. Of the respondents, 61% (45) rated communication in their organisations at above-average levels and only 6% (four) of the respondents have poor communication. None of the respondents chose “very poor” (level 1) for any of these questions.

**FIGURE 4.9 COMMUNICATIONS AND UNDERSTANDING OPERATIONS AND MANAGEMENT EXPECTATIONS**

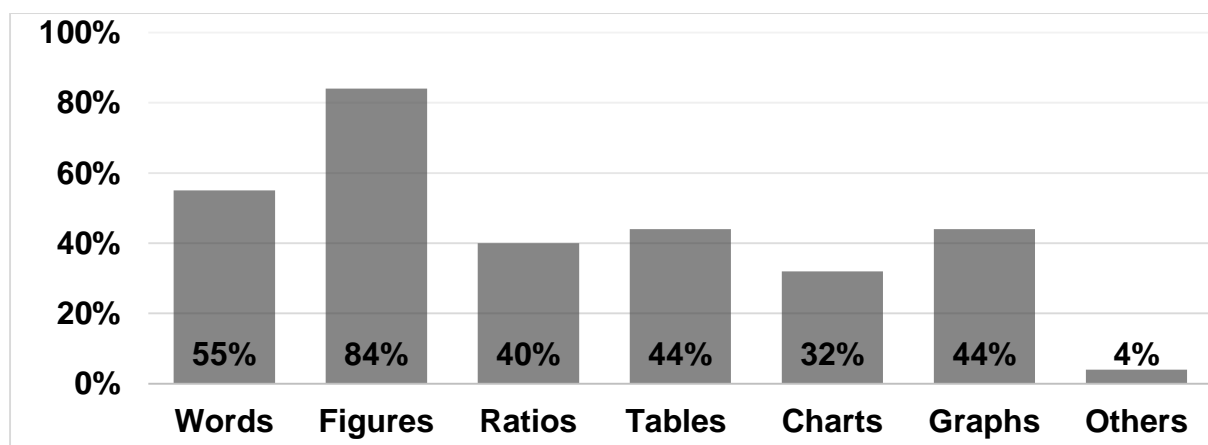


So a conclusion can be reached that most respondents understand their business operation and management expectations because of their involvement in operations (as discussed in section 4.5.1) and good communication in their organisations.

### 4.5.3 Forms of presentation for management accounting reports

Illustrated in Figure 4.10 are the different forms of presentation that are used by respondents in their management accounting reports.

**FIGURE 4.10 THE DIFFERENT FORMS OF PRESENTATIONS USED**



Respondents use different formats of presentations for their reports. However, Figure 4.10 indicates a high usage of figures as a format of presentation in comparison with others. This may be due to the numerical nature of accounting information. However, Nandan (2010:72) found non-financial managers to understand accounting information better when it is presented in graphs, ratios, charts and other forms of presentation. So reports that are mainly presented in number format can have a negative effect on the effectiveness of management accounting reporting.

#### 4.5.4 Preparing management accounting reports for different levels of management

Correia *et al* (2008:21) identified information overload as one factor that affects the effectiveness of internal reporting negatively. Question 4.9 aimed to determine whether respondents prepare customised reports for different levels of management in their organisations, while question 4.10 required respondents to indicate the average length of their reports to management. Table 4.3 illustrates the responses to these questions.

**TABLE 4.3 PREPARING MANAGEMENT ACCOUNTING REPORTS**

<b>Customised reports for different departments</b>	<b>Frequency</b>	<b>Percentage</b>
No	46	63
Yes	27	37
<b>Total</b>	<b>73</b>	<b>100%</b>
<b>Average number of pages per report</b>	<b>Frequency</b>	<b>Percentage</b>
0 to 10 Pages	49	67
11 to 15 Pages	12	17
16 to 20 Pages	6	8
Over 21 Pages	6	8
<b>Total</b>	<b>73</b>	<b>100%</b>

Most (63% or 46) of the respondents prepare one main report for everyone in the organisation, whereas 37% (27) prepare different reports for different departments or levels of management. Since various levels of management require different information (Correia *et al*, 2008:7), preparing one common report for everyone might cause information overload and so negatively affect the effectiveness of management accounting information.

Most (67%) of the respondents prepare reports that are up to 10 pages in length, which is the length of reports recommended by Correia *et al* (2008:21) for effective management accounting reporting. This is therefore likely to influence the effectiveness of management accounting positively. However, a notable 33% of respondents prepare reports over 10 pages long, risking information overload.

#### 4.5.5 The relationship between management and management accountants

Decision making is influenced by the personal situations of decision-makers (CIMA, 2008:11). To determine the level of cooperation between management and management accountants, question 4.11 required respondents to rate the level of teamwork between management and their departments. Questions 4.12 and 4.13 intended to determine the respondents' opinions of the value placed on their roles by management, as well as the value placed on their advice as management accountants.

**TABLE 4.4 RESPONDENT RATINGS OF THEIR RELATIONSHIP WITH MANAGEMENT**

<b>Teams of management and management accountants</b>	<b>Frequency</b>	<b>Percentage</b>
2 Poor	2	3
3 Average	11	15
4 Good	35	48
5 Excellent	25	34
<b>Total</b>	<b>73</b>	<b>100%</b>
<b>Management's value for management accountants</b>	<b>Frequency</b>	<b>Percentage</b>
1 Not Important	2	3
3 Average	8	11
4 Important	32	44
5 Very Important	31	42
<b>Total</b>	<b>73</b>	<b>100%</b>
<b>Management has an open mind towards management accountants' advice</b>	<b>Frequency</b>	<b>Percentage</b>
1 Strongly Disagree	2	3
3 Neutral	18	25
4 Agree	30	41
5 Strongly Agree	23	31
<b>Total</b>	<b>73</b>	<b>100%</b>

According to Table 4.4, most (82% or 60) of the respondents rated their teaming with management at above-average levels and only 3% (two) are on poor terms with management.

Most (86% or 63) of the respondents rated the value placed on their role by management at above-average levels, and only 3% (two) feel less valued in their organisations. Seventy-two per cent (53) of the respondents agree strongly with the statement that management considers the advice of management accountants with an open mind. Only 3% (two) disagree with the statement.

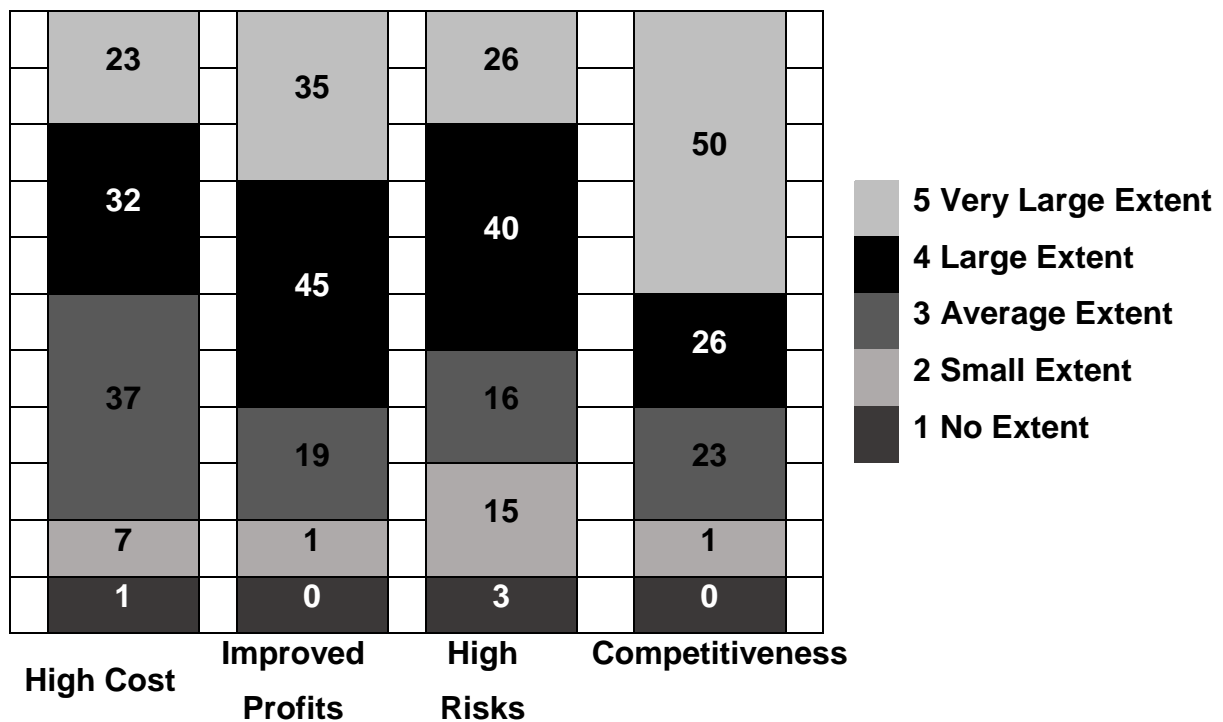
The findings show that there is a good relationship between respondents and management in their organisations, so it is likely that management supports management accountants in fulfilling their role, which is likely to motivate them and improve their effectiveness (Ma & Tayles, 2009:489).

#### **4.6 MANAGEMENT ACCOUNTANTS AND INNOVATION**

Innovation helps an organisation achieve sustainable growth (Hamel & Getz, 2005:26). Since management accountants provide management with information to make decisions, the approval of creative ideas partly depends on them. To determine their attitudes toward innovation, questions in this section required respondents to rate the extent to which they associate innovation with high costs, improved profits, increased risk and competitiveness.

According to Figure 4.11, 55% (40) of the respondents identify innovation with increased cost to an above-average extent (levels 4 and 5), while 8% (6) associate innovation with high cost to a small extent or none (level 1 and 2). Most (80% or 58) of the respondents associate innovation with profitability to an above-average extent. Only one (1%) associates the two factors to a small extent. Sixty-six per cent (48) of the respondents associate innovation with high risks to an above-average extent, while 18% (13) associate the two factors to a small extent or none. Seventy-six per cent (55) of the respondents associate innovation with increased competitiveness to an above-average extent. Only one (1%) associates these two factors to a small extent.

**FIGURE 4.11 RESPONDENTS' ATTITUDES TOWARDS INNOVATION**



The findings show that respondents mostly associate innovation with the benefits of profitability and competitiveness, more than they associate it with increased cost and high risks, so respondents are likely to support innovation within their organisations.

#### **4.7 TECHNOLOGY AND MANAGEMENT ACCOUNTING**

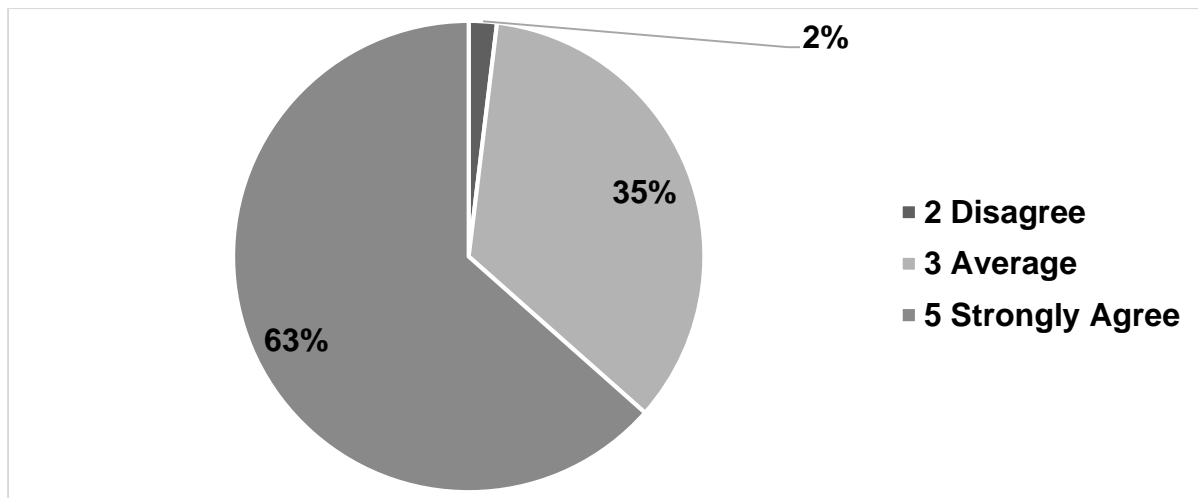
Questions in this section aimed to determine the attitudes of respondents towards technology. The section also aimed at establishing the use of financial software packages in respondents' organisations.

##### **4.7.1 Management accountants and developments in technology**

This question required respondents to rate their level of agreement with this statement: "Management accountants need to keep up to date with developments in technology."



**FIGURE 4.12 KEEPING UP TO DATE WITH DEVELOPMENTS IN TECHNOLOGY**



According to the results, 74% (54) of the respondents agree strongly with the need to follow and keep up with developments in technology. Only one (1%) disagrees with this statement. None of the respondents chose levels 1 and 4.

CIMA (2010:2) highlights the importance of keeping up with developments in technology. Keeping up with developments in technology allows management accountants to be well informed and base their decisions regarding technology on its long-term benefits, not only the short-term cost of technology. So this is likely to have a positive outcome in the role of management accounting.

#### **4.7.2 Financial software packages**

Table 4.5 illustrates the responses to questions related to financial software packages. Respondents were asked whether they use financial software packages in their organisations. A follow-up question, 6.3, inquired whether those respondents who indicated that they use software packages participated in choosing them.

Table 4.5 shows that most (95% or 69) of the respondents use financial software packages in their organisation and only 5% (four) do not use them. Contrary to the findings of Waweru *et al* (2004:683), the findings show a high likelihood of the availability of computers that are used with these packages in most organisations. The results also show the respondents' commitment to providing quality accounting services (Burns & Vaivio, 2001:389).

**TABLE 4.5 RESPONDENTS' USE OF A FINANCIAL SOFTWARE PACKAGES**

<b>Do you use a financial software package?</b>	<b>Frequency</b>	<b>Percentage</b>
Yes	69	95
No	4	5
<b>Total</b>	<b>73</b>	<b>100%</b>
<b>Participation in choosing the software used</b>	<b>Frequency</b>	<b>Percentage</b>
Yes	29	42
No	39	57
Missing Values	1	1
<b>Total</b>	<b>69</b>	<b>100%</b>

Of the 69 respondents who use software packages, only 42% (29) played a role in choosing them, while most (57%) did not.

A follow-up open-ended question on the choice of software packages revealed that management, the IT department, officials in the holding companies and supervisors in the finance departments chose the financial software packages in most organisations. The lack of management accountants' participation in choosing the software packages used could be the cause of their dissatisfaction with maintaining these systems (Marriott & Marriott, 2000:486). Maintenance issues are identified as one of the main disadvantages of software packages in section 4.7.3.

### **4.7.3 The advantages and disadvantages of financial software packages**

Table 4.6 illustrates the advantages and disadvantages of financial software packages. Only 84% (58) of the 69 respondents who use financial software packages answered this question, with some listing multiple advantages. The presentation of frequencies as relative percentages was therefore a challenge for this question.

**TABLE 4.6 ADVANTAGES AND DISADVANTAGES OF SOFTWARE SYSTEMS**

<b>Advantage</b>	<b>Score</b>	<b>Disadvantage</b>	<b>Score</b>
Efficiency	19	Not understood by everyone	13
Effectiveness	12	Maintenance problems	11
Easy to use	10	Limitations e.g. entry types	9
Availability of information	7	Can be ineffective (e.g. slow with many users)	3
Standard systems and reports	6	Inefficient	2
Accessibility of reports	3	Expensive	1
Customised to company needs	2	Produces irrelevant reports	1
Previous information compared	1	Needs electricity & internet	1
Graphical & numerical displays	1	A lot of input data required	1
Allow for delegation of duties	1	–	–

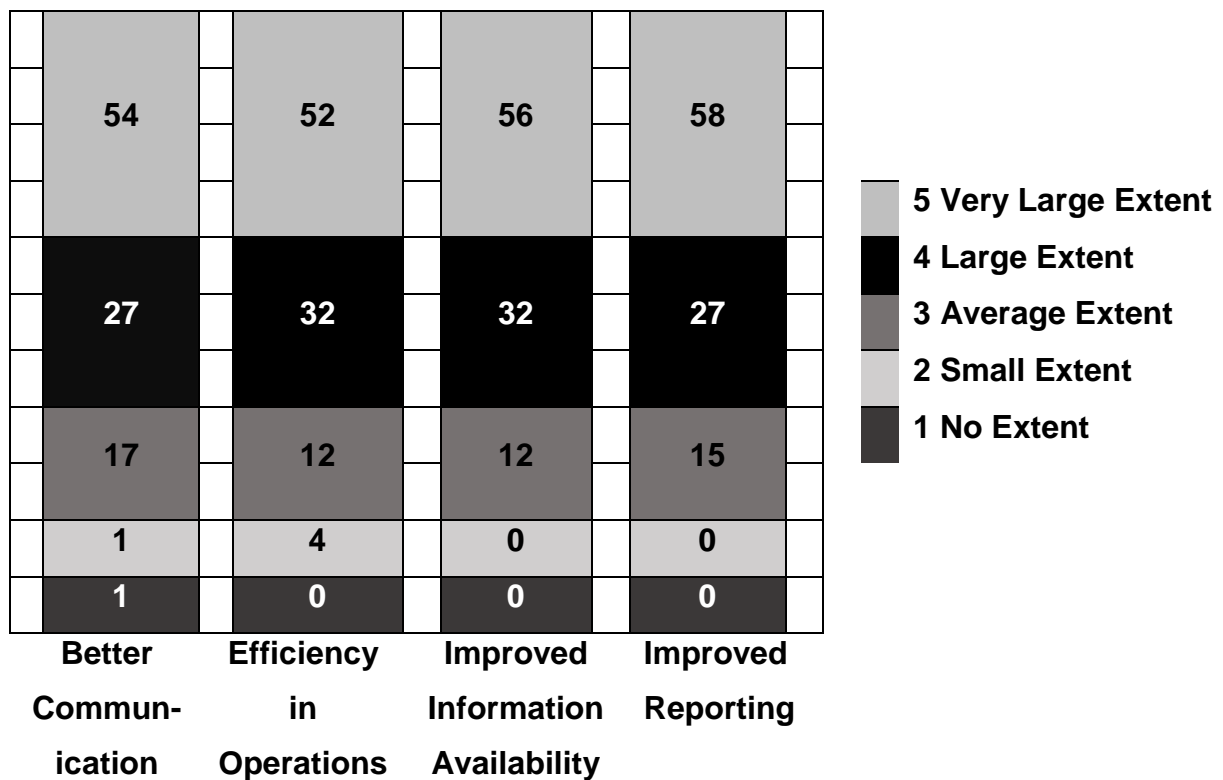
In agreement with the advantages of software packages discussed in Chapter 2, most respondents listed efficiency, effectiveness, simplified usage and increased availability of information as advantages of the financial software packages used. However, respondents also indicated that financial software packages can be hard to understand without training. In agreement with Graham *et al* (2012:83), most respondents have difficulties maintaining their software packages. Restrictions to financial software packages (for example the type of entries allowed by the software) were also listed by most respondents as a disadvantage.

#### **4.7.4 The benefits of technology**

This question required respondents to rate the extent to which they benefit from technology, in terms of improved communication, efficiency, availability of information and reporting. Figure 4.13 presents the responses to these questions.

According to Figure 4.13, 81% (59) of the respondents have improved communication as a result of technology to an above-average extent. Only 2% (two) have achieved better communications to a small extent or none at all because of technology.

**FIGURE 4.13 THE BENEFITS OF TECHNOLOGY**



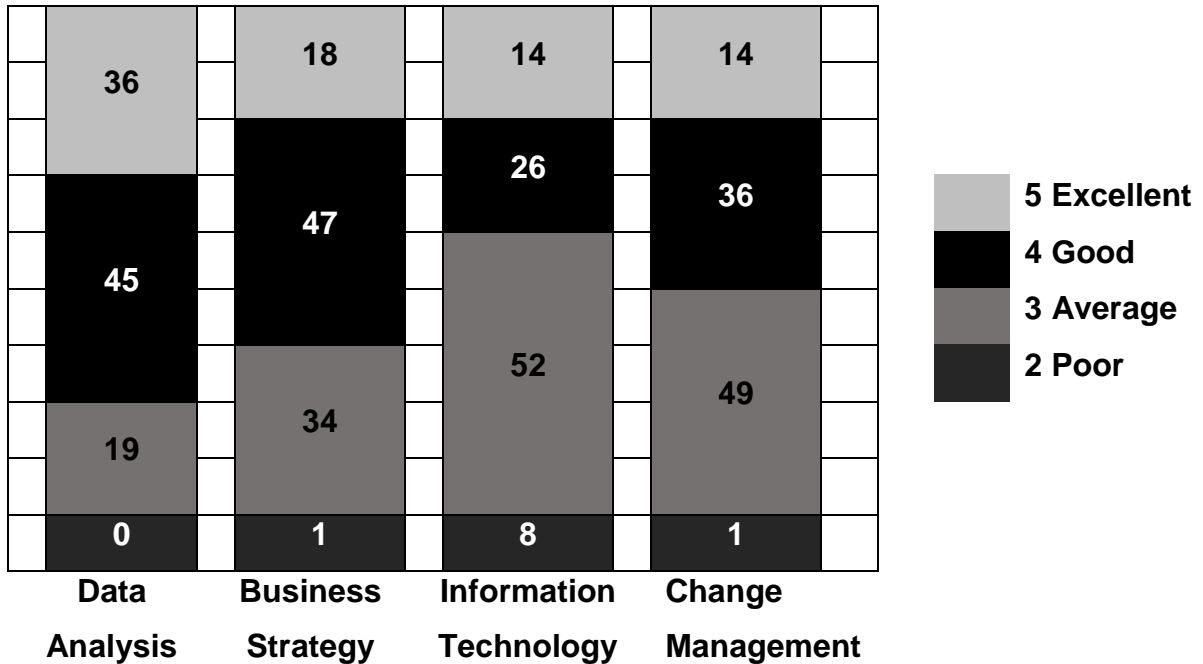
Technology has increased the efficiency of the operations for 84% (61) of the respondents to an above-average extent and only 4% (three) benefited to a small extent. Most (88% or 64) of the respondents now have improved access to information to an above-average extent because of technology. No one chose levels 2 or 1. Eighty-five per cent (62) of the respondents now have improved reporting due to technology to an above-average extent and none of the respondents chose levels 2 or 1.

These findings show that respondents have benefited from technology in all the areas listed. However, technology has mostly benefited respondents in terms of improved availability of information and better reporting. This is in agreement with Burns and Vaivio (2001:389), when they found developments in technology beneficial to collecting, measuring, analysing and delivering information.

### 4.8 PRACTICAL SKILLS

Figure 4.14 presents the respondents' ratings of their levels of knowledge in the areas of data analysis, business strategy, information technology and change management.

**FIGURE 4.14 RESPONDENTS' KNOWLEDGE IN DIFFERENT SUBJECTS**



Of the respondents, 81% (59) have above-average knowledge in data analysis, while 65% (47) have above-average knowledge in business strategy. Fifty per cent (36) of the respondents have above-average knowledge in change management and 40% (29) have above-average knowledge in information technology. None of the respondents are very poor in any of these subjects (level 1).

The findings show that most respondents have high knowledge in data analysis and business strategy, when compared with other subjects. This is in agreement with Burns and Vaivio (2001:391), who emphasised the need to train management accountants in business subjects like strategy, change management and information technology.

### 4.9 MANAGEMENT ACCOUNTING SKILLS

Questions in this section required respondents to rate the importance of various skills to their role. Table 4.7 illustrates the responses to these questions, in a style of

presentation adopted from Blignaut (2013:89). In addition to their above-average scores, the concentration of scores around the mean was also considered in listing the skills. The standard deviation defines the degree to which values vary from the mean (Saunders *et al*, 2009:445). Adding and subtracting the standard deviation from the mean shows the range in which most of responses lie (Kolb, 2008:256). Hence skills with a high mean and low standard deviation are at the top of the list.

**TABLE 4.7 SKILLS IMPORTANT TO MANAGEMENT ACCOUNTANTS**

<b>Skills</b>	<b>Above average total %</b>	<b>Mean</b>	<b>Standard deviation</b>
Numerical skills	95,9	4,73	0,53
Analytical or interpretive skills	91,8	4,63	0,63
Strategic thinking skills	93,2	4,52	0,63
Integrating financial and non-financial Information	94,5	4,47	0,60
Communication skills	91,8	4,45	0,65
Presentation skills	90,4	4,44	0,67
Broad business knowledge	89,0	4,34	0,67
Interpersonal skills	87,7	4,33	0,69
Approachability	79,5	4,23	0,81
Teamwork	86,3	4,23	0,72
Leadership skills	78,1	4,15	0,76
Knowledge in information technology	72,6	4,03	0,90

In agreement with the literature, respondents rated all the skills in the question as important, with above-average scores of over 70%. However, numerical skills were rated the most important, with a mean score of 4.73. Analytical or interpretive skills and strategic thinking skills have the second- and third-highest mean scores (4.63 and 4.52, respectively). Leadership skills and knowledge in information technology obtained the lowest mean scores (4.15 and 4.03, respectively). The lack of importance of IT explains the low level of knowledge in the subject (as discussed in section 4.8).

With regards to an open-ended question 9.13 that required respondents to list other skills important to their role, respondents listed integrity, confidentiality, accountability, firm decision making and the ability to gain from constructive criticism. In agreement with CIMA (2010:4), these findings show the importance of the fundamental principles of integrity and confidentiality. However, firm decision making and the ability to gain from constructive criticism are somewhat contradictory; with the earlier likely to taint flexibility, while the ability to gain from constructive criticism shows respondents' recognition of the importance of being flexible in their roles. Byrne and Pierce (2007:489) listed flexibility as one of the important skills needed by management accountants.

#### **4.10 MANAGEMENT ACCOUNTING AS A BRANCH OF ACCOUNTING**

Questions in this section aimed to define the connection between management and financial accounting in manufacturing companies, as the two branches of accounting. The questions also aimed to determine the level of influence that accounting standards have on internal reporting.

According to Table 4.8, most (62% or 45) of the respondents practise management accounting and financial accounting equally, while the following 33% (24) practise more financial accounting. These findings contradict those of Soobaroyen and Poorundersing (2008:189), who found a high focus on financial accounting in Mauritian organisations.

Fifty-seven per cent (42) of the respondents certainly agree that management accounting reports are influenced by accounting standards, while 11% (eight) disagree with this statement. Most (56% or 41) of the respondents indicated that accounting standards should always be followed in internal reports, and only 8% (six) indicated that standards should be disregarded for internal reporting, in line with the definition of management accounting.

Management accounting reports should not be influenced by standards but fitted to the specific needs of users within the organisation (Drury, 2012:6). However, the findings show a significant focus on accounting standards for internal reporting. This may have a negative effect on the relevance of management accounting information (Pierce & O'Dea, 2003:282).

**TABLE 4.8 RESPONDENTS' PRACTISE OF MANAGEMENT ACCOUNTING**

<b>Do you equally practise financial and management accounting?</b>	<b>Frequency</b>	<b>Percentage</b>
Yes	45	62
No, financial accounting is practised more	24	33
No, management accounting is practised more	4	5
<b>Total</b>	<b>73</b>	<b>100%</b>
<b>Accounting standards significantly influence management accounting reporting</b>	<b>Frequency</b>	<b>Percentage</b>
1 Strongly disagree	1	1
2 Disagree	7	10
3 Neutral	24	33
4 Agree	23	31
5 Strongly agree	18	25
<b>Total</b>	<b>73</b>	<b>100%</b>
<b>Attitudes on following accounting standards for management accounting reports</b>	<b>Frequency</b>	<b>Percentage</b>
They should be followed at all times in internal reporting	41	56
They should be disregarded for internal reporting	6	8
They should be followed sometimes in internal reporting	16	22
I do not know	10	14
<b>Total</b>	<b>73</b>	<b>100%</b>

#### **4.11 THE EFFECTIVENESS OF MANAGEMENT ACCOUNTING**

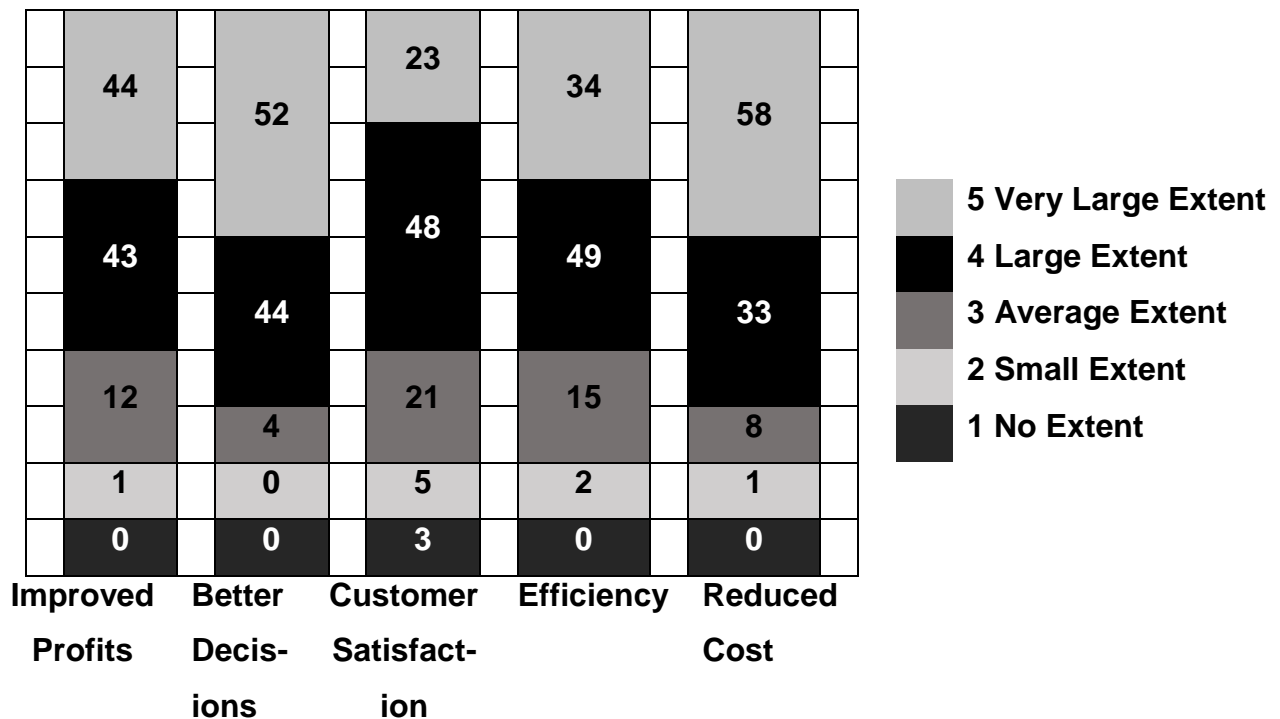
Questions in this section focused on the assessment of the effectiveness of management accounting.

##### **4.11.1 Measures of effectiveness in management accounting**

These questions required respondents to rate the extent to which they use different factors to measure the effectiveness of management accounting in their organisations.



**FIGURE 4.15 MEASURES OF EFFECTIVENESS IN MANAGEMENT ACCOUNTING**



According to Figure 4.15, 87% (64) of the respondents use changes in profit to measure the effectiveness of management accounting to an above-average extent and only one (1%) uses this measure to a small extent. Most (96% or 70) of the respondents assess their decisions to measure the effectiveness of management accounting to an above-average extent. None of the respondents use it to a small extent or not at all. Seventy-one per cent (17) of the respondents use customer satisfaction to an above-average extent, while 8% (six) use the same factor as a measure of effectiveness to a small extent or not at all.

Most respondents (83% or 61) use efficiency to measure the effectiveness of management accounting to an above-average extent and only one (2%) uses it to a small extent. Ninety-one per cent (66) of the respondents use reduced cost as a measure of effectiveness to an above-average extent. Only one (1%) uses reduced cost to a small extent.

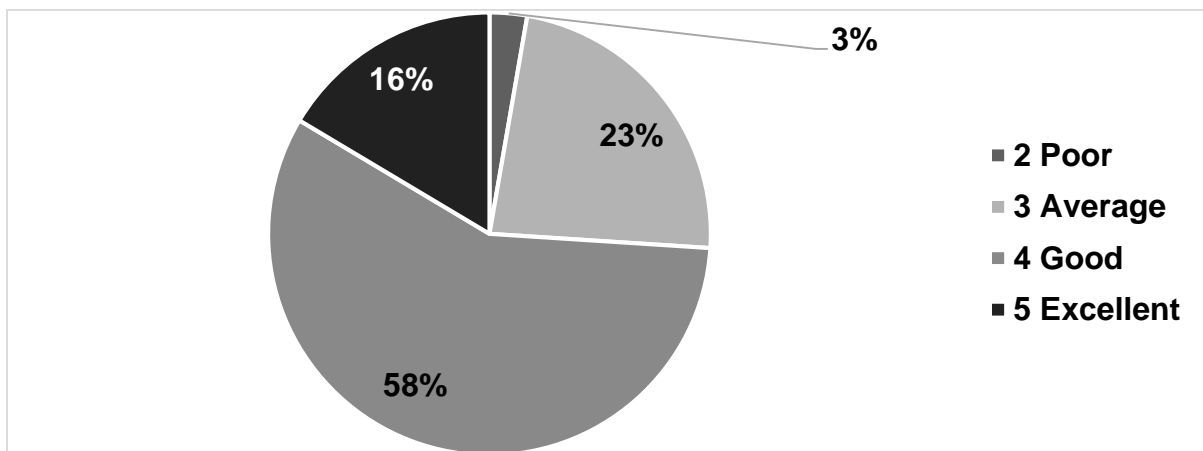
The findings show that respondents use all these factors to measure the effectiveness of management accounting. However decisions made and changes in cost are those most used. Porntip (2011) identifies effective management accounting

with quality decisions and improved performance. Cost reduction can improve profits, which then improves performance. The findings therefore agree with the literature.

#### 4.11.2 Respondents' opinions of the effectiveness of management accounting

This question required respondents to rate their opinions on the effectiveness of their organisations' management accounting systems.

**FIGURE 4.16 EFFECTIVENESS OF MANAGEMENT ACCOUNTING RATINGS**



According to Figure 2.24 most (74% or 54) of the respondents rated their management accounting systems at above-average level. Only 3% (two) rated their management accounting systems as poor and none of the respondents chose "very poor" (level 1). These findings show the respondents' confidence in the effectiveness of their role as management accountants.

#### 4.11.3 Other factors that affect management accounting

Question 11.7, required respondents to list one factor that most affects management accounting in their organisations. Most respondents emphasised the importance of the availability of quality information on time, as well as the value placed on their role by management. The findings discussed in previous sections show that these factors are met for most respondents. For example, the findings discussed in section 4.7.4 revealed that most respondents have improved access to information because of technology. Respondents also feel valued in their organisations (as discussed in

section 4.5.5). So having these factors satisfied is likely to have a positive outcome on the role of management accountants.

#### **4.12 THE PRACTICE OF MANAGEMENT ACCOUNTING**

Questions in this section focused on management accounting activities and techniques, in terms of traditional and contemporary management accounting. Question 12 required respondents to rate the importance of various management accounting activities to their role. Question 13 required them to rate the extent to which they use different management accounting techniques in their organisations.

Respondents rated the importance of all management activities at above-average levels of over 50%. However, most contemporary activities (*i.e.* managing customer profitability, quality management, *et cetera*) obtained the lowest above-average scores, while traditional activities like controlling costs, budgeting and internal reporting obtained higher scores. Similarly, traditional techniques like budgeting, standard costing and return on investment also received the highest above-average scores. With the exception of business forecasting and target costing, all contemporary management accounting techniques are used at low levels; which are below 50% for their above-average scores.

These findings show that although contemporary management accounting is in use, respondents mostly practise traditional management accounting, which is in agreement with the findings of Sunarni (2013:622). The findings also agree with Graham *et al* (2012:84) and Parker (2002), who refer to the contemporary role of management accounting as a supplement to the traditional role.

**TABLE 4.9 RESPONDENTS' PRACTICE OF MANAGEMENT ACCOUNTING**

<b>Activities</b>	<b>Above average %</b>	<b>Mean</b>	<b>Standard deviation</b>
Controlling costs	91,8	4,58	0,69
Forecasting and budgeting	89,0	4,56	0,73
Decision making	89,0	4,45	0,69
Internal reporting	90,4	4,42	0,76
Improving profit	87,7	4,38	0,79
Working capital management	82,2	4,33	0,83
Improving efficiency	83,6	4,25	0,81
Managing risk & controls	76,7	4,19	0,88
Operational support	83,6	4,11	0,70
Fixed asset investments	69,9	4,10	1,03
Performance evaluation	74,0	4,04	0,90
Customer profitability analysis	69,9	4,01	0,87
Taxation and treasury	72,6	4,00	1,05
Improve customer satisfaction	69,9	3,93	1,03
Product quality management	61,6	3,82	0,98
Manage stakeholder relations	63,0	3,78	1,03
Managing IT	52,1	3,64	1,05
<b>Techniques</b>	<b>Above average %</b>	<b>Mean</b>	<b>Standard deviation</b>
Budgeting	89,0	4,52	0,85
Standard costing	80,8	4,27	1,02
Return on investment (ROI)	72,6	3,96	1,18
Business forecasting	63,0	3,86	0,96
Variance analysis	74,0	3,86	1,02
Target costing	52,1	3,48	1,13
Activity-based costing (ABC)	34,2	3,15	1,21
Balanced scorecard	39,7	3,11	1,21
Customer surveys	34,2	2,99	1,24
Value added analysis	34,2	2,84	1,39
Total quality management	32,9	2,78	1,39
Just in time (JIT)	16,4	2,23	1,24

Table 4.9 also shows that respondents rated the management accounting practices that relate to quality and customer satisfaction at low levels when compared with other practices. Unlike the concentration on quality in manufacturing organisations of other countries like Uganda (United Nations, 2003:104), the results show a lack of focus on quality in Namibia and the Eastern Cape, even though it was rated as the most valued aspect by customers (as discussed in section 4.3.3). Lack of focus on quality and customer satisfaction could have a negative effect on customer value. This could cause an imbalance between shareholder value and customer value, a situation which affects management accounting negatively, according to Seal *et al* (2012:13).

#### **4.13 CHAPTER SUMMARY**

This chapter presented the findings obtained from the online survey, with a 29.2% response rate. The findings were discussed according to the literature reviewed in Chapter 2. The aim of the study was to analyse the factors that affect the role of management accounting in manufacturing organisations in Namibia and the Eastern Cape. The chapter also discussed the findings with regard to the practise of management accounting in these organisations, as well as its effectiveness. Chapter 5 will summarise these findings and draw conclusions based on the objectives of the study.

## CHAPTER 5

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

#### **5.1 INTRODUCTION**

This chapter provides a conclusion on the factors that affect the role of management accounting, based on the findings of the study. The chapter also presents a summary of the findings as discussed in Chapter 4. Horn (2009:232) suggests that the conclusions chapter not only be presented as a basic summary of the study but researchers should also reflect on the research process and form connections between the objectives of the study and the findings. This chapter also provides recommendations based on the findings, as well as suggestions for future research.

#### **5.2 RESEARCH SUMMARY**

The main objective of this research study was to determine the factors that affect the role of management accounting in manufacturing organisations in Namibia and the Eastern Cape. The study also aimed at determining the role of management accounting in these organisations, as well as its effectiveness. To address these objectives, literature on the effectiveness of management accounting was reviewed in Chapter 2 to ascertain the perspectives and findings of other researchers on the factors that influence management accounting. The contingency and role theories were used as bases for connections between factors that affect organisations and their management accounting systems. A summary of the findings of the online survey in which a selected sample participated is presented according to the objective and sub-objectives of the study.

##### **5.2.1 Factors that affect the role of management accounting**

In agreement with the literature (Teerooven & Bhagtaraj, 2008:188), the organisations of most respondents are affected by keen competition for customers and raw materials. Decision making in these organisations is affected by the external environment and the organisational structure, although the structure also affects control activities.

Most respondents indicated that quality was the most important aspect valued by their customers. However, the findings in Table 4.9 also revealed that quality

improvement and customer satisfaction were among the management accounting practices with low ratings in respondents' organisations. This could cause an imbalance in shareholder and customer value, which can affect the effectiveness of management accounting negatively (Seal *et al*, 2012:13).

The findings also revealed that most respondents were satisfied with communication between departments in their organisations. However, most of the respondents indicated that they did not know whether the organisational strategies they help set up motivate their colleagues. So there is a possibility that these strategies do not motivate employees, which is likely to affect performance management negatively. Most respondents indicated a good understanding of operations and management expectations. Respondents also feel valued and have a good relationship with management in their organisations. This is likely to affect the role of management accounting positively. Ma and Tayles (2009:489) associate management support with motivated management accountants.

Respondents rated numerical, analytical and strategic skills as the most important skills for the role of management accountants. Most respondents have sufficient knowledge in these skills, but are poor in change management and information technology, both of which are also important (Burns & Vaivio, 2001:391). A significant 22% of the respondents also only have Grade 12 as their highest qualification. So these findings confirm the findings of Mathews (2001:119) regarding the lack of qualified management accountants with the necessary skills to fulfil their role. Respondents listed skills that relate to the fundamental principles of professional accountancy (CIMA, 2010:4) as important to their role. The study also revealed contradictory findings with regard to the flexibility of management accountants.

According to the findings, technology is valuable to manufacturing organisations because of its advantages of improved quality of information and better reporting. In agreement with CIMA (2010:2), respondents indicated that it is important to keep up with developments in technology. Respondents have also shown support for innovation, as they mostly associated it with the benefits of profit improvement and increased competitiveness. The findings also show a high use of financial software packages in respondents' organisations. These findings show that management accountants support technology and innovation, which is beneficial to the success of

manufacturing organisations according to Kadhikwa and Ndalikokule (2007:6). However, most respondents did not play a role in choosing their software packages, which could be the cause of maintenance problems experienced by respondents with these software packages (Marriott & Marriott, 2000:486).

### **5.2.2 The role of management accounting in manufacturing organisations**

The findings illustrated in Table 4.9 reveal that controlling cost, forecasting and budgeting, decision making, internal reporting, improving profit and managing working capital are the most important roles of management accounting in Namibian and Eastern Cape manufacturing organisations.

According to the findings, although respondents use contemporary management accounting practices in their organisations, the practise of traditional management accounting is still significant. These findings agree with Sunarni (2013:622), Graham *et al* (2012:84) and Parker (2002), who all found the practice of contemporary management accounting secondary to that of traditional management accounting.

### **5.2.3 The effectiveness of management accounting**

According to the findings, respondents use improved decisions, reduced cost, improved profits and customer satisfaction to measure the effectiveness of management accounting. The findings illustrated in Figure 4.16 also revealed that most respondents are confident in the effectiveness of their management accounting systems. However, most respondents indicated that management accounting reports were mostly presented in figures, uniform for everyone in the organisation, and were influenced by accounting standards. This is likely to affect the effectiveness of management accounting negatively, as internal reports should be in a format that can be understood easily by non-financial managers (Nandan *et al*, 2010:72), produced for a specific department or level of management (Correia *et al*, 2008:7) to solve a specific problem, but not based on any standards (Pierce & O'Dea, 2003:282).



### **5.3 CONCLUSION**

Based on the analysis of the findings of the study, it can be deduced that in agreement with the literature discussed in Chapter 2, management accounting in manufacturing companies in Namibia and the Eastern Cape is affected by a variety of factors. According to the findings, the roles of management accounting in these organisations are influenced by factors that are external to the entity, like its business environment, developments in technology, competition and customer satisfaction. The internal factors that affect the role of management accounting include the organisational structure, stakeholder relationships and management accounting reporting, as well as certain skills like numerical and analytical skills that were identified as important to the role of management accounting. The study also found differences in these factors, with some identified as likely to have a positive outcome, while others were likely to affect the role of management accounting negatively. According to the contingency and role theories in management accounting, situations that affect the organisation also affect its management accounting (Ding & McKinstry 2012:99 and Byrne & Pierce, 2007:471). So controlling the factors that affect the contingent management accounting systems of manufacturing organisations in Namibia and the Eastern Cape means control over situations that affect these organisations.

The findings also show that controlling costs, forecasting and budgeting, decision making, internal reporting, improving profit and managing working capital are the common roles of management accounting in manufacturing organisations in Namibia and the Eastern Cape. Traditional management accounting practices were found dominant in these organisations, when compared with contemporary management accounting practices. Respondents were also confident in the effectiveness of management accounting in their organisations, which was measured by decisions made, cost reduction, improved profits and customer satisfaction.

### **5.4 RECOMMENDATIONS**

According to Hofstee (2006:159), recommendations represent specific and reasonable proposals to apply the research study in the real world. The following are

the recommendations on how the factors identified in the findings which are likely to affect management accounting negatively could be improved:

- Respondents who have only Grade 12 as their highest qualification could be afforded the opportunity to study further. Management accountants should also improve their skills in value-creating business-focused subjects like change management.
- There is a need for management accountants to understand the goals of other employees in their organisations. This will enable them to participate in setting organisational strategies that motivate members of their organisational teams to integrate their personal goals with the goals of the organisation.
- Different formats of presentation should be used more in management accounting reports. For example, respondents could use more graphs and charts to provide meaning to numbers. This will improve management's understanding of management accounting information.
- Management accounting reports should be different for the various departments or levels of management. This would ensure relevance of information and prevent information overload in management accounting reports. Those respondents (33% or 24) who produce reports that are over the recommended 10 pages in length should try to reduce the length of these reports, but without losing vital information.
- Management accounting reports need to be based on the specific situations that face the organisation, but should not be influenced by accounting standards, as they are in the case of most of the respondents.
- Management accountants should take part in choosing the financial software packages used in their organisations. This could reduce maintenance issues that respondents experience with these packages. Basic training on maintaining and updating software packages could also be useful in this instance, as users would feel more comfortable with the packages.
- There is a need to increase the use of contemporary management accounting practices in manufacturing organisations. For example, organisations could use more customer satisfaction surveys or total quality management (TQM). This could improve customer satisfaction and increase value.

## 5.5 LIMITATIONS OF THE STUDY

From the literature reviewed in Chapter 2, it was found that management accountants collect information that is used by management to make decisions. However participants in this study were limited to management accountants in manufacturing organisations. Hence the study was one-sided, which renders it subjective to some extent. The study would have been more objective if members of management in these organisations were also targeted to provide their insight on the effectiveness of management accounting, as well as the factors that affect it.

The questionnaire used a five-point Likert scale which was interpreted as, for example, 1 = *strongly disagree* and 5 = *strongly agree*. Similar to the findings of Sihlali (2015:68), respondents mostly chose the mid-range 3 = *neutral* option for their answers. This practice is called the central tendency bias and it prevents respondents from truly expressing their opinions, as they avoid options at the extreme ends of the Likert scale (Kostoulas, 2013). Although the research objectives as detailed in Chapter 1 were achieved in the findings, these generalised responses form a limitation for this study. This limitation could have been avoided with the use of interviews, which would have provided the interviewer with an opportunity to obtain an in-depth analysis of the factors that affect the role of management accounting in manufacturing organisations. The responses from management accountants were based on individual perceptions and on one-time self-report measures. A degree of bias in the responses could therefore have occurred.

Despite the aforementioned limitations, this study has provided management accountants as well as management with insights into factors that affect the role of management accounting in manufacturing organisations.

## 5.6 RECOMMENDATIONS FOR FUTURE RESEARCH

Further research could be conducted on the factors that affect management accounting, but focused on both management accountants and management. A more interactive approach could also be used to allow for a comprehensive analysis. This could for example include the use of interviews to collect data.

Further research could also focus on the factors that affect the effectiveness of management accounting in service organisations.

## **5.7 CHAPTER SUMMARY**

This chapter summarised the findings of the study and presented conclusions based on the objectives of the study as discussed in Chapter 1. The research provided knowledge and insight into the factors that affect the role of management accounting in manufacturing organisations. The findings of the study revealed the management accounting practices that are used in these organisations, as well as measures of their effectiveness. These findings will hopefully provide manufacturing organisations with recommendations to increase performance by improving the effectiveness of their management accounting systems. Effective management accounting forms part of the requirements of a successful organisation.

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## **APPENDICES**

### **Appendix 1**

P. O. Box 17063,

Ondobe

Namibia

26 June 2015

Dear Sir or Madam,

#### **QUESTIONNAIRE ON FACTORS THAT AFFECT THE ROLE OF MANAGEMENT ACCOUNTING IN MANUFACTURING ORGANISATIONS**

You are hereby sincerely requested to please take part in completing a questionnaire on the above mentioned topic. This questionnaire is exclusively intended for a survey that forms part of the requirements for a Master of Technology Degree in Cost and Management Accounting.

**Please follow the following link to access the questionnaire:**

<http://forms.nmmu.ac.za/websurvey/q.asp?sid=1439&k=waotooovtf>

The questionnaire has two sections, A and B, and it will take about 15 minutes to complete. It does not ask for any information that might help link your responses to you. Strict confidentiality and academic research ethics will also be adhered to in dealing with the answers you provide.

I would really appreciate it if you could please complete this questionnaire by the 30<sup>th</sup> of July 2015.

If you have any questions with regards to the questionnaire, please contact me on +27 84 915 3573 or +264 812 094 316 or htkangala@gmail.com.

Thank you in advance for your consideration and time.

Sincerely yours,

Hendrina Kangala (Ms)

## Appendix 2

P. O. Box 17063,

Ondobe

Namibia

15 June 2015

Dear Sir or Madam,

### **REMINDER: QUESTIONNAIRE ON FACTORS THAT AFFECT THE ROLE OF MANAGEMENT ACCOUNTING IN MANUFACTURING ORGANISATIONS**

Within the last two weeks you received an email message asking you to assist Hendrina Kangala with completing an online questionnaire on the above mentioned topic, for her research study in management accounting. **If you have filled out the questionnaire, thank you!**

This message is sent to everyone that received the email request to participate. For confidentiality purposes, no personal data is retained with the survey to identify whether or not you have already completed the questionnaire.

**If you did not get a chance to take part yet, this email serves to sincerely remind you to please take part by following the link below:**

<http://forms.nmmu.ac.za/websurvey/q.asp?sid=1439&k=waotoovtf>

The questionnaire has two sections, A and B, and it will take about 15 minutes to complete.

Thank you very much for your time.

Sincerely yours,

Hendrina Kangala (Ms)

Appendix 3



Questionnaire on the factors that affect the role of management accountants in manufacturing

1. Respondent information	
1.1 *	In which country do you operate? <input type="radio"/> Namibia <input type="radio"/> South Africa
1.2	What is your gender? <input type="radio"/> Male <input checked="" type="radio"/> Female
1.3 *	How long have you worked for the organisation? <input type="radio"/> Less than 1 year <input type="radio"/> 1 to 5 years <input type="radio"/> 6 to 10 years <input type="radio"/> More than 10 years
1.4 *	How long have you been in your current position? <input type="radio"/> Less than 1 year <input type="radio"/> 1 to 5 years <input type="radio"/> 6 to 10 years <input type="radio"/> More than 10 years
1.5 *	What is your highest qualification? <input type="radio"/> Grade 12 Certificate <input type="radio"/> Undergraduate qualification <input type="radio"/> Postgraduate qualification
1.6 *	Which of the following professional bodies are you a member of? <input type="radio"/> I am not a member of any professional body <input type="radio"/> SAICA <input type="radio"/> ACCA <input type="radio"/> ICAN <input type="radio"/> CIMA <input type="radio"/> SAIPA <input checked="" type="radio"/> Other
1.7 *	How many employees in total are in your company? <input type="radio"/> 0 to 50 people <input type="radio"/> 51 to 125 people <input type="radio"/> 126 to 200 people <input type="radio"/> 201 to 250 people <input type="radio"/> More than 250 people
1.8 *	In which manufacturing sector does your company operate? <input type="radio"/> ICT and electronics <input type="radio"/> Automotive and auto parts <input checked="" type="radio"/> Plastic and rubber <input type="radio"/> Mining and metals <input type="radio"/> Building supplies <input type="radio"/> Chemicals, gas and air conditioning <input type="radio"/> Clothing, textiles, footwear and

- leather
- Cosmetics
- Milling, food and beverages
- Publishing, printing and stationery
- Agriculture, forestry and fishing
- Other

## 2. External and internal aspects

Please choose the appropriate answer. You may tick multiple boxes where applicable.

2.1 *	To what extent do the conditions of the environment (e.g. climate, the protected natural environment) affect your organisation's decision making?	to no extent <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 to a very large extent
2.2	If applicable, name one environmental condition that affect your company.	<input type="text"/>
2.4 *	Which among the following is mostly valued by your customers?	<input type="checkbox"/> Affordability <input type="checkbox"/> Quality <input type="checkbox"/> Brand <input type="checkbox"/> <input type="checkbox"/> Additional services to products <input type="checkbox"/> Other
2.5	If you chose other for question 2.4, please specify.	<input type="text"/>
2.6 *	The strategies of the organisation motivate me enough to align my personal goals with the goals of the organisation	strongly disagree <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input checked="" type="radio"/> 4 <input type="radio"/> 5 strongly agree
2.7 *	Do you think the strategies have the same effect on your colleagues?	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Don't know
2.8 *	The structure of the organisation is important in making decisions.	strongly disagree <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 strongly agree

2.9 The structure of the organisation is important for control purposes. strongly disagree  1  2  3  4  5 strongly agree

### 3. Competition

To what extent is your organisation affected by competition in the following areas?

3.1 Capital and funding to no extent  1  2  3  4  5 to a very large extent

3.2 Consumer markets to no extent  1  2  3  4  5 to a very large extent

3.3 Raw materials to no extent  1  2  3  4  5 to a very large extent

3.4 Human resources to no extent  1  2  3  4  5 to a very large extent

### 4. Operations and Communication

Please answer the following questions:

4.1 How closely do you work with the operations or production department? 
 We meet to solve any issue that requires my input  
 I take part in all the decisions they make  
 I take part in all their significant decisions and projects  
 The operations manager or supervisor provides me with information to report on  
 I do not work closely with the operations or production department

4.2 It is possible to work closely with the operations or production department and still stay objective. strongly disagree  1  2  3  4  5 strongly agree

4.3 *	What is your level of understanding for your company's business and operational activities?	Very Poor <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 Excellent
4.4 *	How many people report to you?	<input type="radio"/> Less than 5 people <input type="radio"/> 5 to 10 people <input type="radio"/> 11 to 15 people <input type="radio"/> 16 to 20 people <input type="radio"/> More than 20 people
4.5 *	How do you rate communication in your organisation?	Very Poor <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 Excellent
4.6 *	How is your understanding of what management expects from you as a management accountant?	Very Poor <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 Excellent
4.7 *	In which format(s) do you generally present your management reports? (You may select multiple boxes)	<input type="checkbox"/> Words <input type="checkbox"/> Figures <input type="checkbox"/> Ratios <input type="checkbox"/> Tables <input type="checkbox"/> Charts <input type="checkbox"/> Graphs <input type="checkbox"/> Other
4.8	If you chose other for question 4.7, please specify.	<input type="text"/>
4.9 *	Do you produce different reports for different people/ departments in the organisation?	<input type="radio"/> No, one report with relevant information for everyone is enough <input type="radio"/> Yes
4.1 0 *	On average, how many pages are your reports to management?	<input type="radio"/> 0 to 10 pages <input type="radio"/> 11 to 15 pages <input checked="" type="radio"/> 16 to 20 pages <input type="radio"/> More than 20 pages
4.1 1 *	Please rate the spirit of teamwork between management and your department.	Very Poor <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 Excellent



4.1 How do you feel management values your role in the organisation?  Not important  1  2  3  4  5  Very important

4.1 Management has an open mind towards receiving and implementing the advice you provide.  strongly disagree  1  2  3  4  5  strongly agree

**5. Innovation**

To what extent do you associate the following factors with innovation and creativity?

5.1 High costs  to no extent  1  2  3  4  5  to a very large extent

5.2 Improved profitability  to no extent  1  2  3  4  5  to a very large extent

5.3 High risks  to no extent  1  2  3  4  5  to a very large extent

5.4 Increased competitiveness  to no extent  1  2  3  4  5  to a very large extent

**6. Financial Software Packages**

Please answer the following questions:

6.1 Management accountants need to keep up-to-date with developments in technology.  strongly disagree  1  2  3  4  5  strongly agree

6.2 Does the company make use of a financial software package?  Yes  No  
E.g. Sage Pastel, Excel, etc.



6.3 If you chose yes for question 6.2, please name one advantage and one disadvantage of the software the company makes use of.

6.4 If you use a software package, did you have any influence in the choice of software the company makes use of?  Yes  No

6.5 If you chose no for question 6.4, who made this decision?

## 7. Effects of technology

To what extent has technology brought the following benefits to your organisation?

7.1	Better communication		to no	<input type="radio"/>	1	<input type="radio"/>	2	<input type="radio"/>	3	<input type="radio"/>	4	<input type="radio"/>	5	to a very large	extent	
*			extent													

7.2	Efficiency in operations		to no	<input type="radio"/>	1	<input type="radio"/>	2	<input type="radio"/>	3	<input type="radio"/>	4	<input type="radio"/>	5	to a very large	extent
*			extent												

7.3 *	Improved availability of information	to no extent	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5	to a very large extent
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7.4 *	Improved reporting	to no extent	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5	to a very large extent
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### 8. Practical skills

Please rate your practical knowledge in the following subjects:

8.1 *	Data analysis	Very Poor	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5	Excellent
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8.2 *	Business strategy	Very Poor	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5	Excellent
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8.3 *	Information technology	Very Poor	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5	Excellent
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8.4 *	Change management	Very Poor	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5	Excellent
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### 9. Management accounting skills

How important are the following skills to management accountants?

9.1 *	Analytical or interpretive skills	Not important	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5	Very important
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9.2 *	Numerical skills	Not important	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5	Very important
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9.3 *	Integrating financial and non-financial information	Not important	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5	Very important
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9.4 *	Broad business knowledge	Not important	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5	Very important
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9.5 *	Team-work	Not important	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5	Very important
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9.6 *	Communication skills	Not important	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5	Very important
9.7 *	Information technology or systems knowledge	Not important	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5	Very important
9.8 *	Leadership skills	Not important	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5	Very important
9.9 *	Presentation skills	Not important	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5	Very important
9.10 *	Interpersonal skills	Not important	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5	Very important
9.11 *	Strategic thinking skills	Not important	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5	Very important
9.12 *	Approachability	Not important	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5	Very important
9.13	Please name any other skills that you think are needed by management accountants.	<input type="text"/>		

## 10. Management accounting as a branch of accounting

Please answer the following questions:

10.1 *	Is financial accounting and management accounting equally practised in your organisation?	<input type="radio"/> Yes <input type="radio"/> No, financial accounting is practised more than management accounting <input type="radio"/> No, management accounting is practised more than financial accounting		
10.2 *	IFRS and other accounting standards have a significant influence on management accounting reports.	strongly disagree	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5	strongly agree

10. 3 *	How do you feel about accounting standards with regards to management accounting?	<input type="radio"/> They should be followed at all times in internal reporting <input type="radio"/> They should be disregarded for internal reporting <input type="radio"/> They should be followed sometimes in internal reporting <input type="radio"/> I do not know
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### 11. Effectiveness of management accounting

To what extent do the following factors determine the effectiveness of management accounting?

11. 1 *	Improved profitability	to no extent	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5	to a very large extent
11. 2 *	Better decisions	to no extent	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5	to a very large extent
11. 3 *	Customer satisfaction	to no extent	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5	to a very large extent
11. 4 *	Efficiency	to no extent	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5	to a very large extent
11. 5 *	Reduced costs	to no extent	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5	to a very large extent
11. 6 *	What is your opinion of the effectiveness of your company's management accounting system?	Very Poor	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5	Excellent
11. 7	Please name one factor that affects management accounting in your company.	<input type="text"/>		

## 12. Management accounting activities

How important are the following management accounting roles to your organisation?

12. 1 *	Forecasting and budgeting	Not important	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	Very important
12. 2 *	Controlling cost	Not important	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	Very important
12. 3 *	Operational support	Not important	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	Very important
12. 4 *	Working capital management	Not important	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	Very important
12. 5 *	Managing financial controls and risk management	Not important	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	Very important
12. 6 *	Performance evaluation	Not important	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	Very important
12. 7 *	Product quality management	Not important	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	Very important
12. 8 *	Customer profitability analysis	Not important	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	Very important
12. 9 *	Taxation and treasury	Not important	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	Very important
12. 10 *	Decision making	Not important	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	Very important
12. 11 *	Improving profit	Not important	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	Very important
12. 12 *	Productivity/ improving efficiency	Not important	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	Very important

12. 13 *	Fixed assets investment planning	Not important	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5	Very important
12. 14 *	Managing Information technology	Not important	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5	Very important
12. 15 *	Managing stakeholder relationships (Suppliers, shareholders etc.)	Not important	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5	Very important
12. 16 *	Internal reporting	Not important	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5	Very important
12. 17 *	Improving customer satisfaction	Not important	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5	Very important

### 13. Management accounting techniques

To what extent do you use the following methods in your organisation?

13. 1 *	Budgeting	to no extent	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5	to a very large extent
13. 2 *	Standard costing	to no extent	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5	to a very large extent
13. 3 *	Balance scorecard	to no extent	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5	to a very large extent
13. 4 *	Business forecasting	to no extent	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5	to a very large extent
13. 5 *	Target costing	to no extent	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5	to a very large extent
13. 6 *	Customer surveys	to no extent	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5	to a very large extent
13. 7 *	Variance analysis	to no extent	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5	to a very large extent

13. Activity Based Costing (ABC) 8 \*      to no extent  1  2  3  4  5      to a very large extent

13. Total Quality Management (TQM) 9 \*      to no extent  1  2  3  4  5      to a very large extent

13. Just In Time (JIT) 10 \*      to no extent  1  2  3  4  5      to a very large extent

13. Value added analysis 11 \*      to no extent  1  2  3  4  5      to a very large extent

13. Return on Investment (ROI) 12 \*      to no extent  1  2  3  4  5      to a very large extent

**Thank you for taking part.**