



**Implementing of Cost and Profit Management Systems: A case of small,
medium and large Construction firms in Swaziland**

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Declaration

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration Graduate School of Business & Leadership College of Law and Management Studies, University of Kwazulu Natal.

This report has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

Signed: _____

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Abstract

The construction industry in Swaziland consists of small, medium and large construction firms both in building and civil construction works. The industry is guided by several management systems such as quality, health and safety, environmental, cost and profit management systems. The study focused on the implementation of cost and profit management systems, it sought to compare effectiveness of the use of these systems by large construction firms and challenges faced by small or medium contractors in adopting this system. Through this comparison the aim was to find ways in which small and medium contractors could be capacitated for them to be able to master the use of cost and profit management systems so as to track financial performance of the organization and execution of projects. The purpose of the study is to understand the extent to which construction companies employ cost and profit management systems to predict profitability. In previous research inadequate capacity, lack of financial capital, poor management systems have been identified as contributors to the failure of these companies thus this study will collate these contributors, analysing the cost and profit management systems between the small, medium and large construction firms. The interpretivist paradigm and inductive research was conducted in a case study methodology which was qualitative research design in nature as it needed to investigate and understand in depth the reasons for failure to implement cost and profit management systems by small and medium contractors. The research was conducted using semi- structured interviews with nine construction firms in the different categories from the Mbabane- Manzini corridor selected by purposive sampling. These were selected because they had projects at the time of the study. Data was analysed by thematic analysis. The findings were that the firms scarcely used cost and profit management systems and if they used them they were not fed properly with information because of the lack of expertise among staff. It is recommended that employers and employees are given training to understand the intricacies of the industry and the implications are that firms need capacity building.

Table of Contents

Supervisor permission to submit	i
Declaration	ii
Acknowledgements	iii
Abstract	iv
Table of Contents	v
List of Tables	viii
1. CHAPTER ONE - INTRODUCTION	1
1.1. Introduction.....	1
1.2. Background to the study.....	1
1.3. Focus of the Study	7
1.4. Problem Statement.....	7
1.5. Purpose of the Study	8
1.6. RESEARCH OBJECTIVES	8
1.6.1. General Research Objectives.....	8
1.6.2. Specific Research Objectives.....	9
1.7. Research Questions	9
1.7.1. General Research Question	9
1.7.2. Specific Research Questions	9
1.8. Limitations	10
1.9. Methodology.....	10
1.9.1. Introduction.....	10
1.9.2. Research Design.....	10
1.9.3. Study Area and Target Population	12
1.9.4. Sampling Techniques and Size	12
1.9.5. Trustworthiness	12
1.9.6. Data Collection Techniques.....	13
1.9.7. Primary data collection	13
1.9.8. Data Analysis	13
1.9.9. Ethical Considerations.....	14
1.10. The structure of the study:.....	14
1.10.1. Chapter One – Introduction	14
1.10.2. Chapter Two - Literature review	15
1.10.3. Chapter Three – Research Methodology.....	15

1.10.4. Chapter Four – Presentation of Results	15
1.10.5. Chapter five – Discussions	15
1.10.6. Chapter six – Conclusion and Recommendations	16
1.11. Summary	16
2. CHAPTER TWO - REVIEW OF RELATED LITERATURE	17
2.1. Introduction.....	17
2.2. History of Evaluation and Monitoring Strategies	17
2.3. Overview of Cost Management	19
2.4. Description of Management Accounting Techniques	20
2.5. Challenges experienced by small and medium contractors in implementing cost and profit management systems.....	22
2.6. Capability of small and medium firms to implement cost and profit management systems	26
2.7. Large construction firms successfully implement cost and profit management systems	28
2.8. Small and medium contractors' capabilities.....	30
2.9. Summary	33
3. CHAPTER THREE - RESEARCH METHODOLOGY.....	35
3.1. Introduction.....	35
3.2. Aims of the study	35
3.3. Research Questions	35
3.4. Research Design and Methods	36
3.5. Research paradigm	37
3.6. Research Approach.....	38
3.7. Study setting.....	39
3.8. Population and Sampling.....	39
3.9. Sampling method	39
3.10. Construction of the Instrument	40
3.11. Data collection	40
3.12. Data analysis.....	42
3.13. Validity, Reliability and Trustworthiness	42
3.14. Bias	44
3.15. Ethical considerations.....	44
3.16. Summary	45
4. CHAPTER FOUR: PRESENTATION OF RESULTS	46

4.1. Introduction.....	46
4.2. Findings.....	46
4.3. What are the challenges experienced by small and medium contractors in Implementing cost and profit management systems?	49
4.4. Are the small and medium firms incapable to implement cost and profit management systems?	50
4.5. How do large construction firms successfully implement cost and profit management systems in comparison with small and medium construction firms?.....	52
4.6. Are the small and medium contractors capable of performing their work successfully?	53
4.7. Summary	53
5. CHAPTER FIVE – DISCUSSION OF FINDINGS	55
5.1. Introduction.....	55
5.2. Summary	62
6. CHAPTER SIX - CONCLUSION AND RECOMMENDATIONS	64
6.1. Introduction.....	64
6.2. Conclusion.....	64
6.3. Limitations of the study.....	66
6.4. Recommendations to solve the research problem	66
6.5. Recommendations for future studies	67
7. REFERENCES	69
Appendix 1 – Ethical Clearance Approval	75
Appendix 2 – Interview Schedule	76
Appendix 3 - Gatekeepers' Letter.....	80
Appendix 4 – Informed Consent Form.....	86
Appendix 5 – Turnitin Similarity Report	88

List of Tables

Table 1 Categories of Construction Firms 4
Table 2 Background Information of Participants..... 48

1. CHAPTER ONE - INTRODUCTION

1.1. Introduction

Is there a need for contractors to have cost and profit management systems if such businesses are privately owned with one or more directors with different cultures and beliefs in the running of a business? This case study investigated and compared if the use of cost and profit management systems by large construction firms results in their good performance and if the non-use of these systems results in the failure of small to medium construction firms.

This introductory section presents the background to the study. It includes the problem statement, aim of the study, the specific objectives as well as the significance of the study. The study focused on the implementation of cost and profit management systems by small, medium and large construction firms in Swaziland with the aim of evaluating if these systems are effective in the performance and sustainability of the construction firms. Failure to implement such systems also seems to have a direct impact in project execution which in turn the end user client suffers non-delivery, poor quality work or delayed project execution which is a cause of concern. The key players of the research study were both building and civil contractors.

1.2. Background to the study

Small and Medium enterprises have been realized to be the pillar for economic growth in many developed and emerging economies. Swaziland, a country in the Southern Sub-Saharan Africa is amongst these emerging economies whose economic growth is through SMEs. As observed in previous research small, medium and large construction firms' definitions vary from country to country. Different countries adopt different definitions of SMEs (Thwala and Mofokeng, 2012),

According to the South African Small Business Act, small business means a separate and distinct business entity, including cooperative enterprises

and non-governmental organizations, managed by one owner or more which, including its branches or subsidiaries, if any, which can be classified as a micro-, a very small, a small or a medium enterprise. A small enterprise comprises of less than 100 employees, it is formal and registered, fixed business premises, owner managed, with more complex management structure. A medium enterprise comprises of up to 200 employees, it is still mainly owner managed, but decentralised management structure with division of labour operates from fixed premises with all formal requirements.

OECD 2005, states that small and medium-sized enterprises (SMEs) are non-subsidiary, independent firms which employ fewer than a given number of employees and this number varies across countries with the most frequent upper limit designating an SME is 250 employees, as in the European Union, some countries set the limit at 200 employees, whilst the United States considers SMEs to include firms with fewer than 500 employees. The Swaziland Business Act of 2005 however does not define the categories of SMEs. There is, however, a national policy on SMEs which defines SMEs by value of assets, number of staff employed and turnover. SMEs are classified as micro, small and medium enterprises. National Policy of the Government of Swaziland on the development of Small and Medium Enterprises (2003) states that Micro enterprises should have assets under E50, 000.00 Emalangeni, employ one to three people and have a turnover of up to E60, 000.00, A small enterprise should have asset value from E50, 001.00 to two million Emalangeni, employ four to ten people and have a turnover of up to is described as one with assets two three million Emalangeni. A medium enterprise is described as one with assets two million to five million Emalangeni, staff between eleven and fifty people and a turnover of up to eight million Emalangeni. For the purposes of the case study the categorization of the civil and building construction firms by the Swaziland Construction Industry Council will be used as shown in the table 1.1 below. The construction firms will be classified by their financial ceiling or turnover, which defines the capacity

that organization in terms of work the company can tender for and be able to execute. Five large firms and four SMEs are involved in this study.

Table 1 Categories of Construction Firms

CIC Categorization	Large, SME Categorization	Annual Turnover (E)	Number of Employees	Number of registered Contractors
C1	Large	100 000 000	Over 200	6
B1		60 000 000		14
C2	Medium	25 000 000	Less than 200	5
B2		12 500 000		26
C3	Medium	15 000 000	Less than 200	14
B3		5 000 000		29
C4	Small	7 500 000	Less than 100	15
B4		2 500 000		55
C5	Small	2 500 000	Less than 100	17
B5		1 000 000		30
C6	Small	-	Less than 100	42
B6		-		88

Source: <http://www.cic.co.sz/index.php>

The description of small, medium and large scale contractors is defined better with the characteristics in Table 1.1 by adopting the Swaziland construction Industry Councils' categorization, of which the contractors are to be distinguished by their financial capacity.

The Swaziland construction industry is regulated by the Construction Industry Council (CIC) of Swaziland which was established through the Construction Industry Council Act No 14 of 2013. This regulatory body regulates and promotes the construction industry to attain demands of national construction. It also promotes strategic leadership to construction firms to stimulate of lasting growth, reform and improvement in the country's construction sector.

The Construction Industry Act No 14 of 2013 provides for the establishment of the Construction Industry Council. The Council is now operational and implementation of the provisions of the legislation is underway. All construction entities are required to register with council.

The council in liaison with the Ministry of Works is to make sure all construction companies abide by Act No 14 of 2013.

The Government of the Kingdom of Swaziland endorsed the Construction Industry Act No 14 of 2013, which provides for the establishment of the Construction Industry Council (CIC) and outlines its functions. Its objectives are to promote the construction industry in meeting national construction demand, provide strategic leadership to construction industry stakeholders to stimulate sustainable growth, reform and improvement of the construction sector.

The construction industry council has a responsibility to grade and categorize contractors, in which contractors' grading and categorization process is determined by the financial capability, works capability and available capital.

- Financial capability as determined by the best turnover over a period of three years;
- Works capability is determined by the largest contract undertaken and completed in your class of construction works (completed during the 3 years immediately preceding the application);
- Available capital is the sum of total equity and retained income or any form of surety from recognised financial institutions.

Grading category is also used by project owners to qualify a tender to be considered for a particular construction works contract, for example, if a contractor is registered as a category B1, you will be considered for general building works of a value from E25 million and above. A contractor may register for different classes of works, for example, a contractor may be registered as category B1 and as C3.

Under the construction industry council, construction firms are shown to be:

- Civil contractors;
- Building contractors;

- Electrical contractors &;
- Mechanical contractors.

For the purposes of the study, we shall only focus on the construction firms which is the building contractors classified as (B1 to B6) and civil contractors classified as (C1 to C6) as seen in table 1.1 on the background.

As stated in the background, the Swaziland Business Act of 2005 however does not define the categories of SME's but for the purposes of the case study the categorization of the civil and building construction firms by the Swaziland Construction Industry Council will be used as shown in the table 1.1 also in the background.

In Swaziland, all three categorized enterprises which is small, medium and large construction firms have in the past years been seen actively participating in public and private sector construction works. Some small and medium scale contractors have been seen growing from one category to the other and some have been seen failing to perform thus creating fear and uncertainties from the consultants' and clients' point of view in the awarding of works to this category of contractors.

A study conducted by Thwala and Mofokeng (2012), revealed that one of the factors causing failure to small medium contractors in the Free State Province was in fact financial such as lack of finance and mismanagement of funds.

A survey done by Xiao and Proverbs (2002), states that comparison of contractors internationally it's not an easy task nor if done with careful planning and design, such comparisons can provide an opportunity for contractors in different countries to distinguish their own strengths and weaknesses, learn from each other, and improve their competitiveness and performance thereafter.

The case study will therefore carefully examine if these category of contractors' failure to implement or the lack of cost and profit management

systems in comparison to the large construction firms is the main reason for collapsing and if so how can the study assist the small-medium contractors to benefit from the findings. The qualitative research design using case study strategies and adopting exploratory research methods will benefit the clients both public and private, construction companies and the engineering consultants.

1.3. Focus of the Study

The focus of the study is to elicit the challenges leading to failure faced by small, medium companies in the implementation of profit and loss management systems in comparisons to large construction companies in Swaziland; with a view to improve the implementation management systems.

1.4. Problem Statement

The body of knowledge on the operation of construction firms shows that it is a complex venture (Xiao & Proverbs, 2001; Yee & Cheah, 2006a). Unlike manufacturing firms, construction firms are project oriented entities which are temporal and move from place to place. Therefore they require a more complex kind of management. One important requirement to perform effectively and efficiently is the acquisition and use of a good cost management system. It is known from the literature on small and medium that establishing a good accounting system is one of the problems confronting them (Amoako, 2013; Zhou, 2010). Building and civil construction firms in Swaziland are typical family SMEs. In recent times these businesses have suffered from not being paid on time for jobs done and have suffered from diminishing capital and sometimes even project overrun. In the context of Swaziland there exists very little research to be learnt from by the construction companies. The only studies on Swaziland are from Thwala and Mvubu (2008) and the studies are a generalised overview of challenges faced by construction firms in Swaziland. However the problem of this study is to particularly find out if the construction

companies in Swaziland utilise any cost and profit management system to guide them in their operations and if they do, what their challenges are. The study seeks to fill in the research gaps concerning the need to acquire efficient cost management systems.

1.5. Purpose of the Study

The study will address most importantly civil and building contractor's performance by finding the core reasons of failure in managing their firms. The purpose of the exploratory design study will be to obtain findings that may bring about ways to local contractors' improving their implementation of cost and profit management systems.

The study will be qualitative exploration of the failure to implement cost and profit management systems which will collect data by use of interviews from large construction firms, medium to small. The outcome of the data collection will be compared against one another so as to determine the difficulties faced by small and medium contractors who do not use such systems compared to the large firms that have such systems in place. It is significant to note that there is a dearth of research on construction firms in Swaziland. Most of the research done is by South African contractor's researchers, it is important therefore to conduct this research as a contribution to knowledge in Swaziland.

1.6. RESEARCH OBJECTIVES

1.6.1. General Research Objectives

Small and medium contractors in Swaziland fail to implement the cost and profit management systems, as a result they fail to execute their works. The objective of the case study is to investigate the reasons of failure to apply these systems by small and medium contractors and successful/effective application in large firms.

1.6.2. Specific Research Objectives

- i. Challenges experienced by small and medium contractors in implementing cost and profit management systems.
- ii. The capability/proficiency/competency of the small and medium firms to implement/put into operation cost and profit management systems.
- iii. The implementation of cost and profit management systems in large construction firms and small and medium contractors in comparison.
- iv. The proficiency/capability of small and medium contractors to successfully perform their work.

1.7. Research Questions

1.7.1. General Research Question

Based on the knowledge that small, medium construction companies in Swaziland, do not implement the cost and profit management systems which results in failure to execute their works, the case study is to compare why these firms seem to suffer in using these systems and how the large construction firms are managing these systems? Construction firms referred to in this study are all contractors, civil, mechanical, and electrical.

1.7.2. Specific Research Questions

- i. What are the challenges experienced by small and medium contractors in Swaziland Implementing cost and profit management systems?
- ii. Are the small and medium firms in Swaziland incapable to implement cost and profit management systems?
- iii. How do large construction firms In Swaziland successfully implement cost and profit management systems in comparison with small and medium construction firms?

- iv. Are the small and medium contractors in Swaziland capable of performing their work successfully?

1.8. Limitations

The limitations of case study research design is that results cannot be generalized to other institutions and so in this study of typical Mbabane-Manzini corridor construction firms the findings relate to only the nine firms (sites) that were studied. Only one instrument was used because of the constraints of time. The use of another instrument for the purposes of triangulation would have improved the trustworthiness of the study.

1.9. Methodology

1.9.1. Introduction

Kothari (2006), states that research methodology is an approach to methodically solve the research problem. The various steps that are generally adopted by researcher in studying his research problem and logic behind are studied in the research methodology.

This section presents the method and study approach to the investigation of how small to medium contractors fail to implement the profit and loss management systems in comparison with large construction firms in Swaziland.

It is poised by area of the study, research design, population of the study, sample size and sampling technique, data collection and data analysis.

1.9.2. Research Design

Research design is the plan for the research based on the research paradigm and questions (Cooper and Schindler, 2008). A research design is a procedure used to gather data, analyze data, interpret results and disseminate the findings (Myers 2008). Before a

research design is chosen it is important that a research paradigm is chosen, paradigms are rules of procedure about how research problems should be understood and addressed (Saunders Lewis & Thornhill, 2016). Paradigms are a set of universally accepted practices termed as thinking habits of researchers. There is Interpretivist paradigm which tend to produce qualitative research and positivist paradigm which is a quantitative research.

Research design can be qualitative, mixed method (qualitative and quantitative) and the quantitative design. According to Saunders et al, (2016) qualitative design is a research design that is subjective and involves a naturalistic and interpretive approach where data is normally gathered using interviews, archives and observations to generate qualitative data whilst on the other hand quantitative design is objective and normally involves gathering quantitative data in the form of numbers and hence statistical methods can be used to test hypotheses.

This was a qualitative research design using case study strategies and adopting exploratory research methods as it seeks to explore the failure of small to medium construction firms to implement profit and loss management system and it shall benefit the clients both public and private, construction companies and the engineering consultants.

Qualitative exploration of the failure to implement profit and loss management systems study will be done through collection of data by use of interviews and documents from large construction firms, medium to small. The case study research strategy has been chosen as we seek to compare small, medium and large construction firm in Swaziland.

1.9.3. Study Area and Target Population

The study was conducted with companies that are situated in Mbabane and Manzini corridor in Swaziland as most of the registered contractors resides within this areas. The population for this study is defined as all small, medium and large construction firms involved in projects during the sampling period. The primary focus was on the profit and loss management system or any other system the companies use in relation to handling cost and profits within the organization.

1.9.4. Sampling Techniques and Size

According to Ogula (2005), sampling is a process of choosing a sub – group from a population or selecting a number of individuals in such a way that they present a large group to participate in a study.

The two sampling techniques are probability and non-probability according to Saunders et. al. (2016). This research used the non-probability method. Purposive sampling was used in this case study as: Purposive sampling enables the researcher to access rich information in depth understanding from knowledgeable people about particular issues, maybe by virtue of their professional roles.

According to the Construction Industry Council, the registered firms vary in quantity in their categorization. The study look was among 5 large, and 4 small construction firms.

1.9.5. Trustworthiness

In this qualitative study, the audit trail will be used to establish the credibility dependability and therefore the coherence and transferability of the study findings. An audit trailor meticulous logs and records concerning one's research methods and decisions ensure that every aspect of the data collection and analysis can be traced and verified by others. The audit trail will be used to ensure

that every aspect of the data collection and analysis could be traced and verified by others thus ensuring credibility (Glesne, 2014:30). An audit trail allows research teams and outside researchers to reconstruct the work of the original researcher. This method may be used to critically investigate or cross-check the data collection and analysis(Glesne, 2014:30).

1.9.6. Data Collection Techniques

The case study approach typically combines data collection methods such as archives, interviews, questionnaires, and observations (Yin 2014). However, the choice of data collection methods is also subject to constraints in time, financial resources, and access. For the purposes of this case study, primary data collection would be used.

1.9.7. Primary data collection

This was in the form of semi – structured interviews. Research interview is a purposeful conversation between two or more people that requires the interviewer to establish rapport and ask concise questions to which the interviewee is willing to respond and listen attentively. The use of semi structured interviews and in depth interview is key in this exploratory study as it would assist in finding out what is happening and to understand why small to medium contractors fail implement cost and profit management systems. Permission was requested for the use of audio recording whilst making note at the same time so as to provide data check or backup.

1.9.8. Data Analysis

In qualitative analysis, the process involves summarizing some parts of the data collected to condense it, code and categorize data in order to group them according to themes that begins to make

sense to the data, and then link these categories of themes in such a way that provides a structure to answer research questions (Saunders et al, 2016). For the purposes of my research thematic analysis would be used for data analysis. Thematic analysis offers a systematic yet flexible and accessible approach to analyze qualitative data (Braun and Clarke 2006). It may be used in an interpretivist study to explore different interpretations or phenomenon and it relates to its development as a standalone analytical technique. The procedures for data analysis involves becoming familiar with data, coding data, searching for themes and recognizing relationships, refining themes and testing propositions. Thematic analysis is more adaptable hence it can be used in relation to deductive and inductive research approaches. Data was transcribed to word document and analysed by thematic analysis.

1.9.9. Ethical Considerations

Ethical consideration is to be achieved by seeking for permission to conduct the study and the responses are to remain anonymous. A consent form shall be prepared and the respondents to be involved in the study will participate after consent has been obtained.

According to Saunders et al, (2016), informed consent involves ensuring that those individuals involved in the research are given sufficient information, the opportunity to ask questions, and the tie to consider without coercion.

1.10. The structure of the study:

The study is presented in six chapters briefly described below:

1.10.1. Chapter One – Introduction

It gave the background of the study which the situation of the construction industry in Swaziland. It further explained the problem

and pointed out the research questions. It also gave an indication of the methodology going to be employed in the study.

1.10.2. Chapter Two - Literature review

Literature is to be discussed on the topic along the lines of the research questions. The literature involved giving the history of project management, the instruments used for cost and profit management and the theory of project management. Empirical research was reviewed from publications and the researcher made sure that major geographical zones were represented in the literature review.

1.10.3. Chapter Three – Research Methodology

This chapter discuss the research paradigm, the research approach and design, explained the rationale for case study and therefore qualitative research and the instruments used. The chapter also discussed the measures taken to ensure trustworthiness of the study as well the ethical considerations then it also explained the principles and methods employed in the analysis of data collected through semi-structured interviews.

1.10.4. Chapter Four – Presentation of Results

This chapter present the findings. It explained the participants' responses and where necessary the verbatim responses were quoted to illustrate the responses.

1.10.5. Chapter five – Discussions

This chapter presented comments on the findings demonstrating how consistent the findings were with the literature reviewed. It delved into how research into the construction firm illustrates how matters concerning the firms are similar in developing countries and saw how best practice in countries like Singapore can be emulated.

1.10.6. Chapter six – Conclusion and Recommendations

This chapter gave a terse conclusion to the study indicating its achievement and made recommendations for improving the industry in Swaziland and also for further research.

1.11. Summary

This chapter has introduced the research report. It has indicated the nature of the problem to be investigated. The problem is the exploring the extent to which small and medium contractors and large contractors monitor their cost and profit in their projects. The chapter delineated the research questions and outlined the research strategy which was qualitative and therefore interpretivist. The chapter also indicated the limitations of the project indicating that because it was a case study the findings could not be generalised to all construction firms in Swaziland. The next chapter reviews literature related to the topic of study.

2. CHAPTER TWO - REVIEW OF RELATED LITERATURE

2.1. Introduction

Building and civil contractors are very vital elements in the development of any nation. Most of them remain in the small and medium enterprises (SMEs) classification of businesses as has been indicated in chapter one. Like all SMEs, such businesses must be viable, contribute to the nation's economy and must survive all kinds of economic and political pressures. To succeed therefore such enterprises must have a monitoring and evaluation system. Such a system is the cost and profit management system that is the interest of this study. In this review data bases like Proquest, Scopus were searched. The free Internet Google scholar was also searched. Then the researcher was able to access Questia, an on-line library.

Search terms used to search for literature were: cost and profit management systems, process management, managerial accounting, performance management, project management, monitoring and evaluation, and management efficiency performance. The literature is arranged thus: first theories of monitoring and evaluation as well as project and cost management strategies are discussed; then empirical research is gleaned and distilled and presented under sub-headings. They are challenges faced by contracting SMEs, capacity of contracting SMEs, large construction firms and cost and profit management and implementation of cost and management.

2.2. History of Evaluation and Monitoring Strategies

Project management is the professional discipline of planning, monitoring, and controlling specific resources to achieve a set of goals for a project. Project as a term can be defined as a one-time endeavour with well-defined, often unique goals, with specific limits of both time and cost. Projects have a temporal nature and are not repetitive as in manufacturing.

A very different paradigm is required as a practitioner to run a project. . The project manager's main test is to achieve all of the goals, including the deliverables, within the constraint of a fixed budget and fixed time frame. Specific goals and deliverables in the construction industry vary from project to project.

In the construction industry, project management is “the professional practice of planning, scheduling, monitoring, and controlling a finite amount of resources - materials, labour, equipment, and subcontractors - to achieve a set of goals, which are usually a series of engineering improvements for a unique one-time event, the project” (Del Pico, 2013:1). It is incumbent on the project team and clients to be clear about certain factors: definition, planning, scheduling, monitoring, and controlling must occur within a defined duration and a frequently fixed budget. Del Pico (2013) point out certain complicated and quite unpredictable factors such as weather, labour strikes, material shortages, and a wide range of separate goals and conflicting agendas proposed by the participants. Project management and its cost and profit management are a very complicated process (Del Pico, 2013; Ito and Souissi, 2012).

The history of project management has shown the attempts made to monitor the progress of work at construction sites. According to Lock (2007) before 1900, no one studied working practices and architects and engineers managed projects on their own. Project management did not exist as a profession at that time. Lock (2007) says that the production of ammunitions during the First World War and rapid industrialisation necessitated the presence of industrial engineers and management scientists. As a result Taylorism emerged with the publication of *The Principles of Scientific Management* in 1911.

Max Weber (1864–1920) posited the bureaucratic model of organizations when he observed that the most efficient form of organization operated like a machine. Organisations were directed by strict rules, controls, and hierarchies, and driven by bureaucracy. Weber coined the term rational-legal-model and charismatic model as polar opposites where with the

former the organisation was controlled by legal machine like system and the latter dominated by one figure in control. Henri Fayol also appeared with his management theories and the 14 principles of organisation management. These seminal works still govern the running of organisations today. The Gantt chart originated with Henry Gantt who was interested in work efficiency and created a tool that identified activities and when they were undertaken. As the 20th century progressed network techniques developed. They are the Critical Path Method, Programme Evaluation Review Technique and the Precedence Diagramming Method (DPM). These systems were pioneered by mostly the military that needed to be very efficient and effective to win their wars.

Out of all these resulted in Project Management when Gaddis (1959) postulated the project management concept. This brought about the practices professionals are now aware of, and use in their normal daily duties. Atkinson (1999) classifies the factors of project success as the success triangle, technical systems, benefits to the corporation, and benefits to the community. The first, success triangle is about time, cost and quality; the second technical systems is about durability, maintainability, and reliability; the third, benefits to the corporation is about improved work efficiency, enhanced process effectiveness, and organisational learning; the last one is about economic, environmental, and social sustainability impacts, contractor profits and satisfied users. Conflict among these factors must be resolved by the project manager. The main interest of this study is Atkinson's (1999) first classification – time, quality and cost.

2.3. Overview of Cost Management

The cost manager who is often a quantity surveyor plays a critical role in the financial and contract management of construction projects. According to Ellingerova (2011:296) cost management the process of" planning, interpretation, detailing, directing, agreement, cost control and evaluation of the construction during its preparation and constructing phases". The

process spans planning, projection and design and construction phases of the project until inspection and acceptance of the project. The process involves resource planning, cost estimating, cost budgeting and cost control. Resource planning constitutes the determination of the resources like equipment, materials and people needed for performing project activities. Cost estimation involves developing and making estimates of the cost of all the resources required to undertake and complete projects. Cost budgeting process is about the allocation of costs to individual work items of the project and finally cost control involves control of variations and changes to the project budget (Del Pico, 2013). It is significant to note that all those involved in construction, including engineers need to use these techniques to improve performance and maximise profit.

2.4. Description of Management Accounting Techniques

Since management accounting techniques are so important for the control of construction processes it is thought noteworthy to describe some of the techniques that have been in place and are open to use by both small and large construction firms. These techniques vary in complexity and their use depends on the different levels of technology awareness in the different companies. Among them are:

Activity-based costing - Activity based costing (ABC) assigns manufacturing overhead costs to products in a more logical manner than the traditional approach of simply allocating costs on the basis of machine hours. Activity based costing first assigns costs to the activities that are the real cause of the overhead. It then assigns the cost of those activities only to the products that are actually demanding the activities. It is an approach to the costing and monitoring of activities that constitutes the tracing of resource consumption and costing of final outputs. Resources are allocated to activities, and activities to cost objects based on consumption estimates.

Activity-based management - is a practice for analysing the processes of businesses to be able to adequately identify strengths and weaknesses. The whole process involves allocating the costs of equipment, employees, distribution, facilities, overhead and other factors to determine and allocate activity costs in any business.

Target costing - is an approach which aims to determine a product's life-cycle cost that is adequate to cultivate a specified functionality and quality and also making sure there is profit that is desirable. It encompasses establishing a target cost by deducting profit margin desired from a market price which is competitive.

Business process re-engineering - has to do with the radical redesign of primary business processes to achieve stage enhancements in quality, productivity and cycle times. Firms begin start anew and changaround prevailing processes to deliver more value to the customers. The companies characteristically assume a novel value structure that puts high emphasis on customer requirements and needs. They cut organizational layers and jettison certain activities deemed unproductive by redesigning functional organizations into cross-functional teams and using technology to ameliorate data dissemination to inform decision making.

Benchmarking - is a strategy of finding out what other companies do to achieve what they want. They could be competitors or from an entirely different industry. This information is then be employed to detect gaps in the processes of an organization to achieve a competitive advantage. Standards are set aping the best practices in other organisations.

Enterprise resource planning - involves a process by which a company manages and integrates the important facets of its business. A management information system integrates the various areas - marketing, finance, planning, inventory, purchasing, sales, and human resources. It is a procedure used frequently in the context of technology and software.

Balanced score card - is a performance management report used by a management team, and typically this team is focused on managing the implementation of a strategy or operational. It is a strategic planning and management system that organizations use to: communicate what the organisation is striving to accomplish, align the everyday work that everyone is doing with strategy, arrange projects, products, and services, and measure and monitor progress towards strategic targets.

Cost-volume-profit - is a managerial accounting technique that is concerned with the effect of sales volume and product costs on operating profit of a business. It deals with how operating profit is affected by changes in variable costs, fixed costs, selling price per unit and the sales mix of two or more different products. This analysis is used to determine how changes in costs and volume affect a company's operating income and net income. Cost-volume-profit (CVP) analysis calculates the relationships of prices, costs, volume, and mix of products. It is used to determine the number of units or total sales revenue that the firm needs to generate to breakeven or to realise a preferred level of profit.

2.5. Challenges experienced by small and medium contractors in implementing cost and profit management systems

A study conducted by Thwala and Mofokeng (2012), on factors that cause high failure rate of small and medium construction companies in the industry focusing on Free State Province, revealed that high company failure rate amongst small medium contractors was due to lack of lack of finance and financial mismanagement. The study further states that these companies did not have adequate cost, accounting practices and systems in place which also affected the estimating and procurement systems to be done properly and efficiently. Companies' cash flows were greatly affected by the lengthy periods it took clients to pay contractors and this is detrimental.

In Swaziland Thwala and Mvubu (2009), found out that challenges facing small contractors are not unique to Swaziland, as the majority of construction firms are small enterprises that rely on outsourcing personnel as required thus the retention of expertise and skilled workers becomes difficult. Thwala and Mvubu's study established that the relative deficiency of success among the small and medium size contractors in Swaziland is a result of the absence of resources for either large or complex construction work; incapacity to raise securities, come up with insurance and attain professional indemnity; contracts being packaged in such a way as to exclude small to medium contractors; shortage of technical and managerial skills required in project implementation; lack of continuity in relation to type, scale and location of work; and finally poor approach and inadequate knowledge, time and skill required for the whole procedure of finding work and when work is awarded there is lack of understanding of the contract documentation and the preparation and execution of works.

As literature was discussed on cost and profit management it is important that culture is also seen as a component of such research. Culture, is now widely known as a factor in the success of most organisational endeavours, notwithstanding how projects are managed. Nguyen and Watanabe (2017) investigated the impact of project organizational culture on the performance of construction projects in Vietnam. Nguyen and Watanabe (2017) used questionnaire to gather data from 199 completed construction projects in Vietnam. The findings revealed that when contractors committed to contract agreements is the project performance improved. The findings indicate that contractor behaviour which is mostly cultural had an effect on project performance and can also influence cost and profit predictions.

ElGammal, Zakka, El-Kassar and Dandash (2016) decried the disinterest in the use of costing systems in developing countries. Costing systems are employed to direct cost and profit in any organisation. ElGammal and colleagues picked up the Activity Based Costing system as the one they felt could be used. They contend that it is not new and its use should have spread in Africa and Asia. Al Refa'ee (2012) points out the benefits of the

ABC system in organizations if used properly because it helps firms that have many products and complex costs to quickly allocate and differentiate the costs. The efficiency and time saving that result from the ABC implementation lead to more accurate financial information and better cost-management and cost improvement (Atkinson, 2001).

Dawood and Dalakledis (2002) in their study of Greek construction firms concluded that many Greek construction firms did not contribute much to the Greek economy though the industry is considered as the engine of the Greek economy. Despite evidence of some prosperity in the Greek economy Dawood and Dalakledis (2002) contend that the Greek construction industry had a very small benefit from it. The Greek construction industry suffers from diminishing profitability, low market share and are not competitive. They also complain that the majority of the firms suffer from inability to cost projects, let alone manage projects regarding controls and timely delivery. They investigated the Greek construction using a qualitative study. They reviewed the operations of government projects including hospitals, schools, public offices, using semi-structured interviews and concluded that in tendering, cost planning, monitoring and control the Greek construction firms were weak and needed improvement. The industry they contend requires experts in the field of cost and profit management.

Firms in Lebanon, according to ElGammal et al. (2016), do not use the ABC system because of poor of experience of account controllers, and minimal specialized skills and knowledge. The size of the organization can also play an important role (El Hamma, 2012) as well as the lack of training of employees, the weak support of management for ABC implementation, and the complexity of the ABC system. ElGammal et al. (2016) investigated the major managers in Lebanon did not use the ABC system. They particularly targeted the service industry. Their targets were the opinions of Middle and Top Management and professionals. The results indicated that most top management would have supported the use of the ABC system had the accounting department requested it.

Half of the 35 companies studied indicated employees needed a lot of training to be able to use the ABC system since it was a complicated but efficient predictor of profit. Some of the companies also pointed out that the commitment and willingness of the financial controllers was a big factor in the decision to use the ABC system. They also considered that the system was very complex and difficult to use without much preparation. All the organisations admitted that the ABC system was a more advanced system than other systems and was efficient but its complexity creates reluctance to its application. A low percentage of the respondents stated that collecting information about the cost drivers of the different cost pools is one of the main obstacles that prevent companies from applying the ABC system. Obtaining data from the various departments, units and employees is a time consuming stage that staff are reluctant to undertake. One important conclusion the ElGammal et al. (2016), research reached is that the internal culture that is using the same old systems by the institutions have to change for a smooth adoption of the ABC system.

The construction industry is known for project overruns (Del Pico, 2013). Jackson (2002) in the UK tried to identify actual project examples illustrating the problem of cost overruns. Results of a questionnaire survey present perceptions of the main reasons why building construction projects sometimes exceed the initial budget estimate. The reasons include, design change, incomplete design at tender, lack of details in initial design, lack of information at tender stage, clients not knowing what they want, inadequate cost control, poor cost advice, corner cutting clients, inappropriate allocation of risk in contract document and many more (Jackson, 2002) Jackson's (2002) were in agreement with Del Pico (2013). Jackson's study reviewed how the construction industry was responding to the challenge of accurate budgeting. He made two key conclusions in the domain of facility capital cost budgets and risk management. The first was that complete design information leads to more accurate budget estimates. The second was that client driven design change is a great risk. Jackson blamed clients for most of the fluctuations leading to cost overruns and cautioned clients to examine themselves.

2.6. Capability of small and medium firms to implement cost and profit management systems

Thwala and Mofokeng (2012) also found out that in the Free State Province of South Africa construction firms lacked adequate cost and accounting practice and systems. This deficiency had a profound negative effect on the estimating and procurement systems. In their research Thwala and Mofokeng (2012) also discovered that cash flow problems were created for the construction firms because of the long periods it took clients to pay contractors. The majority of the companies studied did not have proper managerial cost accounting systems and so could not establish adequately how money would be used and how it was used. This poor use of money was found among both small and large firms. Mofokeng and Thwala (2012) again attribute failure to execute projects successfully to financial factors. It was also established that educational qualification and experience in the construction industry have an effect in a contractor's failure or success that is the construction industry it's an industry which requires experience by nature as there is no standard formula in the unforeseen circumstances which are sometimes met hence it requires experience and educational qualification is what expands ones thinking and capabilities.

Poor financial management was not limited to South Africa. High competition in bidding processes among small and medium contractors in most emerging economies also created financial failures (Mvubu and Thwala, 2009). Financial Management is the key, which determines business growth. A high cause of failure among construction companies is inadequate cash resources and inability to convince creditors of the availability of money. More often than not even construction companies that obtained good returns on investment could be liquidated. This kind of liquidation results from failure of clients to pay on time. To a great extent capital is often required to mitigate the strains on the cash flow as a result of the cost and uncertainty but lack of access to finance both during pre-

construction and construction tends to result in to cash-flow problems, incomplete work and even liquidation. (Mvubu and Thwala, 2009).

Aziz and Hafez (2013) in their review of literature discovered that construction management and technology were the two major elements influencing the growth and development of the construction industry. Aziz and Hafez (2013) contend that over the past 40 years, new and advanced technologies had been applied to construction projects but the efficiency of the industry has remained quite low. Aziz and Hafez (2013) cited productivity of the USA construction industry as having been declining since 1964. They also saw a similar decline in other countries like Japan. They blamed the new technologies for not being able to effectively reduce the cost of design and construction while, at the same time, improving the management of the construction process. They posit that although the Computer Aided Design (CAD) technology improved drawing, it has not reduced design errors. In this way, it creates the need for rework of construction rendering difficulties for construction managers to reduce cost and therefore maximize profit.

Leong, Zakuan, Saman, Ariff and Soon (2014) employed seven existing and new performance indicators to measure the effectiveness of quality management system (QMS) maintenance and practices in construction industry. The seven performance indicators were cost variance, cost performance index, time variance, non-conformance report, client satisfaction, number of accidents, and fatalities. They carried out a quantitative study using a sample of 1050 respondents from 350 construction firms using questionnaire. Leong et al. employed correlations and regression analysis. Their research findings were that client satisfaction and time variance had positive and significant relationship with QMS but other project performance indicators did not any have significant relationships. Though they could not generalise their findings, they suggested that further research is carried out in Malaysia to investigate the generalizability of their findings. Leong et al.'s research confirms the fact

that customer satisfaction should be one of the bases of cost and profit management system.

In a study in Uganda, it was found out that there existed a significant relationship between contract administration, relationship management and contract closure and performance of the maintenance projects (Almonzi, Oluca & Ndurura, 2016). Almonzi et al. (2016) concluded that when the mechanism of payment was improved, contract variations were controlled, improved communication channels improved and there exists an improvement in dispute management project performance is improved. The payment mechanism and controlled contract variations are part of cost and profit management which has to be meticulously handled to direct the company. The purpose of Almonzi et al's (2016), study was to establish the relationship between contract management and performance of road maintenance projects in Arua Municipality. Their study was a cross-sectional survey, in which data were collected from a sample of 102 respondents using questionnaire and interviews. Apart from their findings they also concluded that improved payment mechanism, controlled contract variations, improved communication channels and dispute management improved project performance.

Their recommendations were that the Ugandan government increased the budget for road works; internal audit function be strengthened, contract management meetings be regularly held and contract specifications clearly articulated and adhered to. They also recommended that technical staff be trained in contract management and stringent performance measures provided as controls to adequately punish errant officials (Almonzi et al. 2016). Similar recommendations were also made in Saudi Arabia by Xiao and Proverbs (2002).

2.7. Large construction firms successfully implement cost and profit management systems

B Barrett and Sexton (2006) synthesized pertinent literature to offer a general picture of the current body of knowledge on innovation in small,

project-based firms, emphasising noteworthy gaps in four organisational performance areas.

Barrett and Sexton (2006) classified these four areas as focus and outcome, organizational capabilities, context and process. Barrett and Sexton (2006) found out that while small firms are closely tied to their operational activities and their owners use the little resources they have to progress in business, the large organizations are able to innovate faster because of the fact that staff have the opportunity to contribute in a much more conducive climate where the capability of staff is high, there exists high risk tolerance and the appropriate matching of personnel to their roles. Barrett and Sexton's findings agree with those of Tatum (1989). Large firms have the resources and more flexible structures to enable them take higher risks.

Research in North America, Europe, and East Asia indicate that that there is no significant correlation between firm size and profitability. Though large firms are endowed with greater resources and competency, they are not necessarily more profitable. Yee and Cheah (2006) found out that firm size has some influence on generic strategies, as large firms tend to adopt either a broadly targeted or a nonrelated diversification strategy. Yee and Cheah (2006) conducted their research in 12 countries. They concluded that the companies exhibited different attributes depending on their regions. While the companies in Europe and America demonstrated growth rates, the companies in Asia were stagnant in the period 1999 to 2004.

What some scholars now call Construction management (CM) is a fundamental matter in executing construction projects. Norizam and Malek (2013) were of the opinion that in order to deliver high-quality products, the production company has to be efficient. They decry the way most companies in the construction industry ignore the critical success factors that guide good construction projects. Norizam and Malek (2013) embarked on the identification of the principal success factors through

literature review and used a survey to see if these factors were considered in Malaysia.

There were six main factors;

1. Construction Scope Management
2. Construction Time Management
3. Construction Cost Management
4. Construction Quality Management
5. Construction Human Resource Management
6. Construction Risk Management

Norizam and Malek (2013) concluded that all these factors were very necessary for effectiveness and efficiency of every construction firm in Malaysia. They used the recommendations of the Project Management Institute to direct their research. The institute identified nine management areas that can be used to benchmark the knowledge area of practitioners towards project success: project integration, project scope, project time, project cost, project quality, project human resource, project communications, project risk and project procurement management. (PMI Standards Committee, (1996).

2.8. Small and medium contractors' capabilities

In a survey, Kivrak and Arslan (2008) examined the acute factors causing the failure of construction companies in Turkey. Kivrak and Arslan (2008) found out that lack of business experience and poor economic conditions in Turkey were the most influential factors leading to company failure. Apart from lack of business experience were difficulties with cash flow and poor relationship with the client. They also cited inability to prepare accurate and realistic bids with the profit margin being carefully determined as one of the banes of small and medium construction firms. Because is high competition, companies are generally forced to decrease their profit in order to win the bid and this would increase the default risk substantially.

They concluded that most business failures in construction were caused by very low profit margins.

Kivrak and Arslan (2008) ascribe failure to the following factors. They are inadequate top managerial skills, poor financial management, skills shortage, loss of important personnel or employee incompetence and the hostile market environment. High competition is often cited as one of the challenges. In addition to that the literature also cites, lack of finances, insufficient capital, poor estimating and job costing and debt. Poor book keeping is one of the major challenges. The absence of a good strategic plan, poor performance management, and inability to predict performance are generally the factors that cause failure. Many of the companies cannot control their equipment, have poor internal communication, poor cost estimation skills and cannot cope with increase in project size.

Toh, Ting, Ali, Aliagha and Munir (2012) identified 35 factors as critical to the cost of projects in the Klang Valley in Malaysia. Toh and colleagues compared it to the factors that were also considered important cost factors identified from the Nigerian construction industry. Common factors were: the unavailability of materials, poor methods of financing, and long period of payments for completed works, poor management of contracts, high materials cost, fraudulent practices and kickbacks, and the constant fluctuation in the prices of materials. Akintoye (2000) working from the United Kingdom identified seven factors that influenced the estimation of costs. They are the complexity of the project, some technological requirements, project information, project team requirement, contract requirements, project duration, and market requirement. In assessing the poor performance of small and medium contractors in Tanzania, Ndulane (2015) listed the lack of project cost management knowledge as one of the causes of failure. Ndulane (2015) listed the processes involved as planning, controlling, and managing costs so that the project can be completed within the approved budget. Resource planning, cost estimation, cost budgeting and cost control are all the necessary processes needed (Bukowy, 2004).

Eksteen and Rosenberg (2002) investigated ten large and medium companies in a qualitative study in South Africa concerning the management of overhead costs. Eksteen and Rosenberg (2002) referred the costs that cannot be attributed directly to or even recovered after production and sales as overhead costs. They say some of the overhead costs result from the organisation structure, size and form of the enterprise. They even attribute some of the costs to site operations. Eksteen and Rosenberg (2002) explain that overhead costs include money spent on plant and equipment and intellectual capacity like data, records, expertise, experience and knowledge. To reduce these costs construction firms periodically retrench and scale down office facilities resulting in loss of capacity. This is a challenge. Even after markets again expand, replacing lost capacity is problematic. Thus budgeting for overheads when bidding and recovering them from contract revenues in a dynamic market is a further challenging factor in optimally balancing overheads against capacity.

Unlike most manufacturing industries, the construction industry is not able to forecast business volume, client base and profit performance for any longer than a relatively short term. This is because of the competitive tendering system, by which the majority of construction work becomes available to contractors. Construction firms therefore could experience unstable levels of activity, particularly when upward or downward drifts occur in the construction cycle or varying success in securing business by tendering or other means.

Eksteen and Rosenberg (2002) concluded that larger construction firm are normally clear about the nature and extent of their overheads and monitor and manage their overheads carefully but sometimes allowed for both site and corporate overheads in bid prices arbitrarily, for competitive reasons. Managing overheads is affected by variations in business volume as result of fluctuations in the construction cycle and in the success rate of obtaining work. Reducing overheads and capacity by retrenchments and curtailing other aspects of competitive advantage can have negative effects on the firm's market position.

Construction projects routinely overrun their cost estimates (Ahiaga-Dagbui, Smith, Love and Ackermann, 2015). Ahiaga-Dagbui et al. (2015) gave instance of studies have thus been dedicated to investigating the root causes, sizes, distribution and nature of overruns. The causes range from a poor understanding of the impact of systems and complexity projects, unrealistic cost targets and misguided trade-offs between project scope, time and cost to suspicions of foul play and even corruption. In spite of the vast attention dedicated to the problem of cost overrun, there has been limited evidence to support the claim that the size or occurrence of cost overruns is reducing in practice. A review of the literature reveals that it may not be an exaggeration to claim that the bulk of our current cost overrun research may be largely inadequate and deficient to deal with the complexity posed by construction projects.

Ahiaga-Dagbui and colleagues provided a critique of cost overrun research and suggested that the adoption of systems thinking is required to better understand the nature of cost overruns. They explored some of the embedded methodological weaknesses in the approaches adopted in a majority of cost overrun research, particularly the lack of systems thinking and demonstrable causality. Ahiaga-Dagbui et al. (2015) came to the conclusion that cost overrun research has largely stagnated in the refinement and advancement of the knowledge area. It has largely been superficial and replicative. They suggested a paradigm and methodological shift in research into project overruns.

Having reviewed the literature this study focuses in finding out the nature of cost and management systems employed by selected construction firms in Swaziland in order to improve the operations of these constructions firms

2.9. Summary

In this review both qualitative and quantitative studies were examined. Literature on the challenges faced by small and medium contracting firms was abundant but there was a dearth of information on large firms.

Generally, the literature exposed that fact that whether the company was in Europe, the United States of America or Europe, or even Australia and Africa, cost and profit management is a big challenge for most construction firms because of the ephemeral nature of the enterprise and the fact that decisions concerning projects must be made by both contractor and client. Project management is a complex and complicated process and cost and profit management in the construction industry is a multifarious endeavour which needs expertise seriously lacking in the industry particularly in the developing world. History and research into project management as exposed by this review shows that scholars and researchers have been for a long time engaged in aspiring to make projects; particularly construction projects a viable and rewarding industry. The next chapter describes details of the research methodology.

3. CHAPTER THREE - RESEARCH METHODOLOGY

3.1. Introduction

This chapter on a case study of small, medium and large construction companies' implementation of cost and profit management system is guided by the interpretivist paradigm and so is a qualitative study. It employs semi-structured interviews for eliciting information. The chapter explains the rationale behind the selection of paradigm, the research design and methodology resulting from the paradigm, the sampling procedure, data collection procedure, the data analysis procedure and the ethical considerations.

3.2. Aims of the study

The aim of the study are to explore and understand how the small, medium and large construction firms in Swaziland create and implement their cost and profit management strategies.

3.3. Research Questions

The following are the research questions;

- a. What are the challenges experienced by small and medium contractors in Implementing cost and profit management systems in Swaziland?
- b. Are the small and medium firms incapable to implement cost and profit management systems in Swaziland?
- c. How do large construction firms successfully implement cost and profit management systems in comparison with small and medium construction firms in Swaziland?
- d. Are the small and medium contractors capable of performing their work successfully in Swaziland?

3.4. Research Design and Methods

This is a qualitative case study of nine construction firms in the two cities of Mbabane and Manzini in Swaziland. Nine research sites were involved. These were three large construction firms, four medium, and 2 small construction companies. The phenomenon was construction companies' use of cost and profit management systems to control their projects. According to Creswell (2014) research design refers to the complete strategy that a researcher selects to put together the different constituents of the study in a systematic, coherent and logical way. This ensures the researcher will effectively address the research problem. The research design also constitutes the blueprint for the collection, measurement, and analysis of data. Research design works as a systematic and rigorously thought out plan outlining the study, the researchers' methods of compilation, details on how the study will arrive at its conclusions and the limitations of the research. Research design is not limited to a particular type of research and may incorporate both quantitative and qualitative analysis (Creswell, 2014).

A case study is an intensive study of an individual unit of interest. It is an exploratory kind of inquiry that provides an in-depth picture of the unit of study. This unit of study can be a person, a group, organisation or a social situation. According to Stewart (2014) what constitutes the unit or case is at the discretion of the researcher. In this case, the unit of study is the nine construction firms in the Mbabane-Manzini corridor of Swaziland. This is a qualitative case study, a case study which has studied the topic under scrutiny in-depth. A case study research may have a single or multiple sites. The sites selected in this case have enabled the researcher to fully examine the issues, problems and concerns faced by the phenomenon under study. A typical characteristic of a case study is that the study focuses on a small number of detailed inquiries (Stewart, 2014).

3.5. Research paradigm

The study employed the interpretive-constructivist paradigm. This paradigm was chosen by the researcher because it was the relevant method for qualitative study and crucial to making meaning as constructed by the participants themselves. The paradigm therefore, guided the choice of the qualitative methodology that was employed throughout the study. This can range from thought patterns to action. This paradigm can be defined as "a loose collection of logically related assumptions, concepts, or propositions that orient thinking and research" (Bogdan & Biklen, 2007:23) or the philosophical motivation for undertaking a study (Cohen, Manion, & Morrison, 2007). The main endeavour in the context of the interpretive paradigm was to understand the experiences of the managers of the construction firms that participated in the study and their subjective world of human experience of implementing or not implementing a cost and profit system of management to monitor and evaluate their projects. To retain the integrity of the phenomena being investigated, efforts are made to get inside the person and to understand from within and this is what the researcher did (Bogdan & Biklen, 2007). The researcher used semi-structured interviews consisting of open-ended questions for the face to face individual interviews to allow participants to express themselves the best way they could, in words and using gestures. The intention was to get the participant's understanding of what it means and feels to implement a cost and profit management system in a construction firm that requires a rigorous system to monitor profit. Interpretive approaches focus on what the research participants do, how they feel and what they understand about implementing a cost and profit management system. The constructivist paradigm begins with individuals and set out to understand their interpretations of the world around them in this case, an understanding and experience of their cost and profit management system.

3.6. Research Approach

Curry (2010) sees qualitative research as any kind of research that produces findings not arrived at by means of statistical procedures or other means of quantification. In this study, the approach employed was the uncovering of a deeper level of understanding of the practice and process of the implementation of cost and profit management in Swaziland. Qualitative research approaches are well suited for investigating the meanings, interpretations, social and cultural norms and perceptions that impact on behaviour (deVaus, 2001). This approach was chosen by the researcher with the intention to draw from the participants their life experiences in the construction industry regarding cost and profit calculations. The researcher was interested. This approach is often called the inductive paradigm or naturalistic research (Glesne, 2014). Qualitative research focuses on understanding the phenomena being studied in their naturally occurring context as understood or lived by the participants. (Seeing through the eyes of the participants). Underpinning this approach is the assumption that there is no single reality or truth (Rice & Ezzy, 2000). From this perspective, research is about discovery arising from active participation by the researcher. Hypotheses and theories are generated but the aim of the research is not to prove them to be true or false. Instead, it is assumed that there are a range of possible perceptions of reality and these will change over time and according to social context. In other words, what the researcher is able to know drawing from the presented context and situation (Rice & Ezzy, 2000).

The researcher approached the fieldwork without being constrained by predetermined categories of analysis and this contributed to the depth, openness and detail of the qualitative inquiry. The approach did not seek “yes or no” answers but free expression of real experiences. Generally, qualitative methods permit the researcher to study selected issues in depth and detail and are very useful once the relevant categories have been pre-determined.

3.7. Study setting

The setting of this study is the Mbabane-Manzini corridor of Swaziland. Swaziland is a small landlocked country of a little more than one million in population and is classified as a lower middle income country. There are 39 registered contractors in Swaziland.

3.8. Population and Sampling

Bertram and Christiansen (2014) state that sampling involves making decisions about which people, settings events or behaviours to include in the research. Purposive sampling was used in selecting the research sites. The study was conducted in nine selected construction sites. There are twenty-three construction firms in the Mbabane-Manzini corridor. There are by far more construction companies in the Mbabane-Manzini cities as compared to the other towns. Bertram and Christiansen (2014) explain purposive sampling as the selection for a particular purpose. The nine firms were purposively selected because of their active involvement in projects at the time of the study.

3.9. Sampling method

As its name suggests, the sample has been chosen for a specific purpose to satisfy the researcher's needs to take this type of sample, without pretending to represent the wider population; it is deliberately and unashamedly selective and biased. Purposive sampling is the deliberate selection of information-rich sources (Pascoe, 2014). There were twenty-three construction companies in the Mbabane-Manzini corridor but nine stood out for the purposes of this research. The nine firms were selected because they were in active business at the time of the study. The nine participants took part in the study because they were nominated by their organisations to take part in the study (See Table 2 in Chapter 4 for detailed information). The researcher was cautious about their rights and

explained that they did not have to take part if they were not comfortable. All of them were given an informed consent form which they read and signed.

3.10. Construction of the Instrument

In line with qualitative research, one instrument was used in this study. Interviews using open ended questions on a one on one with each participant, face to face individual interviews were about 30 minutes each. The instrument addressed the four research questions that have driven this study. Please see appendix 1 for a copy of the interview guide.

Semi-structured interviews consisting of open-ended questions allow researchers to focus the participants talk on a particular topic of interest and may allow researchers the opportunities to test out his/her preliminary understanding, while allowing for ample opportunity for new ways of seeing and understanding to develop. Semi-structured interviews designed using open-ended questions interviews were used because first, they allow the participants to express themselves freely in some depth which reveals their own understanding of the phenomenon as per the interest of the researcher. Secondly, they coordinate very well with this case study design which set out to be qualitative (Barbie & Mouton2001). In order to learn more about the participants' interviews provide an avenue for generating data by talking to people about how they go about their day-by day dealings (Strydom and Delport, 2009). The researcher's main function in an interview is to provide a framework for participants to express their views. Bertram and Christiansen (2015) contend that this in-depth interview is used to explore specific information about the participants and may also help probe deeper into people's feelings, attitudes and beliefs about issues surrounding the their holistic understanding of a situation.

3.11. Data collection

The researcher personally conducted the interviews, all of which did not last for longer than one hour per participant. The researcher after having booked appointments with the company arrived and introduced himself and was introduced to the research participants. Data was recorded and transcribed. The researcher took relevant notes of non-verbal cues during interviews this was done to align the responses with the gestures for purposes of getting a deeper understanding of the phenomenon being studied. When a researcher employs qualitative research, behaviours, understandings, actions and experiences are not measured using statistical analysis as in quantitative research (Rice & Ezzy, 2000:35). Instead, detailed written descriptions and explanations of the phenomena under investigation are produced. 'Quantitative research attempts to reduce and measure social phenomena while qualitative research aims to understand social processes'(Glesne, 2014:32).

At a given point the researcher felt there was data saturation as the interviews added no new and different viewpoints from what had been given in the initial stages of the interviews

A pilot study was conducted to find out if the items in the interview guide were apt for the purposes of answering the research questions. The researcher approached three site agents and one Managing Director in the Lubombo Region and requested that they took part in a mock interview. They consent to it and it served his purposes. The researcher, being a novice researcher endeavoured to understand the interviewing process very well that is why he undertook a pilot study. The main objective of undertaking the pilot study was to assess the acceptability of the interview process. The study gave the researcher the confidence to ask questions and the skills of an active listener and the ability to probe for better understanding. Thus the pilot study served to offer the researcher the opportunity to self-evaluate his readiness and fitness, and commitment as an interviewer. It was also an opportunity to capacitate himself. According

to Mills and Berks (2012) through piloting, qualitative researchers are able to adjust their proposed research topics and gain a clear direction of the objective of the study.

3.12. Data analysis

The thematic analysis approach as recommended by Braun and Clarke (2006) was employed in the analysis of data. After the collection of data by recording, it was played back several times and transcribed. Then an iterative process was adopted. The data was read over and over to get the researcher familiar with the data. The researcher looked for themes that emerged and tried to find out relationships among concepts. For example it was generally realised that there were different levels of cost and profit management. Also some organisations used specific software to handle this aspect of the work. After the researcher got familiar with the information constituting data he went to the next stage of analysis. The researcher then went on to create themes out of the codes. Themes like the awareness of the existence of monitoring and evaluation tools for cost and profit management among the research participants, fear of the cost of software, and some of the systems weak in monitoring and evaluation, emerged. The researcher kept on refining the themes until he was satisfied that they represented the opinions and feeling of the research participants.

3.13. Validity, Reliability and Trustworthiness

Validity and reliability are basic requirements for every empirical study and for qualitative studies. Validity and reliability are therefore critical in ensuring issues on trustworthiness. Babbie and Mouton (2009:88) note that validity refers to how far the research findings accurately and adequately address the real phenomena under study. On the other hand, reliability refers to the ability to obtain the same results if the study were to be repeated (Collis and Hussey, 2003:300). The various forms of validity includes internal, external, content, construct and criterion related validity.

Mindful of the fact that the study was qualitative, validity and reliability entailed trustworthiness based on credibility, transferability, dependability, and conformability (Lietz and Zayas, 2010:411). Credibility refers to the extent to which studies reflect the views of the research participants (Lincoln and Guba 1985 as cited in Lietz and Zayas 2010:411).

Credibility was achieved by ensuring that findings were linked back to participant's experiences, insights and evidence the implementation of cost and profit management systems in the construction industry in Swaziland. To achieve this goal only selected participants employed in the construction industry participated in the study. Further, the researcher is a qualified Civil Engineer, who is well versed with the working environment and that translates into detailed analysis and interpretation with a view to examine the findings.

Babbie and Mouton (2009:92) defines transferability as the extent to which results of the study relate to other contexts. The findings of this study were aligned to the implementation of cost and profit management systems and are also transferrable to the construction industry.

Dependability is also an important aspect of qualitative studies. According to Shenton (2004), dependability refers to a situation where a repeat of the same study in the same context continues to provide similar results. To ensure the same biographical data such as gender, age and experience was analysed and described accordingly. Further, interviewees were conducted within the same environment with all the respondents treated the same.

Conformability means that the findings of the study are informed by the experiences of respondents (Shenton, 2004:104). In this study, conformability was achieved by ensuring that accurate data trace was linked to various sets aligned to data findings. Thus, the raw data from the interview notes and analysis tied to the themes enhanced conformability thereby reducing bias.

According to Flick (2014) in a qualitative study the procedure used in the research must be crystal clear. In this qualitative study, the researcher used data from different sources to ensure trustworthiness and rigor. He further asked participants to verify the transcripts to check for errors. Quotes were used in a manner that ensured they were only used in context. The voice recorder was replayed on several times to understand the data before it was coded for validity and reliability and therefore the coherence and transferability of the study findings. The audit trail was used to ensure that every aspect of the data collection and analysis could be traced and verified. The researcher recorded the interviews and has electronic copies saved for future reference. And the recordings are available for review by others thus ensuring credibility (Glesne, 2014). An audit trail was used so that the records regarding the whole procedure for ensuring credibility were kept and could be followed if need be to allow other researchers to reconstruct the researcher's original work. This method may be used to critically investigate or cross-check the data collection and analysis (Glesne, 2014).

3.14. Bias

The researcher is an engineer in a construction firm and so was very careful about the questions he asked. He tried hard to be as objective as possible and not to make any wrong inferences. The researcher practiced active listening and on many occasions had to restate his questions to make sure that participants understood what he wanted and he had heard them well.

3.15. Ethical considerations

Stewart (2014) defines ethics in research as a critical area that must be observed by the researcher. The Ethics Committee of The University of Kwazulu-Natal gave permission to the researcher for entry into the field. The researcher explained, using the authorisation letter from the university

and participating firms, the purpose of conducting the study. Participants were requested to volunteer. Participants were informed that their participation was voluntary and informed about what the researcher expected of them. It was further explained that they could withdraw at any stage of the research if they wished to do so, with no negative consequences for them. A written informed consent was obtained from the participants before the commencement of the interview, and confidentiality was upheld throughout the research. They were also informed that information collected will be kept for five years and be destroyed by the university.

3.16. Summary

The research project employed a qualitative case study design and therefore was interpretivist in direction. It employed the semi-structured interview to elicit information. The researcher was interested in obtaining an in-depth understanding of construction firms' use of cost and profit management tools to cut wastage in the construction business. All participants were cooperative and all went well with data gathering.

4. CHAPTER FOUR: PRESENTATION OF RESULTS

4.1. Introduction

This chapter reports the outcomes of the data collection process. It outlines the chapter according to the research objectives and uses the verbatim responses of the participants to illustrate the results. It uses the thick description approach as recommended by Geertz (1973). The chapter begins with the description of the backgrounds of the research participants, goes on with describing the challenges faced by the small and medium contractors in implementing cost and profit management systems, assessment of their capability, the manner in which the large firms manage their cost and profit and finally provides an evaluation of the small and medium firms regarding their ability to be effective.

4.2. Findings

Participants' Background Information

As can be seen from the table below, when the request for the interview went to the contracting firms for the study, each firm nominated someone to participate in the interview. These participants are representatives of the construction firms. The construction firms as indicated by the research questions are the unit of analysis in this study. Each construction firm is described in Table 2. Nine firms agreed to participate in the research. Since this was a qualitative study, bounded by the interpretivist paradigm of obtaining in-depth information and obtaining the information from the point of view of the companies, it was deemed appropriate to have nine participating firms (Saunders, Lewis and Thornhill, 2016; Creswell, 2014).

From Table 2 it can be seen that out of the nine participants five firms were represented by employees and four by the owners of the firms. They were the Managing Directors. The designations of the employee representatives

were, Contracts Manager, Site Agent, and Contract Director. Whatever designation was given to the personnel who represented the organisation, their description of their roles and responsibilities as per their job descriptions were very similar. They were all knowledgeable and quite conversant with the operations of the firms to give credible and dependable information. Their experiences with the organisations ranged from two and a half years to twenty-six years. All the nine research study participants were both building and civil contractors and according to the Swaziland categorisation criteria were “C” and “B” contractors. There were five category 1 contractors and two category 2 contractors and two category 3 contractors. The oldest firm was established in 1991 and the youngest firm established in 2000. If these firms are typical of the construction industry in Swaziland then one can see that it is quite a very young industry and therefore prone to many challenges.

Table 2 Background Information of Participants

FIRM	CLASS	POSITION IN FIRM	YEARS IN ORGANISATION	AGE OF ORGANISATION
1	C1	Contracts Manager	17	1997
2	C1	Site Agent	10	1982
3	B3	Contract Manager	10	
4	C2	Contracts Director	2	2008
5	B3	Managing Director	9	2008
6	B1	Managing Director	21	1995
7	B1	Managing Director	26	1991
8	C1	Managing Director	17	2000
9	C2	Contract Director	2½	2000

For all the firms, the Project Manager must possess a diploma in Civil Engineering, Building Technology or Quantity Surveying.

Participant 1 reported. 150 million Emalangenani turn over per annum, had four engineers at their four sites and offered in-service training to employees.

Participant 2 reported 2 billion Emalangenani turnover per annum and employed 30 engineers and conducted in-service training for all staff. Participant 3 had one engineer on the only current site offered no in-service training.

Participant 4 reported an average of 70 million emalangeni turnover, offered training had in employment one engineer, one building technologist, and one quantity surveyor. The firm offered in-service training.

It was only participant 5 that reported having a safety officer in employment. It offered no in-service training, employed one building technologist and one quantity surveyor.

Participant 6 had a turnover of 10 million emalangeni per annum, employed one building technologist and offers training to staff. Participant 7 reported 250 million turnover, had one engineer, 3 building technologist and reported that it employed engineers for each project. The firm offered training.

Participant 8 reported 700 million turnover had four engineers at its current project sites and offered training.

Participant 9 reported having 200 million turnover per annum, employed two civil engineers and offered training to staff. Clearly only two out of the nine firms reported they did not offer training to staff. All the firms are family companies.

4.3. What are the challenges experienced by small and medium contractors in Implementing cost and profit management systems?

The basic problem with the firms studied is that most of them are family enterprises. Therefore all the weaknesses that such enterprises are prone to are exhibited by these firms.

As regards the employment of unqualified personnel, participant 1 said this; *“Contractors want to make money, the company needs to hire people and wanting to implement this system requires that you hire more people and the systems shows you if you make profit or loss but that requires that a qualified person be hired who knows the system and that come with cost. The system is not implemented as a result of contractor not wanting to hire more people and these qualified persons might want to be paid more than others”*.

Participant 2 also saw some weakness in the attitude of the owners of the construction firms. The participant was of the opinion that owners, who are the managing directors, had an unfortunate attitude. He summed it up this way: *“Main challenge is that they don’t understand the business of construction, that it is not about winning a tender and thinking you are rich all of a sudden, it is a high value industry with low margin hence a lot of them don’t poses the skills and experience to effectively manage their business in such a manner that they track their cost and revenue to ensure they remain profitable”* This also was a clear manifestation of the vulnerabilities of a family company as revealed by the literature. Ahiaga-Dagbui et al., (2015) demonstrated in their studies that delays in payment created financial problems for the construction firms. This happened among the firms studied also.

Participant 3 was of the opinion that a cost engineer should be appointed full time to be in charge of such a system. This is because such a system requires a dedicated time. Participant 4 attributed the inability to obtain a cost and profit management system to the way tendering is poorly done and because some contractors are so desperate to win the bid that they under price. This way they are not able to make any meaningful profit to be able to buy items very necessary for running the project. He said, *“...most of the contractors are desperate for work thus some contractors will then under-price the projects which leads to being awarded projects which have been under-priced forcing other contractors to cut their prices”*.

The rest of the respondents blamed the late payment for jobs as one of the reasons there is never sufficient money to buy important items needed to make progress. Some even think that their old systems that constitute paper work are better and more understandable.

4.4. Are the small and medium firms incapable to implement cost and profit management systems?

From the interviews it is not very clear if the small and medium size contracting firms do not have the capacity to run a cost and profit management system. They made very vague statements about their own evaluation of their capacity. The three small and medium construction firms which are in this study demonstrate some Participant 3, for example explained that the firm used a manual system to monitor cost and profit. But he also added that it was not efficient. On a scale of 0 to 10 he put it on between 6.5 and 7. This means that he reckoned it would do two-thirds of the job it is supposed to do.

Participant 5 agreed that it was necessary for a construction company to have a system that monitors work but would not say they did not have a system. He said the company had a manual system run by the accounts department so in effect one would reach the conclusion that the company did not have any effective cost and profit system. He said this when probed further to explain if the organisation could run such system *“Yes there is as there is a buyer and the materials bought by him they needs to be checked if he is not buying out of the project and also complying with the BOQ. The accounts department is checked if they pay people working for the company. On site records of all daily works and the quantities are checked if they are not over what has been priced or tendered for”*.

The researcher could infer from his skirting around the question that there was some weakness in the ability to provide an effective management accounting system. It is either he did not believe it worked or was afraid of cost which indicates that there is some inability to use such systems in this particular medium construction company.

Unlike the two small and medium firms, the third one acknowledges that the system is effective and the company in fact uses one such system, the CCS, the Construction Computer Software. This is advertised as a very effective cost management system for construction works. This is an indication that such companies can use a system if management has the

desire to use it. Participant 9 was quite candid. He said “...*The contracts director. The director oversees the overall coordination of the system as it's from pricing and implement on site and the two come together to give a clear picture on the performance of the project. “It can run but not effectively the risk of non-profitability is too high and deliverables become difficult to measure them without the system. It is effective”.*

4.5. How do large construction firms successfully implement cost and profit management systems in comparison with small and medium construction firms?

The five large firms reported using cost management for their cost and profit management. They acknowledge that it might be expensive but it is a necessary tool. Since they offer training, it is easy to get staff responsible for it. It is only three of the companies that really went further to explain how effectively it works. The software these three use is the combination of **Candy** for estimating, planning, and Project control and **Build Smart**, for Cost management and enterprise accounts. The three research participants reported that they are very effective systems. Participant 8, the Managing Director of a category C1 firm vividly described the software thus.

“... We send the professionals and artisans to upgrade their knowledge to short courses offered more especially in SA. It is after 2 years after the person has shown commitment. Yes there is, in terms of procurement, running a site, accounting, Candy and Build Smart which talk to the industry in totality. IT division manages the systems to ensure system is working and if there is an upgrade they upgrade it to ensure it's relevant. CCS and build smart systems manages the works on site and ensure that it talks to the office. The site agent has a team, QS and foreman's and hence they follow the systems which is then transferred to the office in the office which accounting division will check if the project is making money or not. Build smart system records from procurement, hours for plant, labour hours and then it informs you if you have met your programme in conjunction with CCS and then tell you if you making money or not. It is done monthly and tells

you if you losing money you shall do something on those items and if you making money also make some improvements. As a company grows you need a system that will talk to the industry, the company opted this particular one as it is used within the SADC region or internationally, we opted for the system as it good and relevant to the industry”

4.6. Are the small and medium contractors capable of performing their work successfully?

From the interviews, they are all capable of doing their jobs well and have been doing it but need a great deal of improvement. Apart from being family businesses, that are prone to many challenges and the attitude of the owners, there are also external factors like the inability of the clients to fulfil their payment obligations. The problem with most of the small and medium contractors is also discipline regarding the use of funds. For one of the companies, the participant critically said this *“Management of operations on site is by each site having own records and are submitted to the head office and are just filled without being checked systems on site work as back up for records in case of claims. Profits and checking if money is made is at the discretion of directors, costing is done, records kept but there is no proper checking if profit or loss is made as there is not enough information”*. He further went on to say *“According to directors they have run the company over 38years and have not been declared bankruptcy hence it can be said the systems is working because it would have fallen by now. This time of company needs to improve of the time and this could be done if the company can be run by other people with directors stepping aside”*.

4.7. Summary

The chapter has shown that though the construction companies have existed for some time, they still need to improve many aspects of their operation. Generally, an efficient cost and profit management system does not bother them. They think they are doing well with the systems they use.

However, from the responses given by both the owners and their representatives it is clear that they need training of staff more often and need to pump more of their current profits into obtaining efficient cost management systems.

5. CHAPTER FIVE – DISCUSSION OF FINDINGS

5.1. Introduction

This chapter gives a comprehensive discussion of the findings of this study. A project is a collaborative or an individual effort that is planned, designed and executed to attain a particular objective. This is what building contractors are normally engaged in. They are normally in Africa small and medium entrepreneurs. Their aim is to make profit so they must monitor their activities to attain their objectives. The findings of this study have been very interesting. All the findings were quite consistent with the theoretical bases of project management and the empirical research reviewed.

The findings of Thwala and Mvubu (2009) in Swaziland were confirmed by this small study. The challenges faced by the small and medium contractors were among other things, little capacity to raise securities, come up with insurance and attain professional indemnity; shortage of technical and managerial skills required in project implementation; lack of continuity in relation to type, scale and location of work; and finally poor approach and inadequate knowledge, time and skill required for the whole procedure of bidding for work and when work is awarded there arises lack of understanding of the contract documentation and the preparation and execution of works. This was clearly articulated by some of the research participants as the bane of Swaziland construction industry. The fact that most of the companies are family businesses also creates a problem. Simply put some of the enterprises might only be interested in the profits they make or may not be aware that they are not making much profit.

As revealed in the findings, the reluctance to appoint very qualified personnel also contributes to the inefficiency and wastage. The diversion of funds into personal ventures by the owners of the firms also contributes a lot to their inability to maintain the capital required for the projects. The level of knowledge of project management among owners of the businesses should also be a problem. From the results it could be clearly

discerned that where the owner and Managing Director was the interviewees there was an attempt to blame the clients for the challenges faced by the firms.

The client, more often than not the government, is the guiltiest for delaying payment and creating financial problems for the firms. Judicious use of money can also serve to avert some of the challenges. Then comes the issue of the use of technology in the construction industry. Aziz and Hafez (2013) indicated that management science and technology have led to the development of the construction industry. It is however like in Swaziland, the opportunity to use technology for construction has been seized but there is lack of enthusiasm to adopt technology as a monitoring tool. The same owners of construction firms, both large and small and medium firms appear to be technophobes.

The decision to use cost and profit management systems is made by management. It is known that where the owner is the Managing Director, he or she has a lot of discretionary authority and power. . The literature on family businesses shows the problems created sometimes. According to Onuoha (2012) and Schwrsler (2010) the nature and culture in such businesses makes them vulnerable to many problems and these were exhibited in the findings. The challenges experienced included the following:

- a. The employment of unqualified personnel;
- b. Clients do not fulfil their payment obligations;
- c. Owners of construction firms do not care about efficiency;
- d. Lack of business acumen on the side of owners; and
- e. Some complain of affordability.

From the results it could clearly be seen that business owners are the people who sabotage the use of effective cost and management systems. The literature identified a lot of such systems available for use. There are many choices like, the Activity-based costing and those mentioned in the literature review of this study are available. They could be used. It is unfortunate that among the nine companies studied only four mentioned

that they used a technology based tool and all of them mentioned the same software.

Other software is available in the market. Most of them can safely seamlessly integrate with data from accounting software like pastel and quick books and many payroll software. They include Procure, TimberScan, Jobpower, IHMS, Contractor Office, Construction/Job Cost and Bill Project just to mention a few. As it is the contractors studied, only knew about Candy and Build Smart. This might be because they are available in South Africa and organisations in Swaziland ape events, practices and institutions in South Africa. It is high time Swaziland business men start originating and inventing their own systems or going beyond the Republic of South Africa to learn best practice in business. In the UK for example there are so many cost estimating software for the building industry. Two of them are the Easy Price Pro and even the Monte Carlo simulation but Potts (2008) cautions that there should not be a very heavy reliance on too sophisticate software. Potts (2008) contends agreeing with other consultants that construction firms should use both computer software and judgement based on experience.

In Swaziland, the majority of the consultants are young when one sees how young the construction industry is in Swaziland and lack that experience that abounds in the United Kingdom so it is necessary to use such software to assist in doing the right things. The ability to acquire the software is one problem. It will require acceptance that it is necessary which some of the contractors studied did not appear to have. There should be some degree of change among the Swazi business persons to make them accept new ideas.

The study did not go into much detail about the various stages of cost estimation and monitoring. The stages are quite complex and are understandable by only certain professionals like the quantity surveyor and the engineer. Many of the firms studied did not have quantity surveyors working permanently. They were only hired temporarily to cost projects during bidding. They therefore were not available to do the monitoring and therefore to supervise any cost and profit management system. It is

incumbent of the business men in construction in Swaziland to understand better the mechanisms of the industry in which they are.

There are the problems caused by construction overruns caused basically by the inability to cost projects properly. Ahiaga-Dagbui et al., (2015) found it a disturbing factor and a big problem caused by both client and contractor. Deducing from the findings of this study one can safely say that it is a big issue in Swaziland with evidence from the findings. Without a good cost and profit management system, an efficient and meticulous supervisor of a good system there is likely to be persistent cost overruns in the industry. The clients too are to blame because they sometimes are not sure of what they want or they do not know what they really want regarding certain specifications.

From Jackson (2002) and Del Pico (2013) it can clearly be seen how construction overruns are caused. Small and medium contractors as well as their large counterparts do not assiduously adhere to proper cost management systems. The findings of this study indicate how poorly cost and profit management systems are run. They construction firms are therefore prone to the factors leading to cost overrun which is a normal phenomenon among the firms studied. The problems are caused by design change, incomplete design at tender, lack of details in the initial design, client driven design change and inadequate cost control. If the right personnel is not engaged and the right tool is not used for cost and profit management then the dangers of cost overrun will remain. Jackson (2002) blamed clients as the source of the overruns. In the absence of a confident person in charge of cost and profit clients will continue to request changes and would not know the implications of their requests. This study did not delve into the behaviour of clients but there were indications of the inefficient cost and profit management systems making it impossible to check the changes in client requests.

Organisational culture prevents the use of appropriate tools. One of the findings was that one of the participants complained about the lack of desire on the part of the owners of the firms to appoint competent personnel. This indicates how the organisational culture is among all the categories of

construction firms. The findings in this study clearly show how the behaviours of the owners are likely to affect recruitment and selection in the firms. Nguyen and Watanabe (2017) found that sometimes contract agreements are not adhered to. They suggested that where contract agreements are adhered to it is easier to manage cost and profit. However from the way there is very little effort to run a proper cost and profit management system there is always a likely hood of not fulfilling contract agreements. It is an attitude and not conducive to the appropriate running of construction firms. It is quite cultural. This begins from recruitment and runs through all the facets of the company's system.

With problems of the culture comes the necessity for change. The findings indicate that there must be change in the culture of management. The owners have to change for any meaningful progress to be made. ElGammal et al., (2016) found out in Lebanon that a particular cost management system was not used because of the resistance to change among management. It is a similar situation among the firms studied. In Lebanon, firms resisted using the ABC system. In Swaziland among the firms studied one clearly sees a resistance to change. Resistance to change is a problem in any management system. Technology has come to stay and will run through all systems. It is necessary that in all business organisations innovation is accepted.

The human resource management systems in the companies studied had problems. It is like there was no system to ensure that the right personnel is engaged. The need for change is not just about cost and profit management but about complete policy change. This is a problem in owner run organisations where it is necessary to do favours for relative and friends and business is mixed with other family matters. This prevents the recruitment of qualified staff and the absence of qualified staff leads to inefficiency. From Ndulane's (2015) list of the processes involved as planning, controlling, and managing costs it can be observed that these firms do not have the necessary tools for their ventures to be able to complete the projects within the approve budget. Resource planning, cost

estimation, cost budgeting and cost control the necessary processes needed are absent (Bukowy, 2004).

In discussing the problem of cost and project overruns, Ahiaga-Dagbui et al., (2015) did not forget the issue of corruption. They suggested that one of the causes of overruns is corruption. The causes are a collection of factors that range from a poor understanding of the impact of complex projects, unrealistic cost targets and misguided trade-offs between project scope, time and cost. Ahiaga-Dagbui et al., lay stress on suspicions of foul play and even corruption. They however concluded that in spite of the attention devoted to the problem of cost overrun, there has been limited evidence to support the claim that the size or occurrence of cost overruns is reducing in practice. From the researcher's personal experience this is a perennial problem in Swaziland. Deliberate distortions in cost create many problems. Clients, consultants and construction company owners are guilty of the charges of distortion of cost that favour them.

The desire to be efficient among staff is an important issue to be considered in this kind of enterprise. The construction business requires effectiveness and efficiency, particularly efficiency, since the object of the running a construction company is efficiency. Good returns must be made on investments and a good cost and profit management system is the preventative mechanism for the absence of efficiency. There is lack of that in the majority of the firms studied. Some of the participants demonstrated complete candour when they indicated that jobs were done for doing sake and some staff did not care about what information they put in the systems even if the system existed.

The study revealed how incompetence can lead to a great deal of damage to organisations. Since even the large companies did not employ very competent people the systems the organisations run did not work for them as they should. As revealed by the findings information entered into the systems sometimes were wrong so the predictions were wrong and the conclusions were wrong. This takes us back to the assertion that company

owners at times are their own saboteurs. The consequences of recruiting personnel who do not possess the necessary capabilities to perform tasks is poor performance at work and therefore inefficiency of the whole business.

Schedule overruns are inextricably linked to construction cost overruns. From the literature and the findings it can be seen that these are very perennial problems. Poor estimation, leading to inadequate bid documents and therefore poor budgets, poor human resource plans and very pitiable time frames are to blame for schedule overruns. Sometimes contractors do not realise the absence of an efficient cost management system is the basis for the delay in the project. Apart from the inability to properly predict cost and profit, the contractor is also not able to adequately assess the complexity of the task and even anticipate unexpected events. Since staff is not very competent there also arises the inability to co-ordinate activities. This finding from the study is confirmed by the literature. Alinaitwe, Apolot and Tindiwensi (2013) found a similar pattern in Uganda. They found that schedule overruns are a perilous norm and as such should be reduced in all countries. It however appears that historically, this has been the trend. In Palestine, Mahamid and Dmaid (2013) found out that the political state of affairs, fluctuation of prices of materials, instability in the economy, and rates of currency exchange, are normal causes of schedule overruns. Nega (2008) cited old projects like the Sydney Opera House.

The construction companies studied complained about absence of financing and training. There are institutions in Swaziland meant to educate and train entrepreneurs. The construction firms are essentially small and medium enterprises. In Swaziland the researcher has not identified any document singling out construction firms for support apart from as far back as in 2004 the government observed that the construction industry was poised for growth because of the urbanisation, industrialisation and the rising expectations of the population (Ministry of Economic Planning and Development, 2004). Many institutions have been created to support SMEs. In many government documents, the capacity building of SMEs is indicated. The Swaziland Investments Promotion Authority (SIPA), the

Swaziland Industrial Development Company (SIDC), the Small and Medium Enterprises Development Corporation and many micro-finance companies have been established to support SMEs.

Thwala and Mvubu (2007) explored a contractor development programme in Swaziland. They found out that the Ministry of Public Works and Transport is the organ responsible for this programme. The programme consisted of loans to the contracting firms on good terms, training, establishing quality circles, which are aimed at mentoring new contractors, skills development, all linked to financial packages which loans for equipment and machinery. The support programme is packaged to include training for new machinery and technology. These strategies for improving the performance of small and medium contractors in Swaziland were designed along the experiences of Singapore which has had a very successful contractor development programme to support their industrialization and infrastructural development.

5.2. Summary

The findings of this study are consistent with the findings in the literature concerning small and medium enterprises generally and contracting firms in general. Project Management skills stood out as lacking among contractors and improving performance and efficiency is relegated to the bottom of activities. Though contractors were found to be basically interested in profit making they have used the tools that are necessary to establish how well to ascertain that they are making profit. The contractors in Swaziland are basically made up of family businesses that employ personnel that are not ready for the work and offer very little training to staff. They are also reluctant to invest in technology that will enhance their work. No significant difference was found between the behaviour of owners of big firms and the medium and small ones. All the businesses are owner run and depending on the level of sophistication of the owner, the owner adopts new ideas. From the literature searched and discovered it was realised that little

research has been conducted in Swaziland regarding construction firms. Most of the research is quantitative and the research scene is dominated by the same people who from all indications are based in one tertiary institution in the Republic of South Africa. Most of the research concentrated on South African contractors and not Swaziland. The next chapter discusses the conclusions and makes recommendations for the improvement of cost and profit management among contractors in Swaziland.

6. CHAPTER SIX - CONCLUSION AND RECOMMENDATIONS

6.1. Introduction

The chapter concludes this study which has been on the implementation of cost and profit management strategies among construction firms in Swaziland. This chapter discusses the implications of this study, describes the limitations of the study, makes recommendations for solving the research problems based on the findings of the study and the literature uncovered, and makes recommendations for future research.

This study has been a qualitative study into the implementation of cost and profit management procedures. The research questions were:

- i. What are the challenges experienced by small and medium contractors in Implementing cost and profit management systems?
- ii. Are the small and medium firms incapable to implement cost and profit management systems?
- iii. How do large construction firms successfully implement cost and profit management systems in comparison with small and medium construction firms?
- iv. Are the small and medium contractors capable of performing their work successfully?

6.2. Conclusion

This study has shown that the construction industry in Swaziland needs a great deal of attention. The construction firms studied were nine in number but one can see from these nine that they are typical of the construction firms in Swaziland. They are along the Manzini-Mbabane corridor and have been in business for some time. The oldest has been in business for 26 years and the newest has been in business for two years. The study shows

that the construction firms need to change. They are beset with many problems and challenges.

They are family businesses and suffer all the problems of family businesses. Which include employing not very well qualified personnel, not willing to change, not willing to invest in technology and not willing to monitor properly the progress of work.

Another implication is that the contractors need training. It is not only the employees but also the owners of the construction firms. They also will be required to understand better the nature of the business. Apart from this the clients also require change in how the construction industry is treated. The government of Swaziland is the normal client. The two parties, the construction firms, the government and private sector clients need to understand their obligations to the industry. As it is now the attitude of the government towards payment for job done is not good. Firms will easily get liquidated because of delays in payment.

The challenges facing the small and medium constructions firms were their inability to use modern cost and profit management systems because of the lack of desire to buy the technology required for it or the absence of funds to buy it. They are not able to use it properly if they have it because the staff lacks training to use it efficiently. From the study the larger firms are more conversant with the use of such technology but still have some challenges regarding use. Currently, the small and medium contractors need a great deal of improvement to meet the standards required by the industry to make profit. The findings of the study were consistent with the literature reviewed. This study was a qualitative study that used a small sample so it is recommended that further research is conducted to understand the current state of the construction industry to inform government policy. There needs to be an alignment between higher institutions and the construction industry so that training is made relevant to the current needs of the industry.

6.3. Limitations of the study

This study is limited in some regards. The first limitation is the nature of sampling. Purposive sampling was used and so the companies cannot be said to be representative of the firms in Swaziland. They were selected along Mbabane-Manzini corridor. One would say that the selection was biased towards the firms that operate in the urban area. Another limitation is the methodology. Only one instrument, a semi-structured interview guide was used. Time was not on the side of the researcher. The research participant were very busy and had little time to spend with the researcher. After discovering the difference in attitude among owners of the firms who participated in the study and the employees the researcher is of the opinion that he could have interviewed every managing director and the site managers. Triangulation of data could also have enhanced the findings of the study. A focus group discussion could have made possible gaining more insight into the research questions.

6.4. Recommendations to solve the research problem

The following are recommended for an improvement in the operations of the construction industry:

1. The higher institutions in Swaziland need to change their curriculum to align with the new trends in the construction industry. The Swaziland College of Technology (SCOT) and the University of Swaziland should liaise with the industry to educate and train prospective personnel in response to the requirements of the current demands of the construction industry. The curriculum should stress cost and profit management techniques in the construction industry.
2. Apart from the initial training it is also recommended that the companies institute measures for further professional development for their staff. Staff could be sponsored to attend workshops, seminars and conferences so that they are conversant with current trends in construction project management which should include

specifically details of various cost and profit management techniques.

3. Managing directors of the firms also require training so that they are aware of the tools that can enhance their performance and therefore profitability. Change management is one area of training that owners of construction firms need to be trained in.
4. Financial institutions should also make loans available. Institutions like Swaziland Investment Promotion Authority (SIPA), Swaziland Enterprise Development Corporation (SEDCO), and Swaziland Industrial development Company (SIDC) must coordinate their activities and make their services known to the construction firms.
5. Since finances are the major challenge of the firms, government the major client needs to do its homework regarding budgeting before awarding contracts.
6. Government should assist the firms in identifying the training needs of the employees and the required technology for implementing an efficient cost and profit management system
7. Firm owners need to change attitude and embrace change. This is difficult to achieve but incessant campaign from government institutions that promote small and medium businesses can make it their responsibility. The firm owners must be encouraged to use modern technology.

6.5. Recommendations for future studies

This has been a small study. It is recommended that the government finds a way of financing a state of the art research into the operations of the construction industry using all the current research strategies. A study involving both qualitative and quantitative approaches is required to provide evidence-based action to improve the construction industry in Swaziland. The construction industry is very important for developing the economy so serious attention needs to be given to it. Swaziland needs to grow its own researchers so that policies are based on evidence from research and not

conjecture. Cutting edge research is urgently required on a national scale to inform action.

Research should cover areas like:

1. Procurement procedures
2. Cost and profit management
3. Change management
4. The alignment between higher education and the needs of the construction industry
5. Bid process management
6. Monitoring and evaluation

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Appendix 1 – Ethical Clearance Approval



01 November 2017

Mr Sihle Seedwell Shabangu (216073457)
Graduate School of Business & Leadership
Westville Campus

Dear Mr Shabangu,

Protocol reference number: HSS/1986/017M

Project title: Implementing of Cost and Profit Management Systems: A case of small, medium and large construction firms in Swaziland

Approval Notification – Expedited Approval

In response to your application received on 19 October 2017, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number.

PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

Dr Shenuka Singh (Chair)

/ms

Cc Supervisor: Dr Rosemary Sibanda
Cc Academic Leader Research: Dr Muhammad Hoque
Cc School Administrator: Ms Zarina Bullyraj

Humanities & Social Sciences Research Ethics Committee

Dr Shenuka Singh (Chair)

Westville Campus, Govan Mbeki Building

Postal Address: Private Bag X54001, Durban 4000

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Website: www.ukzn.ac.za

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Appendix 2 – Interview Schedule

SEMI – STRUCTURED RESEARCH INTERVIEW SCHEDULE FOR CONTRACTORS

A. GENERAL INFORMATION

1. What is the name of the organization?

2. What is your position in the organization?

3. How long have been with the organization?

4. What is the size of the organization?

5. How long has been in existence?

6. What is the core business of the organization?

7. What is the project profile for the last five years and the turnover?

8. What are the requirements for heads of a project?

9. Does the organization require heads of projects to poses a certain qualifications?

10. What is the name of the qualification?

11. How many engineers are employed by the organizations?

12. Does the organization offer trainings to its personnel?

THANK YOU FOR YOUR COOPERATION

APPENDIX II:

INTERVIEW GUIDE FOR CONTRACTORS

A. INFORMATION ON CONTRACTORS' OPERATIONS

13. To what extent does the organization train its staff? Is it on entry to the organization for an employee to be appraised of the procedures of the company?

14. Are there management systems used by the organization in managing the organization?

15. What are those management systems?

16. Does the organization implement cost and management system is used for site control?

17. Who is responsible for ensuring that this system is adhered?

18. How effective is this system in tracking the cost and profit to a particular project?

19. Would an organization run effectively if these systems are not in place?

20. What are the challenges faced by small to medium contractors in implementing such systems?

21. Is there any cost barriers limiting contractors to have such systems in place?

22. What measures should be taken to improve performance small to medium contractors in Swaziland?

23. What effect would not implementation of such systems have in completing works as per contract period and specification?

24. What are the factors leading to non – completion within the specified contract period?

25. Are you paid as per time stipulated in the contract? (a) Yes (b) No

26. What do you think should be done to overcome these challenges? If not paid on time.

27. What factors do you consider most for the contractor to qualify for the award of works?

THANK YOU FOR YOUR COOPERATION

APPENDIX III:

INTERVIEW GUIDE FOR CONTRACTORS

A. COST & PROFIT MANAGEMENT SYSTEMS

28. What are the benefits of using cost and profit management systems?

29. Is the use of cost and profit management systems a good tool for emerging, small and medium Construction Management for procurement management and how does it help in the managing of works to ensure successful completion of project?

30. Please state reasons for your answer in 29 above;

31. In your opinion, what are the shortcomings of cost and profit management systems?

32. Why did you decide to use or not construction cost and profit management systems?

33. Has the use of cost and profit management system worsen or improved your fulfilment of the following client objectives (tick applicable box i.e. worsened or improved)?

Client Objective

Cost / Budget

Time

Quality

Affirmative Procurement / Empowerment

Overall Client Satisfaction

34. Were most of your projects managed using cost and profit management systems successful?
(Yes/No).

35. Please indicate what you consider to be critical success factors on the cost and profit management systems? Clarity of Roles and responsibilities construction team;

36. What problems have been encountered using cost and profit management systems?

37. How were these problems resolved and what lessons were learnt?

38. Do you intend using cost and profit management systems in all of your projects in the future?
(Yes/ No)

THANK YOU FOR YOUR COOPERATION

Appendix 3 - Gatekeepers' Letter

Sihle Shabangu

From: Emmanuel Nsanzubuhoro <ensanze@agthomas.co.sz>
Sent: 05 October 2017 14:10
To: 216073457@stu.ukzn.ac.za
Cc: sihle@potstech.co.sz
Subject: Permission to conduct research at AG THOMAS

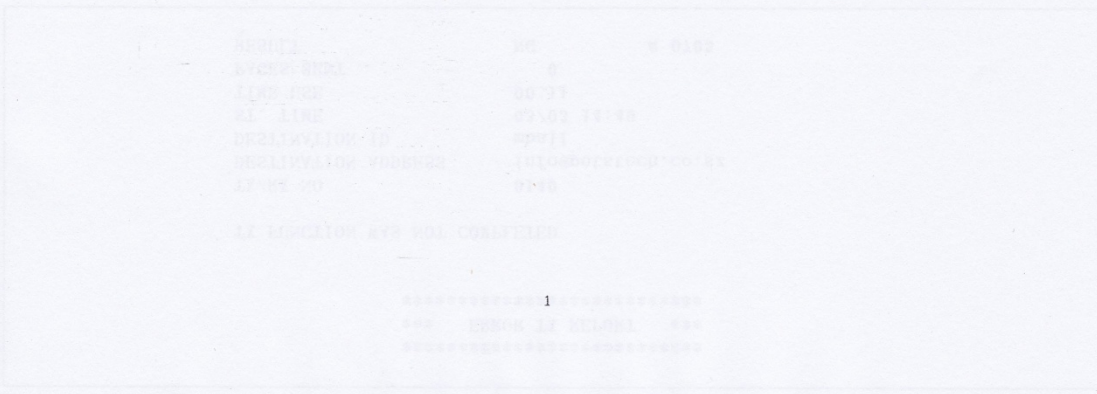
Good afternoon Sihle,

In response to your request above, please note that the AG THOMAS Management doesn't have any objection, thus you are requested to indicate the suitable time you will be visiting our company for your interview questions
Regards



Emmanuel Nsanzubuhoro

AG Thomas (PTY) Ltd
Plot 132, First Avenue, Matsapha Industrial Sites
Swaziland | P.O. Box 100 Manzini
Tel +268 2518 6362 Fax +268 2518 6363
Mobile +268 7640 2991



DU - VAN DEVELOPERS (PTY) LTD.

BUILDING, CIVIL ENGINEERING CONTRACTORS, PROPERTY AND PROJECT MANAGERS

11 October 2017

Sihle Shabangu
P.O. Box 493
Matsapha

RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH AT DU-VAN DEVELOPERS

We acknowledge receipt of your letter dated 26 September 2017 requesting to conduct research at Du-Van Developers. We hereby give you permission to run the research at a time convenient for all participants.

For further clarification and/or information in this regard, please do not hesitate to contact the undersigned.

Regards,

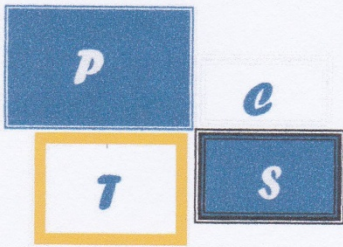
Maurice du-Pont
Managing Director

P.O. BOX 1414 Matsapha
Swaziland



Tel: 2518 4766/2516 4699
Fax: 2518 5129
E-mail: info@duvan.co.sz
TIN No. 100102118

BUILDING THE NATION
DIRECTORS: M duPont, A V Zuydam, H duPont



POTS CONSTRUCTION & TECHNICAL SERVICES

INNOVATIVE TECHNOLOGIES & CONSTRUCTION MANAGERS

P.O Box 229
Eveni
Tele/fax: 2404 2789/241005
Email: info@potstech.co.sz

Plot No. 409
Sambhlo Rd.
Queensgate

3 October 2017

Sihle Shabangu
P. O. Box 493
Matsapha

Dear Sir

RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH AT POTS CONSTRUCTION

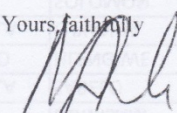
We hereby confirm receipt of your letter dated 26 September 2017 regarding the above.

I am pleased to inform you that POTS Construction hereby approves your request to conduct part of your research at POTS Construction. As a medium sized construction company, we take note with keen interest the research topic you are pursuing, and are equally eager to have a look at the final results upon completion.

On this note, we wish you all the best as you undertake this task and pledge our support and cooperation during this exercise.

We trust that you will find the above in order.

Yours faithfully


Maxwell Jele

Commercial & Admin Manager



Roots Group (Pty) Ltd
REG No. 1798 of 2004
Bethany Area Matsapha
P.O Box 5615 Manzini
Telephone: +268 2518 7216
Facsimile: +268 2518 7522
Email: info@rootsgroup.biz
Web site: www.rootsgroup.biz

04th October, 2017
Our Ref: 001/SS/UKZN/001

**THE UKZN MBA STUDENT,
Sihle Shabangu,
P.O. Box 493,
Matsapha, M202
Swaziland.**

Attention: Mr. Sihle Shabangu

RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH AT ROOTS GROUP OF COMPANIES.

In response to your letter on the above subject we grant you permission to conduct your research (case study); subject to our terms and conditions.

The following terms and condition but not limited to this conditions;

- You will be granted the permission to interview our senior managers by appointment and this is subject a request for such appointment ant our manager's convenience and approval.
- You will be requested to sign a **non-disclosure clause** for any information furnished to you during the interviews with our managers' and such shall be legally binding to both parties.
- Our Managers will only furnish you with information that is adequate for your research. Any information deemed to be confidential in our management systems may not be furnished to you for security reasons.
- Your Interviews maybe recorded for security reasons.
- Financial Statements and CEO integrated report may be furnished to you if requested on approval of the CEO.

We trust the above is in order, hope our cooperation will meet with your favourable requirements of your study and we wish you good luck and a successful study.

Yours truly,

Mr. R. F. Msibi
Chief Executive Officer
ROOTS GROUP (PTY) LTD

11 October 2017

Sihle Shabangu
P.O. Box 493
MASTAPHA

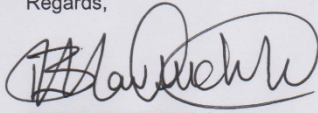
Dear Sir,

Re: REQUEST FOR PERMISSION TO CONDUCT RESEARCH AT LILAWU
CONSTRUCTION

The organisation is in receipt of your letter requesting to conduct research at Lilawu Construction. You are hereby granted permission to conduct your research and you are requested to arrange for an appointment in time so as to ensure the relevant managers are available to assist you.

Wishing you the best as you carry on with your research.

Regards,



BHEKI MAVIMBELA
MANAGING DIRECTOR



Appendix 4 – Informed Consent Form

This page is to be retained by participant

**UNIVERSITY OF KWAZULU-NATAL
GRADUATE SCHOOL OF BUSINESS AND LEADERSHIP**

MBA Research Project

Researcher: Mr. Sihle Shabangu (+268) 7208 0860

Supervisor: Dr. Rosemary Sibanda Name 031-260 1479

Research Office: Ms P Ximba 031-260 3587

CONSENT

I.....(full names of participant) hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participating in the research project.

I understand that I am at liberty to withdraw from the project at any time, should I so desire.

The research requires the interview to be recorded for cross referencing, please indicate below by tick if recording is permitted or not.

Agree

Disagree

SIGNATURE OF PARTICIPANT

DATE

.....

This page is to be retained by researcher

Appendix 5 – Turnitin Similarity Report

Sinie Shabangu User Info Messages (1 new) Student English Help Logout

Class Portfolio Peer Review My Grades Discussion Calendar

NOW VIEWING: HOME > MBA DISSERTATION FOR TURNITIN 2017

Welcome to your new class homepage! From the class homepage you can see all your assignments for your class, view additional assignment information, submit your work, and access feedback for your papers. Hover on any item in the class homepage for more information.

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This is your class homepage. To submit to an assignment click on the "Submit" button to the right of the assignment name. If the Submit button is grayed out, no submissions can be made to the assignment. If resubmissions are allowed the submit button will read "Resubmit" after you make your first submission to the assignment. To view the paper you have submitted, click the "View" button. Once the assignment's post date has passed, you will also be able to view the feedback left on your paper by clicking the "View" button.

Assignment Inbox: MBA dissertation for turnitin 2017					
	Info	Dates		Similarity	
Dissertation for turnitin 2017		Start	09-Jan-2017	10:48AM	3% <input type="button" value="Resubmit"/> <input type="button" value="View"/>
		Due	31-Dec-2017	11:59PM	
		Post	31-Dec-2017	12:00AM	

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