Cape Peninsula University of Technology

BUDGETING AND COST CONTROL CHALLENGES IN SMALL AND MEDIUM ENTERPRISES CONSTRUCTION PROJECTS IN CAPE TOWN

BY

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DECLARATION

I, Aphiwe Wellem, declare that the contents of this dissertation represent my own unaided work, and that the dissertation has not previously been submitted for academic examination towards any qualification. Furthermore, it represents my own opinions and not necessarily those of the Cape Peninsula University of Technology.

Signed:  Date: 30 September 2022

ABSTRACT

Small enterprises are critical entities in many economies worldwide. This study was based on small enterprises in the construction sector, which significantly contribute to employment in South Africa. However, despite their critical role in the economy, small businesses have suffered from a high failure rate characterised by weaknesses in their financial management systems. Therefore, this study was formulated to explore budgeting and cost control challenges of small enterprises. Specifically, the objectives of the study were: (1) to investigate budgeting and cost-control approaches for effective construction project management, (2) to determine how better budget planning and cost control might help SMEs in the construction sector enhance their performance, (3) to explore how to improve the accuracy of budgeting and expense controls.

A mixed research design was adopted, and qualitative and quantitative data were collected. Participants of the study were from selected small enterprises in the construction sector, most of whom were enterprise owners. The latter were most familiar with their budgeting and costing functions. Findings from the study provided evidence that inappropriate budgeting and costing affected the viability and sustainability of SMEs. The data collected also pointed out that construction SMEs lack the requisite business competencies, such as budgeting and cost control, that are needed for competitiveness. It was clear from the responses that there is a lack of financial, budgeting, and costing skills among construction SMEs. The study also concluded that budgeting and costing are essential skills for the viability of construction SMEs. However, SMEs lack the appropriate skills required for effective budgeting and costing.

These findings are in line with some studies done by other researchers, which pointed to the essence of budgeting and costing in SME management. However, future research may need to investigate the underlying factors influencing budgeting and costing, such as cultural and individual socio-psychological characteristics.

Keywords: Small businesses, budgeting, costing, construction sector

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DEDICATION

This study is wholeheartedly dedicated to my family.

A special expression of gratitude to my late grandmother,

Tazana Regina Sidumo,

and my loving mother,

Sindiswa Sidumo.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

APPENDICES

CHAPTER 1
INTRODUCTION

1.1 Introduction

The construction industry is one of the most well-known industries (Chinyamurindi, 2017) at Cape Town. This study makes specific study of Small and Medium Enterprises (SMES) in Cape Town following findings in studies as those of Ngubane, Mayekiso, Fitshane, Matsoso and Bruwer (2015) that SMEs in Cape Town lack formal financial management skills involving inventory, budging and cost control. However, the industry is growing more complex in terms of growth because it primarily relies on public and private sector investments in building projects (Chinyamurindi, 2017). The construction industry is a complicated cluster of companies, including banks, materials, equipment manufacturers and contracting firms (Ulaga & Loveland, 2014). This industry, which generates construction and civil engineering structures, influences how investment efforts in a resource-rich country are translated into investment outcomes (Windapo & Cattell, 2013).

According to Statistics South Africa, 78.5 per cent of construction enterprises are SMEs, contributing to job creation, long-term growth, and economic development (Santos, Castanho & Lousada, 2019). SMEs have a critical role in employment creation, poverty alleviation, and the development of innovative goods. Although SMEs are seen as engines for boosting employment, they continue to face hurdles that limit their expansion. According to reports, South Africa has a high failure rate of SMEs, with estimates ranging between 70 and 80 per cent (Fatoki & Smit, 2011). As a result, it is critical to identify potential causes of failure to ensure the long-term viability of construction SMEs and to study possible solutions to ensure effective and efficient budgeting and cost management approaches

Many SMEs do not attain their full potential and fail to expand, resulting in a loss of money and jobs in the region where they are located. Given their high failure rate, it is critical to examine the variables influencing their development and survival (Fatoki & Smit, 2011). Construction SMEs encounter various obstacles in the implementation and execution of the project (Kulemeka, Kululanga & Morton, 2015). With the construction industry's ever-changing and developing nature and the adoption of new business processes and technology, SMEs must adopt appropriate strategies to maintain their competitiveness and success. Small business failure is partially caused by a lack of budgeting and expense

control. This is supported in Ngubane, et al (2015) who found that small business generally lacks adequate budgeting and cost control skills. Construction is characterised by time and cost-intensive manufacturing processes, making it vulnerable to project risks and cost and time failure. Chinyamurindi (2017) also observed the vulnerability of SMEs in the construction sector and observed that this affected their success. Therefore, construction project performance tends to suffer because of such financial factors.

1.2 Problem Statement

The construction industry in South Africa, specifically in Cape Town, heavily relies on small and medium-sized enterprises (SMEs) (Nketsiah, 2018). However, these SMEs are facing new challenges in project planning and implementation, with a high failure rate attributed to a lack of budgeting and expense control (Chinyamurindi, 2017).

Effective budgeting and cost management strategies are crucial for the survival and success of SMEs in the construction industry in Cape Town. Studies have shown that implementing project management methodologies such as Earned Value Management (EVM) can significantly improve budgeting and cost control for SMEs (Babakus, et al, 2019). Additionally, the use of advanced technologies such as Building Information Modeling (BIM) can also help SMEs to improve cost estimating, budgeting, and project control (Liu, et al, 2021).

SMEs in the construction industry in Cape Town play a vital role in the city's economic growth and development, as they provide the foundation for high-quality infrastructure and have the potential to generate significant economic activity (Ngubane, et al, 2015). However, these SMEs often face access to finance challenges (Mabugu, et al, 2019), lack of skills and capacity (Visser, 2020) and regulatory hurdles (Makola, 2020) that hinder their ability to grow and succeed. Therefore, it is important for the government and private sector to provide support and resources for SMEs in the construction industry in Cape Town to overcome these challenges and develop and implement effective budgeting and cost management strategies. This will ensure the long-term economic growth and development of the city, as SMEs provide employment opportunities and contribute to the city's economic progress. Despite government efforts to support the SME sector, the sector still faces high failure rates and limited growth potential (Chen, 2011). Therefore, putting emphasis on budgeting and cost management is critical for the survival and success of SMEs in the construction industry in Cape Town. Given the above, it is vital to identify

factors contributing to the failure to promote the long-term viability of construction SMEs and to explore potential solutions to realise effective and efficient budgeting and cost management approaches

1.2.1 Study's key objectives and aims

- To investigate budgeting and cost-control approaches to avoid failure to meet the project budget and missing deadlines.
- To determine how better budget planning and cost control might help SMEs in the construction sector enhance their performance.
- To develop strategies/processes/methods to improve SMEs construction project budget and cost planning

1.3 Research Questions

1.3.1 Research questions

To address the objective of this research, the following research questions are posed:

- How does budgeting and cost-control approaches contribute to avoid exceeding the project budget and missing deadline?
- How does better budget planning and cost control help SMEs in the construction sector enhance their performance?
- What are the strategies/processes/methods that can be adopted to improve SMEs construction project budget and cost planning?

1.4 Rationale and Significance of the Study

The motivation for this study stems from the high failure rate of SMEs in South Africa, with budgeting and costing functions identified as major contributing factors (Ngubane, et al. 2015). Additionally, research conducted by Chinyamurindi (2017) revealed that SMEs in the construction sector are also hindered by poor and informal financial management systems. SMEs play a crucial role in employment, economic growth, and technical innovation, yet the construction industry has seen a significant loss of jobs and an increase in bankruptcies among contractors, including SMEs, between 2009 and 2010 (Tate, Lartey & Randall, 2021). It is important to understand the challenges and difficulties faced by the

construction sector to improve its efficiency and effectiveness. Therefore, researchers have focused on developing and improving research in budgeting and cost management for construction projects to address these issues and support the growth of the SME construction sector (Ngubane, et al, 2015).

Furthermore, this study aims to investigate the factors that influence project delivery in construction SMEs and provide detailed solutions that can be applied within the sector to ensure effective and efficient use of financial resources in the long run. By identifying and understanding the challenges faced by SMEs in the construction industry, specifically in budgeting and cost management, this research will contribute to the development of strategies and techniques that can help SMEs to succeed and contribute to the overall growth and development of the industry.

1.5 Underpinning Conceptual and Theoretical Framework

The proposed study recognises that budgeting and costing are internal systems that affect the survival of SMEs. In recognition of this, financing theories related to internal systems will be considered a lens that offers the theoretical framework for the study. While there could be many such theories, the proposed research will be viewed from the Internal Theory of Industrial Development perspective. This theory asserts that enterprises are financed and funded internally through retained profits and reserves, as well as other systems that involve internal funds (Kapunda, 2015). The theory argues that neither gross nor net profits are relevant for investment. Instead, retained profits and depreciation expense (finances accumulated for firm stability as plant, machinery, motor vehicles, equipment and other assets lose value with time) (Stevens, 1993) are considered the most important. Internal financing is considered easy (Almeida & Campello, 2007) and cheaply available relative to external funds, which are often costly when considering interests and are not well accessible in circumstances of the failure to pay back.

When considering this theory, it can be argued that budgeting and costing systems represent an essential component of internal funds that are essential for the investment of SMEs and their growth. Challenges in costing and budgeting are viewed from a largely internal perspective. As such, the external challenges are seen to impact internal factors, which then affect budgeting and costing as well as the growth and competitiveness of the enterprises. Consequently, the conceptual framework for the study can be presented below.

Figure 1.1: Conceptual framework

Source: Kapunda (2015)

The study will, therefore, be viewed from the lens of the Internal Fund theory of Industrial Development as well as the conceptual framework presented in Figure 1.1

1.6 Literature Review

SMEs are described as “a unique and separate entity that comprises informal or formal registered firms as well as non-VAT registered entities controlled by a single or several owners” (Cant, 2020). SMEs are highly recognised in developing and developed countries (Smit & Watkins, 2012). SMEs are the engine of growth and play a critical role in the economies of emerging nations like South Africa, which confront both income and employment issues (Cant & Wiid, 2013). Despite government efforts, however, the industry has witnessed a fall in growth, with the employment rate declining (Cant & Wiid, 2013). South African SMEs have one of the greatest failure rates in the world, with 75 per cent of enterprises failing to establish themselves and so failing to fulfil developmental tasks in the country (Cant, 2020).

SMEs include a broad spectrum of enterprises, from large family businesses with hundreds of employees to sole proprietorships (Gurayah, 2021). They range in size from micro-enterprises like sole proprietorships to medium-sized businesses with up to 100 workers. SME sectors likewise range from the lowest to the highest income groups of the population, which may be likened to SME segments in developed countries (SEDA., 2016).

Small businesses with less than 50 workers are classified as small enterprises, whereas medium businesses with fewer than 200 employees are classified as medium businesses (Krause & Schutte, 2015). Even though these enterprises are modest in scale, have limited capital, and have a poor structure, they contribute considerably to national economic growth, provide countless employment, and support social and economic stability (Aigbavboa & Thwala, 2014). Retailing, wholesaling, tourism, mining, agriculture, manufacturing, construction, and service are among the industries where SMEs operate in both the formal and informal sectors (Chimucheka, 2013).

1.6.1 The South African construction sector

The construction industry is vital to the South African economy and contributes significantly to economic growth (Windapo & Cattell, 2013). The sector contributes significantly to the physical development and employment of the country's predominantly jobless workforce (Gurayah, 2021). Compared to other sectors, it contributes 9% to the GDP (Maziriri & Chinomona, 2016). The industry is responsible for building and work planning, design, construction, maintenance, and final destruction (Gurayah, 2021). It is primarily a service business that sources its inputs and outputs from various economic sectors. The sector operates in a complex, project-specific context that brings together a diverse set of investors, clients, contractual arrangements, and consulting professionals (Sibiya et al., 2015). Small and medium-sized businesses dominate the construction industry in developing countries such as South Africa (Malefane, 2013). Small and medium-sized enterprises (SMEs) have been identified as the engine that may help developing countries reach their economic goals (Maziriri & Chinomona, 2016).

1.6.2 Overview of SMEs in South Africa

Even though the notion of a small business is universally recognised, identifying SMEs and their size requirements can be contentious since various nations employ different characterisations and rules for small businesses (Malefane, 2013).

The number of workers and the turnover of SMEs are used to classify them. In South Africa, SMEs are classified as firms with a maximum of 200 workers, a maximum annual sale of R64 million, capital assets of R10 million, and direct management engagement by the owners (Balogun, Ansary & Ekolu, 2017). The SME sector in South Africa is an integral part of the government's drive to boost job creation, promote innovation, and improve living circumstances in both rural and urban regions (Mannan, Khurana, Haleem & Nisar, 2016).

The SME sector contributes almost 58% of the GDP and 60% of employment in South Africa (Sitharam & Hoque, 2016). SMEs have much inventive potential but often lack money and experience, which makes it difficult for them to grow (Marcellino-Sadaba, 2014). Construction SMEs are fundamental in stimulating growth, generating employment, and contributing to poverty alleviation (Malefane, 2013). Due to their degree of investment and financial commitment to the South African government, these businesses must develop and become more competitive for the economy to grow (Mannan et al., 2016).

1.6.3 SMEs in the construction industry

The construction sector is dominated by small and medium-sized contractors, who comprise the bulk of the industry (Adendorff, Appels & Botha, 2011:40-63). Construction development and expansion SMEs are critical for all countries, as they provide robust construction. SMEs have the ability to build high-quality infrastructure for the country (Adendorff et al., 2011). SMEs that operate in the construction industry are essential contributors to the economy and are drivers of reducing unemployment in South Africa (Abavboa & Thwala, 2014). However, construction SMEs encounter several challenges when dealing with construction projects (Ulaga & Loveland, 2014). These obstacles obstruct their long-term growth and development, resulting in poor project performance and job quality in the construction industry. Operational problems, budgetary restrictions, limited resources, and inadequate strategic planning are among the challenges construction SMEs face (Balogun, Ansary & Ekolu, 2017).Failure to order on time, which delays project completion; incorrect delivery time, which disrupts the work schedule; over ordering the wrong resources or error in material direction, which necessitates reworking; and theft of resources from delivery into production are just a few of the common challenges encountered on construction projects (Ismail, Halog & Smith, 2017). Construction SMEs must adopt a strategy to ensure that all construction operations are carried out sustainably, from project planning to project completion, while also considering economic, social, and environmental concerns (Aigbavboa, Ohiomah & Zwane, 2017). According to Ismail, Halog & Smith (2017), sustainable construction techniques, such as land use planning, environmentally friendly project design, the use of sustainable building materials, the efficient use of natural resources, and the production of minimal construction waste during construction work, can increase the resiliency of construction projects.

Many factors may contribute to the failure of Cape Town construction SMEs to complete projects on schedule. Despite the significance of budgeting and cost control in construction

projects, little study has been conducted to understand successful budgeting and cost control better; instead, most of the research has concentrated on design and procurement process management, as well as labour site productivity (Aigbavboa, Ohiomah & Zwane, 2017). Given the state of SMEs in South Africa, it is necessary to identify the factors that impede project delivery in Cape Town's construction SMEs. Given that resources account for up to 70% of project construction costs, any approaches that decrease waste and increase productivity will have significant cost and time savings on project completion (Abanda, Tah & Cheung, 2017). Therefore, the objective of this study was to identify the impact of budgeting and cost control challenges on SMEs in the construction industry in Cape Town.

1.6.4 Definition of Key Concepts

SMEs: Firms with less than 50 employees are considered 'small enterprises', and those with less than 200 employees are 'medium' (Krause & Schutte, 2015:163).

Budgeting: Calculating how much you will earn during a particular period and planning how much you will spend, save, and borrow.

Cost Control: The practice of identifying and reducing business expenses to increase profits and starts with the budgeting process

Infrastructure: The basic equipment and structures (such as roads and bridges) needed for a country or organisation to function correctly.

Construction Industry Development Board (CIDB): The board responsible for enhanced delivery management, capacity improvement and contractor development in the construction industry through strategic interventions and partnerships.

1.7 Paradigm/Philosophy

In academia, positivism is a well-known paradigm (Su, 2018). The quantitative technique is used in this paradigm, which allows the researcher to stay detached from the respondents. This study will use the quantitative approach to illustrate budgeting and cost management in construction SMEs in Cape Town. As a result, a positivist research design will be used to gather data utilising a questionnaire. According to Antwi & Hamza (2015:217-225), the positivist paradigm assumes that there is an objective truth that can

be measured and described scientifically in the world. Therefore, the data collected from this study will allow a quantifiable overview of budgeting and cost control challenges faced by construction SMEs, answering one of the first objectives of the research report.

1.8 Research Approach

To accomplish the study's objectives, both qualitative and quantitative data were adopted to understand how budgeting and cost control impact project delivery. Elliott (2018:2850-2861) articulated that quantitative research is a type of educational research in which the researcher decides what to study, asks a specific, narrow question, collects quantifiable data from participants, analyses these numbers using statistics, and investigates in an unbiased, objective manner, according to the author. In addition, survey research uses a scientific sampling method with a designed questionnaire to measure a given population's characteristics through statistical methods, as postulated by Moser & Korstjens (2018).

1.9 Research Design/Strategy

An accurate design was fundamental for each study; the present study's focus was on budgeting, and cost control challenges faced by SMEs on project delivery projects in randomly selected construction SMEs based in Cape Town. Thus, the descriptive design was more appropriate for the study, as the purpose of the study was to describe the current conditions of the phenomena. According to Schoenherr, Ellram & Tate (2015), a descriptive design has a high degree of representativeness and ease in which a researcher could obtain the participants' opinions. The researcher used appropriate descriptive and inferential statistical techniques to evaluate the data and reach conclusions.

1.10 Demarcation/Delimitation of Study

The study was conducted in Cape Town, South Africa. The focus was on the sustainability of small and medium construction companies. Budgeting and cost control challenges were among the critical the factors considered contributing to SMEs' failure in the construction sector. The study did not include perspectives of failed, expired, and suspended companies. SMEs were randomly selected from the fully compliant and operating SMEs in the construction Cape Town database. Due to time and logistical constraints, this method required less time than having to visit every suburb in Cape Town in search of

relevant businesses.

The proposed survey research was conducted in the form of a structured questionnaire. The questionnaires comprised of both open-ended and close-ended questions. The questionnaire was grouped into two sections; the first section solicited general information about the respondent and the company to capture data such as position held in the company, level of education, work experience, company size and age, the total number of full-time employees, and company type of work. In comparison, the second section gathered information on the impact of resource utilisation on project delivery. Questionnaires were created using Google forms and Likert scale questions.

A pilot survey was carried out to establish whether the questions in the structured questionnaire were realistic, acceptable, and applicable. After preliminary work, the questionnaires were modified according to respondents' comments and suggestions.

1.11 Research Methods/Processes

The population comprised everyone who shared those characteristics defined by the researcher as relevant to the investigation (Gratton & Jones, 2014). Furthermore, the population refers to a subgroup of individuals relevant to the study (Lose & Tengeh, 2015). The research participants for this study were limited to 20 active construction SMEs in Cape Town. The sample for this study was randomly selected from the list of companies currently fully compliant and operating SMEs in the construction Cape Town database during the investigation. The unit of analysis will be construction SMEs' perception of budgeting and cost control.

1.12 Sample Method/Technique and Sample Size

Since it is not financially possible to include all the active SME contractors in the sample, a total of 20 SME contractors was adequate and represented the number of fully compliant SMEs. With regards to sampling techniques, a random sampling procedure was used. Probability sampling is also known as 'random sampling' or 'chance sampling' (Maxwell, 2021). Under this sampling design, each item of the universe has an equal chance of inclusion in the sample. Maxwell (2021) also stated that probability sampling is based on the conception of random selection, an organised technique which guarantees that each population element is given a known non-zero chance of selection. Probability sampling

aims to keep sampling error to a minimum. The snowball sampling technique was adopted for effectively selecting participants for the study. Taherdoost (2016) explains that the snowball sampling technique involves selecting a few possible participants who encourage others to participate in the study, who will, in turn, provide other possible participants

1.13 Data Collection/Fieldwork

The researcher used random sampling techniques to select 20 construction SMEs. SMEs taking part in the questionnaire survey were those that fit the SME definition relating to the construction industry. Questionnaires were distributed via email, due to covid-19 pandemic; there were limitation on physical contact with participants during the data collection phase to ensure compliance with Covid-19 regulations. Therefore, it was decided only to include those contractors with retrievable telephone numbers so that it would be easier to contact contractors during administration and increase the response rate.

1.14 Data Coding and Analysis

After completing the questionnaires, they were sent back to the researcher's email address, printed, and numbered accordingly to facilitate the data capture process. Data will be captured on an Excel spreadsheet. The demographic variables were summarised using descriptive summary measures: expressed as mean (standard deviation) for continuous variables and per cent for categorical variables. Descriptive Statistics presents quantitative descriptions in a manageable form (Igual & Seguí, 2017). SPSS version 16 was used for data analysis. Data was presented in tables, charts, and graphs to illustrate survey results.

Chi-squared test of association was carried out to find significant factors in business performance. All statistical tests were used to separate the means at a level of significance, $P<0.05$.

1.15 Ethical Consideration

Prior to the commencement of this study, ethical clearance was sought from the Ethics Committee of CPUT. For the research study to be ethical, it had a sound methodology and meet the moral expectations of all research participants. The study was conducted following University regulations. Participants obtained and signed consent letters and were

informed of their rights before, the beginning and during the study. The researcher ensured that ethical considerations such as protecting the anonymity or confidentiality of participants were included.

The letter provided details pertaining to the study's background information and the research objectives and ensured that participants did not develop unrealistic expectations regarding their involvement in the study. They were also briefed about the confidential nature of the study and assured that the information collected was only to be used for this research. Equally important, the researcher conducted this study with integrity and transparency.

1.16 Outline of the Dissertation

The study comprises the following chapters:

Chapter One: Introduction and background to the study- this chapter will provide an overview of the problem investigated. It will outline the problem statement, the significance of the study and research objectives and questions. Also, elaborate on how the research will be carried out.

Chapter Two: Literature review- the chapter will explore the vast material published by reviewing the literature on the impact of resource utilisation in the construction industry. It will provide information on the South African construction sector, SMEs in South Africa and the construction industry, highlighting challenges faced by construction SMEs and possible solutions.

Chapter Three: Research Methodology- outlines the methodology of the research study and the rationale thereof. It includes survey instrument design, data collection procedure, data analysis, and ethical procedure.

Chapter Four: Findings and data analysis- this chapter will detail the data obtained from the questionnaires and analyse the findings.

Chapter Five: Discussion of findings, conclusion, and recommendation- this chapter will look at the relationship between the findings and provide conclusions and recommendations after conducting research.

CHAPTER 2
LITERATURE REVIEW

2.1 Introduction

To foster a broad appreciation of budgeting and costing challenges among SMEs in construction projects and how this impact their growth and development, this chapter considers relevant literature that can inform the present study's directions. The chapter considers empirical and theoretical literature on budgeting and costing challenges relevant to the present study and construction projects. In conducting the literature review, a broad appreciation of the nature of small businesses, their history and financial management systems are considered. As an important function of financial management, budgeting and costing challenges were considered from a business management perspective since they are important functions of managers in construction projects. This chapter identifies literature gaps, informs the study methodology, discusses construction project management, SME budgeting and costing from various perspectives and allows the development of a strong foundation for the empirical procedures of the later Chapters. While the study was set to specifically attend to the budgeting and costing dilemma among SMEs, it takes into context and perspective the operational systems of SMEs and how this tends to influence the financial management viability of the SMEs in construction projects.

2.2 Overview of the Construction Projects in South Africa

Koolwijk (2022) defines construction projects as organised determination to build a building or construct. Merschbrock & Munkvold (2015) note that construction project differs from manufacturing in that manufacturing characteristically involves mass production of similar items without a chosen purchaser, while construction typically takes place on-site for a known client. The construction project commences with planning, design, and funding, which continues until the project is built and ready for use. Large-scale construction requires collaboration across several disciplines.

A project director typically oversees the financial plan for the work, the construction manager, the design engineer, the construction engineer, and the architect (Gharouni Jafari & Noorzai, 2021). In addition, those involved with the design and implementation

must consider zoning necessities, the environmental consequence of the work, scheduling, budgeting, construction-site security (Koolwijk, 2022), accessibility and conveyance of construction resources, logistics, inopportuneness to the community instigated by construction postponements and bidding.

2.2.1 Construction project characteristics

The key characteristics of construction projects relate to time and cost which must be well managed for the attainment of project objectives. Aghimien, Aigbavboa, & Matabane (2021) state that construction project management has two components: time-driven and cost-driven. The management of the time for completion of projects and the minimisation of cost, meeting all the requirements, is termed project management. A building project has its characteristics set aside so that it can be finished within the budget and time. Cost and time for a construction project are inter-reliant, and their oversight should be thoroughly planned (Gharouni Jafari & Noorzai, 2021). The increase or decrease in the construction project period directly affects the budget of construction projects.

All construction projects encompass the same work and can be run most effectively with the same project management abilities and proficiencies. Whilst building project qualities are not always examined, Golini, Kalchschmidt & Landoni (2015:650-663) consider that such aspects as the business environment and project characteristics have created grouping systems. Aghimien, Aigbavboa & Matabane (2021) have deemed its characteristics as a way to better comprehend the project's needs, and they assessed project manager and team associate skills to distinguish an organisation’s openness to projects. Overall, when project traits are used as a means by which to categorise projects, a minimal number are incorporated, and these are correlated to the project environment and other project components.

Below is Table 2.1 showing the characteristics of a construction project.

Table 2.1: The characteristics of a construction project

The project should have a distinct target.
The project should be unique and cannot be replicated with a similar task, giving indistinguishable results.
The construction project should satisfy the owners 'requirements and expectations from the development.
The construction project should not be tedious, although certain features are repetitive.
The construction project should comprise several related events adding to the project.
The time threshold for the accomplishment of the project should be specified.
The construction project is complicated and includes several persons from various departments.
The construction project manager should be adaptable to contain any change that might arise during the project.
There are characteristics of ambiguity, such as the performance of individuals, how their competencies adapt to unaccustomed work, and other unidentified outside influences.
The total cost of the construction project should be defined, and the project should be completed within the given budget.
The construction project should offer unique opportunities to develop new skills.
The construction project impels the project manager to adapt to working under changing environments as the nature of the project changes.
There are risks with each step of the construction project, and the project manager should manage those risks to reach the project goal.

Source: Own construction adapted from Vidaković, Hadzima-Nyarko & Marenjak (2020:12).

As shown, in Table 2.1, a construction project should have a specific start and end time (time limit), distinctive, specific target, controlled resources, and should have scope. The typical features of construction project management have been presented in Table 2.1 above.

2.3 The History of Small Business Development in South Africa

SME operations, managerial styles, and the challenges they face within various business management tasks are well understood if there is a proper appreciation of their nature and history (Crittenden, Crittenden & Ajjan, 2019). In South Africa and other developing countries, SMEs are an essential component of economic development and prosperity among the poor and "the segment of the population at the bottom of the pyramid" (Tala, 2021:276-287). However, SMEs in South Africa often face challenges in budgeting and costing which greatly affect their success and increase their failure rate.

Time and cost management are of utmost importance for the survival and success of SMEs in the construction industry. The ability to effectively budget and control costs can mean the difference between completing a project on time and within budget or going over budget and missing deadlines. This is critical for SMEs in the construction industry, as any delays or cost overruns can put their financial stability at risk. Therefore, it is essential to understand and address the budgeting and cost management challenges faced by SMEs in the construction industry in South Africa, in order to support their growth and success. At that time, early economic activities included raiding, hunting, trade, gathering and some form of agriculture. People who exhibited special talents in the various economic dimensions became rich, rulers and gained status. The coming of Europeans introduced modern economic activities into Africa. As such, concepts of business management were learnt from the establishments of the Europeans where the industrial revolution had started earlier. In South Africa, a government with a strong segregation system that offered whites economic, political, and social participation while limiting chances for other races emerged (Tala, 2021). During apartheid, economic participation was restricted to some races, and entrepreneurship was only open to certain races (mainly whites) (Abebe & Gebremariam, 2021). In any way, the economic system introduced was novel to most people. As a result, small business development and entrepreneurship among some races lagged. This may explain why some racial groups who own small businesses face serious management capabilities and challenges, including budgeting and costing.

Europeans in South Africa were exposed to and empowered to engage in meaningful economic participation because industrialisation started in Europe (Booyens, Rogerson, Rogerson & Baum, 2022). Therefore, the Europeans were equipped with the economic, intellectual, and social capital as well as the political capacity to engage in all forms of entrepreneurship. Most white entrepreneurs at the time could find opportunities in all industrial sectors. There were limitless opportunities in Agriculture, Mining, Services and so on. Virtually all the entrepreneurs at that time were Europeans, and their ventures quickly rose to become big businesses that exist even today.

After 1994, the new democratic government faced the colossal task of effecting socio-economic transformation among its citizens (Choto, Iwu & Tengeh, 2020). There was the

need to equalise business and economic opportunities across society. The new government had the task of equalising all spheres of economic development, including the spread of entrepreneurship from significant initiatives that were implemented under the Reconstruction and Development Programme (RDP) as well as the Growth, Employment and Redistribution Programme (GEAR) (Masipa, 2018). The two programmes were crafted to address unemployment within the black population, reduce homelessness, redistribute land, equalise service delivery (Misra, Etkins, Yang & Williams, 2022), provide electricity to all, ensure free education and adult basic education as well as general training opportunities. However, it should be observed that the fundamentals for accelerated entrepreneurship were still not there during these early years.

Education among some of the racial groups was still inadequate to lead to meaningful entrepreneurship; ideologically, black people seemed overwhelmed by an inferiority complex that emerged and was emphasised during the apartheid era (Marule, 2022). Webster and Francis (2019) note that policies such as the Broad-Based Black Economic Empowerment (BBBEE) and affirmative action were crafted to propel black people towards economic participation. Whereas there were greater calls for equalisation of economic opportunities in the period immediately after the 1994 elections (Marule, 2022), it should be taken that real change was not an immediate phenomenon. As such, the budgeting and costing challenges still faced by small businesses are likely to have emerged from the background of limited management capabilities and support mechanisms within the systems.

2.3.1 The small business concepts

There is a greater concern for small business viability in South Africa owing to high unemployment, and budgeting as well as costing systems are a matter of concern among SMEs as they affect their viability. However, there has been a decrease in the unemployment rate of 0,8% from the last quarter of 2021 as economic activities are increasingly becoming dominated by small businesses and entrepreneurs in South Africa (Nyoni & Moos, 2022).

In addition, economic hardships often result in the emergence of several survivalist entrepreneurial ventures in the population (Manning, 2022). However, small businesses suffer from viability challenges such as budgeting and costing owing to several circumstances in which they operate. Therefore, to understand the small business

landscape, the SME concept need to be well defined.

Therefore, there is a need to specify how small businesses are defined in South Africa and the criteria officially used to interpret small businesses.

In South Africa, small businesses are recognised by the central government and the Department of Small Business Development, which was tasked with overseeing small businesses nationally. This Department is guided by the National Small Enterprise Act, 1996 (Act No. 102 of 1996) as well as the National Small Enterprises Act, 2004 (Act No. 29 of 2004), which provide a national definition of small businesses and set out issues for small business development (Belitski, Guenther, Kritikos & Thurik, 2022).

The National Small Enterprise Act, 1996 (Act No. 102 of 1996), read with the National Enterprise Amendment Act, 2003 (Act No. 26 of 2003) and the National Small Enterprises Act, 2004 (Act No. 29 of 2004) proclaim that: “Small enterprise” means a separate and distinct business entity, together with its branches or subsidiaries, if any, including cooperative enterprises, managed by one owner (Wen, Zhong & Lee, 2022), or more predominantly carried on in any sector or subsector of the economy mentioned in column 1 of the Schedule and classified as a micro, a small or a medium enterprise by satisfying the criteria mentioned in columns 3 and 4 of the Schedule. The 2019 amended Schedule 1 of the National Definition of Small Enterprise in South Africa schedules recognises that the definition of a small business is related to the sector or industry in which the small business operates (Bushe, 2019). South Africa is one of the notable Sub-Saharan countries contending for a place as a global economic giant. Choto, Tengeh & Chux (2014) asserted that despite the national government’s support, small business failure is still high in South Africa. Business incubation programs and organisations such as Small Enterprise Finance Agency (SEFA), South African Enterprise Development Authority (SEDA), and National Youth Development Agency (NYDA) are being implemented to support SMEs. South Africa is on a robust path of promoting participation by the private sector as the biggest stimuli for solving economic and social issues.

2.3.2 Internal factors for small business strategy.

Budgeting and costing are internal operations and managerial activities that have a bearing on the success of small businesses. However, factors that affect companies tend

to be both internal and external. External factors are imposed by the external environment, while internal factors such as financial management activities are part of the internal environment (Chege & Wang, 2020). The external environment refers to everything outside an organisation and all factors beyond the control of the individual, such as political/ legal factors, economic factors, technological factors, socio-cultural factors, and global factors (Stachová, Papula, Stacho & Kohnová, 2019).

These factors are such that the small business entrepreneur has no control and tends to emerge from outside the business. Therefore, the essence of internal analysis lies in identifying and evaluating a company's resources and capabilities. In relation to this study, resources for budgeting and costing, as well as the capabilities of the small business operator in conducting financial management, are essential. According to the resource-based view, distinctive resources and capabilities are a source of competitive advantage (Donnellan & Rutledge, 2019) Resources and capabilities provide a competitive advantage in three main ways. Firstly, resources determine the organisation's strategic direction by giving it the capability to follow its strategic options. Secondly, resources are the primary source of profit; lastly, they are the basis for industry positioning. According to Chumphong, Srimai and Potipiroon (2020), internal analysis examines the overall organisation structure, management competence and quality, and human resource characteristics. Based on the understanding of the areas mentioned above, managers can determine the strength and weaknesses of their organisations. Considering the above, it can be commented that budgeting and costing strategies and activities are likely to be affected by the possession of appropriate resources and the capabilities, knowledge, and skills of small enterprises. There is, therefore, a need to explore whether SMEs possess the right budgeting resources and capabilities that promote small business competencies in South Africa (Chege & Wang, 2020).

Budgeting and costing challenges tend to affect the entire financial management processes of small businesses. As argued in Nketsiah (2018), financial management and other monetary issues are central to the viability and sustainability of SMEs because of the strong competition they face (International Finance Corporation. 2018). Abraham and Schmukler (2017) claim that the financial problem is much stronger among small businesses than the established corporations, thereby pointing to the essence of effective budgeting and costing among SMEs. As argued in business management literature, financial management represents an internal factor instead of external factors that affect

businesses. Both recent and traditional literature on business management has recognised this argument (Jungwoo & Hyuksoo, 2022:1-9). Bhorat, Asmal, Lilenstein & van der Zee (2018) describe these factors as endogenous and exogenous variables that tend to influence the growth and profitability of enterprises. Endogenous factors describe the variables that tend to be internal, including factors that are under the control of the enterprise and finance and budgeting, which represent a notable element within the endogenous factors.

Financial management includes budgeting and cost management as essential for long-term competitiveness and enterprise survival. Studies like that of Reynolds, Fourie & Erasmus (2019) considered the elements of the balanced scorecard, which include financial and non-financial within the SME sector. They concluded that there is a greater need for financial and customer perspectives for success. The financial perspectives include budgeting and costing, which have been argued to be a challenge for many SMEs (Maduekwe & Kamala, 2016).

2.4 SME Costing and Budgeting

2.4.1 Budgeting

A budget is a financial plan that summarises the revenue and expenditure expected for a particular year (Gordon, Dadayan & Rueben, 2020:733-758). Budgets are financial plans that provide a statement of expected income or revenue and the anticipated expenditure for the payments (Reynolds, Fourie & Erasmus, 2019). On the other hand, a budget term provides the time frame for which a specific budget is prepared. Pelz (2019) cited other studies demonstrating that research has received mixed results on the extent to which small businesses compiled and used budgets, but it appears that many small businesses used cash budgets across Canadian, Asian, and African countries.

Budgeting is an ongoing process of anticipating future actions by identifying income and expenditure (Song & Zhou, 2020). There are also many types of budgets, including sales, production, and cash. The kind of budget essential to any organisation depends on the nature of the organisation, its size, and the line of business that the organisation does. Many small enterprises tend to be less complex and may not require many types of budgets. However, the cash budget is an essential tool among many small enterprises. Wadesango, Tinarwo, Sitcha & Machingambi (2019) suggest that small businesses often

have some form of cash budget for their operations to ensure better financial management for survival.

Pelz (2019) further claim that budgets are planning tools which are important for successful business activity as planning tools budgets are critical in the ability of enterprises to meet or overcome future financial challenges. Despite these assertions, it has been reported that small enterprises lack the appropriate knowledge and skills to ensure adequate budgeting and costing. Karadağ (2018) argues that financial prudence among SMEs has been criticised owing to several limiting factors such as reduced demand, shortage of materials and labour, and having little financial resources. In line with these assertions, Pelz (2019) conducted a study on the use of budgets among SMEs in South Africa. They premised their analysis on the argument that the failure of SMEs to adequately prepare and use budgets is one of the major causes of their failure. This argument is also found in Enow and Kamala (2016), who pointed out that many SMEs fail because of poor cash budget systems, making them fail to plan for future financial challenges. Chege & Wang (2020) revealed that budgets are an essential aspect of financial management among all types of businesses as they assist in the coordination of various business activities, are crucial for forecasting the use of financial resources and are a critical component of business plans. Additionally, budgets are often seen as essential in ensuring a long-term perspective of the business and are critical for competitiveness (Maduekwe & Kamala, 2016). A budget is based on a department's income, direct costs, gross profit, and expenses (Song & Zhou, 2020).

Budgets are often drawn in such a way that for each of the income, profit, or expenditure items, there are actual amounts from the previous financial year, projections for the next financial year and adjustments of the actual amounts from the previous financial year (Adam & Alarifi, 2021). After the projections are made, budgeted drafts are prepared with adjustments to give a projected budget. Budget projections are based on the internal and external environment, including issues like inflation, boom, depressions, and proposed business expansions. As provided in McKenzie (2021), small business budgets typically involve the determination of changes in the income and expenditure items across the department, departmental income and expenditure forecast for the upcoming year, consultations, preparation of drafts, presentations and discussion of departmental draft budgets, preparation of final departmental budgets and consolidation and integration of

departmental budgets into a full budget.

2.4.1.1 The essence of budgeting and costing

Business operations involve some direct and indirect monetary expenses on the part of businesses, and it is essential that proper budgeting is implemented to ensure that investments in companies are realised and sustained (Wadesango, Tinarwo, Sitcha & Machingambi, 2019).

Therefore, SMEs need to first study the business environment within which it operates, paying attention to legal, social, economic, and cultural challenges in the community, including the adverse effects of the company's products on the population. As such, the budgeting process will likely lead to identifying opportunities and threats for the enterprise. According to Nikitina, Litovskaya & Ponomareva (2018), opportunities are elements a strategic planner can progress towards to capture advantage. On the other hand, threats are elements that cause harm to the business, and therefore a company should avoid threats or take action to diminish their impact. For example, opportunities may exist as potential new markets, a strong economy, and emerging technologies, whereas threats may be changes in consumer preference, government regulations and a weak economy.

Such budget forecasting should be both short-term and long-term. The forecasting processes should provide the company with short- and long-term financial commitments. To avoid the collapse of the SME, reserve funds can be utilised to strengthen the market position and overcome competition (Emerling & Wojcik-Jurkiewicz, 2018). Some of the significant budgeting process activities that are essential for the growth and survival of SMEs include the development of a budgeting policy for the SME to adhere to. Departmental and sectional budgets should be prepared for incorporation into a master budget which SMEs have to adhere to increase their financial management (Nikitina, Litovskaya & Ponomareva, 2018).

2.4.1.2 Costing and budgeting challenges among SMEs

As observed in O'Mahony (2021), SME owners are often individuals with challenges such as low educational backgrounds, poor socio-economic family situations, as well as belonging to previously disadvantaged groups such as being African, young, and female.

As a result of their socio-economic backgrounds, small business entrepreneurs lack the financial and non-financial capacity to execute specific management tasks such as financial management effectively. This challenge makes small businesses poor in financial management skills, including poor budgeting and costing management.

This makes them vulnerable and usually fail to survive or grow their businesses. Furthermore, the lack of budgeting and costing skills significantly affects the effectiveness of SMEs as they are also affected by poor access to credit that they face to grow and expand (Emerling & Wojcik-Jurkiewicz, 2018). Without access to credit, SMEs require appropriate budgeting of existing financial resources and adequate costing skills to have financial viability. Maduekwe & Kamala (2016) echoed these views, and if SMEs suffer from the lack of collateral that is needed for accessing credit, thereby making it imperative for them to rely on existing financial resources primarily and to ensure effective budgeting and costing management for these resources.

Management literature also argues that certain factors inside the company influence strategic financial management, including budgeting and costing (Wong, Holmes & Schaper, 2018). This includes the culture of the organisation, the influence of senior management, organisational politics, the structure of the organisation, bureaucracy, levels of motivation and corporate policies and procedures. At times conflicts and power struggles affect strategic budgeting and costing management when influential people in the organisation become subjective rather than objective in formulating and implementing strategies (Hilkens, Reid, Klerkx & Gray, 2018). While most SMEs have smaller human resources complement and a less sophisticated organisational structure, they may face these challenges or be affected by their capability inadequacies, leading to poor budgeting and costing.

Availability of resources is also a major internal influence on budgeting and costing because inventions and innovations could require significant capital outlay to be implemented. O'Mahony (2021) believes that culture is the most important internal factor influencing strategy through issues like routines, rituals, systems, stories, ideologies, and philosophies which can either lead the organisation to active strategic initiatives or can lead to strategic innovations. SMEs tend to have an organisational culture characterised by flexibility and close customer links as they operate close to the market (Emerling & Wojcik-Jurkiewicz, 2018). This will likely impact their thrust towards effective management as they may overlook risks. This argument implies that some organisational cultures

support competitiveness and viability while others can be detrimental to strategic management.

As reviewed in this section, Hilkens, Reid, Klerkx & Gray (2018) found that the challenges faced by small businesses in preparing and using budgets were related to those shown in Table 2.2.

Table 2.2: Challenges faced by small businesses in budgeting

Lack of support and poor coordination with top management
Limited skills and knowledge for budget preparation
Absence of relevant resources for use in the preparation of budgets
Poor appreciation of the essence and criticality of budget in business management

Source: Hilkens, Reid, Klerkx & Gray (2018)

The above are internal factors that tend to affect the use and adoption of budgeting systems among small businesses. Factors such as the lack of skills and knowledge for budget preparation is considered to be relevant among SMEs and significantly affect them (Adam & Alarifi, 2021). The absence of relevant resources likely encompasses a lack of appropriate technologies for handling the budgeting and costing function. Other researchers seem to take a broad view of the challenges faced by SMEs that affect budgeting and costing. Mbumbo, Benedict and Bruwer (2019) provide the perspective that challenges faced by SMEs can be identified within the macro and micro factors. Some of the macro and micro factors that affect SMEs in adopting effective budgeting and costing are shown in Table 2.3.

Table 2.3: Macro and micro-economic factors affecting budgeting and costing among SMEs

Macro-economic factors	Micro-economic factors
Economic uncertainty	lack appropriate resources
Extensive red tape	Strong business competition
Inflation	High cost of credit
Ineffective government support	limited skills
Weak protection from government	Poor knowledge
Corruption	Unpredictable operational environment
Weak SME support services	Inflation Poor business models Poor customer relations Weak financial knowledge

Source: Mbumbo, Benedict & Bruwer (2019:323)

Table 2.3 shows how macroeconomic factors such as economic uncertainty tend to affect the ability of SMEs to forecast their financial needs adequately. In addition, legal/ political factors include state and local government regulation and political activities designed to influence enterprise behaviour (Adam & Alarifi, 2021). Finally, economic factors are the overall financial health of the country in which it operates.

2.4.2 Financial management challenges

Research has established that financial challenges, including budgeting, funding, and cost management, are some of the main growth challenges facing SMEs in general (Karadag, 2015). Other growth challenges include competition from large businesses, inadequate infrastructure, and the ability to find customers.

SMEs have also been known to have challenges in assessing their financial positions through the effective use of relevant financial ratios, which are important in evaluating their financial status. For instance, ratios such as the current ratio assess the short-term liquidity of the SME (Mosteanu & Faccia, 2020). While big organisations may easily get credit to increase their current ratio, SMEs struggle to acquire credit and rely on effective budgeting and control measures to strengthen their liquidity. In addition, the quick ratio evaluates a company's liquidity by subtracting inventory from the current assets and dividing by the liabilities (Karadag, 2015). Therefore, such ratios may be essential for effecting budgeting and costing among SMEs. Finally, the return on equity ratio considers the company's performance (Mbumbo, Benedict & Bruwer, 2019) by analysing how the SME is financed.

In contrast, return on equity ratios measures the profit generated by the assets invested in the company (Karadag, 2015). These ratios remain a crucial component of the operations of SMEs. Still, they lack adequate resources and infrastructure and knowledge to execute them to guide their budgeting and costing systems. The literature also argues that the failure of SMEs to use such ratios as the asset turnover ratio to determine the number of sales generated for every rand's worth of assets means they cannot easily budget for their financial years. The asset turnover ratio compares sales by assets, making it essential to ensure that SMEs do not remain survivalists. In addition, this ratio is more advantageous for growth companies to check if they are growing revenue in proportion to sales (Musah, Gakpetor & Pomaa, 2018).

Muchaendepi, Mbohwa, Hamandishe, and Kanyepe (2019) articulate that budgeting represents a significant financial planning activity among enterprises. Mosteanu & Faccia (2020) explored the financial management processes of SMEs and concluded that there is a serious lack of budgeting and financial analysis skills among SMEs. This accounted

for the high SME failure rate in South Africa and many other developing countries.

2.4.2.1 Poor financial management skills

Musah, Gakpetor & Pomaa (2018) suggested that the main challenge facing SME financial management is the lack of and poor financial skills among SME owners. Budgeting and costing administration is a central function within critical financial management tasks such as liquidity and cashflow management, capital, and funding structure, as well as the acquisition of long-term assets (Wong, Holmes & Schaper, 2018). Without proper budgeting for these key financial management skills, SME survival and growth is limited. As such, the lack of financial management skills related to budgeting and costing tends to impact SMEs negatively.

2.5 The High Failure Rate of SMEs

Nketsiah's (2018) study of the relationship between the financial management practices of firms and profitability as moderated by firm age proved that the age of a firm significantly affects the financial management practices of the firm and profitability. SMEs tend to suffer from high mortality and the general failure to grow. This is often associated with the inability to develop strong and complex budgeting and costing systems necessary for effective financial management. Musah, Gakpetor & Pomaa (2018) have argued that the failure of SMEs is also due to the low adoption of appropriate technology and information systems.

Despite its reported benefits, the adoption of formal Accounting Information Systems (AIS) for budgeting and costing is low among most SMEs (Rashid Issa, 2019). It has been reported that the use of AIS in budgeting and cost management can be one way of reducing the high failure rate of South African SMEs. Some studies on adopting AIS have found that reasons for failure to adopt AIS among SMEs include the lack of awareness of the essential role of SMES for the organisations (O'Mahony, 2021). AIS adoption has a strong history within the accounting discipline as it has gone through several stages, which include the automation of business processes and the development of Management Information Systems to facilitate decision-making and reporting (Franco-Santos & Otley, 2018). Brijlal, Enow & Isaacs (2014) conducted a study on the financial management practices of small, medium, and micro enterprises in South Africa and observed a serious lack of knowledge on the benefits and technical aspects of using AIS. As a result, most SMEs reportedly relied on external persons to do their financial audits, reports and

recording (Franco-Santos & Otley, 2018).

A significant disadvantage of using external consultants is that operational cost is increased. Therefore, the knowledge challenge among SMEs seems to result in low AIS adoption.

This implies that SMEs may opt to avoid proper budgeting as they fear the increased cost associated with having it done by an external consultant.

Research on the factors influencing the adoption of AIS among SMEs has been limited (Rashid Issa, 2019). SMEs, therefore, lag in adopting technological infrastructure. As a result, they have continued to rely on traditional accounting systems without realising the benefits of using AIS in circumstances where the SMEs' failure rate has remained high. Brijlal, Enow & Isaacs (2014) also commented that adequate literature on the financial management practices of SMEs in South Africa is absent.

2.5.1 Weak management structure

SMEs tend to be characterised by a weak organisational structure which heavily relies on the owner with just a few support employees. As a result, Doshmanli, Salamzadeh and Salamzadeh (2018) comment that the owners of SMEs tend to be overwhelmed by the various management tasks they perform, failing to perform appropriate budgeting, accounting, business reporting and costing functions. There are comments in the literature that most SMEs are not managed like businesses. In the same manner, Albassami, Hameed, Naveed and Moshfegyan (2019) argue that the owner-manager arrangement of the management structure of most SMEs result in serious managerial and administration inadequacies.

SMEs often suffer from poor commercial knowledge, lack of management abilities or skills, inadequate experience, and poor planning expertise. Albassami et al. (2019) believe that SME owners cannot single-handedly handle all the four functions which have dominated management literature over the years. These are (1) planning, (2) organising, (3) leading and (4) controlling (Doshmanli, Salamzadeh & Salamzadeh, 2018). Budgeting is often considered a planning function, while costing control can be related to the controlling function. SMEs lack a sophisticated managerial structure that is likely to handle the four functions of management which were enunciated in the work of Henri Fayol in 1916 and since then have been in use (M'zungu, Merrilees & Miller, 2019). Even when considered

from the perspective of the administrative theory that emerged from the work of Henri Mintzberg on the roles of management, SMEs appear to suffer from an inappropriate management structure to ensure effective budgeting and financial control. Mintzberg provided that rather than performing specific functions, managers performed roles which included interpersonal, informational, decisional, and technical functions (Carroll & Gillen, 2019).

From these roles, budgeting and cost control can be seen as technical functions that are also critical for financial decision-making. While these roles have also been significant in shaping management practices, the functions provided by Fayol have been enduring. The planning function is the function that is involved with strategy setting and development as well as operationalising the organisational mission statement as well as critical functions such as budgeting (Doshmanli, Salamzadeh & Salamzadeh, 2018). Fayol believes the organisation functions like an organism with many activities (Carroll & Gillen, 2019). The organising function is then seen as the task involved in structuration work and allocating resources to attain plans. The leading function involves the role of leaders and managers who monitor and inspire others to perform. Lastly, the controlling function consists of determining challenges and developing strategies to ensure that the organisation remains on track. Brijlal, Enow & Isaacs (2014) suggest that SMEs suffer from a weak management structure characterised by an owner-manager set-up. The owner-manager cannot handle all the management tasks as expected.

2.5.2 The budgeting and costing technology adoption challenges

Technology is an essential resource in the current business environment. Resources refer to the assets, skills, and capabilities over which the organisation has control. The resource-based view of the firm argues that distinctive resources and capabilities provide uniqueness to a particular organisation and are a source of competitive advantage and profitability (Mustafa & Yaakub, 2018). Therefore, the possession of technological resources for effective budgeting and costing represents an essential component among small businesses. Prause (2019) suggests a framework for analysing resources in terms of their value (V), rarity (R) and imitability (I) and exploitability by the organisation (O). This is called the VRIO analysis. This framework relates in some way to Mustafa & Yaakub's (2018) framework of analysis which is based on the competitive advantage of resources, their appropriability, sustainability and exploitability. Therefore, the possession of budgeting and costing technologies can be viewed as a source of competitive advantage.

The competitive advantage of resources is based on their scarcity, uniqueness, path dependency (when the resources are built over time), causal ambiguity (when competitors cannot duplicate them) and economic deterrence (when possession of the resource scares away competitors) (Carroll & Gillen, 2019). The sustainability of resources relates to durability, transferability, and replicability of resources, while appropriability of resources refers to the extent of protection of the resource as intellectual capital and be exploited (Prause, 2019). SMEs that can acquire technologies as unique resources for their budgeting and costing systems will likely gain significant advantages for their viability.

Despite observations that the information explosion has the potential to improve the various functions of business, SMEs are reportedly ill-equipped to exploit appropriate technologies (Moeuf, Pellerin, Lamouri, Tamayo-Giraldo & Barbaray, 2018). It will be observed that Africa continued to lag in technological developments in all later revolutions, including the present 4th industrial revolution (Sevinc, Gür & Eren, 2018). This can imply that Africa ought to be understood in its circumstances as far as technological and industrial revolutions are concerned. It should also be commented that most technological breakthroughs were quickly associated with large companies and multinationals. Small businesses accessed most technologies later than large businesses. Such a scenario has also been a challenge in the growth and survival of small businesses across African countries. The second industrial revolution was then characterised by mass production and increased industrial output facilitated by electrical energy, while the third revolution was epitomised by massive automation and information technologies (Sevinc, Gür & Eren, 2018).

Technological breakthroughs characterised by using various tools and systems to perform different business functions have also become essential in budgeting and costing. Many technological tools have evolved and are applicable to SMEs' budgeting and costing control functions. However, it has been observed that SMEs lack the capacity to adopt and use relevant technologies. Mustafa & Yaakub (2018) found that SMEs do not value the essence of appropriate technologies in their planning and control functions. Carroll & Gillen (2019) commented that the innovation capability of small enterprises has become essential to ensure their growth and sustainability over the years.

Various technology-based systems are increasingly becoming important in accounting, budgeting, and costing systems. As a result, expert systems have increasingly become important. The concept of an Expert System (ES) is said to be the precursor of artificial

intelligence systems that have become applicable in many accounting, budgeting, and costing systems (Akpan, Udoh & Adebisi, 2022). The concept of an ES refers to the use of computer-based knowledge programs to handle certain imperatives that require deep expertise to be completed (Priyono, Moin & Putri, 2020). However, Brijlal, Enow & Isaacs (2014) found that several SMEs do not possess a computer to aid their administrative, planning and controlling functions. As such, they are ill-prepared to adopt ES. Therefore, early ES was developed based on interviews with experts to generate a knowledge domain that can then be translated into a computer program that can handle tasks or solve associated problems (Priyono, Moin & Putri, 2020).

ESs have become critical in today's knowledge economy and highly computerised environment. Lucas & van der Gaag (2014) explain that ES have the capability to deal with specific problems extracted from a particular domain or can provide advice that can be seen as like that which an expert in the field can provide. Winarno & Hariyanto (2021) indicate that the development and preparation of ES represents a distinct construct called knowledge engineering. The concept of ES is arguably related to Artificial Intelligence which is viewed as the application of computer systems in situations where human knowledge appears to be the most appropriate. ESs are an essential feature of the technological revolution whose significance in this era cannot be adequately emphasised. The main tasks performed by ES include (1) data interpretation, (2) detection of malfunctioning systems and faults, (3) analysis of complex systems, (4) sequencing of systems and predicting future trends of phenomena (Yazdi, Hafezi & Abbassi, 2019). These functions are essential for the budgeting and controlling functions required for the effectiveness of small businesses. According to Winarno & Hariyanto (2021), ESs have three main components, namely: (1) the knowledge base, (2) an inference system and (3) a working memory. These three components work together so that the knowledge base is the knowledge input structure while the inference component reasons out the problem or task to be done and deals with the issue based on its knowledge domain. Sarker, Khan, Abushark & Alsolami (2021) advise that expert systems are composed of a knowledge base and a reasoning mechanism. The reasoning mechanism appears to be what Yazdi, Hafezi & Abbassi (2019) describe as the inference system and working memory. According to Mohammed, Ambak, Mosa & Syamsunur (2019), ES are effective in multiple ways if they are adequately utilised. An ES is no substitute for a knowledge worker's overall performance of the problem-solving task. However, these systems can dramatically reduce the amount of work the individual must do to solve a problem and leave people

with the creative and innovative aspects of problem-solving. As shown in Table 2.4, ES in budgeting and cost control can be designed to make them faster than humans, understandable, reliable, and timeous in response.

Table 2.4: Evaluation of the efficiency of Expert Systems in budgeting and costing

1. They are much faster than a human expert.
2. The error rate of well-maintained systems can be better than that of humans
3. They are consistent and can be trusted to make recommendations
4. They are convenient in managing financial knowledge
5. Expert systems capture the scarce expertise of a uniquely qualified expert.
6. They become a way of knowledge development and growth in organisations
7. When used as training vehicles, ESs result in a faster learning curve for novices.
8.Such systems can be applied where humans cannot work

Source: Mohammed et al. (2019:232)

Well-maintained ESs perform way faster and more effectively than humans in complex situations. The effectiveness of ES within this century of rapid technological developments is enormous. Consequences arising from the Covid-19 pandemic have presented complex scenarios demonstrating the need for ES in modelling problems, forecasting, and predictions (Akpan, Udoh & Adebisi, 2022).

Computer-aided budgeting systems have also become highly reliant on neural network (NN), which is a series of algorithms that endeavours to recognise underlying relationships in a set of data through a process that mimics how the human brain operates (Vrbka, 2020). SMEs face the need to upgrade their current sales forecasting system by including a neural network for time-series predictions. NN also allow for better budgeting through better consideration of time series analysis. Budgeting based on Neural Networks has been described as adapted impressions of the neuron and nerve network from biological science to computer programming systems that depict multiple relationships among input and output variables (Anna, 2020). NN was imaged from the inspiration of how the brain works, memorises, and comprehends complex situations. Such adaptations allow for

budgeting under complex situations as such neural networks are expected to interlink with various information points to solve certain real problems (Ptak-Chmielewska & Matuszyk, 2018). According to Senthil & Muthukannan (2022), neural networks are believed to have emerged from the work of Warren McCullough and Walter Pitts in 1994. Neural networks are composed of basically three layers, namely: (1) an input layer, (2) one or more hidden layers and (3) an output layer. Each layer consists of various nodes that are interlinked into a network. In describing the general structure of neural networks, Ptak-Chmielewska & Matuszyk (2018) explains that it consists of an input and a structural output point with many other hidden layers that aid the complex analysis of input data to ensure the correct output is realised. The IBM Cloud Education (Al-Sharafi, Arshah & Abu-Shanab, 2019) specifies that there are many types of neural networks that include the perceptron, which is simple and consists of only one neuron; the multi-layer perceptron or Feedforward neural network, which is composed of input layers, hidden layers, and output layers. Convolutional neural networks resemble feedforward networks but are distinctively used in image identification, pattern identification, computer vision, and recurrent neural networks characterised by strong feedback loops and widespread use of mathematical models (Senthil & Muthukannan, 2022).

According to Sandu & Gide (2019), neural networks have several applications in many sectors and industries in which various SMEs may be involved, which include those shown in Table 2.5.

Table 2.5: Uses of neural systems

Applications of neural networks
Fraud detection, such as in credit cards and Medicare
Transport logistics optimisation
Recognition of characters and vocals, including language processing
Diagnosis of diseases and other medical conditions
Special niche and target marketing strategies
Predictive functions in stocks, currency, and other financial ratings
Robotics and robotics control systems
Electrical load assessments and demand forecasting
Quality and process control
Identification of chemical compounds

Evaluation of ecosystems
Imagining and recognition in robotics, photos, videos, and facials.

Source: Sandu & Gide (2019:169)

Neural networks are computer database systems composed of interconnected nodes that work like the human brain (Senthil & Muthukannan, 2022). It has been found that neural networks have many benefits for budgeting, accounting, and costing, which include

- Assist people in solving complicated real-life issues
- Can provide a model for interpreting input and output variables that are non – specific intertwined and complex
- Neural systems possess the capacity to generalise and make inferences
- They can identify and reveal latent relationships, patterns, and trends
- They are useful in handling dynamic data such as time series and financial trends
- Can interpret variables for managing rare events such as disasters, frauds, and other types of shocks

As Table 2.5, neural networks perform critical tasks which would have been complex for the ordinary human being. Furthermore, Table 2.5 shows that neural networks are used across many fields and specific areas, including medicine, criminology, policing, electrical engineering, financial economics, chemistry, computer-aided imagining, and other applications. This means SMEs in various sectors can find them helpful.

SMEs can also rely on Rapid Application Development (RAD) approach to budgeting, accounting, and costing, which emerged in information systems development methodology from the work of James Martin in 1991 (Syafrizal, 2021). It is viewed as a flexible software and application development procedure that is pragmatic and collaborative when compared to other approaches. In addition, it emphasises responsiveness to customers' needs and the use of software (Syafrizal, 2021).

Table 2.6 shows that RAD provides notable benefits for 21st-centuryorganisations as it offers flexible ways that also take note of customer preferences and stakeholders.

Table 2.6: Benefits of RAD

Fosters flexibility, responsiveness and it is adaptable to changes during the process of development
It is based on a sequence that enables speed and quick development
Allows for further development, limiting errors and shortens application development completion times
Developers, clients, and end users collaborate in the development, thereby increasing customer satisfaction
Integrates earlier software development
Strengths risk management through the involvement of stakeholders.

Source: (Syafrizal, 2021:78)

In these times of increased competition in business, RAD systems can give SMEs a competitive advantage as they rely on key stakeholders such as customers and the community (Oktaviani, Atina & Nugroho, 2019). Research indicates that sources of competitive advantage are shifting to the customer. As such, collaborative and flexible systems such as RAD have Project specifications. The RAD approach is focused on meeting certain project requirements, which must be clarified and specified. Syafrizal (2021:75-79) observed that the project specification component of the RAD systems involves the setting of goals, expectations, timelines, and budgets which the application must meet. This is a critical feature of the RAD approach. The RAD approach is a joint and collaborative system that often draws on four to eight persons, some representing all interest groups, such as end users, clients, and developers (Satyawati, 2018). RAD's joint application design characteristic is based on team effort, and team-building activities and structures are often practised. The team may conduct workshops and other sessions to foster collaboration and team effort.

SMEs can also rely on Rapid Application Development (RAD) systems that are often set to ensure quick completion. Effective prototype development and the effective utilisation of information aid the rapidity of the RAD approach. Emphasis on rapidity is essential in ensuring that the applications meet stakeholders' requirements in real-time (Sasmito,

Wibowo & Dairoh, 2020).

2.5.3 Cloud budgeting and data security risks related to cloud computing

Information management in budgeting can also rely on Cloud computing which deviates significantly from hardware computing (Matias & Hernandez, 2021). In cloud computing, data is stored over the internet by service providers, unlike in hardware computing, where data is stored on a particular hardware-based gadgets. Data security and privacy are critical issues in cloud computing due to increased internet use for storing data. SMEs that rely on cloud budgeting face data security challenges. At the same time, cloud computing has become popular as some organisations, such as those in the public sector, have been slow in adopting digital information management systems. A service provider often provides the cloud system, and these providers can be public, private or hybrid cloud systems (Wagh, Chaudhari, Deshmukh & Khandave, 2014). The fact that data is under the control of a service provider who could be an external third person presents concerns about the security and privacy of data. As commented in Mosweu, Mosweu & Luthuli (2019), cloud computing offers many benefits but suffers many serious security issues. The security of the data can be viewed from two perspectives: (1) the security of the data itself and (2) the security of codes associated with the cloud system and the data. The simple fact that the owner of the data does not know where the data is stored in cloud computing presents significant security concerns, especially if the data has the potential to cause serious problems if leaked to the wrong individuals (Mosweu, Mosweu & Luthuli, 2019).

2.5.4 Common data security risks

The literature seems to provide several cloud computing risks, some of which are in Table 2.7.

Table 2.7: Data security risks in cloud computing

Limited visibility and control of data
Unauthorised uses of certain data related to demand issues
Compromisation of application programming interfaces
The exploitation of system and software vulnerabilities
Incomplete data deletion
Attacks can lead to credentials being stolen
Vendor lock-ins associated with the need to transfer data from one service provider to another resulting in being stuck with a service provider who is no longer favourable.
Insiders can abuse authorised access
Data can be stolen
Cyber risk is associated with inadequate due diligence.

Source: Mosweu & Rakemane (2020).

When considering the data security risks shown in Table 2.7, most of them emanate simply from the fact that cloud computing tends to involve an external service provider. Thereby challenging elements of confidentiality, trust, and secure handling of data. Cybercriminals such as hackers and malware have the potential to access cloud data, thereby posing a threat. Figure 2.1 shows Sun, Zhang, and Xiong Zhu's (2014) depiction of some major data issues associated with cloud computing. It is illustrated that data integrity, confidentiality, availability, and privacy issues can be breached in cloud computing systems. The major security issues of cloud computing arise, noting that: (1) data is stored on the service provider’s infrastructure; (2) data of different users share the same physical infrastructure; (3) data is accessible via the internet.

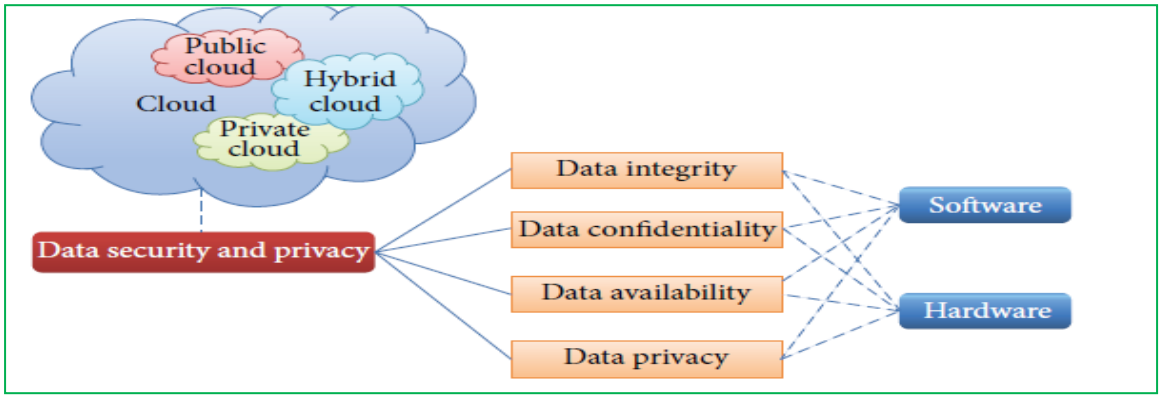


Figure 2.1: Security issues in cloud computing

Source: Nagahawatta & Warren (2020:18-27)

Data integrity often protects data from modifications, unauthorised deletion, and fabrications (Sun et al., 2014). On the other hand, the confidentiality of data relates to the privacy and confidentiality of data which is often controlled through accessibility issues. Privacy relates to controlling unauthorised access to data while its availability has such critical elements as its availability in cases of disasters and challenges. Cloud computing also has the risk of data loss, and some scholars have commented that cloud computing users should guard themselves against data loss through alternate backups of data. A data backup strategy is a form of data backup that ensures that data is not entirely lost in the cloud (Mosweu & Rakemane, 2020). The surety, privacy and confidentiality challenges associated with cloud computing must be considered within a cost-benefit analysis to ensure that the proper data storage decisions are made.

Some studies on adopting AIS have found that reasons for failure to adopt AIS among SMEs include the lack of awareness of the essential role of SMES for the organisations (Sevinc, Gür & Eren, 2018). AIS adoption has a strong history within the accounting discipline. It has undergone several stages, including the automation of business processes and the development of Management Information Systems to facilitate decision-making and reporting. Mosweu, Mosweu & Luthuli (2019) conducted a study on the financial management practices of small, medium, and micro enterprises in South Africa and observed an extensive knowledge of the benefits and technical aspects of using AIS. As a result, most SMEs reportedly relied on external persons to do their financial audits, reports, and recording (Mosweu & Rakemane, 2020). However, a major disadvantage of using external consultants is increased operational costs.

Therefore, the knowledge challenge among SMEs seems to result in low AIS adoption.

2.5.5 Theories of accounting information systems adoption

Since the popularisation of the technological revolution, many theories have received consideration to assess the adoption of technological systems in accounting and budgeting systems. Some of these theories are shown in Table 2.8 below.

Table 2.7: Technological adoption theories

Source	Theory	Analysis
Rogers (1995)	Theory of Diffusion Innovations (DIT)	A process in which an innovation is communicated thorough certain channels over time among the members of a social system. Innovation, communication channels, time, and social system are the four key components of the diffusion of innovations
Fishbein and Ajzen (1975)	Theory of Reasonable Action (TRA)	Suggests that a person's behavior is determined by their intention to perform the behavior and that this intention is, in turn, a function of their attitude toward the behavior and subjective norms
Ajzen (1985) and Ajzen (1991),	Theory of Planned Behavior (TPB)	The Theory of Planned Behavior (TPB) predicts that planned behaviours are determined by behavioural intentions which are largely influenced by an individual's attitude toward a behavior, the subjective norms encasing the execution of the behavior, and the individual's perception of their control over the behavior.
Taylor and Todd (1995)	Decomposed Theory of Planned Behaviour	The Theory of Planned Behavior states that our intentions to perform a certain behavior (such as the adoption of a new technology) arise from three major categories of influence: (1) our attitudes towards the behavior, (2) the influences (norms) of our social circle, and (3) our perceived level of control regarding the behavior.
Davis, Bogozzi and Warshaw (1989)	Technology Acceptance Model (TAM)	Technology Acceptance Model (TAM; Davis, 1989) has been one of the most influential models of technology acceptance, with two primary factors influencing an individual's intention to use new technology: perceived ease of use and perceived usefulness.
Venkatesh and Davis (2000)	Technology Acceptance Model 2 (TAM2)	TAM2 incorporates the subjective norm, voluntariness, and image, which are three interrelated social forms. These forms help to determine if an individual will adopt or reject a new system

Venkatesh and Bala (2008)	Technology Acceptance Model 3 (TAM3)	TAM3 presents a complete nomological network of the determinants of individuals' IT adoption and use

Source: Lai (2017:16)

Skafi & Yunis, Zekri (2020) acknowledged that the TAM is one of the most well-accepted technological adoption models for consideration in many circumstances.

The prominence of the TAM model can also appear apparent when considering that it has given birth to two other models (TAM2 and TAM3). The proposed study will be based on the original TAM framework as a lens for the interpretation of the factors that impact the adoption of AIS in SMEs. The TAM models assume subdued technological adoption is due to the perceived usefulness of the technology (Lai, 2017). In the same way, the proposed study will explore the possibility that the adoption of AIS systems is based on the perceived usefulness of the AIS.

In other words, for SMEs to adopt AIS, the motivation can be expected to rely heavily on its perceived usefulness. Therefore, another dimension of the TAM model is the perceived ease of use. In this way, it is argued that if AIS is perceived as challenging to use, its adoption may be low compared to circumstances when its perceived ease of use is high.

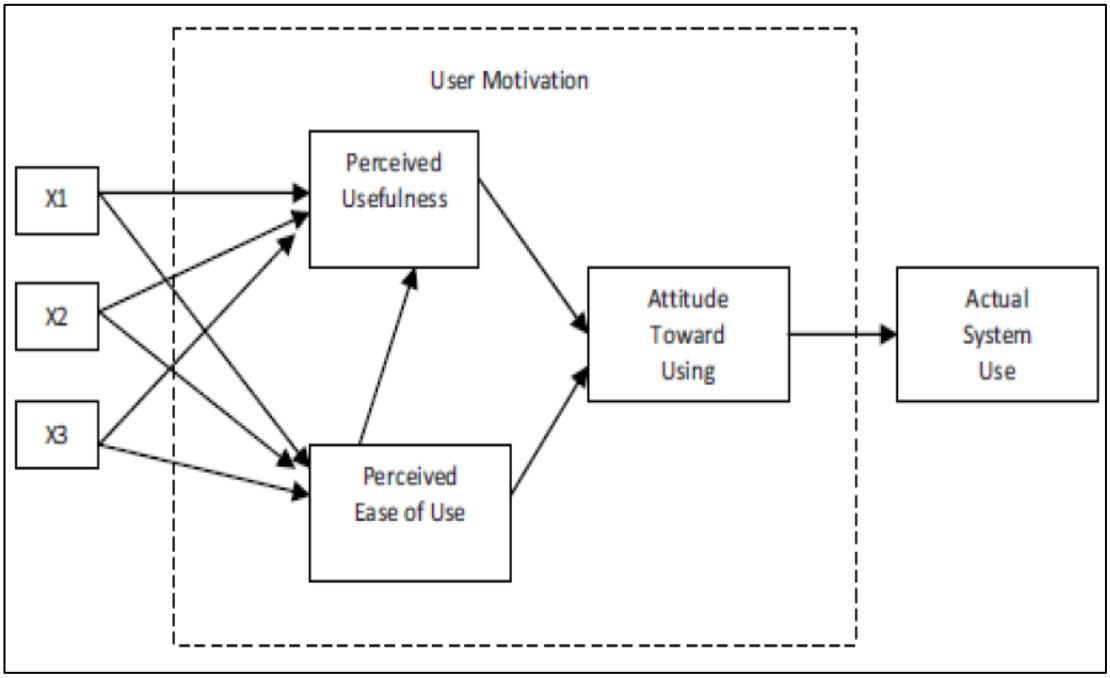


Figure 2.2: The original TAM framework

Source: Bakar, Talukder, Quazi & Khan (2020:215.)

Other theories of general accounting are stated in Skafi & Yunis, Zekri (2020), including shareholder primacy theories, stakeholder theory, legitimacy theory, agency theory and instrumental theory. These theories are important in understanding the accounting function and inferring its best standards and practices. The proposed study will use the TAM technological adoption model with reference to the accounting theories stated above to ensure in-depth appreciation and understanding of the phenomenon under investigation

2.6 Summary

This chapter has considered literature related to the challenges faced by SMEs in Budgeting and Costing. These challenges include the lack of effective budgeting and costing skills, which are essential for effectiveness. SMEs also lack the capacity to use various technologies, as discussed in this chapter. The next chapter considers the data collection approach for this study.

CHAPTER 3
RESEARCH METHODOLOGY

3.1 Introduction

In the preceding chapter, a review was made of available literature for this study and previous scholarly works concerning the budgeting and costing function of SMEs in the construction sector were reviewed. This was essential for an in-depth appreciation of the study. Literature on budgeting and costing challenges of SMEs has reviewed prevailing literature of research interest exposed. The review was essential in providing methodological directions that were critical in developing and setting out the research design of this study. This chapter considers key methodological issues related to this study, and the scientific approach adopted for the study is also enunciated. This Chapter attends to the study's methodology by describing its philosophical foundations and the associated research design, data collection methods and fieldwork. As explained in this chapter, the methodology is closely linked to the research objectives and questions stated earlier. The study sought to establish the budgeting and costing challenges that SMEs face in managing their enterprises. As noted in the literature review, these challenges tend to be of such magnitude that they are likely to account for the high failure rate of small businesses in South Africa. This chapter attends to these objectives by explaining methodological aspects that include sampling methods, research instruments and data collection methods used. The merits and demerits of the research instruments used are also provided. The chapter also specifies the step-by-step procedure of data collection and the methods of data analysis used. In setting out the research methodology, the literature review, as conducted in the previous chapter, provided essential elements for consideration by revealing how previous studies were conducted and highlighting focus areas for the essential concepts of this study.

3.2 Paradigm/Philosophy

Philosophically, the study owed itself to critical realism, which believes that multiple realities can be investigated using different methods (Krauss, 2005; Scotland, 2012). Fletcher (2016) further asserts that critical realism as a paradigm emerged from the debates attributed to positivism and constructivism. Critical realism became an alternative that embraced both positivism and constructivism to create a hybrid philosophy that has increasingly become powerful over the years. Critical realism has been argued to embrace

all major research philosophies, particularly positivism and constructivism. The search for scientific truth has resulted in various paradigms and philosophies which have been popularised over the years (Shah & Khaskhelly, 2018). Such philosophies as positivism, constructivism, pragmatism, and critical philosophies have been discussed over the years. The present study was aligned with the philosophy of critical realism, which was deemed suitable because of its emphasis on the need for multiple realities in exploring complex phenomena such as SMEs, given concern for their high failure rate over the years. In addition, the philosophy of critical realism was considered necessary in providing reliable, in-depth information to achieve the research objectives, given the nature of the construction sector.

In the first chapter, the focus and aim of this study were on the problem of the high failure rate among SMEs in the construction sector and the objectives were set to explore their budgeting and costing function. Prior research had established that financial management, including budgeting and costing, was a factor in the success and survival of SMEs. As is the tradition in management and social sciences research, the philosophical assumptions related to the nature of reality, as well as how it can be known, represent an essential departure point (Shah, et al., 2018). As such, this inquiry was underpinned by certain philosophical positions on the nature of reality which became the foundations for the research design and related methodological procedures to which the study adhered. Whereas some scholars describe the set of assumptions from which research is derived as worldviews, some consider them as paradigms (Christensen et al., 2015)

Creswell & Creswell (2018) explain the necessity for the study's paradigm to be set at the beginning guiding the researcher and allowing for effective interpretation and comprehension of a study by those interested in it. Over the years, scientific inquiry has considered Positivism and Constructivism as the principal research paradigms for understanding world phenomena (Heeks, Ospina & Wall, 2019). Consequently, there has been recognition that researchers can be positivistic or interpretivist. Positivism studies are aligned to confirmatory or investigative as well as to be predictors of general patterns or natural laws (Shah, et al., 2018). Those that are constructive, or interpretivist are based on reality as it is interpreted or made by observers and people involved (Medina, 2011:4). Roots of constructivism and interpretivism have been traced to anthropology in the 1970s. The basis of the study was to appreciate phenomena by being involved or from those involved. As the present study was founded on the critical realist philosophy, which is

based on multiple realities, both the philosophies of constructivism and positivism were considered suitable and adopted within the collection of both quantitative and qualitative data to understand the SMEs' budgeting and costing function in the construction sector in Cape Town.

Whereas the positivist paradigm is notably based on quantitative data and the use of numerical measures in understanding phenomena, the philosophy of constructivism owes itself more to the qualitative and subjective aspects concerning inquiries of social behaviour (Heeks, et al., 2019). It is significantly based on the analysis of perceptions, attitudes, and other subjective social studies basics. Essentially, researchers who adhere to the philosophy of constructivism provide a better understanding and interpretations of the subjective dimension of world phenomena, while positivist researchers are often considered objective (Scotland, 2012). Regarding budgeting and costing management studies among SMEs in the construction sector, researchers adhering to the interpretative paradigm often ensures that they increase their interaction with SMEs in their operational environments and tend to collect multifaceted and rich data. As reviewed in Medina (2011), recent developments in the interpretative paradigm suggest a need for the researcher to also be subjectively intelligent in interpreting and analysing data. The merging of subjective views is, thus, a critical component of the constructivist process of data interpretations. Developments related to the interpretative research tradition have been linked to the emergence of the critical dimension, which is gaining dominance. It is widely accepted that studies oriented to the critical research philosophy have become popular in studying marginalised and underprivileged groups and sections of society.

Consequently, researchers who contend that SMEs are a disadvantaged group within business studies tend to find the critical paradigm relevant for their inquiries. A significant component of critical studies relates to the interest of a study in respect of either the marginalised group or some other stakeholder (Kincheloe & McLaren, 2000).

As explained in Kincheloe & McLaren (2000), the critical research tradition has been notable in exposing injustices and policy components that tend to favour powerful groups at the expense of the weak. Over the years, SMEs have faced many challenges in their operations. In addition, they have been found to suffer from many problems in the operational environment compared to big businesses. Therefore, the critical paradigm as the basis of research for SMEs seems relevant.

The collection of quantitative Likert type data for the study was considered appropriate within the positivist paradigm which assumes that there is an objective truth that can be measured and described scientifically in the world. The data collected from this study allowed for a quantifiable overview of budgeting and cost control challenges faced by construction SMEs, answering one of the first objectives of the research report. This view is considered in the literature review, which was done earlier. The high failure rate of SMEs across many nationalities and regions was indicative of some broad and general elements which can be objectively analysed across all SMEs. At the same time, the study also considered that context-specific factors could best be understood through interaction with small businesses. As a result, the study followed the critical realist philosophy. It was taken that knowledge of the budgeting and costing challenges that the SMEs face can be understood through an appreciation of both philosophies.

Critical realism is a philosophical stance that envisions positivist and constructivist worldviews as being complementary rather than conflicting (Danermark et al, 2016). It holds that positivist worldviews provide an understanding of objective reality, while constructivist worldviews provide an understanding of human interpretation and understanding of that reality. Critical realism aims to integrate the best aspects of both worldviews, seeking to understand the underlying causes of social phenomena while also taking into account the ways in which human perception and interpretation shape our understanding of those phenomena (Danermark et al, 2016).

In terms of research methods, critical realism can employ both quantitative and qualitative data to address research problems (Creswell, 2018). For example, it can use survey data to quantify the prevalence of a phenomenon and interview data to understand the experiences and perspectives of individuals affected by that phenomenon (Bryman, 2018). Additionally, critical realism encourages the use of case study method, which is a research method that allows the researcher to investigate a particular phenomenon in its real-life context (Yin, 2018).

Critical realism also emphasizes the importance of triangulation, which is the use of multiple methods and sources of data to verify and cross-check findings (Sarantakos, 2018). This helps to ensure that the research is robust and that the findings are not the result of a single perspective or method. The specific research approach and research design that was adopted for the study are as discussed in the paragraphs that follow.

3.3 Research Approach

Consistent with the critical research paradigm, the study collected both qualitative and quantitative data. The quantitative and qualitative research approaches are the dominant research approaches that have been prominent in scientific inquiries over the years (Christensen, et al., 2015). Criticisms of reliance on one of these approaches have led to the emergence of the mixed approach, which combines both quantitative and qualitative data. The mixed research approach is often considered to be important in triangulating research findings and increasing the validity and or reliability of a study, given the advantages of the mixed research approach. Creswell and Creswell (2018) assert that the mixed methods or hybrid stems from considerations of whether a single approach can adequately attend to the nature of specific enquiry and where one approach may not yield strong evidence to arrive at expected conclusions. In line with the need to triangulate quantitative and qualitative data, this study collected both quantitative and qualitative data in order to have a multi-faced view of the budgeting and costing challenges facing SMEs in the construction sector. The reliance on both qualitative and quantitative data is more rigorous and thorough in ensuring the strength of the findings of a study (Krauss, 2005).

Moreover, triangulation of quantitative and qualitative data is methodologically appropriate to offer an in-depth appreciation of the phenomenon under investigation (Christensen, eta al., 2015). As a result, the triangulation of research approach has gained popularity and importance as an essential research method in the social sciences. The use of both quantitative and qualitative data to increase understanding of phenomena offers significant benefits such as trustworthiness and rigour in the social sciences (Tashakkori & Creswell, 2007). In the analysis of the budgeting and costing function of SMEs, the mixed research approach can be expected to increase understanding and to generate new information that can increase the viability and competitiveness of SMEs.

Hancock (2009) describes qualitative research as limited to data collection in non-numerical means. At the same time, quantitative research is limited to collecting numerical data, and combining the two approaches is valuable. In respect of the arguments in favour of the mixed method approach described in this section, this study adopted it to ensure that the problem of the high failure rate of SMEs is adequately understood. As argued in the literature review, SMEs have been critical in the economic development of many nations and studies that adequately foster their viability are critical

3.4 Research Design/Strategy

Among the many research designs available to researchers, this study was based on the multi-case study design involving collecting data from several SMEs resembling the same growth situation. The multi-case study design involves the selection of several units that resemble phenomena of interest and instituting inquiry on them (Hancock, 2009). The multiple cases of such a study allow conclusions to be made on how a phenomenon of interest manifests itself, and the observable patterns descrying it can be explored. The case study design is appropriate where detailed, in-depth data about a phenomenon is required (Christensen et al., 2015). Creswell and Cresswell (2018) also advise using the case study design where detailed, rich information is required to attend to the unique circumstances experienced by units of analysis. This study sought to provide a dimension from previous studies and considered the need for context-relevant data in addressing the study's aims. Therefore, the multi-case study design was adopted. In addition, the data collected for analysis in this study was both qualitative and quantitative. The theory on research designs identifies notable research designs that have been used over the years, and these include cross-sectional, historical, exploratory, descriptive, longitudinal, experimental, observational, philosophical, sequential, exploratory, ethnographic case study, grounded theory and others which are a combination of one or two. Among these designs for scientific inquiry, the present study adopted the multi-case study design characterised by the in-depth and detailed analysis of phenomena of interest as it manifests across the identified cases (Creswell, Hanson, Plano & Morales, 2007). In describing a multi-case study, Thomas (2021) explains that a lively and realistic design is relevant across disciplines and adequately attends to phenomena of interest by generating context-based data. Researchers who adopt the case study design find it useful where there is a need for context-rich data and where a deep analysis of an issue is required. Given the background regarding challenges faced by SMEs, this design was deemed suitable. Furthermore, the multi-case study design was considered in this study to be cost-effective and convenient.

Consistent with the critical realist philosophy as explained in Krauss (2005), the study was also based on the descriptive research approach whereby quantitative data was triangulated with qualitative data in the form of open-ended questions within a questionnaire to effectively describe the budgeting and costing challenges faced by small businesses. This way, data was sought to describe the budgeting and costing challenges

of SMEs. The triangulation of data was deemed to be strong and appropriate for the study as it offers advantages from both quantitative and qualitative data. The descriptive research design was more appropriate for the study as it allowed for collecting in-depth triangulated data in response to the research questions. Since the purpose of the study was to describe the current conditions of the phenomena, this research design was regarded as appropriate in attaining the study's objectives as formulated earlier. The current study's focal point is budgeting, and cost control challenges faced by SMEs on project delivery projects in randomly selected construction SMEs based in Cape Town. The descriptive design offers a high degree of representativeness and makes it simple for a researcher to collect participant feedback. To accomplish the study's objectives, the quantitative approach to data allowed for adopting budgeting and cost control to impact project delivery through quantitative tools. At the same time, the qualitative dimension of the design was also essential to obtain a more people-centred view of reality. In quantitative research, the researcher decides what to study, asks a specific, narrow question, collects quantifiable data from participants, analyses these numbers using statistics, and investigates in an unbiased and objective manner (Christensen, et al., 2015). In contrast, qualitative data allows for explanations and detailed descriptions of phenomena.

3.4.1 Data collection/fieldwork

The data collection process involved the face-to-face distribution of questionnaires to identified SMEs selected from the construction sector in Cape Town. The definition of an SME from the Small Business Act of 1996 was used to identify SMEs. SMEs exist in various and site visits are considered important to ensure the effective collection of data. Therefore, major construction sites in the Cape Town area were visited to identify and seek suitable SMEs willing to participate in the study. Contact with SMEs to seek their consent and willingness to participate faced Covid-19 challenges, and attempts were made to interact with the SMEs through electronic methods. However, it was found that the SMEs were unwilling the use electronic interactions. The reasons for unwillingness to rely on electronic methods seemed to be the lack of adequate electronic systems and infrastructure, while cost was also mentioned. Finally, SMEs that agreed to participate in the study were requested to give dates during which they could be visited and for data to be collected. The SMEs also provided a person who could respond to the questions for the study.

In many cases, the owners of the SMEs were most knowledgeable and appropriate in explaining the budgeting and costing function of the SMEs. These supported literature findings are that most SME owners independently performed their budgeting and costing functions. Data was then collected on the agreed dates, and the respondents completed the question in fifteen to twenty minutes as expected. In some cases, the completed questionnaires could not be collected on the same day, and a date was also set for collecting the completed questionnaires.

3.4.2 Population

A population is a group of possible study units of respondents capable of providing data that is of interest to a study (Bacon-Shone, 2015). Additionally, Polit and Hungler (1999) explain that the term population describes a distinct group of individuals, subjects, or objects with a combination of specific attributes that make them capable of providing certain data. The population of a study relates to the total number of units that are relevant in providing the data required in a study (Zainal, 2007). This shows that the population is conceptualised as the entire possible universe from which smaller units and samples can be obtained.

The study's population comprised individuals from selected SMEs in construction involved in the budgeting and costing management function and who could provide relevant data on the Likert-type scale and open-ended questions in the questionnaire issued.

In elaborating on the population for this study, it should be noted that small business owner-managers are the principal custodians of the financial resources of a small business. As noted in the literature, they take the major financial decisions and perform the financial strategies of small businesses. As such, the study's target population was the small business owner-managers. A total of seventeen SMEs participated in the study, and seventeen owners of SMEs formed the target population. Furthermore, the case studies of SMEs in construction from which respondents were considered met the following criteria.

Table 3.1 provides an overview of the criteria used to select construction SMEs for the research study.

Table 3.1: Selection criteria for SMEs

Selection criteria	Size
Size (staff complement)	Less than 50
Year in operation	At least three years
Capitalisation	Less than 80 million rands
Location	Cape Town
Nature	Formal/non-formal

The requirement for the small business to have a complement of 50 employees was in line with the definition of a small business as found in the National Small Business Act, which was discussed in the literature review conducted earlier. In addition, the need for the small business to have been in operation for at least three years was in consideration of the high failure rate of small businesses in their first two years. The capitalisation considered in the study was also based on the description of small businesses as provided in the small business Act. The research participants for this study were limited to 20 active construction SMEs in Cape Town who had indicated their interest and desire to participate in the study. The sample for this study was randomly selected from the list of companies currently fully compliant and operating SMEs in the construction Cape Town database during the investigation. A study's population can be the units of analysis (Taherdoost, 2016), and in respect of this study, these were owners and managers of SMEs who were involved in budgeting and costing for the SMEs.

3.4.3 Sample method/technique and sample size

A sample is made up of elements fewer than the population since it represents a subset. Samples are often considered appropriate in giving data where not all population members can participate. It has been argued that, in many cases, adequately representative samples can provide data that adequately resemble the population. The major advantage of a sample is that it makes research possible in cases where the population cannot be fully interacted with and can be convenient in collecting data. In the view of Mugere (2016), a sample can provide data that resemble a population if it is carefully selected and representative, especially when quantitative studies are involved. As mentioned above, probability and non-probability sampling techniques are the primary forms of sampling considered in research.

Sampling theory recognised two types of sampling: probability and non-probability. The probability sampling procedure is also considered 'random sampling' or 'sampling by chance' as it ensures that all possible participants are selected (Taherdoost, 2016). This implies that the random sampling procedure is based on giving every element of the population a chance to be selected or chosen. Creswell and Creswell (2018) provide that probability sampling is fair and appropriate in quantitative studies as it limits bias by giving every element a chance to be selected. While non-probability sampling methods do not provide an equal likelihood of being selected to all the population members and are popular in qualitative studies, probability sampling methods dominate quantitative studies and are based on affording an equal chance of being selected to all population members.

The snowball sampling technique was adopted for effectively selecting participants for the study. Taherdoost (2016) explains that the snowball sampling technique involves selecting a few possible participants who encourage others to participate in the study, who will, in turn, provide other possible participants. This technique is suitable in cases where the population is generally small or is not adequately known. This sampling technique was deemed suitable given the nature of SMEs as a largely informal and difficult-to-know sector. SMEs can be formal or informal, registered, or unregistered, making it difficult to establish the actual numbers of SMEs operating in any area. Including all the active SME contractors in the sample is also not financially possible. Following the snowball sampling techniques, 20 SME contractors indicated their interest in participating in the study and their views were considered important in understanding the budgeting and costing function of construction SMEs.

To identify possible participants, random selection, characterised by site visits, was the procedure followed. The study was based on collecting data from owner-managers or managers of SMEs in the construction industry. Due to a lack of adequate knowledge of SMEs in the construction sector, the snowball sampling technique was adopted whereby the few SMEs who were known assisted in providing data on others who could participate in the study. The convenience and sampling techniques were also valuable in ensuring that the snowball technique was executed correctly.

3.4.4 Data collection instruments

A questionnaire with both Likert-type and open-ended questions was the primary data collection instrument used in this study to gather data on the budgeting and cost function of the selected SMEs. The collection of data through Likert scales was initiated by Rensis Likert (1932) as an important method for measuring attitudes in the social sciences. However, the Likert technique has gained prominence after its adaptation to suit broader research contexts. A questionnaire is a set of questions or items to which respondents provide information as requested (United States Census Bureau, 2012; Brace, 2004).

After completing the questionnaires, they were sorted and numbered accordingly to facilitate the data capture. Data was captured on an Excel spreadsheet. The data analysis process considered the demographics of the respondents as well as the responses provided to the five-point Likert items, which were linked to the research objectives. Additionally, thematic analysis was applied to the open-ended questions to establish emerging patterns. Finally, Atlas.ti software for qualitative data analysis created relevant network diagrams that illustrate primary data links and relationships in establishing SMEs' budgeting and costing challenges.

3.5 Demarcation/Delimitation of the Study

The study was conducted in Cape Town, South Africa. The focus was on the sustainability of small and medium construction companies. Budgeting and cost control challenges was the only factors considered contributing to SMEs' failure in the construction sector. The study did not include perspectives of failed, expired, and suspended companies. SMEs were randomly selected from the fully compliant and operating SMEs in the construction Cape Town database. Due to time and logistical constraints, this method required less time than having to visit every town in Cape Town in search of relevant businesses.

3.6 Validity and Reliability

Christensen, Johnson, and Turner (2015) explain that the reliability and validity of a study are important aspects of any scientific enquiry. Kumar (2014) explains that the concept of reliability of research instruments relates to their stability, consistency, and predictability. In this way, reliable instruments are seen as those that can produce the same results if the study is replicated under the same conditions. A parallel form of the same test provided in Kumar (2014:183) was implemented as a pilot study to ensure that the questionnaire used in this study was reliable.

Two construction SMEs from another province (the Eastern Cape province) were identified to participate in the pilot test of the questionnaire. Owner-managers from these two construction SMEs were issued with the questionnaire, and the results were reviewed. The results from these respondents were found to be consistent. There the study instrument was deemed appropriate. In addition, the test for validity considers the degree to which an instrument measures specific factors it intended to measure (Christensen et al.,2015; Creswell, 2018). A panel of research experts was engaged in analysing it and providing their opinion to ensure that the questionnaire items attended to the objectives and the research questions set in Chapter one. The analysis led to various items being removed and others being added to ensure the validity of the questionnaire. Therefore, the questionnaire was valid and suitable before the data collection process.

3.7 Data Coding and Analysis

Likert-scale items from the questionnaire were analysed and coded following quantitative processes, which are based on the numerical measure of data patterns (Williams, 2007). On the other hand, the analysis of the open-ended questionnaire items was based on thematic analysis in line with the need to reduce a large volume of qualitative data to a summarised form that precisely addresses the research objectives. The Likert data was primarily based on the analysis of frequencies to establish how certain levels of the agreeableness of the Likert statements manifested across respondents.

The data was coded on a five-point Likert scale as follows (strongly agree – 5; Agree – 4; neutral-3; disagree-2 and strongly disagree -1). The numbers were used to code and

analyse the data using the Statistical Package for the Social Sciences (SPSS) version 16. Graphs were then used to depict the significant findings of the study

3.8 Ethical Consideration

Ethics is a set of moral principles that guide what is acceptable and unacceptable, for instance, when conducting an activity. The Ethics Committee at CPUT was consulted prior to the start of this study to ensure that it is ethical. To be considered ethical, a research study must have a solid technique and fulfil the moral standards of all research participants. The research carried out the study following university guidelines. Participants were be given consent forms to sign and informed of their rights before and throughout the study. The researcher upholdered ethical factors such as participant anonymity and confidentiality. The letter included information on the study's history and research aims and ensure that participants did not have false expectations about their participation. They were also informed about the study's confidentiality and guaranteed that the data gathered will be utilised solely for research purposes. Moreover, the researcher undertook this investigation with honesty and transparency.

Research methodology generally accepts the research process, and the data collection techniques are expected to ensure that participants are safe and free from harm. In addition, it is considered important to ensure that the research process is morally deemed appropriate and does not violate any known ethical principles. In other words, participants are expected to benefit from the research process and to adhere to proper moral and ethical standards. Terreblanche et al. (2006) explain that ethical principles such as anonymity of respondents, the respect of respondents' and participation for consent are some of the most basic ethical principles which all forms of scientific enquiry are expected to honour. Therefore, research ethics guided this study in the following sections and adhered to throughout the study.

3.8.1 Informed consent

As Brace (2004) suggested and following the same principles, the first page of the questionnaire used in this study informed the respondents of the University that commissioned it, the study's title, its aims and how the study results were to be used. Respondents were required to fully understand this before indicating their agreement to participate in the study. As a result, all participants agreed to provide data fully aware of

the study's purpose, who needed the study as well as how the results of the study would be used.

3.8.2 Beneficence and non-maleficence

According to Christensen et al. (2015), beneficence and non-maleficence ensure that the study does not cause harm or victimise respondents. These principles emphasise the need to ensure that the study is better than bad to respondence. As such, where it was deemed that respondents may be affected, a different approach was adopted. The findings of this study were meant to ensure that SMEs' budgeting and costing challenges are identified to initiate processes of handling them to reduce the failure rate of SMEs in the construction sector.

3.8.3 Anonymity and confidentiality of data

Anonymity and confidentiality relate to ensuring that the names of respondents are not revealed and that the data they provide is respected and not linked to specified individuals. The names of the respondents were not requested, and their SMEs were not identified by name to ensure these principles. In addition, respondents were not required to provide any form of identification in responding to the questionnaire items.

3.9 Summary

The chapter aimed to explain the study's research design and philosophy or paradigm from which it was founded. The study was based on the critical realist philosophy, which informed the mixed research design based on a multiple case study adopted. It was explained that the study was conducted among SMEs from the Cape Town area, and a questionnaire with both open-ended and closed-ended Likert-type questions was deemed suitable and used for the study.

CHAPTER 4
DATA ANALYSIS AND PRESENTATION

4.1 Introduction

As explained in chapter 3, The study sought to establish the budgeting and costing challenges that SMEs face in managing their enterprises through the critical realist philosophy. As noted in the literature review, these challenges tend to be of significance to likely account for the high failure rate of small businesses in South Africa. To attend to these objectives, the previous chapter explained the methodological aspects that included the sampling methods, fieldwork, research instruments, and research design that the researcher used. The present chapter analyses the data collected from the study.

Both quantitative and qualitative methods of analysis were relevant. According to Klem, Shields, Smith & Bunzli (2022), qualitative data analysis associated with the constructivist approach inquiries involve the in-depth analysis of detail through an exhaustive, systematic, and reflective study of qualitative data as provided by respondents. The analysis in this chapter involved the consideration of the broad scope of views, attitudes, and perceptions of the respondent, as well as the analysis of Likert scale responses through the study of frequencies. Mohajan (2018) states that qualitative data analysis involves transcribing data, immersing oneself within the data to gain detailed insights into the phenomena being explored, constructing a data coding structure and creating links and relationships among the codes. Allan (2020) also argues that qualitative data analysis is a process that reduces data from a large chunk to a few helpful data segments.

In doing the qualitative study and as stated in Chapter One, the study sought to:

- To determine how better budget planning and cost control might help SMEs in the construction sector to enhance their performance.
- To come up with ideas for improving accurate budgeting and expense control

4.1.1 Demographical Profile of Response

The biographical information of the participants in this study is shown in Figure 4.1.

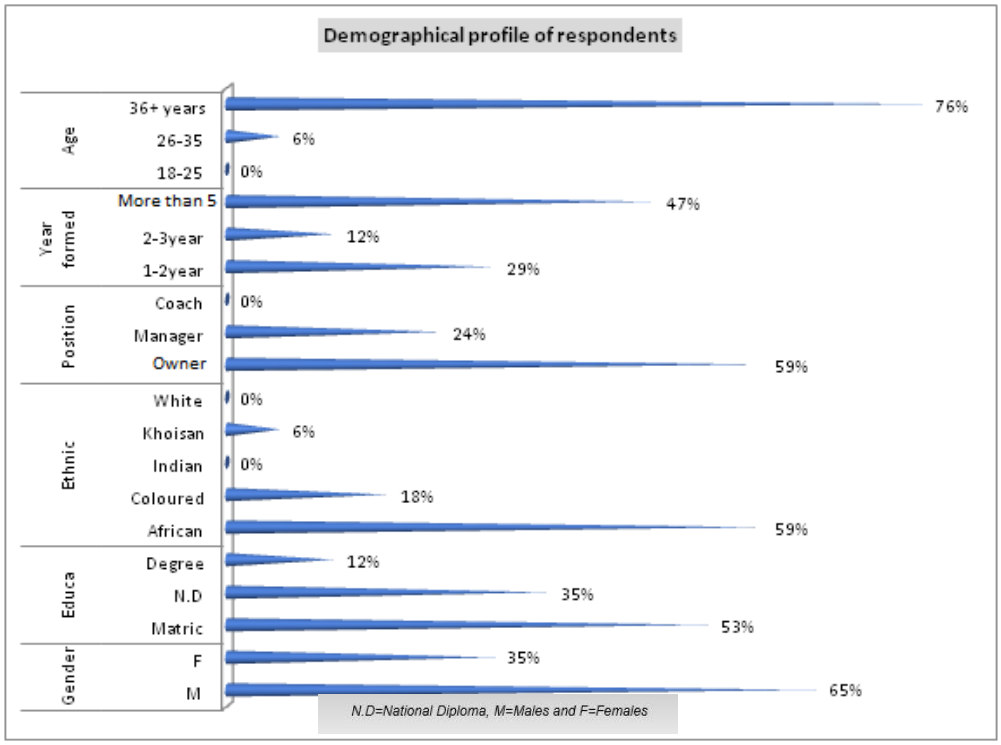


Figure 4.1: Demographical profile of respondents

4.1.2 Age distribution

The age range of the respondents is shown as shown in Figure 4.1, demonstrating that the majority (76%) of the respondents were above thirty-six (36) years of age group, suggesting that most SMEs in the construction sector are owned and managed by people in the middle age group.

4.1.3 Gender

The gender distribution of participants provided in Figure 4.1 is skewed in favour of males showing that 65% of the respondents were males while 35% were females. This implies that males seem more participative and involved in SMEs in the construction sector than females.

4.1.4 Education

Figure 4.1 indicates that the level of education of participants is skewed in favour of having matric as the level of education, with 53% only having matric and 35% having a national diploma. This indicates that many individuals choose to start their own business after matriculating rather than furthering their education or looking for employment.

4.1.5 Ethnic Group

Figure 4.1 shows that the ethnic group distribution of participants is favoured by most Africans, with 59% of respondents being Africans and 18% being Coloured. This means that Africans appear to be more active and participatory in SMEs in the construction sector than Coloureds.

4.1.6 Year Formed

Figure 4.1 shows that the year founded, or business was created distribution of participants is biased in favour of SMEs in business for more than 5 years, with 47% of respondents being SMEs in business for 1 - 2 years. This implies that SMEs that have been in business for 5 years or more appear to survive than SMEs that have been in company for 2 - 3 years.

4.1.7 Position

The position distribution of participants in Figure 4.1 is skewed in the favour of owning SMEs, with 59% of respondents being owners and 24% being managers. This indicates that owners, rather than managers, manage and operate SMEs.

4.2 Quantitative Analysis

The quantitative section of the study was based on five-point Likert questionnaire items, and the coding was as follows: 1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree. ‘Agree’ and ‘strongly agree’ were taken as positive perceptions, while ‘disagree’ and ‘strongly disagree’ were taken as negative perceptions on budgeting and costing statements explored in this study. On the other hand, the response “neutral” is taken as a neutral perception. The general responses provided by items on the various statements in the questionnaire are discussed below.

Perceptions of the statement: Has your business experienced any kind of budgeting or cost control problems before?

The responses on perceptions on the statement: Has your business has experienced budgeting/cost control problems before are shown below in Figure 4.2.

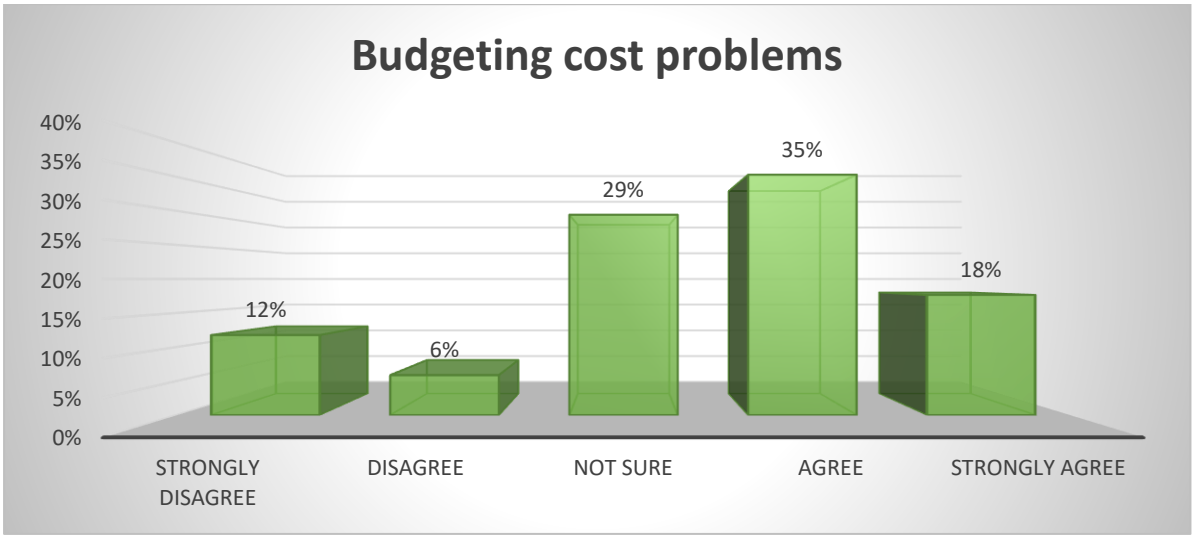


Figure 4.2: Budgeting/cost control problems

Thirty five percent (35%) of the respondents agreed, while 18% agreed they had experienced budgeting and cost control challenges in running SMEs in the construction sector. On the other hand, 29% of the respondents indicated they were neutral, 6% disagreed, and 12% strongly disagreed. These results and the literature indicate that budgeting and costing challenges affect small businesses' entire financial management processes. For example, in Nketsiah's (2018) study, it was found that financial management and other monetary issues are central to the viability and sustainability of SMEs because of the intense competition they face. Furthermore, Abraham and Schmukler (2017) claimed that the financial problem is much stronger among small businesses than in established corporations, thereby pointing to the essence of effective budgeting and costing among SMEs. As such, this study strengthens prevailing literature arguments that SMEs in South Africa face significant budgeting and costing challenges.

Perceptions on the statement: Poor budgeting and effective cost control measures cause late project delivery.

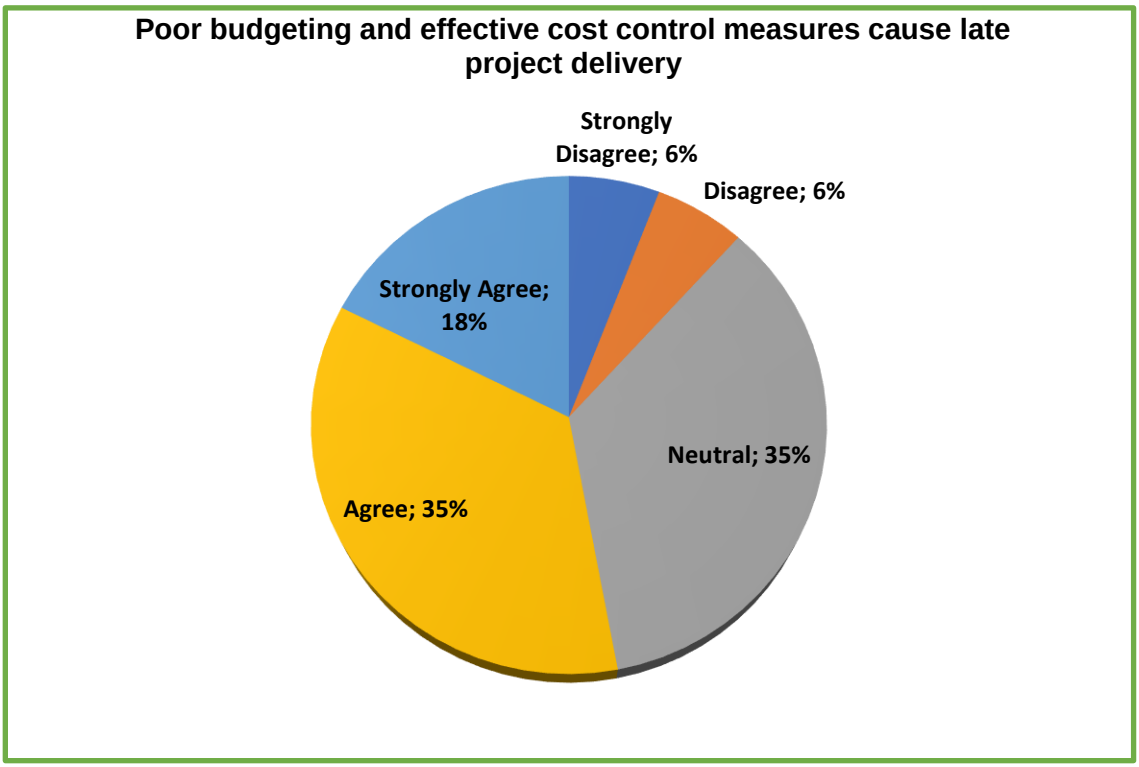


Figure 4.3: Poor budgeting and effective cost control measures cause late project delivery

Figure 4.3 demonstrate that 35% of the participants agreed, and 35% indicated neutral scores on the assertion that poor budgeting and cost control measures cause late project scores. The fact that several of the respondents were neutral on this item demonstrates that there may exist some other factors that affect project delivery. On the other hand, 18% of the respondents strongly agreed that poor budgeting and effective cost control measures cause late project delivery. The level of disagreement was 6%, and strong disagreement was low at 6%, showing that budgeting and costing are essential components of small business management that significantly affect service delivery.

Responses to the statement: Do you think that resource utilization could have a critical impact on your business?

The responses provided in this study are shown in Figure 4.4. 35% and 24% of the respondents agreed and strongly agreed that resource utilisation was a critical component that affected their businesses. Only 6% strongly disagreed, and 12% disagreed, demonstrating that resources were a critical component that affected the performance of the SMEs that participated in this study. However, 24% of the participants indicated neutral on whether resource utilisation could have a critical impact on my business or not. It can be argued that the effective management of resources significantly relies on the effective implementation of budgeting and costing procedures.

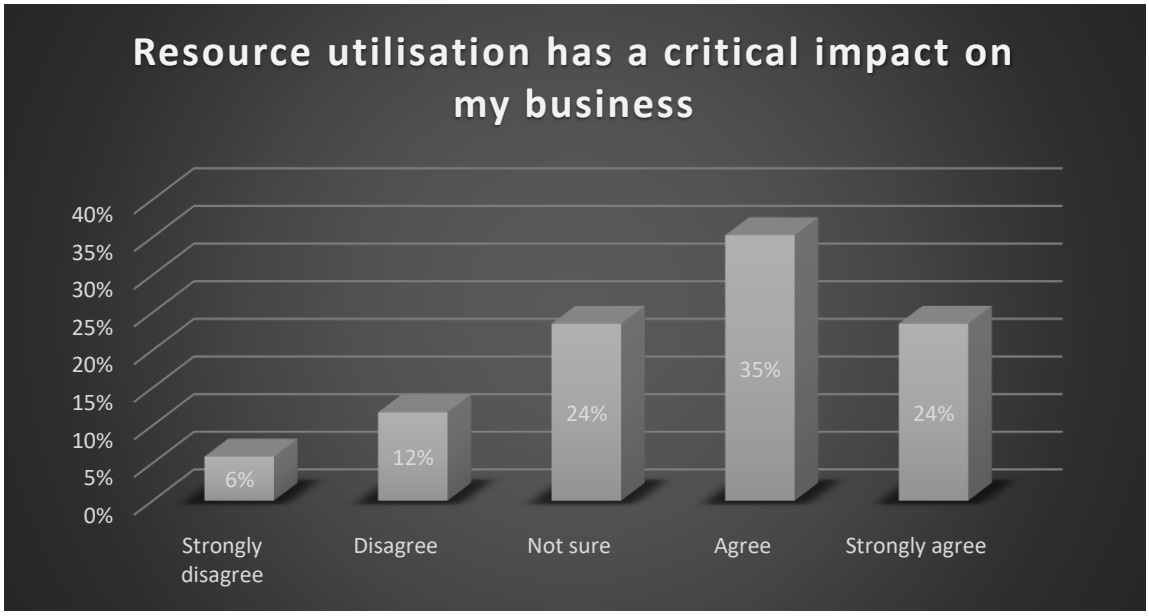


Figure 4.4: Resource utilisation has a critical impact on my business

Responses to the statement: Effective budgeting and efficient cost controls affect resource optimisation

Figure 4.5 shows that 35% respondents strongly agree and 35% of respondents agreed that effective budgeting and efficient cost controls affect resource optimisation. On the other hand, 10% of the respondents disagreed and 24% of the respondents were neutral. This shows that most respondents positively perceive the impact of effective budgeting and efficient control systems on resource optimisation.

These findings are consistent with the literature. In the literature, it has been argued that SMEs have been known to have challenges in assessing their financial positions through the effective use of relevant financial ratios, which are essential in assessing their financial status due to lack of education (Maziriri & Chivandi, 2020). For instance, ratios such as the current ratio for assessing the short-term liquidity of the SME are considered vital (Maziriri & Chivandi, 2020).

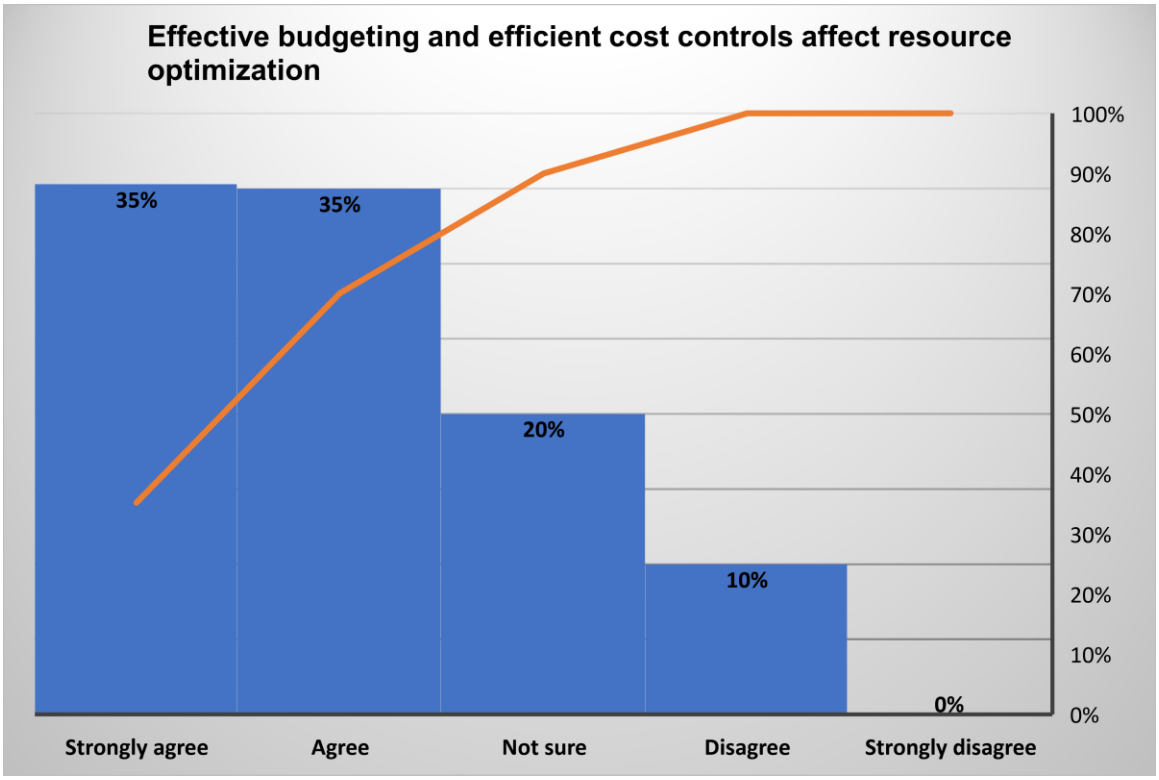


Figure 4.5: Effective budgeting and efficient cost controls affect resource optimisation

Responses to the statement: Budgeting and cost control strategies

Figure 4.6 indicates that 35% of respondents strongly agree and 35% agree that budgeting and cost management measures are crucial. On the other hand, 10% of respondents disagreed and 24% were neutral. This demonstrates that most respondents believe that budgeting and cost control strategies are critical to the success of SMEs. These findings are consistent with previous research.

It has been suggested in the literature that SMEs face difficulties in placing adequate favourable budgeting and cost management measures in place to improve their financial position due to the lack of education (Maziriri & Chivandi, 2020).

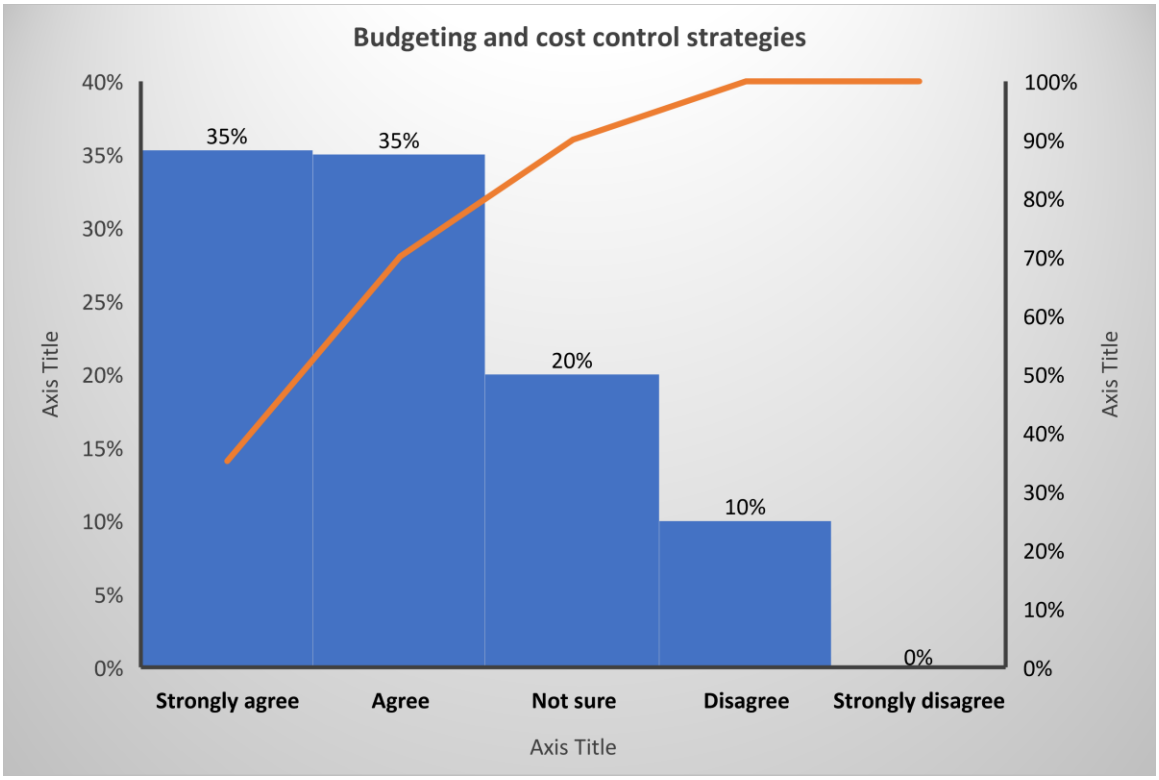


Figure 4.6: Budgeting and cost control strategies

Responses to the statement: The government has a role in reducing the failure of construction SMEs due to budgeting and cost control.

A quick analysis of the results showed the government's perceived role in reducing the failure of construction SMEs is depicted in Figure 4.7. The results demonstrate that most (41% who agreed and another 35% who strongly agreed) of the respondents opined that the government has a role to play in reducing the failure rate of SMEs due to budgeting and costing challenges. On the other hand, 24% of the respondents were neutral. This finding implies that SMEs have a greater perception that the government should play an essential role in reducing failure due to budgeting and costing.

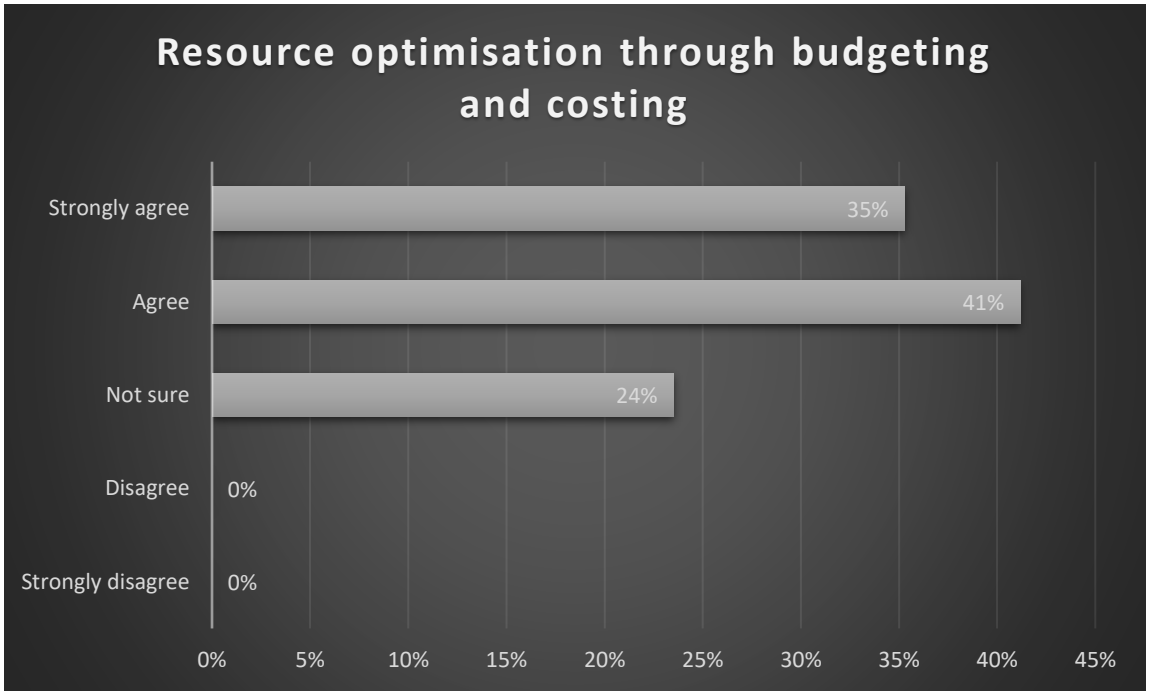


Figure 4.7: Resource optimisation through budgeting and costing

Responses to the statement: The seasonal and irregular nature of trade makes it difficult to forecast growth

Below is figure 4.8 showing the seasonal and irregular nature of trade makes it difficult to forecast growth.

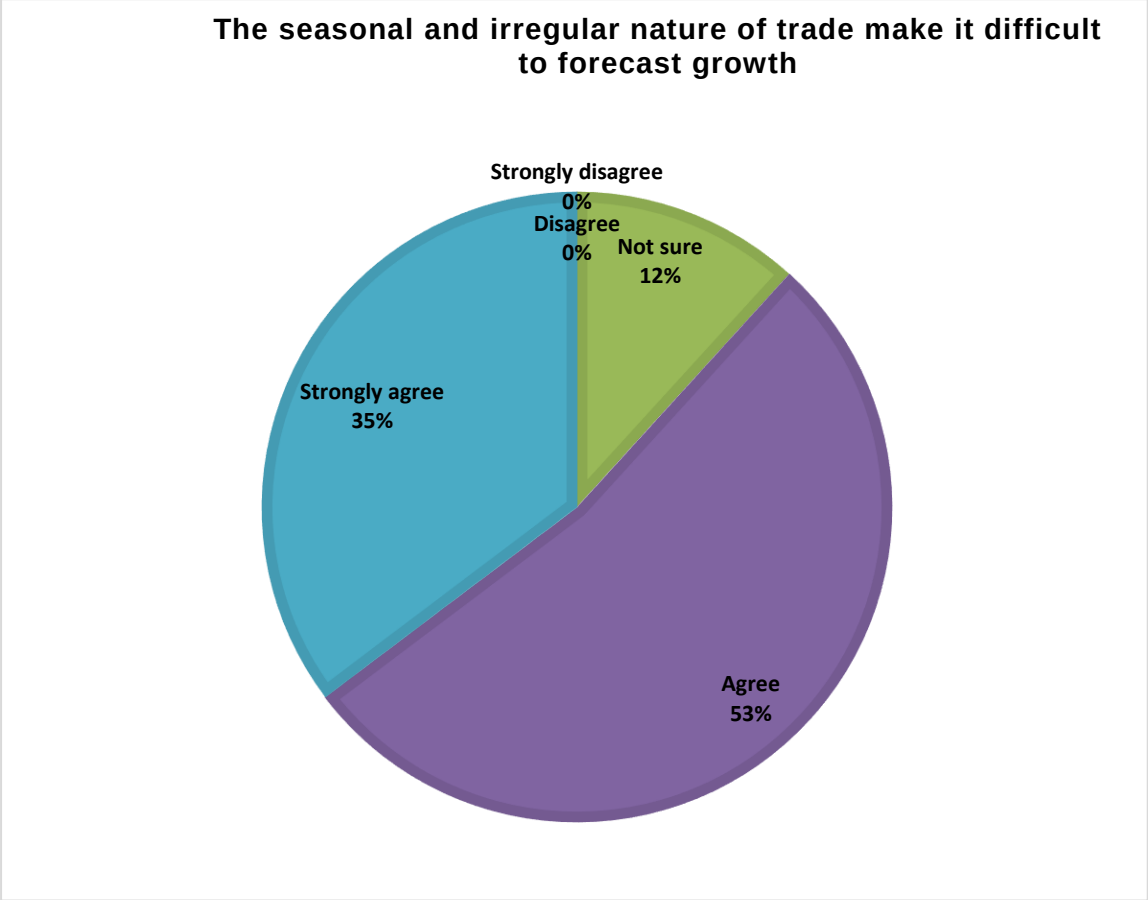


Figure 4.8: The seasonal and irregular nature of trade makes it difficult to forecast growth

The responses provided to this statement are shown in Figure 4.8. There are 53% and 35% of the respondents that agreed and strongly agreed, respectively, that trade's seasonal and irregular nature makes it difficult to forecast growth. Only 12% opted to be neutral, demonstrating that trade's seasonal and irregular nature makes it difficult to forecast growth in the SMEs participating in this study.

Responses to the statement: Lack of entrepreneurial skills

Below is figure 4.9 showing the lack of entrepreneurial skills within SMEs.

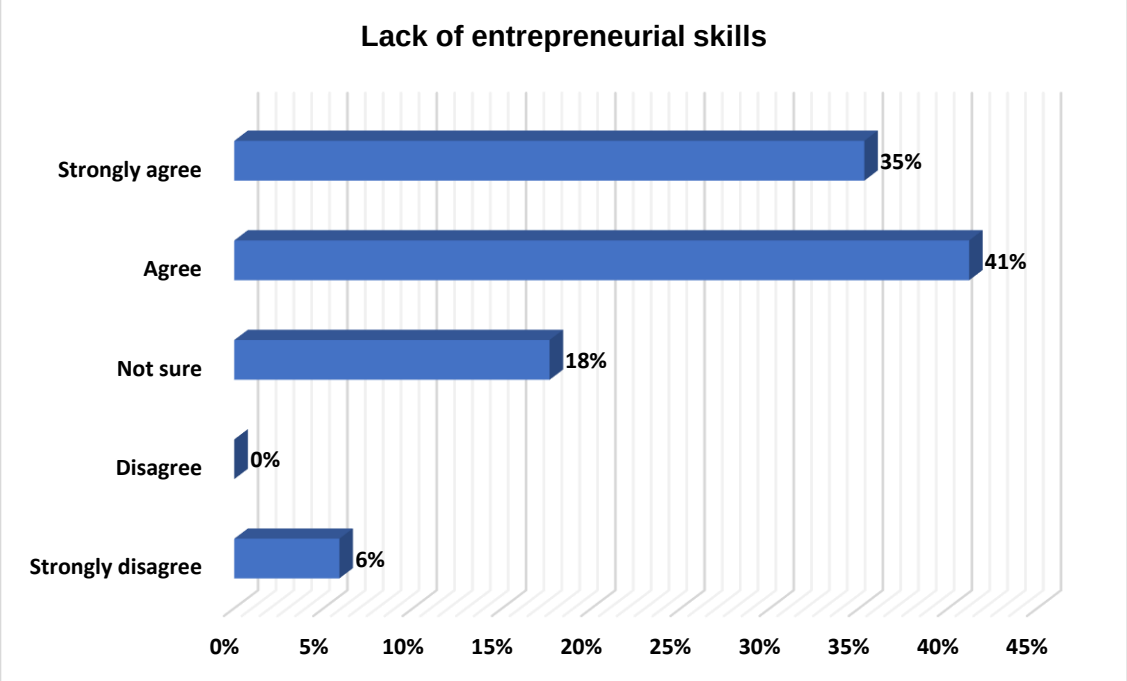


Figure 4.9: Lack of entrepreneurial skills

From the results of the data collected, as shown above, in Figure 4.9, 41% and 35% of the respondents agreed and strongly agreed, respectively, that SMEs lack entrepreneurial skills. This explains why SMEs have a high failure rate, as they lack entrepreneurial skills (Mayr, Mitter, Kücher & Duller, 2021:539-558). On the other hand, 18 % of the participants were neutral on the subject matter, while 6% strongly disagreed with the notion that entrepreneurial skills are lacking.

Responses to the statement: Lack of access to technological based prototype

Below is figure 4.10 showing the lack of access to technological based prototype

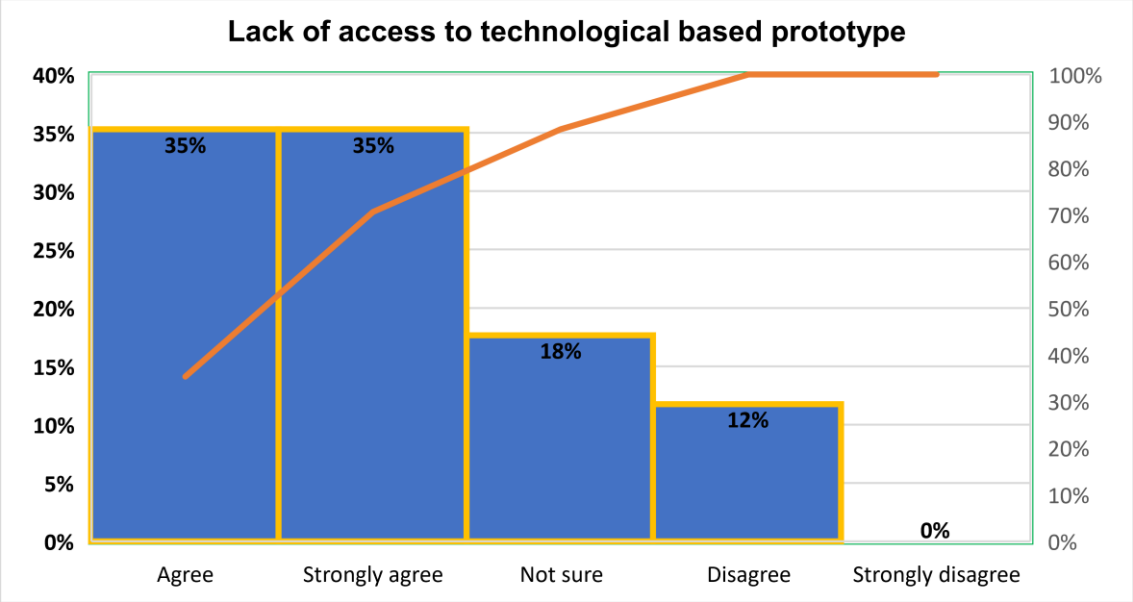


Figure 4.10: Lack of access to technology-based prototype

The responses provided to this statement are shown in Figure 4.10 above 35% and 35% of the respondents agreed and strongly agreed, respectively, that the lack of access to technology-based prototypes hinders the growth of SMEs. Only 18% opted to be neutral, whilst 12% of the selected participants disagreed, demonstrating that the lack of access to technological-based prototype growth in the SMEs caused SMEs' projects to fail.

Responses to the statement: Geographic Area-Convenience

Below is Figure 4.11 showing the geographic area convenience.

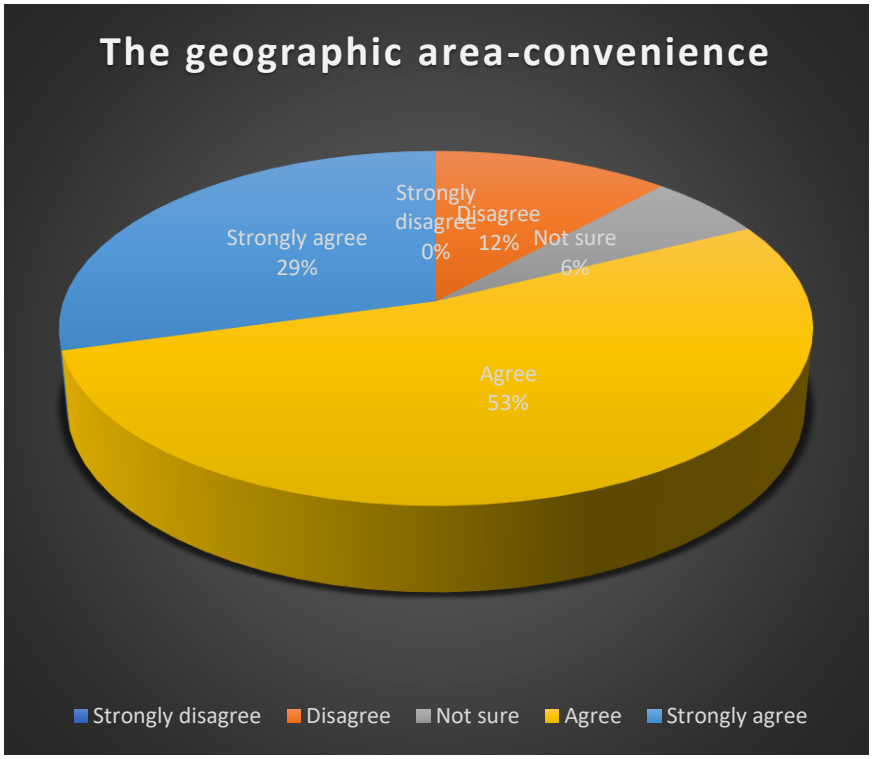


Figure 4.11: The geographic area convenience

The responses to the statement about the geographic area convenience are shown in Figure 4.11. Again, 53% and 29% of the respondents agreed and strongly agreed, respectively, that geographic area convenience plays an essential role in the performance of SMEs in construction. On the other hand, 12% disagreed, and 6% opted to be neutral, showing that the geographic area convenience poses a challenge to the development of SMEs in construction projects in the area under study.

Responses to the statement: The organisation has contingency plans for budgeting and cost control in worse scenarios that could take place

The responses provided in this statement are shown in Figure 4.12, 29% and 41% of the respondents agreed and strongly agreed, respectively, that the organisation has contingency plans for budgeting and cost control in worse scenarios that could take place. Only 6% strongly disagreed, and 24% were neutral, demonstrating that the SMEs that participated in this study had contingency plans for budgeting and cost control in worse scenarios that could take place. With the majority agreeing to the given statement, it can be noted that most of the SMEs under study had contingency plans for budgeting and cost control in worse scenarios that could take place.

Below is Figure 4.12 showing the organization has contingency plans for budgeting and cost control

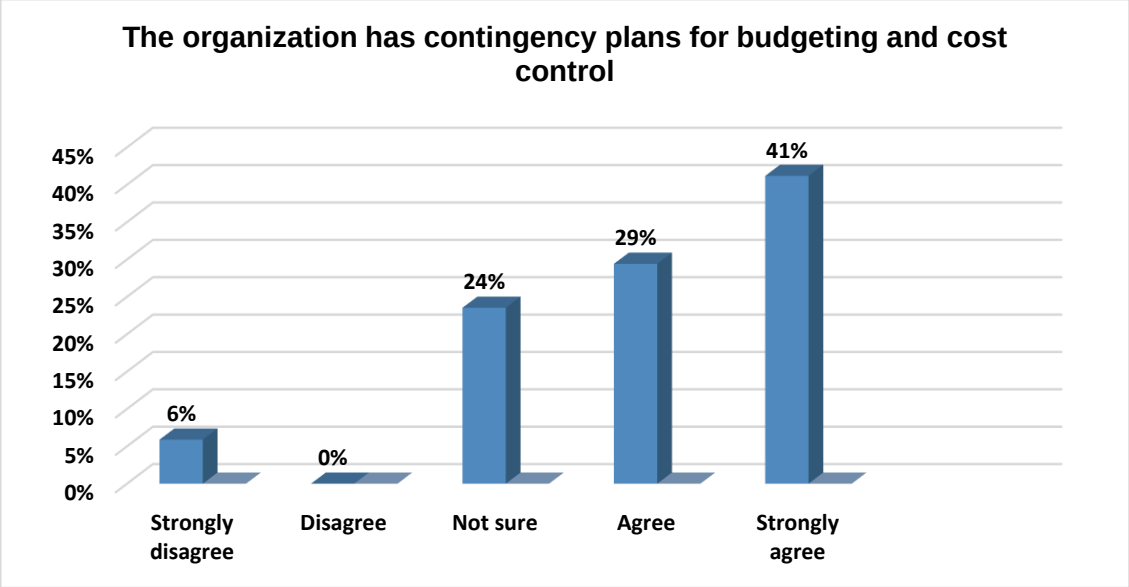


Figure 4.12: The organisation has contingency plans for budgeting and cost control in worse scenarios that could take place

Responses to the statement: Poor budgeting and cost control management affect the success of construction projects

The responses obtained in this statement are shown in Figure 4.13 below, 59% and 24% of the respondents agreed and strongly agreed, respectively, that poor budgeting and cost control management affect the success of construction projects. Only 6% strongly disagreed, and 12% were neutral, demonstrating that among the SMEs that participated in this study, only a few were not familiar with or aware that poor budgeting and cost control management affect the success of construction projects. With the majority agreeing with the given statement, it can be noted that amongst the challenges faced by SMEs in construction projects, poor budgeting and cost control management plays a significant role in the success or failure of a construction project.

Below is Figure 4.13 showing poor budgeting and cost control management affect the success of construction projects

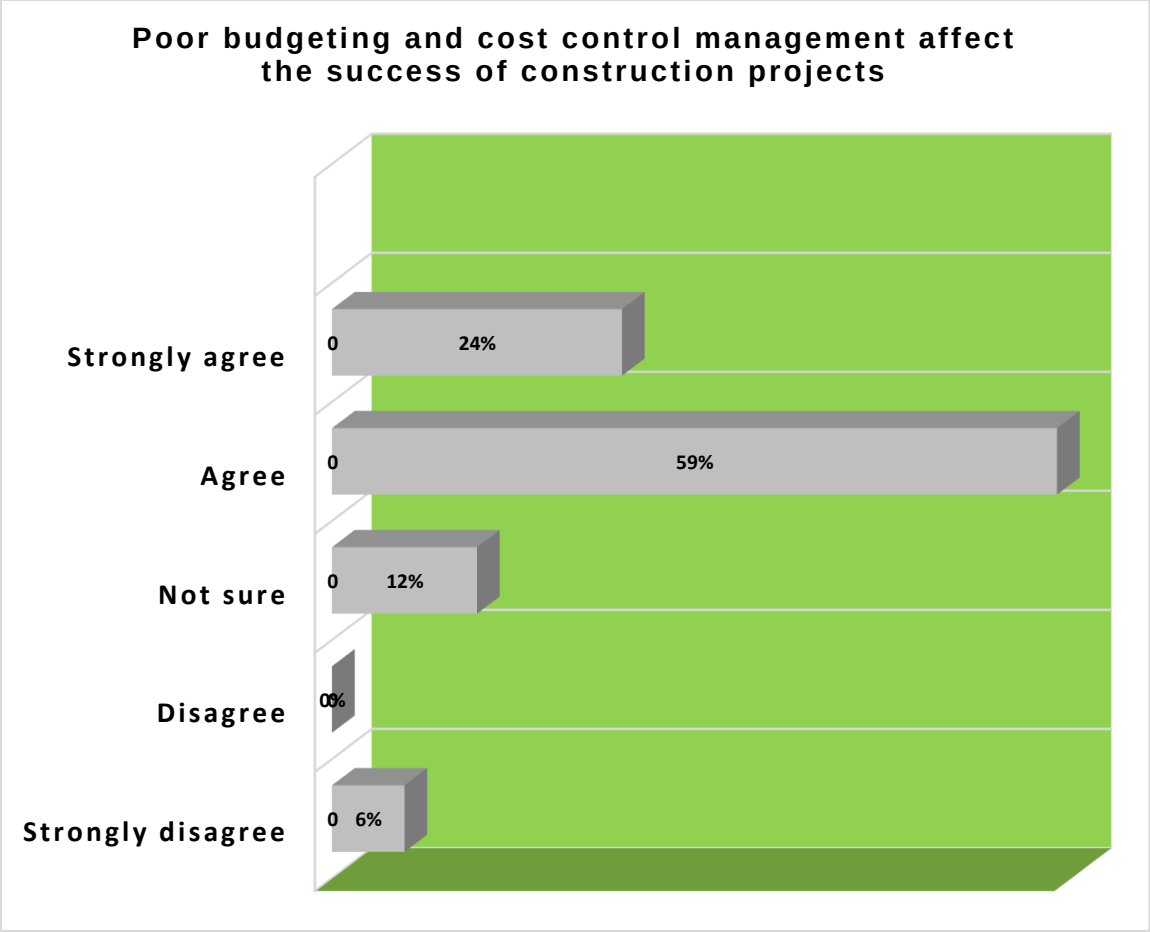


Figure 4.6: Poor budgeting and cost control management affect the success of construction projects

Responses to the statement: Lack of allocation systems and appropriate budgeting and cost control negatively impacts the overall performance of construction SMEs in Cape Town, mainly regarding project budget and completion period.

Twenty-four percent (24%) of the respondents strongly agreed that the lack of allocation systems and appropriate budgeting and cost control impacts negatively on the overall performance of construction SMEs in Cape Town. This substantial agreement was also supported by a further 59 % who agreed to the statement and 12% who were neutral, 6% strongly disagree as shown in Figure 4.14. These findings correspond to literature perspectives that SMEs tend to be characterised by a weak organisational structure which

heavily relies on the owner with just a few support employees. As a result, Ramukumba (2014) commented that the owners of SMEs tend to be overwhelmed by the various management tasks that they perform, resulting in the failure to perform appropriate budgeting, accounting, business reporting and costing functions. In addition, there are comments in the literature that most SMEs are not run like businesses. In the same manner, Kambwale, Chisoro and Karodia (2015) argued that the owner-manager arrangement of the management structure of most SMEs result in serious managerial and administration inadequacies.

Below is Figure 4.14 showing lack of allocation systems and appropriate budgeting and cost control

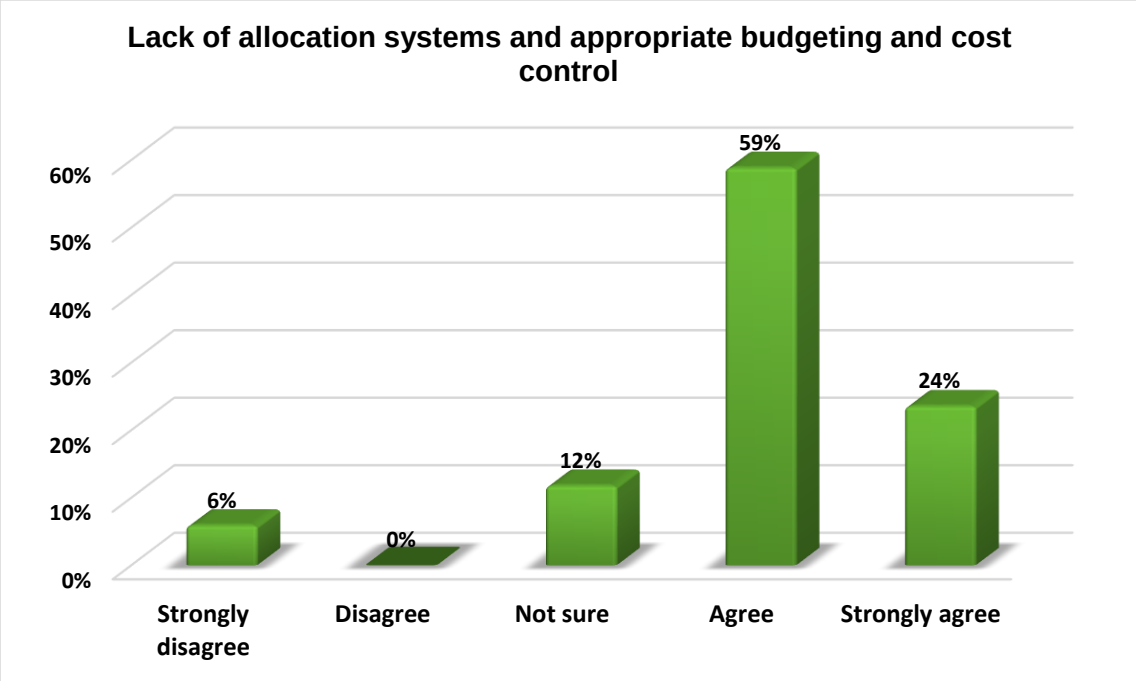


Figure 4.14: Lack of resource allocation systems and budgeting and control impact negatively on overall SME performance

Responses to the statement: Proper planning and maintenance of budgets and costs directly affect the improvement of SMEs' performance and project delivery.

The responses obtained in this statement are shown in Figure 4.15 below. The 47% and 23% of the respondents agreed and strongly agreed, respectively, that proper planning and maintenance of budgets and costs directly affect the improvement of SMEs' performance and construction project delivery in Cape Town. On the other hand, 18% strongly disagreed, 6% disagreed, and 6% were neutral, showing that proper planning and maintenance of budgets and costs directly affect the improvement of SMEs' performance and project delivery. With the majority agreeing to the given statement, it can be noted that the given statement of proper planning and maintenance of budgets and costs directly affects the improvement of SMEs' performance and project delivery.

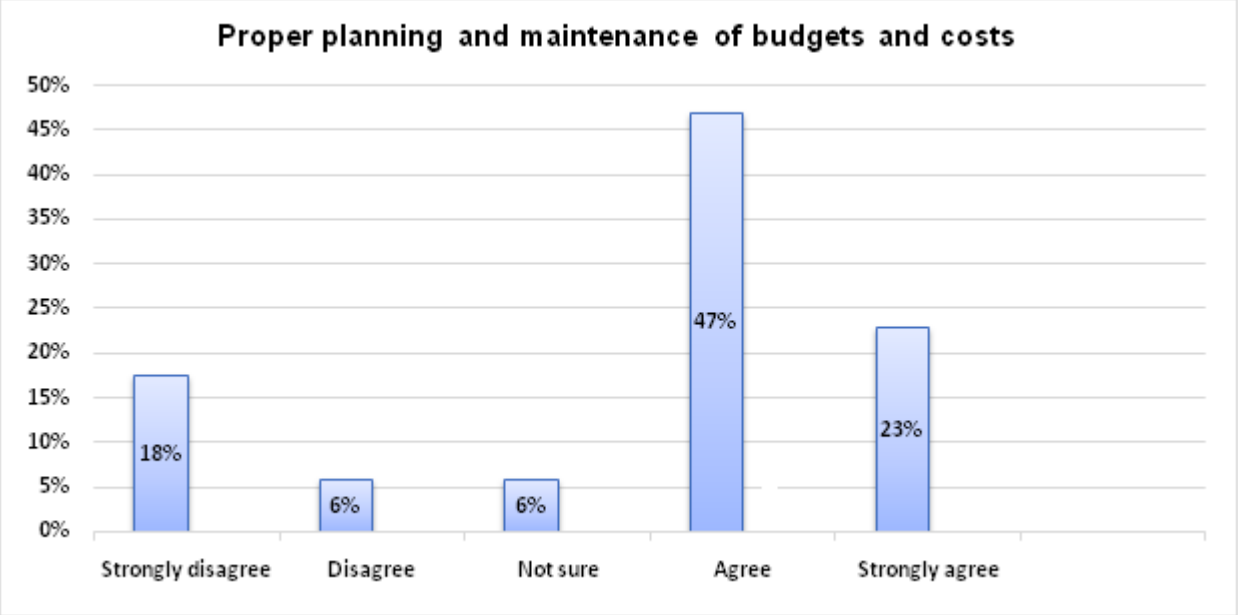


Figure 4.7: Proper planning and maintenance of budgets and costs directly affect the improvement of SMEs' performance and project delivery

Responses to the statement: Construction SMEs lack the requisite business competencies such as planning and maintenance of resources

From the response obtained from this statement, displayed below in figure 4.16, most of the employees (82%) strongly agreed and agreed with the notion that construction SMEs lack the requisite business competencies such as planning and maintenance of resources. Therefore, if such competencies are lacking in a construction project, the success of that

project is jeopardised. It should also be noted that only a few personnel (12%) disagreed with the statement, and some were neutral (6%) as they did not have a specific point of view regarding the subject matter.

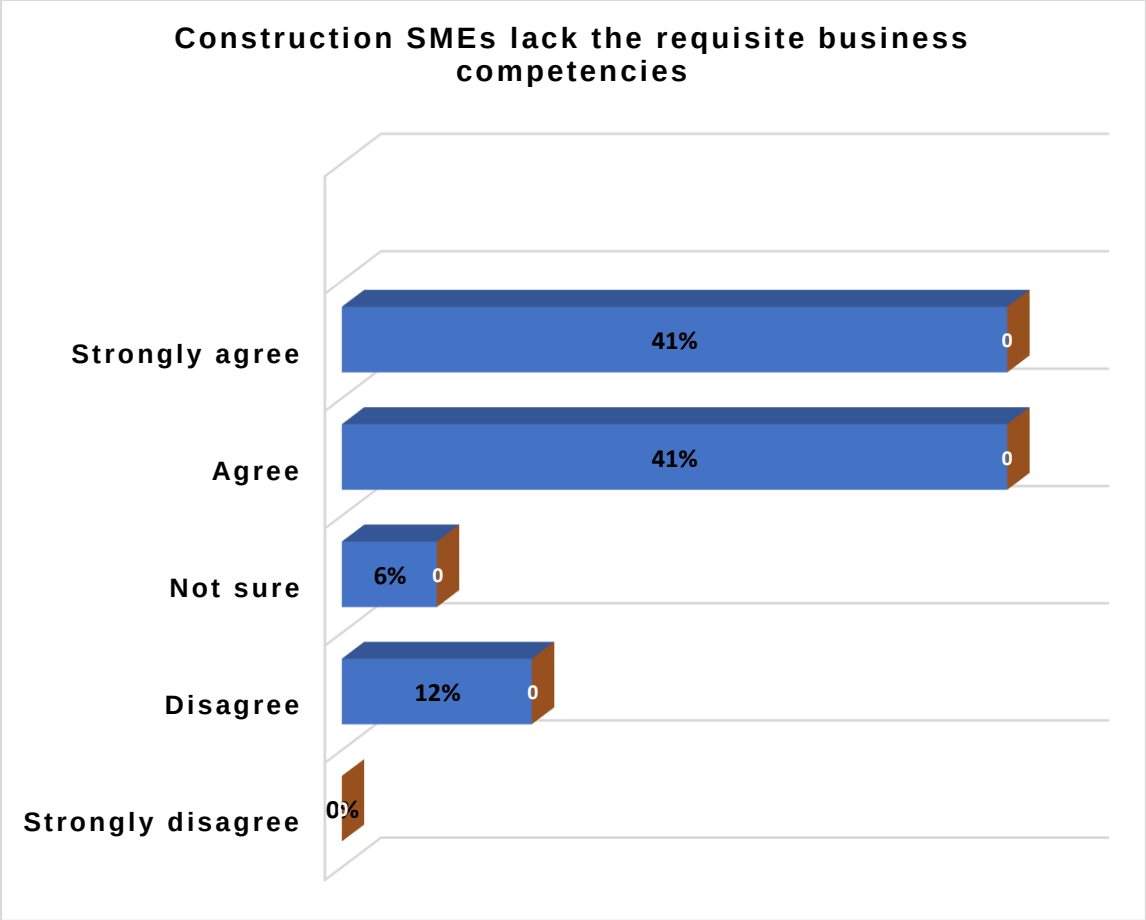


Figure 4.8: Construction SMEs lack the requisite business competencies such as planning and maintenance of resources

Responses to the statement: Developed budgeting and cost control strategies that will accurately and adequately improve project delivery.

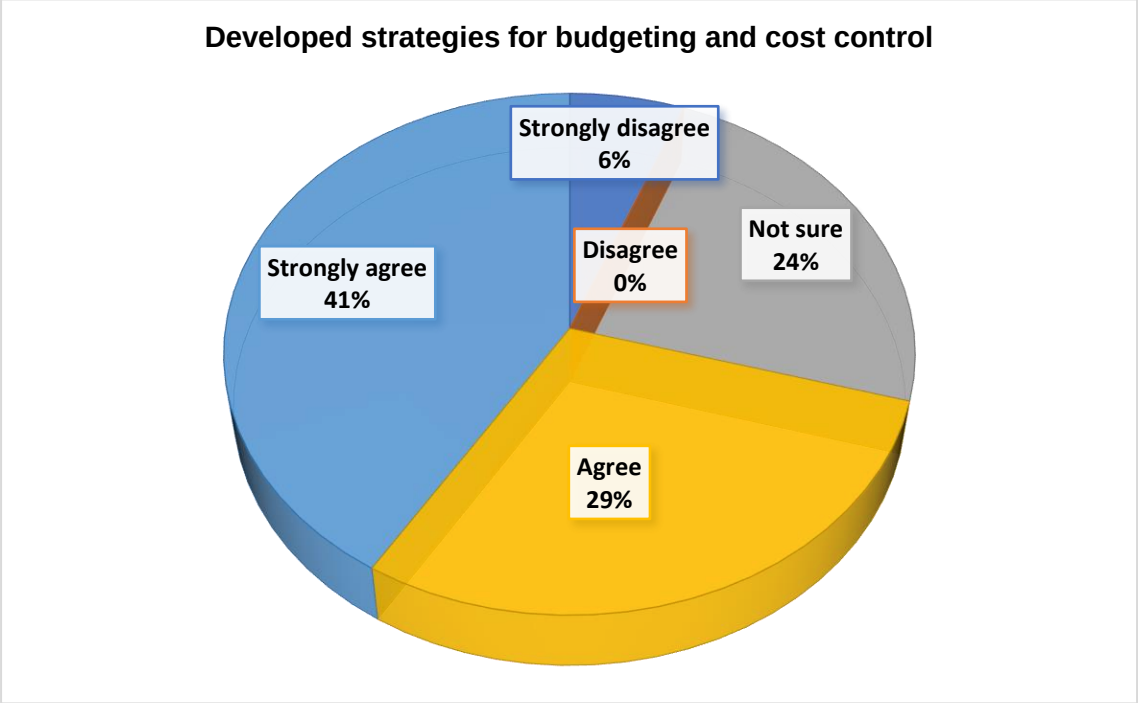
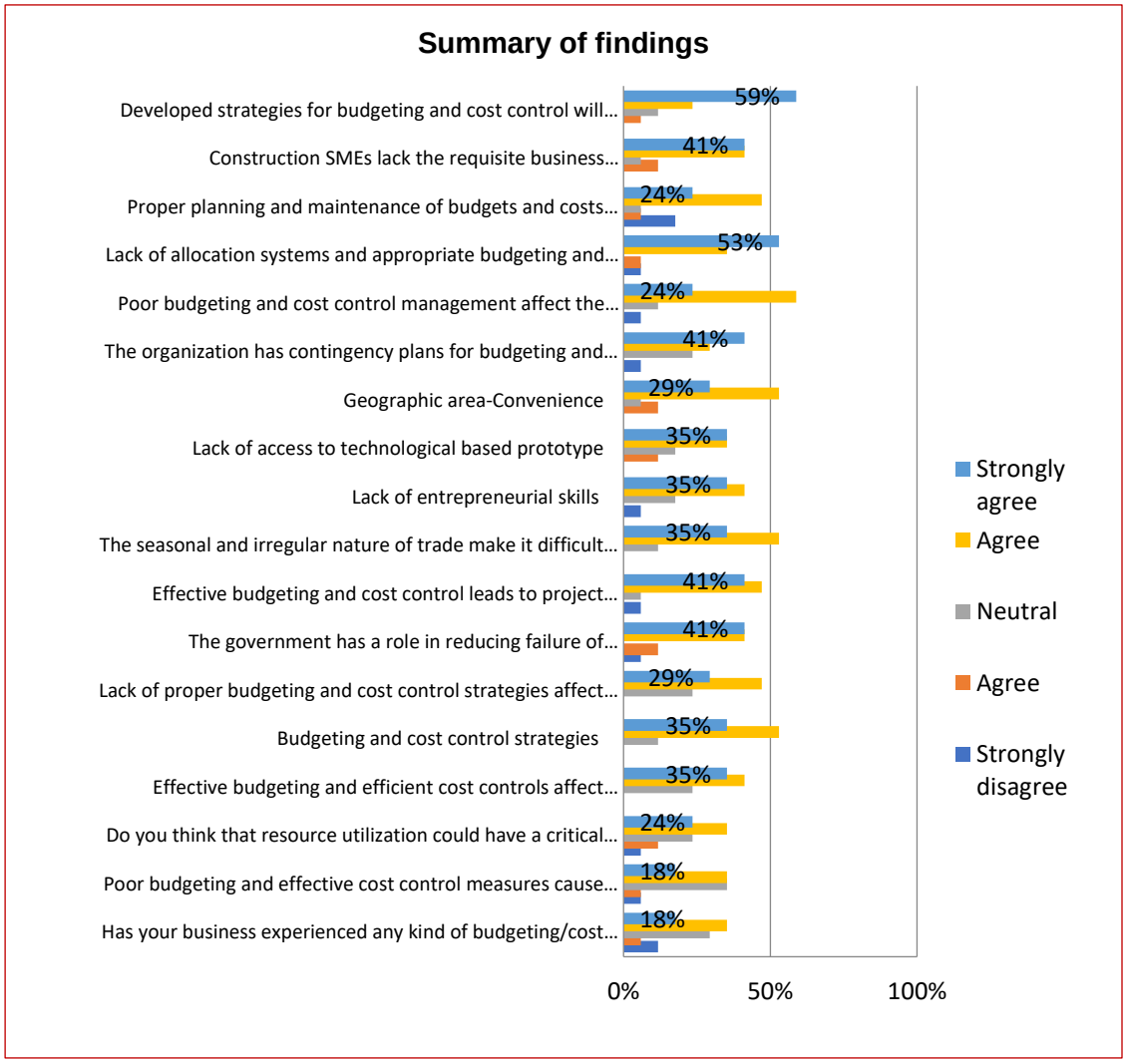


Figure 4.9: Developed strategies for budgeting and cost control will accurately and adequately improve project delivery

Figure 4.17 demonstrate that 29% of the participants agreed, and 41% strongly agreed that developed budgeting and cost control strategies would accurately and adequately improve project delivery in SMEs. There is a total of 24% of the respondents indicated not sure on the assertion under discussion, and 6% strongly disagreed. Numerous respondents agreed with the notion that developed budgeting and cost control strategies will accurately and adequately improve project delivery in construction SMEs.

4.3 Summary of Response



4.3.1 Qualitative analysis of results of the study objectives

As a mixed study, to address the research questions, the study relied on the thematic analysis to establish meaning in the qualitative section of the study. In performing the analysis, Clarke, Braun, and Hayfield's (2015) definition of thematic analysis was considered in the general steps to follow in conducting the thematic analysis. This method is a process of deciphering patterns from qualitative data and analysing them systematically to create meaning. Themes are seen as identifiable patterns from the data and have meaning that informs the research questions. This method is described as flexible in extracting themes as many themes are considered. Clarke, Braun, and Hayfield (2015) mentioned several themes that can be considered, including explicit and latent themes and inductive and theoretical themes. This study sought to consider manifest themes suggested in the data collected and included the method of constant comparison and theoretical sensitivity to allow for the effective abstraction of codes and categories into meaningful themes that addressed the study objectives.

4.3.2 Strategies for improving resource utilisation in construction SMEs.

The responses related to strategies for improving resource utilisation in construction SMEs are provided in Figure 4.18. Budgeting was one of the critical strategies for improving resource utilisation among construction SMEs.

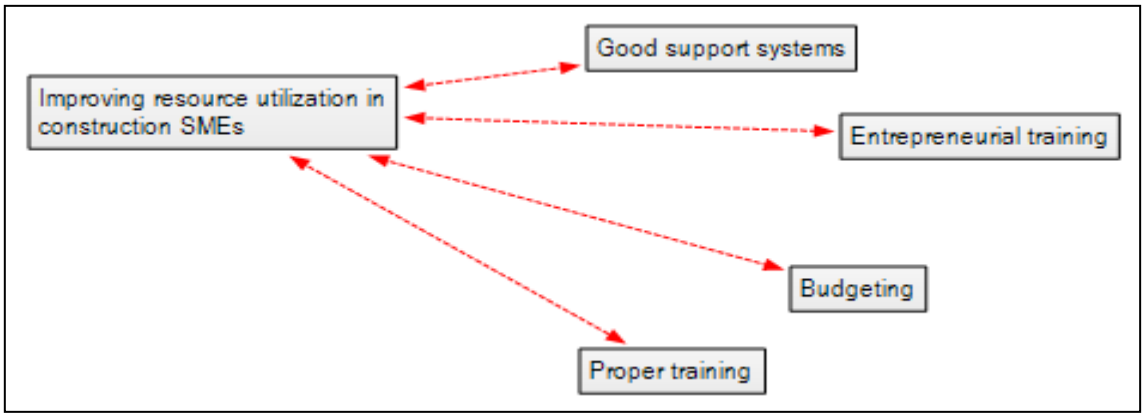


Figure 4.10: Improving resource utilisation in construction SMEs

Other strategies included increasing entrepreneurial training among SMEs, proper training, and sound support systems. These findings support those in the literature. Abraham and Schmukler (2017) claim that the financial problem is much stronger among small businesses than the established corporations, thereby pointing to the essence of effective budgeting and costing among SMEs. As argued in business management literature, financial management represents an internal factor instead of external factors that affect businesses. Both recent and traditional literature on business management has recognised this argument (Clarke, Braun & Hayfield, 2015).

4.3.3 Causes of resource wastages among SMEs in the construction sector

Figure 4.19 provides the major themes that emerged from the respondents on the leading causes of resource wastage among construction SMEs. Respondents pointed to financial problems, poor business planning, illiteracy, and lack of business skills as contributors to resource wastages. The themes were developed from responses such as lack of business skills, buying materials, insufficient finances, and lack of financial knowledge. This supports literature findings that SMEs lack the appropriate skills for performing such critical functions as budgeting and costing.

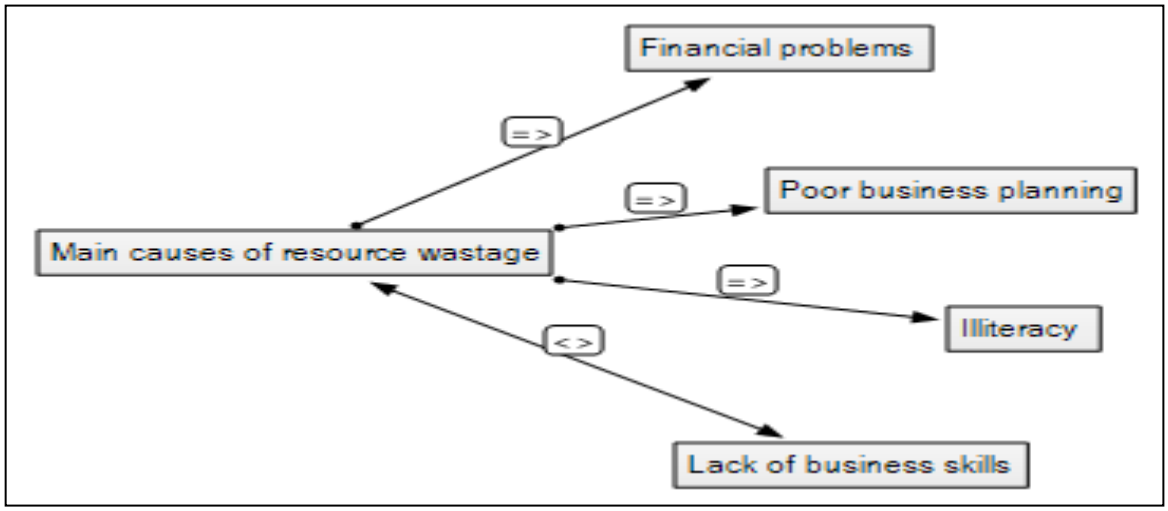


Figure 4.11: Solving the budgeting and costing challenges of construction SMEs

Figure 4.20 provides the respondents' views on what can be done to solve the budgeting and cost challenges SMEs face in the construction sector. The respondents were of the view that they needed training, government support and financial assistance in solving the budgeting and costing challenges of construction SMEs. Training appears to be an essential component of the requirements for successful budgeting and costing among SMEs.

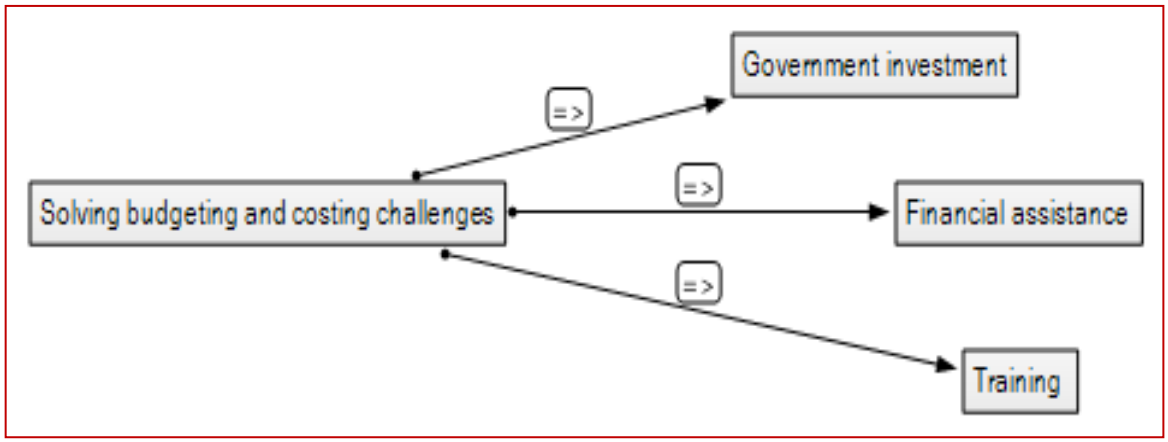


Figure 4.12: Solving budgeting and costing challenges of SMEs

4.4 Key Findings

This study has produced significant results on the operations of SMEs in the construction sector. In addition, it has generated significant evidence to accept responses to the research questions and achieve the research objectives.

The research questions sought information on the budgeting and control strategies as well as challenges that affected the performance of construction SMEs in Cape Town, which is mainly project-based and affects their completion period. The previously reviewed literature demonstrated that poor budgeting and costing were significant factors in SMEs' effectiveness. As such, the findings of this study supported the literature. The results, therefore, conclude that there is evidence that inappropriate budgeting and costing affected the viability and sustainability of SMEs. The data collected also pointed out that

construction SMEs lack the requisite business competencies such as budgeting and cost control that are needed for competitiveness was also supported. It was clear from the responses that there is a lack of financial as well as budgeting and costing skills among construction SMEs. This study also concludes that budgeting and costing are essential skills for the viability of construction SMEs. However, SMEs lack the appropriate skills required for effective budgeting and costing.

These findings are in line with some studies done by other researchers, which pointed to the essence of budgeting and costing in SME management (Abraham and Schmukler 2017). Future research on this matter may need to investigate the underlying factors such as cultural and individual socio-psychological characteristics that influence budgeting and costing

CHAPTER 5
SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

Against the background that small enterprises have become critical in the economy as they help foster economic growth and reduce unemployment, this study was formulated to explore their budgeting and costing functions. Despite their crucial role, small businesses have suffered from a high failure rate characterised by weaknesses in their financial management systems. The previous chapter presented the findings of the study and considered their implications for the research objectives. The analysis of the findings in the previous chapter sought to establish relevant conclusions that answered the research questions and achieved the study objectives. The analysis was performed in a manner that was meant to increase comprehension of the research problem and offer essential perspectives and insights into the budgeting and costing function of the selected small enterprises in the banking sector in the South African context.

The current chapter was formulated to offer conclusions and summaries of each chapter and highlight the key deductions and inferences realised from the study. The chapter emanates from the research questions and objectives developed in the first chapter. Therefore, the conclusions are founded on the premise of offering insights that promote an in-depth appreciation of the phenomenon that was investigated. The chapter also provides recommendations on what can be done in relation to budgeting and costing among small businesses in the construction sector. The main conclusions and summaries offered are based on a need to ensure that the whole study is linked to previous empirical and theoretical work. This enhanced the identification of areas for future research.

Table 5.1 below provides a full detailed summary of findings based on the study's objectives.

Table 5.1: Summary of findings on study objectives

Objectives	**Findings**
I. To investigate budgeting and cost-control approaches to avoid exceeding the project budget.	The data collected and analysed in this study explored established that there is a significant need for government support, training, and financial coaching among SMEs in the construction sector to ensure that they have effective budgeting and costing mechanisms to succeed in their projects and deliver the different project within the approved budget.
II. To determine how better budget planning and cost control might help SMEs in the construction sector enhance their performance.	Data collected in this study demonstrated that most small businesses believed that the budgeting and costing control systems they implement are essential in ensuring the success of projects. As such better budgeting and planning were considered critical in enhancing effective budgeting for small business enterprises. The respondents provided information demonstrating that budgeting and costing are essential factors that affect the success of SMEs in the construction sector.
III. To come up with ideas for improving accurate budgeting and expense control	Respondents indicated some mechanisms that can be followed to improve budgeting and costing among the construction sector SMEs. These strategies included acquiring financial literacy, government providing support for SMEs, and acquiring relevant training and development.

5.1.1 Summary of the study in relation to the literature

In Chapter 1, the problem of SME survival was given its background and introduced with a specific focus on budgeting and costing functions. Generally, the literature review demonstrated small enterprises' need for effective financial management skills. It was provided that the broad aim of the study was to explore the budgeting and costing strategies of small enterprises in the construction sector in South Africa. It was established that budgeting and costing are internal operations and managerial activities that have a bearing on the success of small businesses. The literature demonstrated that the factors affecting businesses tend to be internal and external. External factors are imposed by the external environment, while internal factors such as financial management activities are part of the internal environment.

The external environment refers to everything outside an organisation and all factors beyond the control of the individual, such as political and legal factors, economic factors, technological factors, socio-cultural factors, and global factors. These factors mean that the small business entrepreneur has no control and tends to emerge from outside the business. At the same time, the internal environment implies all factors inside the organisation that affect the operations of the business such as managerial skills and competencies, financial management and technological capabilities, depending on a period, have a significant impact on the performance of SMEs.

The literature also if budgeting and costing challenges tend to affect the financial management processes of small businesses and their general competitiveness. While many scholars argued that small businesses lack the expertise for effective budgeting and costing, it was found that they are also vulnerable to environmental factors that impact effective financial management. Financial management and other monetary issues are central to the viability and sustainability of SMEs because of the strong competition they face. It was established that previous research confirmed that the financial problem is much stronger among small businesses than the established corporations, thereby pointing to the essence of effective budgeting and costing among SMEs. The analysis of related literature followed a thematic study of related concepts before a review of previous studies on SME budgeting and costing.

5.1.2 Summary of the methodology of the study

The philosophy of the study was explained in Chapter 3, including the data collection and analysis procedures. The study was both qualitative and qualitative. Participants of the study were from selected small enterprises in the construction sector, and most of them were the owners as they were most familiar with their budgeting and costing. In Chapter 3, an analysis of the data collected to answer research questions raised during this study was provided. It provided empirical answers to the research questions.

5.2 Conclusion

The analysis conducted in this study demonstrated that small businesses in the construction sector:

- Face significant budgeting and costing challenges that affect their viability and sustainability.
- Require significant support mechanisms related to training, coaching and development to be able to initiate effective budgeting and costing for their organisations
- The internal and external environment that characterises the context of the operation of the small enterprises was significant in affecting the effectiveness of the budgeting and costing function.
- The construction sector is a competitive project-based environment and relies on effective financial management for business viability. As a result, SMEs in the sector need to improve their financial management skills.
- The survival of small enterprises in the South African construction sector is an essential area since many people are employed in the sector and contribute to the reduction of unemployment

5.3 Limitations and Future Research

This study was geographically limited to construction SMEs in Cape Town, and future studies may focus on a wider geographical area. This means future studies could consider the budgeting and costing of small enterprises on a national or regional scale. Although theoretically, the study considered the budgeting and costing function of SMEs, future studies may have to focus on a broader scale that involves the full financial function of small enterprises to have a deeper appreciation of the finance-related challenges that SMEs face in their struggle for survival and viability. An in-depth analysis of the collected data was implemented to ensure that the study produces meaningful data. However, future studies can consider a larger sample and other industrial sectors to promote a better understanding of the factors affecting small businesses.

5.4 Recommendations

- In respect of the study's first objective, which was to investigate budgeting and cost-control approaches for effective construction project management, this study recommends a collective approach in the sector. Such an approach will be based on dialogue among stakeholders in the construction sector to establish mechanisms for increasing small enterprises' financial viability and competitiveness through effective budgeting and costing management.
- The second objective was to explore ideas for improving the accuracy of budgeting and expense control in the construction sector. It is recommended that there should be negotiations among players in the construction industry supply chain to establish the best ways to address the financial and budgeting skills that small enterprises in this sector require.
- More research should be undertaken to explore the productive capacity of small enterprises in the construction sector and how this relates to effective budgeting and costing.
- The study found a need for government support for SMEs in the construction sector through training in budgeting, cost management, and general financial management. It is recommended that the government strengthen its role in supporting small enterprises' financial, budgeting and costing needs. Government support of the construction sector may also include infrastructural, financial, and intellectual support for effective budgeting and costing. The support should be extended countrywide among relevant enterprises
- Big businesses, multinationals, non-governmental enterprises, and other stakeholder groups should help the government address the small business failure through poor financial management skills such as ineffective budgeting and costing in crucial sectors such as construction.

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APPENDICES

Appendix A: Questionnaires

Title of study: Budgeting and cost control challenges in Small Medium Enterprises construction projects in Cape Town

The purpose of the study is to explore the budgeting and cost control challenges on project delivery in a construction

Please note **that your views/responses will be dealt with respect and with confidentiality**, and that **you can withdraw at any time during this interview,** should you feel so. **Your responses and the name of your organization will be kept anonymous**. You are also kindly asked to give your consent that the information captured during the interview be used for the purposes of the research topic.

This questionnaire is scheduled to take approximately thirty (30) minutes to complete.

The following ethical issues will be adhered to in this study

Anonymity (**no names and personal identification for both the organisation and participants will be revealed. The organisation will be called NGO X, people who participated will simply be identified as participants**)
Confidentially (**information collected will be used for this study only and will not be revealed directly to anyone**)
Consent (participants will give consent first)
The interviewee is freely to discontinue the interview without explanation at any time.

Please mark the appropriate box with an X

1. I am assured that my participation in the study is voluntary and that I am free to withdraw from the study at any time without any penalty.	**Yes**		**No**	
2. I am assured that my confidentiality is respected, and the intellectual property of my company is respected	**Yes**		**No**	
3. I agree that that I cannot be identified by my answers and that my answers cannot be linked to me.	**Yes**		**No**	
4. I agree that I have the right not to answer all the questions.	**Yes**		**No**	

5. I agree that all the information I give may be used for research purposes and will not reveal my identity.	**Yes**		**No**	
6. I agree to participate in this study and that my participation is voluntary.	**Yes**		**No**	

Researcher:

I agree that I will abide by the terms above:

Name: …….. Sign…….. Date……..

SECTION A: Demographic Profile

In this section we would like to find out more about the you and your enterprise. Please place a cross **(X)** in the appropriate block.

A1	Your gender	Male		Female										
A2	Age category	18-25 years		26-35 years								36+ years		
A3	Educational level	Matric		National Diploma								Degree		
A4	Ethnic group	African		Coloured		Indian		White		Other (specify) ……				
A5	Current position in construction company?	Business owner		Manager						Coach				
A6	In what year was the construction enterprise started?	1-2 years		2-3 years						+5 years				

SECTION B: Indicate your level of agreement to the following statements

Code	STATEMENT	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
1	Has your business experienced any kind of budgeting/cost control problems before?	1	2	3	4	5
2	Poor budgeting and effective cost control measures cause late project delivery.	1	2	3	4	5
3	Do you think that resource utilization could	1	2	3	4	5

	have a critical impact on your business?					
4	Effective budgeting and efficient cost controls affect resource optimization	1	2	3	4	5
5	Budgeting and cost control strategies	1	2	3	4	5
6	Lack of proper budgeting and cost control strategies affect project budgets	1	2	3	4	5
7	The government has a role in reducing failure of construction SMEs due to budgeting and cost control.	1	2	3	4	5
8	Effective budgeting and cost control leads to project delivery on time and within the planned budget.	1	2	3	4	5
9	The seasonal and irregular nature of trade make it difficult to forecast growth	1	2	3	4	5
10	Lack of entrepreneurial skills	1	2	3	4	5
11	Lack of access to technological based prototype	1	2	3	4	5
12	Geographic area-Convenience	1	2	3	4	5
13	The organization has contingency plans for budgeting and cost control in worse scenarios that could take place	1	2	3	4	5
14	Poor budgeting and cost control management affect the success of	1	2	3	4	5

	construction projects					
16	Lack of allocation systems and appropriate budgeting and cost control impacts negatively the overall performance of construction SMEs in Cape Town mainly project budget and completion period;	1	2	3	4	5
17	Proper planning and maintenance of budgets and costs have a direct effect on the improvement of SMEs performance and project delivery	1	2	3	4	5
18	Construction SMEs lack the requisite business competencies such as planning and maintenance of resources	1	2	3	4	5
19	Developed strategies for budgeting and cost control will accurately and adequately improve project delivery	1	2	3	4	5

What can be done to improve cost control and budgeting in construction SMEs?

……
……
……

Based on your experience what are the main causes of the lack of effective budgeting and cost control?

……
……
……
……

In your view how can these challenges and problems be overcome?

……
……
……
……

Explain the contingency plans for budgeting and cost control available that you are having for your organization

……
……
……

Comment on government initiatives to try and minimize failure of construction SMEs due to resource budgeting and cost control?

……
……
……
……

What are the lessons learnt and coping strategies that can be implemented to face future resource wastage?

……
……
……
……

Thank you for your participation

Appendix B: Ethical Clearance Certificate

Cape Peninsula University of Technology

P.O. Box 1906 | Bellville 7535
Symphony Road Bellville 7535
South Africa
Tel: +27 21 4603291
Email: fbmsethics@cput.ac.za

Office of the Chairperson **Research Ethics Committee**	**FACULTY: BUSINESS AND MANAGEMENT SCIENCES**

The Faculty's Research Ethics Committee (FREC) on **22 February 2022**, ethics **APPROVAL** was granted to **Aphiwe Wellem (207018111)** for a research activity for **MTech: Bus Admin (Project Management)** at the Cape Peninsula University of Technology.

Title of project:	**Budgeting and cost control challenges in Small Medium Enterprises construction projects in Cape Town** Researcher (s): Mr. S Fore

Decision: APPROVED

Signed: Chairperson: Research Ethics Committee	**24 February 2022** **Date**

The proposed research may now commence with the provisions that:

1. The researcher(s) will ensure that the research project adheres to the values and principles expressed in the CPUT Policy on Research Ethics.
2. Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study requires that the researcher stops the study and immediately informs the chairperson of the relevant Faculty Ethics Committee.
3. The researcher(s) will conduct the study according to the methods and procedures set out in the approved application.
4. Any changes that can affect the study-related risks for the research participants, particularly in terms of assurances made with regards to the protection of participants' privacy and the confidentiality of the data, should be reported to the Committee in writing accompanied by a progress report.
5. The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines, and scientific standards relevant to the specific field of study. Adherence to the following South African legislation is important, notably compliance with the Bill of Rights as provided for in the Constitution of the Republic of South Africa, 1996 (the Constitution) and where applicable: Protection of Personal Information Act, no 4 of 2013; Children's act no 38 of 2005 and the National Health Act, no 61 of 2003 and/or other legislations that is relevant.
6. Only de-identified research data may be used for secondary research purposes in future on condition that the research objectives are similar to those of the original research. Secondary use of identifiable human research data requires additional ethics clearance.
7. No field work activities may continue after two (2) years for Masters and Doctorate research project from the date of issue of the Ethics Certificate. Submission of a completed research ethics progress report (REC 6) will constitute an application for renewal of Ethics Research Committee approval.

Clearance Certificate No | 2022_FBMSREC 002

Appendix C: Permission Letter

KHAYELITSHA DEVELOPMENT FORUM

Khayelitsha Development Forum
People Working Together for Sustainable Development

OFFICE OF THE SECRETARIAT
Malibongwe Badi (Mr)

A: Office No. 10 Khayelitsha Training
B Cnr. Spine Road &Lwandle Road
Khayelitsha
7784
E: malibongwebadi@gmail.com
T: 021 838 81197/021 829 1030
C: 064 169 5809

To whom it may concern

Re: Permission Letter (MTECH research)

This is to confirm that Aphiwe Wellem has permission to carry out research in Small Business Enterprise in Construction here in Cape Town for her MTECH degree. She will be able to conduct the interviews or survey research as required to gather the data for her dissertation.

Kind regards

Mzu Mongameli

KDF administrator

KDF
Khayelitsha Development Forum
People Working Together for Sustainable Development
Office No.10 Khayelitsha Training Centre
Cnr Spine Road & Lwandle Road
Khayelitsha 7784
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Appendix D: Certificate of Editing

PROFESSIONAL EDITING SERVICES
Stand out for the Write reasons

Gerald T du Preez
PhD
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Brantwood, Kuils River, 7580
+27 (21) 903-3145 | +27 (83) 325 1842
geralddu9@gmail.com

Certificate of Editing

This serves to confirm that copy-editing and proofreading services were rendered to
Aphiwe Wellem
for the degree

Master of Public Administration in Project Management entitled

BUDGETING AND COST CONTROL CHALLENGES IN SMALL MEDIUM ENTERPRISES CONSTRUCTION PROJECTS IN CAPE TOWN

with final word count of 28 508 on 29 September 2022

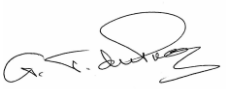
I am a member of the Professional Editors' Guild (member number DUP015) and commit to the following codes of practice (among others):

- *I have completed the work independently and did not sub-contract it out*
- *I kept to the agreed deadlines and/or communicated changes within reasonable time frames*
- *I treated all work as confidential and maintained objectivity in editing*
- *I did not accept work that could be considered unlawful, dishonest or contrary to public interest*

I uphold the following editing standards:

- *proofreading for mechanical errors such as spelling, punctuation, grammar*
- *copy-editing that includes commenting on, but not correcting, structure, organisation and logical flow of content, formatting (headings, page numbers, table of contents, etc.), eliminating unnecessary repetition*
- *checking citation style is correct, punctuating as needed and flagging missing or incorrect references*
- *commenting on suspected plagiarism and missing sources*
- *returning the document with track changes for the author to accept*

I confirm that I have met the above standards of editing and professional ethical practice. The content of the work edited remains that of the student.



Gerald T du Preez, PhD

Membership: Southern African Freelancers' Association and Professional Editors' Guild (Membership #DUP015)

Appendix E: Turnitin Report

BUDGETING AND COST CONTROL CHALLENGES IN SMALL MEDIUM ENTERPRISES CONSTRUCTION PROJECTS IN CAPE TOWN

ORIGINALITY REPORT

13%	11%	3%	7%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	www.abacademies.org Internet Source	Internet Source
2	Submitted to University of the Western Cape Student Paper	
3	Submitted to Cape Peninsula University of Technology Student Paper	
4	theconstructor.org Internet Source	
5	etd.cput.ac.za Internet Source	
6	open.uct.ac.za Internet Source	
7	www.coursehero.com Internet Source	
8	uir.unisa.ac.za	