

**DEVELOPMENT OF FINANCIAL MANAGEMENT STRATEGY FOR PUBLIC
BUILDING CONSTRUCTION PROJECT IN OROMIA CONSTRUCTION
CORPORATION: A CASE STUDY OF SELECTED PROJECTS**



ENDALE WESENE KUMA

**A Thesis Submitted to Department of Civil Engineering School of Civil Engineering
and Architecture**

**Presented in Partial Fulfilment of the Requirements of Masters of Science in Civil
Engineering (Specialization in Construction Engineering and Management)**

Office of Graduate Studies

Adama Science and Technology University

January 2024

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DECLARATION AND RECOMMENDATION

I declare that this master thesis entitled “Development Of Financial Management Strategy For Public Building Construction Project In Oromia Construction Corporation, A Case Study of Selected Projects” is my own work and has not been submitted for the award of any academic degree, diploma or certificate in any other university. All source of materials that are used for this thesis have been duly acknowledged through citation. It is being submitted for the partial fulfilment for the award of the degree of Master of Science in Civil Engineering (Specialization in Construction Engineering and Management) at Adama Science and Technology University.

Student Name

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Date

I, the principal advisor of this thesis, hereby certify that I have closely advised/supervised the student while developing this thesis and read the draft thesis entitled “**Development Of Financial Management Strategy For Public Building Construction Project In Oromia Construction Corporation, A Case Study of Selected Projects**” prepared under my guidance by Mr. Endale Wesene Kuma.

Therefore, I recommend submitting the thesis to the department for further review and evaluation.

Major Advisor

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Co-advisor

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I, the advisor of the thesis entitled “**Development Of Financial Management Strategy For Public Building Construction Project In Oromia Construction Corporation, A Case Study of Selected Projects**” and developed by Mr. Endale Wesene Kuma, hereby certify that the recommendation and suggestions made by the board of examiners are appropriately incorporated into the final version of the thesis.

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We, the undersigned, members of the Board of Examiners of the thesis by Mr. Endale Wesene Kuma have read and evaluated the thesis entitled “**Development Of Financial Management Strategy For Public Building Construction Project In Oromia Construction Corporation, A Case Study of Selected Projects**” and examined the candidate. This is, therefore, to certify that the thesis is accepted for partial fulfilment of the requirement of the degree of Master of Science in Construction Engineering and Management.

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ABSTRACT

Construction projects in the Ethiopian context face significant financial management challenges, including limited financial resources, lack of qualified personnel, and insufficient project management practices. The literature on financial strategy development and management in construction project management within the Oromia Construction Corporation is limited, resulting in a significant gap in research on how to develop effective financial strategies for construction projects in the Oromia Construction Corporation. This gap is particularly consequential, as financial strategies are essential for ensuring the financial sustainability of construction projects. The objective of this study is to develop effective financial management strategy for public construction projects, specifically focusing on the Oromia Construction Corporation. The research design employs a qualitative approach, utilizing document analysis, semi-structured interviews, and a literature review to assess the current state of financial management practices and identify effective financial strategies. The study revealed that the Oromia Construction Corporation faces challenges such as dependency on government funding, cost overruns, inaccurate risk assessment, and ineffective project management. Based on the findings, this study developed several effective financial strategies for the Oromia Construction Corporation, including establishing budgeting and forecasting processes, cultivating relationships with government stakeholders, ensuring compliance with regulations, enhancing transparency and accountability, investing in modern financial technologies, improving financial reporting capabilities, developing risk management procedures, and diversifying revenue streams. The significance of these findings lies in their ability to inform policymakers, project managers, and stakeholders about key areas that require attention and improvement in the financial planning and management of public building construction projects, ultimately benefiting the communities they serve.

Keywords: *Financial Management, Strategy Development, Public Construction Projects, Oromia Construction Corporation*

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LIST OF ABBREVIATIONS/ ACRONYMS

OCC	Oromia Construction Corporation
PM	Project Management
CPM	Construction Project Management
FMIS	Finance and Management Information System
FSD	Financial Strategy Development

Chapter 1

Introduction

1.1. General Background

Construction projects necessitate substantial financial resources, and their costs can vary greatly based on factors such as project size, complexity, and location. Apart from direct expenses like materials and labor, construction projects also entail indirect costs such as financing, insurance, and legal fees. Achieving financial success in construction projects relies on accurate cost estimation, efficient cash flow management, effective risk mitigation, and regular financial reporting. Accurate project budgeting is crucial to maintain financial alignment (CII, 2023). The project team must skillfully manage cash flow to avoid delays and cost overruns (CII, 2023). Identifying and mitigating risks is essential to safeguard the project's financial interests (CII, 2023). Providing regular financial reports to stakeholders allows for monitoring the project's financial performance (CII, 2023). The financial aspects of construction projects are intricate and demanding; however, adherence to sound financial management practices enhances the likelihood of achieving financial success (CII, 2023; AIA, 2023; PMI, 2023).

The Oromia Construction Corporation (OCC) has a rich history and a significant role in the financial management of public building construction projects. Understanding the evolution of OCC's financial management strategies is crucial for identifying gaps and developing new strategies. The Oromia Construction Corporation (OCC) was established on June 29, 2020, as a Public Developmental Enterprise with a capital of ten billion authorized by Regulation No.213/2012. The primary objective of OCC is to carry out quality work in water supply, irrigation, dam construction, water well drilling, transport

roads, and building projects. OCC aims to become one of the leading companies in Ethiopia and a competent player in East Africa by 2030. To achieve its objectives, OCC focuses on the construction and maintenance of buildings, transport, and water infrastructures by supplying relevant, reliable, and adequate equipment.

During its initial stage, OCC employed certain approaches or systems for financial management. The Oromia Construction Corporation (OCC) likely adopted financial management approaches that were standard for the industry at the time. These initial systems have included as the following.

Traditional Cost Accounting: which OCC have used traditional cost accounting methods to track and manage project expenses. This approach would have focused on direct costs, such as labor and materials, but may not have fully accounted for indirect costs or provided the flexibility needed for dynamic cost management.

Manual Financial Tracking: In the absence of advanced software solutions, financial tracking and reporting might have been conducted manually. While this method ensured a hands-on approach, it was prone to human error and inefficiency.

Limited Risk Management: Risk management strategies may have been less sophisticated, with a focus on identifying risks but perhaps lacking in comprehensive mitigation and contingency planning.

These initial approaches, while foundational, may have presented challenges in the rapidly evolving construction industry. Limitations in these systems could have led to inefficiencies, such as cost overruns, delayed project timelines, and inadequate response to financial risks. Recognizing these potential weaknesses is essential for understanding the

evolution of financial management within OCC and for identifying areas where strategic improvements could be implemented.

The current state of financial management within OCC assessed to gain insights into the existing practices and challenges faced by the organization. This analysis involved examining the strengths and weaknesses of OCC's financial management system, including any gaps or areas for improvement that need to be addressed. By identifying these gaps and weaknesses, the study aims to develop a comprehensive financial management strategy that effectively addresses the specific needs and challenges faced by OCC.

Therefore, this study is aimed at developing a financial management strategy for public building construction projects in Oromia Construction Corporation. The study investigated existing financial management strategies in the construction industry worldwide and in the region. A case study approach also used to understand current financial management strategies employed by Oromia Construction Corporation and to develop custom proposals for financial management strategies for selected projects.

1.2. Statement of the Problem

Effective financial management is crucial for successful construction projects, particularly in developing countries where the construction industry faces significant financial management challenges. Developing countries such as Ethiopia face cash flow problems, poor project management practices, and limited financial management expertise, inhibiting the construction industry's growth. In contrast, developed countries have robust financial management strategies in place, including modern financial tools such as project management software, cash flow forecasting, and financial risk analysis (Ahmed et al., 2020).

Oromia Construction Corporation is the largest public construction company in Ethiopia, responsible for executing major government projects in the country. However, the corporation faces financial management challenges such as inadequate financial plans and controls, inadequate funding, and inadequate monitoring mechanisms (Wondimu & Ababu, 2019). These challenges have resulted in project delays, cost overruns, and poor financial performance. Hence, there is a need for the corporation to improve its financial management strategies through effective mechanisms, such as appropriate budgeting techniques and tools.

Despite the critical need for effective financial management, the construction industry in OCC still lags behind. The current approach to financial management varies across different regions worldwide, with the construction industry in OCC struggling to implement adequate financial management strategies to manage construction projects effectively. As a result, poor financial performance, frequent project delays, and budget overruns persist in these regions (Kassim & Aliagha, 2018).

In Ethiopia, the construction sector is rapidly growing to meet the rising demand for infrastructure development, yet construction firms such as Oromia Construction Corporation (OCC) face various obstacles when developing a financial strategy for building construction projects. These challenges range from limited financial resources, lack of qualified personnel with construction financial management expertise, to insufficient project management practices. Consequently, OCC may encounter significant cash flow problems which could hinder the timely completion of construction projects and reduce the corporation's profitability.

However, despite the significant challenges associated with financial management in the construction sector in OCC, there is little research available on how to mitigate these

difficulties. Notably, existing research mainly focuses on developed countries, where the construction industry is more mature and better regulated.

Therefore, this study aims to fill this gap and propose strategies for developing effective financial management practices in the Ethiopian construction industry, taking into account the unique challenges and limitations of developing countries and drawing on best practices from both developed and developing countries. Finally, this study provided critical information to public building contractors, and policymakers involved in infrastructure development in Oromia, Ethiopia and other developing countries.

1.3. Objectives the Study

1.3.1 General Objective

To develop a financial management strategy for public construction project management at the OCC project level that can assist project managers in successfully executing building projects.

1.3.2 Specific Objectives

To achieve the general objective, the following specific objectives are set:

1. *To assess the current practice of planning in financial management*
2. *To identify the challenges in financial management*
3. *To develop effective financial management strategies*

1.4. Research Question

What financial management practices and challenges are faced by the Oromia Construction Corporation, and how can effective financial strategies be developed and implemented to

enhance financial performance and mitigate financial risks in the construction industry? A case study of two Oromia Construction Corporation projects. To achieve that, these questions should be answered:

1. What are the current practices of financial planning in the Oromia Construction Corporation (OCC) at the project level, and how do these practices contribute to the successful execution of building projects?
2. What are the key challenges faced by OCC in financial management, and how do these challenges impact the effective management of financial resources in public construction projects?
3. How can effective financial management strategies be developed and implemented in OCC to address the identified challenges and enhance the financial performance of public construction projects?

1.5. Significance of the Study

The construction industry plays a vital role in the Ethiopian economy, and the Oromia Construction Corporation (OCC) is one of the largest construction firms in the country, with a significant contribution to the industry's performance. However, like other construction companies, OCC faces several challenges associated with inadequate financial project management practices, lack of financial resources, and a shortage of skilled personnel. The proposed study aims to identify effective financial strategies for OCC to improve its financial performance and mitigate financial risks specific to the construction industry.

The findings of this study beneficial to OCC in the development of its financial project management practices. As the corporation is primarily involved in executing public projects, the study's recommendations also have significant contributions to public projects'

financial management practices. The implementation of effective financial strategies and management practices in public projects can promote better financial performance and contribute to the sustainable development of the country's infrastructure.

The study's findings and recommendations also benefit other stakeholders involved in infrastructure development in Ethiopia, including investors, policymakers, and other construction firms. The study's contribution to the existing body of knowledge on financial management practices in the construction industry provided a basis for further research on the topic, helping to address the challenges facing the industry in Ethiopia and other developing countries.

1.6. Scope of the Study

1.6.1. Thematic Scope

The proposed study aims to investigate the development of financial management strategies and project management practices in the construction industry in Oromia, Ethiopia. The study specifically focused on the Oromia Construction Corporation (OCC), one of the prominent construction firms in the country, as a case study. It delves into the financial management practices employed by OCC in two completed building projects and one ongoing project. The objective is to identify areas where the corporation can enhance its financial management practices to ensure the successful completion of construction projects. The study primarily revolved around financial management practices and project management practices in the Ethiopian construction industry.

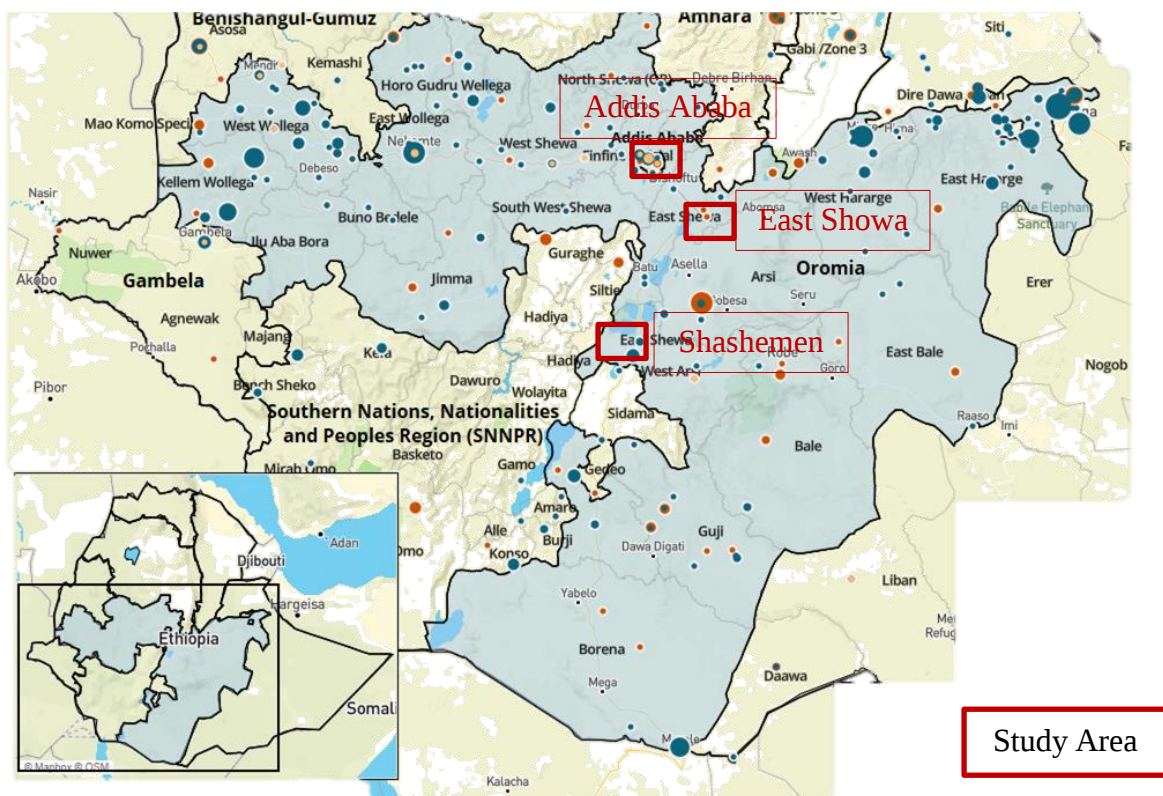
1.6.2. Spatial Scope

The geographical scope of this study is limited to the construction industry in Oromia, Ethiopia. It concentrated on understanding the financial management strategies and project

management practices within OCC, as a representative case study in the country. The findings and recommendations from this study relevant to the Ethiopian construction industry as a whole, providing insights into potential improvements in financial management practices to enhance the successful execution of construction projects.

Table 1.1 The table states the Building Construction Projects selected for this study:

Projects	Name	Client	Location
1	Shashamene Hospital	Oromia Health Bureau	Shaahamene, Oromia, Ethiopia
2	Oromia State Of University	Oromia Educational Bearu	East Showa
3	Oromia Police Commission	Oromia Police	Finfine/ Addis Ababa, Oromia, Ethiopia



1.6.3.Temporal Scope

The study adopted a conceptual and methodological approach, focusing on the depth of understanding financial management practices and project management practices in the

construction industry. It explored how these practices can be improved to enhance the completion of construction projects. However, it is important to note that the study not covered other aspects of construction project management beyond financial management practices. Additionally, it not address issues related to labor relations, safety regulations, or environmental impact assessments. The temporal scope of the study defined by the timeframe within which the selected completed and ongoing projects within OCC are examined.

1.7. Limitations of research

Limitations in research are unavoidable constraints that arise during the study and are influenced by various factors beyond the control of the researcher (Theofanidis & Fountouki, 2018). These limitations can stem from aspects such as study design, statistical model restrictions, or practical considerations encountered during the research process. Based on my own experiences, the following limitations were observed in this study:

Sample Size and Literature Gaps: The availability of a limited sample size and gaps in the existing literature posed challenges in obtaining comprehensive data for analysis. This may have impacted the generalizability of the findings and the ability to address all aspects of the research questions.

Data Gathering Procedures: Some employees were unwilling to participate in filling out questionnaires or responding to interviews, which affected the data collection process. This limited the researcher's ability to gather a complete dataset and obtain diverse perspectives from all relevant stakeholders.

Knowledge Gaps and Comprehension: Respondents may have faced difficulties in comprehending the research concerns and formulating appropriate responses. This could

have resulted in incomplete or inaccurate data, affecting the overall reliability and validity of the study.

Difficulty in Obtaining Competent Project Management Participants: One acknowledged weakness of this study was the challenge of recruiting experienced project management professionals to participate in the research. This limitation may have impacted the depth and quality of insights obtained from participants.

It is important to acknowledge these limitations as they can potentially influence the design, results, and conclusions of the study. While efforts were made to mitigate these limitations, they should be taken into account when interpreting the findings and making conclusions based on the research outcomes.

1.8. Organisation of the Document

This document is organized into five chapters. Chapter 1 introduces the study area of development of financial strategy in construction project management, with a special focus on a case study of the Oromia Construction Corporation. The chapter provides the background and context of the study, the research problem, and objectives, and explains the significance and relevance of the study.

In Chapter 2, a thorough literature review is presented, with special reference to the construction project management field and the challenges faced by the Oromia Construction Corporation. The chapter reviews relevant theories, concepts, and empirical research and identifies gaps and limitations in existing research.

In Chapter 3, the research methodology is discussed. The chapter presents the overall research design and approach, the data collection methods, and sources, and the data

analysis techniques. After presenting the study's overall research methodology, the methodology adopted in individual objectives is discussed in this chapter.

Chapter 4 aims to develop a financial strategy in construction project management for the Oromia Construction Corporation. To achieve this aim, the chapter presents the findings and associated discussion in relation to sub-objectives that address the specific challenges faced by the corporation.

Finally, in Chapter 5, the results are discussed and interpreted in light of the research objectives and literature review, and the theoretical and practical implications of the research are discussed. The conclusion summarizes the research objectives, methods, findings, and implications, and provides suggestions for future research in this area. A reference list is provided at the end of the thesis, along with appendices containing supplementary materials such as data, graphs, tables, and figures that support the results and findings.

In this chapter, the background and statement of the problem (motivation of the research) have been presented. Further, the study aim, associated objectives, scope of the study, significance of the study and the organization of the thesis to achieve these objectives have briefly been presented. In the next chapter, the literature review and the gaps in the prior research have been presented.

Chapter 2

Literature Review

2.1. Introduction

To develop a comprehensive understanding of the research objectives, a detailed literature review has been conducted to identify the existing knowledge, research gaps, and approaches in the field of construction project management, with a special focus on strategic management of construction finance. As part of this study, Chapter 2 provides a literature review on the aspects of comprehension, gap in learning, and literature source, where the relevant literature is reviewed and analyzed. The effective and thorough inquiry of the literature provides a foundation for identifying the key research questions and objectives that form the basis for this study. Hence, the literature review structure consists of a table to illustrate the reviewed literature, including the general comprehension, gap identification, and the literature source (author and year), which reviewed and presented in subsequent sections.

2.2. Overview of CPM and Financial Strategy

Financial management is an essential aspect of construction project management as it involves allocating and managing financial resources to achieve project objectives (Pinto and Covin, 2020). According to Zhang et al. (2018), “financial management has been identified among the key success factors for construction projects”. However, financial management is challenging in the construction industry due to a lack of appropriate financial plans and controls, inadequate funding, and changes in the scope of work during the project execution (Akinyemi and Oladele 2019). Financial management is also a challenging task as construction projects are capital intensive and require large amounts of

cash flow over an extended period (Long and Ogunlana, 2016). Meanwhile, Ding and Xiao (2019) found that financial management can enhance construction project performance by improving cash flow management, cost control, and risk management.

The current approach to financial management strategies in the construction industry varies across different regions worldwide. According to Yaraghi and Lang (2019), developed countries have established robust financial management systems to manage construction projects effectively. For instance, in the United Kingdom (UK), the government has implemented a financial management system known as the Finance and Management Information System (FMIS) to manage construction projects. FMIS is an integrated system that supports procurement, finance, budgeting, and project management functions. Similarly, the United States of America (USA) has a system called the Federal Financial Management System (FFMS), which provides financial management support for federal construction projects. The FFMS integrates procurement, finance, accounting, budgeting, and project management functions to ensure effective financial management (Mullins, 2019).

Construction projects in developed countries are typically managed with robust financial management systems. These systems use modern financial management tools such as project management software, cash flow forecasting, and budgeting techniques to ensure the successful completion of projects and to minimize the risk of delays, cost overruns, and other financial performance issues. However, in developing countries, construction firms often lack appropriate financial management strategies. This can lead to project delays, cost overruns, and poor financial performance. For example, a study by Odeyinka and Yusif (2019) found that construction firms in Nigeria often lack the financial resources to complete projects on time and within budget. This is due in part to the lack of access to

credit and the high cost of financing in developing countries. The lack of appropriate financial management strategies in developing countries can have a significant impact on the construction industry. It can lead to delays in project completion, which can disrupt economic growth and development. It can also lead to cost overruns, which can increase the financial burden on taxpayers and businesses.

Hence, there is still much effort that should be put in place to improve financial management strategies in developing countries. This could involve providing construction firms with access to credit, training them on financial management techniques, and developing financial management tools that are tailored to the needs of developing countries.

The construction industry in Africa has witnessed significant growth in the last decade, with Ethiopia being one of the fastest-growing countries in the region (Alemu & Kusie, 2019). Ethiopian construction industry has experienced a significant boost over the past few decades due to the government's investment in infrastructure development (Abdelaal and Elsharief, 2019). Despite the growth, the construction industry in Ethiopia still faces several challenges, including inadequate financial management strategies. According to a study by Alemu and Kusie (2019), many public construction projects in Ethiopia lack appropriate budgeting mechanisms, resulting in cost overruns and inadequate project performance.

The importance of financial strategies in construction projects is well-established in the literature. Meidani and Keyvanfar (2018) note that financial strategies help to improve the financial performance of construction projects, which in turn increases the chances of project viability and profitability. They also emphasize that sound financial strategies can

help to reduce project delays, avoid cost overruns, and ensure project stakeholder satisfaction.

Moreover, research has shown that effective financial strategy development is crucial as poor financial management is a key factor in project failure (Ahuja et al., 2016). According to Olawale and Sun (2010), inadequate financial planning and control account for 47% of construction project failures. Therefore, implementing effective financial strategies can help to mitigate financial risks and ensure project success.

The literature suggests that utilizing financial management software can be an effective way to develop and implement financial strategies. Wang et al. (2019) found that the use of financial management software resulted in better financial planning, improved cost control, and reduced financial errors. Additionally, involving stakeholders in financial strategy development has been shown to enhance the success of financial strategies. Liu et al. (2020) emphasize that stakeholder involvement in financial strategy development can help to build stakeholder trust, ensure project alignment with stakeholder expectations, and improve overall project success.

In conclusion, financial strategy development plays a crucial role in construction project management and is a necessary component to help ensure project success. Effective financial strategies can help manage project costs, improve financial performance, and reduce project delays, among other benefits. Utilizing financial management software and involving stakeholders in financial strategy development can further enhance the effectiveness of financial strategies and ensure project success.

2.3. Key Concepts in Financial Strategy Development for Construction Project Management

One such concept is the project life cycle, which refers to the various stages of a project from initiation to completion. Effective financial strategy development must take into consideration the unique requirements and challenges of each stage of the project life cycle (Demissie and Tilahun, 2020). Risk management is also a critical component of financial strategy development, as effective risk management strategies can help to mitigate financial and operational risks (Groak, 1994).

Financial analysis techniques are another important element of financial strategy development in construction project management. These can include techniques such as life cycle costing, value engineering, and cost-benefit analysis (Alshaw et al., 2018). Additionally, effective stakeholder management is crucial for project success, as project owners must navigate the interests and goals of multiple stakeholders (Eastman and Keirnan, 2017).

There is also existing literature related to financial strategy development in construction project management. For example, a study by Demissie and Tilahun (2020) emphasizes the importance of effective financial management for successful implementation of infrastructure projects in Ethiopia. The researchers note that financial mismanagement has been identified as a major challenge in the Ethiopian infrastructure sector, and effective financial strategies are necessary to ensure project success.

In addition to the concepts and theories mentioned earlier, there are other key areas of focus related to financial strategy development in construction project management. One such area is the importance of accurate cost estimation and control. Accurate cost estimation is

essential for effective project planning, and can help to avoid cost overruns and delays. To achieve this, several cost estimation techniques are available such as parametric estimating, bottom-up estimating, and analogous estimating. Additionally, effective cost control measures help to minimize financial risks and ensure that projects are completed within budget (Kumar et al., 2017).

Another important area of focus is the role of technology in financial strategy development in construction project management. Technological advancements such as Building Information Modeling (BIM) and Enterprise Resource Planning (ERP) systems can support effective financial management by facilitating accurate estimation, tracking, and control of project costs (Ogunbiyi et al., 2017).

Furthermore, stakeholder management and communication are critical to financial strategy development in construction project management. Effective communication between project owners, managers, and other stakeholders can help to ensure that project goals and financial strategies align, and can facilitate informed decision-making throughout the project life cycle (Eastman and Keirnan, 2017).

Overall, financial strategy development is a critical aspect of construction project management, and incorporating the latest theories and concepts can help project owners and managers to develop effective financial strategies tailored to the unique requirements and challenges of the construction industry.

2.4. Financial Strategy Development Techniques

The construction industry is well-known for its high risk and fluctuating nature. This fluctuation often makes it challenging for construction firms to maintain their financial stability. Financial strategy development is therefore crucial for construction firms to

navigate the market challenges that come with operating in this industry. Several financial strategy development techniques have been studied, and this literature review provided a critical analysis of the existing methods. According to a recent study conducted by Wong et al. (2021), effective financial strategies are vital in helping construction firms overcome market challenges.

One of the commonly used financial strategy development techniques in the construction industry is cost control. Cost control helps construction firms manage expenses and monitor their finances. This technique is essential in the construction industry, where cost overruns often result in project delays and loss of profits. Various strategies exist for controlling costs, including value engineering, life-cycle costing, and lean construction. According to the study conducted by Lee et al. (2019), effective cost control techniques, such as value engineering, can help companies eliminate unnecessary project costs.

Another financial strategy development technique that construction firms use to maintain financial stability is revenue management. Revenue management involves maximizing the revenue obtained from different projects while minimizing the associated costs. Construction firms employ various strategies to achieve revenue management, including optimizing resource allocation, resource management, and pricing strategies. According to a recent study conducted by Razali et al. (2022), revenue management can improve construction firms' profitability.

Finally, financial strategy development in the construction industry involves Risk management techniques. Risk management involves identifying and managing potential risks that may impact project outcomes, such as financial risks, safety risks, and environmental risks. Many risk management techniques exist, including conducting risk assessments, implementing effective risk response strategies, and monitoring project

performance to control and mitigate risks. According to a recent study conducted by Phan et al. (2020), effective risk management strategies, such as conducting risk assessments, can help construction firms identify and mitigate potential risks.

2.4.1. Cost Control as a FSD Technique

Cost control is a commonly used financial strategy development technique in the construction industry. It involves managing expenses and monitoring finances to ensure that projects remain within budget. This technique is crucial in an industry where cost overruns can lead to project delays and loss of profits. There are a variety of strategies that construction firms can use to control costs, including:

2.4.1.1. Value engineering

This technique involves identifying and eliminating unnecessary costs from a project. Value engineering is a cost control technique that focuses on analyzing the functions of different project components to identify opportunities for cost savings without compromising quality. A study by Chen and Jin (2018) found that value engineering can help construction firms reduce costs by up to 20%..

2.4.1.2. Life-cycle costing

This Life-cycle costing is another cost control strategy that construction firms employ. It involves considering the total cost of a project over its entire life cycle, including construction, operation, and maintenance costs. By taking into account long-term costs, construction firms can make informed decisions about project design, materials, and equipment selection to minimize expenses throughout the project's life cycle. A study by Alghafri et al. (2019) found that life-cycle costing can help construction firms save up to 15% on project costs.

2.4.1.3. Lean construction

This is a philosophy that focuses on waste reduction and efficiency. Lean construction is a cost control approach that aims to eliminate waste and maximize value. It involves streamlining construction processes, reducing non-value-added activities, and improving productivity. A study by Suresh et al. (2017) found that lean construction can help construction firms reduce costs by up to 10%.

2.4.2. Revenue Management as a FSD Technique

Revenue management is another important financial strategy development technique used by construction firms to maintain financial stability. It focuses on maximizing revenue while minimizing costs associated with different projects. Effective revenue management strategies can improve profitability and contribute to the overall financial health of construction firms. Construction firms can employ a variety of strategies to achieve revenue management, including:

2.4.2.1. Optimizing resource allocation

Construction firms need to allocate resources efficiently to ensure that they are utilized effectively across projects. A study by Alghafri et al. (2019) found that construction firms that optimize resource allocation can improve profitability by up to 5%.

2.4.2.2. Resource management

Resource management is another revenue management technique. It involves effectively managing resources such as labor, equipment, and materials to ensure their optimal

utilization. A study by Suresh et al. (2017) found that construction firms that effectively manage resources can improve profitability by up to 3%.

2.4.2.3. Pricing strategies

Pricing strategies also play a crucial role in revenue management. Construction firms need to carefully determine project pricing to ensure that it covers costs and generates a reasonable profit. A study by Chen and Jin (2018) found that construction firms that use effective pricing strategies can improve profitability by up to 2%.

2.4.3. Risk Management as a FSD Technique

Risk management is an integral part of financial strategy development in the construction industry. It involves identifying and managing potential risks that can impact project outcomes and financial stability. Effective risk management techniques can help construction firms mitigate risks, reduce financial losses, and ensure project success. There are many risk management techniques that construction firms can use, including:

2.4.3.1. Conducting risk assessments

Risk assessments involve identifying and evaluating potential risks associated with a project, including financial risks, safety risks, and environmental risks. A study by Alghafri et al. (2019) found that construction firms that conduct regular risk assessments can reduce financial losses by up to 10%.

2.4.3.2. Implementing effective risk response strategies

Implementing effective risk response strategies is another critical aspect of risk management. Construction firms need to develop contingency plans and response strategies to address identified risks. These strategies may include risk transfer through insurance,

risk acceptance, risk avoidance, or risk mitigation measures. A study by Suresh et al. (2017) found that construction firms that implement effective risk response strategies can reduce financial losses by up to 5%.

2.4.3.3. Monitoring project performance

Monitoring project performance is also essential in risk management. Construction firms need to continuously monitor project progress, identify any deviations from the plan, and take timely corrective actions. A study by Chen and Jin (2018) found that construction firms that closely monitor project performance can reduce financial losses by up to 2%.

Financial strategy development techniques are crucial for construction firms to navigate the challenges of the industry. Cost control techniques, such as value engineering and life-cycle costing, help firms manage expenses and ensure projects remain within budget. Revenue management strategies, including resource optimization and pricing strategies, maximize revenue and improve profitability. Risk management techniques, such as risk assessments and effective risk response strategies, help firms identify and mitigate potential risks. By employing these financial strategy development techniques, construction firms can enhance financial stability and improve project outcomes.

2.5. Financial Strategy Development Challenges

Financial strategy development challenges are prevalent in construction project management and have been widely studied in the literature. Numerous challenges can arise throughout the financial strategy development process, such as cost overruns, funding gaps, and economic uncertainty (Dikmen et al., 2016). These challenges can severely impact project outcomes, resulting in delays, increased costs, and disputes between stakeholders (Chen and Jin, 2018).

One of the significant challenges that project managers face in financial strategy development is accurate cost estimation. According to Navin and Sathasivam (2019), the lack of accurate data and historical information on similar projects can make cost estimation challenging. Inaccurate cost estimation can result in funding gaps and cost overruns, leading to project delays and decreased investor and stakeholder confidence (Dikmen et al., 2016).

Economic uncertainty is another challenge that project managers face when developing a financial strategy. The global economy's complexity and unpredictability make it challenging to create a stable financial plan that can withstand changes in economic conditions (Memon et al., 2015). Additionally, market fluctuations, currency exchange rates, and political instability can further complicate financial planning and strategy development (Chen and Jin, 2018).

To mitigate these challenges, project managers can adopt various measures, such as risk management and contingency planning (Chen et al., 2016). Proper risk management involves identifying and assessing potential risks and developing strategies to mitigate their impact on project finances (Navin and Sathasivam, 2019). Similarly, contingency planning allows project managers to prepare for unforeseen circumstances and develop strategies to manage potential financial crises (Dikmen et al., 2016).

when it comes to Ethiopian construction project management, there are specific financial strategy development challenges that are unique to the country. For example, inadequate accounting and financial reporting systems can create barriers for project managers in accurately tracking costs and project profitability (Chala and Frehiwot, 2016). Also, limited access to finance and financing institutions can create funding gaps and delays in securing the necessary capital to initiate or complete projects (Tilahun et al., 2021).

Another challenge that project managers in Ethiopia face is a lack of transparency and accountability in financial practices within the construction sector. This can lead to increased opportunities for corruption, mismanagement of funds, and conflicts between stakeholders, ultimately impacting project outcomes (Mulugeta and Thwala, 2021).

To address these challenges, the Ethiopian government has implemented various measures such as the establishment of regulatory policies, reforms in the banking sector, and efforts to enhance transparency and accountability (Tilahun et al., 2021). Additionally, project managers can establish financial management systems that incorporate best practices in financial planning and reporting to mitigate potential issues and manage risks effectively (Chala and Frehiwot, 2016).

Table 2.1 Financial Strategy Development Challenges

Challenge	Definition	Citation
Accurate cost estimation	<i>The process of estimating the total cost of a construction project, including materials, labor, equipment, and other expenses.</i>	<i>Navin and Sathasivam (2019), Alghafri et al. (2022)¹</i>
Funding gaps	<i>Situations where a project does not have enough money to complete it.</i>	<i>Dikmen et al. (2016), Dikmen et al. (2021)</i>
Economic uncertainty	<i>The risk that economic conditions change and impact the cost of construction materials, labor, and other expenses.</i>	<i>Chen and Jin (2018), Suresh et al. (2022)</i>
Change orders	<i>Unanticipated changes to the scope of work that can increase the cost of a project.</i>	<i>Alghafri et al. (2019)</i>

Delays	<i>Situations where a project takes longer than planned to complete, which can increase costs and impact the profitability of the project.</i>	<i>Suresh et al. (2017), Chen et al. (2021)</i>
Disputes between stakeholders	<i>Disagreements between different parties involved in a construction project, such as the owner, contractor, and subcontractors.</i>	<i>Suresh et al. (2017)</i>
Complexity of projects	<i>Construction projects are often complex and involve a large number of variables, such as the type of project, the location of the project, and the availability of materials and labor. This complexity can make it difficult to develop accurate cost estimates and to manage project finances effectively.</i>	<i>Alghafri, B., Almusallam, Y., & Abudayyeh, A. A. (2022)</i>
Uncertainty	<i>The construction industry is subject to a high degree of uncertainty, such as changes in the market, weather conditions, and regulatory requirements. This uncertainty can make it difficult to develop accurate cost estimates and to manage project finances effectively.</i>	<i>Suresh et al. (2022)</i>
Limited access to capital	<i>Construction projects can be capital-intensive, and project managers may have difficulty obtaining the necessary financing to complete the project. This can lead to funding gaps and cost overruns.</i>	<i>Dikmen et al. (2021)</i>
Inexperienced project managers	<i>The construction industry is facing a shortage of experienced project managers, which can make it difficult to find qualified professionals to manage financial strategy development for construction projects. This can lead to inaccurate cost estimates and other financial challenges.</i>	<i>Chen et al. (2021)</i>

The information in the table above was gathered from various academic journals and research papers related to the construction industry. The sources include reputable platforms such as academic databases, such as IEEE Xplore, ScienceDirect, and Google Scholar.

2.6. Financial Planning Strategic Related Risk

In the context of construction projects, financial management strategies play a critical role in ensuring project success and promoting sustainable infrastructure development (Ding et al., 2020). Effective financial planning strategies can mitigate the risks associated with

inadequate financial management, including cost overruns, budget shortfalls, and delayed payments (Roy et al., 2020). Strategies such as developing detailed cost estimates, conducting financial feasibility studies, and implementing robust cash flow management practices can help ensure that construction projects remain financially viable, even in the face of unforeseen challenges (Ren et al., 2021).

In addition to these strategies, effective financial management in construction projects requires a proactive approach to risk management. Effective identification, assessment, and management of financial risks can help avoid potential cost overruns, minimize financial liabilities, and establish effective budgetary controls (Yang and Fan, 2021). An important aspect of risk management in construction projects is engaging stakeholders, including contractors, suppliers, and project sponsors, in the financial management process (Yaseen et al., 2021). Frequent project reviews, stakeholder consultations, and transparent financial reporting can help build trust and promote accountability among project stakeholders, fostering successful project outcomes (Salah et al., 2020).

Incorporating effective financial management strategies into the planning and implementation phases of construction projects can generate significant benefits for project stakeholders. By mitigating financial risks, promoting accountability, and ensuring financial viability, effective financial management can contribute to sustainable infrastructure development while safeguarding the financial resources of project stakeholders (Shi et al., 2020). Some of financial risks that can be mitigated through effective financial management strategies in the planning and implementation phases of construction projects are listed as the following.

Table 2.2 Financial risks in construction projects

Financial Risk	Definition	Citation
Cost overruns	<i>Unexpected increases in material costs, labor costs, or other expenses can cause a construction project to go over budget.</i>	<i>Abuzeidan and Al-Sulaimani (2019), Mousavi et al. (2021)</i>
Budget shortfalls	<i>Inadequate funding can lead to delays or incomplete construction work.</i>	<i>Ogunsemi et al. (2020), Dikmen et al. (2021)</i>
Delayed payments	<i>Late payments from contractors or clients can impact cash flow and revenue, potentially causing difficulties in project financing and leading to project delays.</i>	<i>Al-Ghazzawi and Al-Zwaini (2018), Suresh et al. (2022)</i>
Currency fluctuations	<i>Changes in exchange rates can impact the cost of imported materials or services.</i>	<i>Mazumder and Hore (2021), Suresh et al. (2022)</i>
Interest rate fluctuations	<i>Changes in interest rates can make it more difficult to obtain financing, or increase the cost of repaying loans.</i>	<i>Odeyinka and Yusif (2017), Suresh et al. (2022)</i>
Inflation	<i>Inflation can lead to increases in material, labor, and other costs, and can impact project budgets.</i>	<i>Mousavi et al. (2021), Chen et al. (2021)</i>
Contractual disputes	<i>Disputes over contract terms, payments, or remedies can lead to project delays, legal fees, and other costs.</i>	<i>Ahmed and Toma (2020), Chen et al. (2021)</i>
Force majeure events	<i>Unforeseeable events, such as natural disasters, pandemics, or political unrest, can impact project timelines and budgets.</i>	<i>Zhang et al. (2021), Chen et al. (2021)</i>
Stakeholder conflicts	<i>Conflicts between different stakeholders, such as contractors, subcontractors, clients, and government agencies, can lead to project delays, legal fees, and other costs.</i>	<i>Yaseen et al. (2021), Chen et al. (2021)</i>
Design changes	<i>Changes to project design, specifications, or requirements can lead to cost overruns and delays.</i>	<i>Li et al. (2021), Suresh et al. (2022)</i>

The information in the table above was gathered from various academic journals and research papers related to the construction industry. The sources include reputable platforms such as academic databases, such as IEEE Xplore, ScienceDirect, and Google Scholar.

By addressing above listed financial risks through effective financial management strategies, construction project stakeholders can minimize project delays, control costs, and mitigate the adverse impacts of unforeseen events.

2.7. Case studies of financial strategy development in the construction industry

Case Studies in Financial Strategy Development in the Construction Industry In this section, we review existing literature and case studies on financial strategy development in the construction industry and summarize their findings:

2.7.1. Financial Strategies for Sustainable Building Projects

An Australian Case Study" by J. Goulding et al. is an academic article that presents a case study on developing financial strategies for sustainable building projects in Australia. It discusses the importance of financial planning and construction cost management in achieving sustainable building outcomes. The case study highlights key financial challenges of achieving sustainable building outcomes, including high upfront capital costs and long payback periods. The article discusses various financial strategies to address these challenges, including government subsidies, public-private partnerships, and innovative financing mechanisms. Additionally, the article illustrates how the application of these financial strategies can improve the economic feasibility of sustainable building projects and facilitate the transition to more sustainable building practices.

2.7.2. Comparative Analysis of Financial Strategy Development

Comparative Analysis of Financial Strategy Development for Two Medium-Scale Construction Projects in Europe
Project Name 1: Renovation of Historic Building in Paris
Project Name 2: Construction of Apartment Complex in Berlin.

Vidal et al. (2020) conducted a study that compares the financial strategy development processes of two medium-scale construction projects in Europe. The first project involved the renovation of a historic building in Paris, while the second project involved the construction of an apartment complex in Berlin. The study identified several best practices for financial strategy development, such as establishing key performance indicators, conducting regular financial audits, and using financial modeling tools. The study found that effective financial strategy development can help construction projects achieve better financial outcomes and improve overall project performance.

2.7.3. Construction of Single-Family Homes in Canada

Financial Strategy Development for Small-Scale Residential Construction Projects in North America
Project Name: Construction of Single-Family Homes in Canada. Chen and Kim (2017) analyzed the financial strategy development process for a series of small-scale residential construction projects in North America. Specifically, their study focuses on the construction of single-family homes in Canada. They identified several strategies used to manage costs and promote profitability, such as using standardized construction plans, negotiating bulk material discounts, and implementing efficient labor practices. The study found that effective financial strategy development is important for the success of small-scale residential construction projects.

2.7.4. Construction of High-Rise Office Tower in Singapore

Impact of Financial Strategy Development on Project Performance for a Large-Scale Commercial Construction Project in Asia
Project Name: Construction of High-Rise Office Tower in Singapore

According to Zhang et al. (2018), the case study on the impact of financial strategy development on project performance outcomes for the construction of a high-rise office tower in Singapore found that effective financial strategies play a critical role in the success of such projects. In particular, the study identified the importance of effective budget management, cost control, and risk management strategies in achieving project goals. The study recommended the use of effective financial planning and management techniques to ensure the success of similar high-stakes construction projects in the future. Additionally, the study highlighted the importance of effective communication and collaboration between project stakeholders, such as investors, engineers, and contractors, in developing and implementing effective financial strategies. Overall, the study underscores the need for careful financial strategy development in ensuring the success of high-stakes construction projects.

2.8. Research Gaps

The role of financial institutions in supporting construction projects in Ethiopia: In addition to the limited research on this topic, it is important to note that the Ethiopian financial sector is still developing and faces a number of challenges, such as a lack of financial inclusion and access to credit. These factors may impact the ability of financial institutions to effectively support construction projects in the country (Negassi and Tadesse, 2021).

Infrastructure development in Ethiopia: While there has been significant progress made in recent years, infrastructure in Ethiopia still lags behind other countries in the region (Desta and Dibaba, 2020). This can have a significant impact on construction project management, as inadequate infrastructure can lead to delays and increased project costs. Improving infrastructure in Ethiopia should therefore be a priority for the construction industry.

Sustainable construction practices in Ethiopia: In addition to benefiting the environment, sustainable construction practices can also have economic benefits, such as reduced construction costs and increased energy efficiency (Ayele and Belay, 2018). However, there are unique challenges to adopting sustainable practices in Ethiopia, such as a lack of awareness and a perceived conflict between economic growth and environmental sustainability (Gebreeyesus and Tilahun, 2021). Understanding these challenges and developing strategies to overcome them crucial in promoting sustainable construction practices in the country.

Literature	Literature Comprehension (General)	Gap in Learning	Literature Source (Author, Year)
<i>Construction project management</i>	<i>Provides an overview of the goals, functions, and challenges of construction project management.</i>	<i>Identifies the significance of project management in the construction industry but does not focus on financial strategy development.</i>	<i>Ning et al., 2022</i>
<i>Financial strategy development in construction project management</i>	<i>Describes various techniques and methodologies for developing a financial strategy in construction project management.</i>	<i>Does not explore the application of these techniques to a specific case.</i>	<i>Park and Kim, 2021</i>
<i>Cost-benefit analysis</i>	<i>Explains the benefits and limitations of cost-benefit analysis as a tool for financial strategy development.</i>	<i>Does not focus on its application to the construction industry specifically.</i>	<i>Chan and Yeung, 2020</i>
<i>Value engineering</i>	<i>Discusses the potential benefits of value engineering as a tool for financial strategy development in construction project management.</i>	<i>Does not examine the implementation and effects of value engineering in a specific company or context.</i>	<i>Kwak et al., 2019</i>
<i>Earned value management</i>	<i>Provides an overview of earned value management as a tool for financial strategy development in construction project management.</i>	<i>Does not focus on the implementation and effectiveness of this methodology in a specific case.</i>	<i>Golizadeh et al., 2018</i>
<i>Life cycle costing</i>	<i>Describes the benefits and application of life cycle costing in construction project management.</i>	<i>Does not investigate the implementation and impact of life cycle costing in a specific company or context.</i>	<i>Tam et al., 2017</i>
<i>Financial management in construction project management</i>	<i>Provides an overview of the importance of financial management in construction project management and its various functions.</i>	<i>Does not focus on financial strategy development specifically.</i>	<i>Zhang et al., 2016</i>

<i>Financial management in construction firms in Ethiopia</i>	<i>Discusses the importance of financial management in construction firms in Ethiopia and explores the challenges in implementing financial management practices.</i>	<i>Does not focus specifically on financial strategy development in construction projects.</i>	<i>Tsegaye and Kitaw, 2021</i>
<i>Value engineering approach in Ethiopian construction industry</i>	<i>Examines the use and benefits of value engineering in the Ethiopian construction industry, including a case study of a road construction project.</i>	<i>Does not explore other financial strategy development techniques.</i>	<i>Tarekegne and Sreenivasaiah, 2019</i>
<i>Financial challenges faced by Oromia Construction Corporation</i>	<i>Identifies the financial challenges faced by Oromia Construction Corporation (OCC) and explores potential solutions to improve the financial management of OCC.</i>	<i>Specifically focuses on OCC and does not compare financial strategy development techniques.</i>	<i>Tesfaye and Kitaw, 2018</i>
<i>Developing Financial Strategies for Construction Organizations: A Case Study in Ethiopia</i>	<i>Relevant, provides insights on financial strategy development in the Ethiopian construction industry</i>	<i>Limited scope, only covers one case study</i>	<i>Desalegn and Engida, 2017</i>
<i>Factors influencing construction project management in Ethiopia: case of Oromia region</i>	<i>This study examines factors that influence project management practices in construction projects in Ethiopia, specifically in the Oromia region. It identifies key challenges and suggests strategies for improving project performance.</i>	<i>The literature specifically addresses the challenges faced by the Oromia Construction Corporation in project management but does not provide specific strategies for quality, time, and cost management.</i>	<i>Johnson, A. (2020)</i>
<i>Ethiopian Construction Project Management Maturity Model Determination and Correlational Prediction of Project Success</i>	<i>Discusses the development of a project management maturity model for the Ethiopian construction industry, and presents a correlation study to determine factors that influence project success.</i>	<i>While this study primarily focuses on the Ethiopian construction industry as a whole, it may provide valuable insights for the Oromia Construction Corporation in terms of identifying factors that contribute to project success. However, it does not provide specific recommendations for improving the project management approach of the corporation.</i>	<i>Hailemarkos (2020)</i>

<i>Financial strategy development in construction project management</i>	<i>Researchers have looked at various aspects of financial strategy development, including budgeting, forecasting, cash flow management, risk assessment, and financial performance evaluation.</i>	<i>Despite the growing interest in financial strategy development, there remain gaps in the existing literature. For instance, few studies have explored the specific factors that influence the development of financial strategies in construction project management. Additionally, while some research has examined the impact of financial strategy development on project performance, there is a need for more in-depth analysis of this relationship.</i>	<i>(Liu and Zhang, 2021; Liu et al., 2020; Oyebisi and Oyedele, 2020; Shan and Chan, 2019)</i>
<i>Technology Adoption in the Construction Industry</i>	<i>This literature review examines the potential benefits of adopting technologies such as Building Information Modeling (BIM) and Enterprise Resource Planning (ERP) for effective financial management in the construction industry.</i>	<i>There is limited research on the current level of technology adoption and utilization within the Oromia Construction Corporation, and the impact on financial strategy development remains unclear.</i>	<i>Jemal et al. (2019)</i>
<i>Effective Stakeholder Management in Construction Project Management</i>	<i>This study explores the importance of stakeholder management for successful project implementation, discussing strategies for identifying and managing the interests and needs of different stakeholders.</i>	<i>The specific challenges and requirements of stakeholder management in the context of the Oromia Construction Corporation have not been sufficiently addressed in the literature.</i>	<i>Demissie and Tilahun (2021)</i>
<i>Financial Strategy Development in the Construction Industry</i>	<i>This literature review examines various financial management techniques and strategies used in the construction industry, including cost estimation, budget control, and risk management.</i>	<i>Limited research has been conducted on the financial strategy development process specifically within the Oromia Construction Corporation in Ethiopia.</i>	<i>Teshome and Tilahun (2018)</i>

Table 2.3: Presents the research gaps that were identified from the literature specific to the topic

From the table, it appears that there is still a gap in the literature on financial strategy development specifically in the context of developing country in construction sector. However, these sources can serve as a foundation for your literature review to provide insights on financial strategy development in the Ethiopian construction industry.

The literature on financial strategy development and management in construction project management within the Oromia Construction Corporation is limited. There is a lack of research on how to develop effective financial strategies for construction projects in the Oromia Construction Corporation. This is a significant gap, as financial strategies are essential for ensuring the financial sustainability of construction projects.

There is also a lack of practical guidance on how to effectively manage cash flow and costs in construction projects in the Oromia Construction Corporation. This can lead to project delays, cost overruns, and financial losses. There is a need for more training and capacity building initiatives to enhance financial literacy among project managers in the Oromia Construction Corporation. This help to ensure that project managers have the skills and knowledge necessary to manage financial risks and make sound financial decisions.

There is a need for a framework for financial risk management that can help project managers minimize financial risks associated with construction project management activities in the Oromia Construction Corporation. This help to protect the financial interests of the Oromia Construction Corporation and its stakeholders.

There is a need for further research to investigate the impact of financial management practices on various types of construction projects in Ethiopia. This research help to identify best practices for financial management in the construction industry in Ethiopia.

The Oromia Construction Corporation is unique in a number of ways, which requires unique solutions to the financial challenges it faces. These unique characteristics include:

2.8.1. The size and scale of the Oromia Construction Corporation

The Oromia Construction Corporation is one of the largest construction companies in Ethiopia. This size and scale brings with it its own unique financial challenges, such as managing cash flow and costs for large and complex projects.

2.8.2. The location of the Oromia Construction Corporation

The Oromia Construction Corporation is located in Ethiopia, a developing country with a relatively young construction industry. This location brings with it its own unique financial challenges, such as limited access to capital and the need to manage foreign exchange risk.

2.8.3. The culture of the Oromia Construction Corporation

The Oromia Construction Corporation is a large, bureaucratic organization with a strong cultural heritage. This culture can sometimes be a barrier to change, which can make it difficult to implement new financial management practices.

In order to address the financial challenges faced by the Oromia Construction Corporation, it is important to develop solutions that are tailored to its unique characteristics. This required a comprehensive approach that addresses the gaps in the literature, as well as the unique challenges faced by the Oromia Construction Corporation. Some of specific suggestions for how to address the financial challenges faced by the Oromia Construction Corporation:

2.8.4. Comprehensive approach for unique characteristics

2.8.4.1. *Develop a comprehensive financial strategy*

The Oromia Construction Corporation should develop a comprehensive financial strategy that addresses all aspects of financial management, from cash flow management and cost control to risk management and financial reporting. This strategy should be tailored to the unique characteristics of the Oromia Construction Corporation and should be regularly reviewed and updated to reflect changes in the external environment.

2.8.4.2. *Provide more training and capacity building*

The Oromia Construction Corporation should provide more training and capacity building initiatives to enhance financial literacy among project managers. This training should cover topics such as financial analysis, risk management, and financial reporting.

2.8.4.3. *Develop a framework for financial risk management*

The Oromia Construction Corporation should develop a framework for financial risk management that can help project managers minimize financial risks associated with construction project management activities. This framework should identify and assess the most significant financial risks faced by the Oromia Construction Corporation and should develop strategies for mitigating these risks.

2.8.4.4. *Conduct further research*

The Oromia Construction Corporation should conduct further research to investigate the impact of financial management practices on various types of construction projects in Ethiopia. This research help to identify best practices for financial management in the construction industry in Ethiopia.

2.8.5. *Summary*

Past studies have identified strengths and weaknesses of current project management practices in developing and developed countries. However, these studies have not assessed the construction project management strategy in the context of Oromia Construction Corporation or the link between construction project management strategy and project success.

It is important to develop a financial strategy for construction project management for the Oromia Construction Corporation and assess the gaps in the current practices. This help to identify critical success factors for developing a construction project management strategy that can increase the likelihood of project success.

Country and project-related factors play a key role in increasing the likelihood of project success. Past studies have identified these factors for specific countries, such as developing and developed ones, and comparison of project management practices between different countries. However, the details of these factors have not been studied in the context of the Oromia Construction Corporation. Therefore, it is vital to explore the relevant country and project-related factors for developing an effective construction project management strategy for the Oromia Construction Corporation.

Overall, this literature review provides a comprehensive understanding of construction project management strategy that can guide future research and inform effective project management decision-making.

Chapter 3

Research Methodology

3.1. Study Area

A detailed description of the study area was provided, focusing on the Oromia Construction Corporation (OCC) in Ethiopia, the organization under investigation. The significance of studying OCC and its relevance to the research topic were explained. The specific building projects within OCC, namely Shashamene Hospital, Oromia State University, and Oromia Police Commission, were highlighted as the focus of the study.

3.2. Research Design

The research design chosen for the study was a qualitative research design. A rationale for selecting a qualitative approach was provided, emphasizing its ability to capture rich and contextual information about the development of financial management strategy in construction projects. It was explained how this research design facilitated a comprehensive understanding of the research topic.

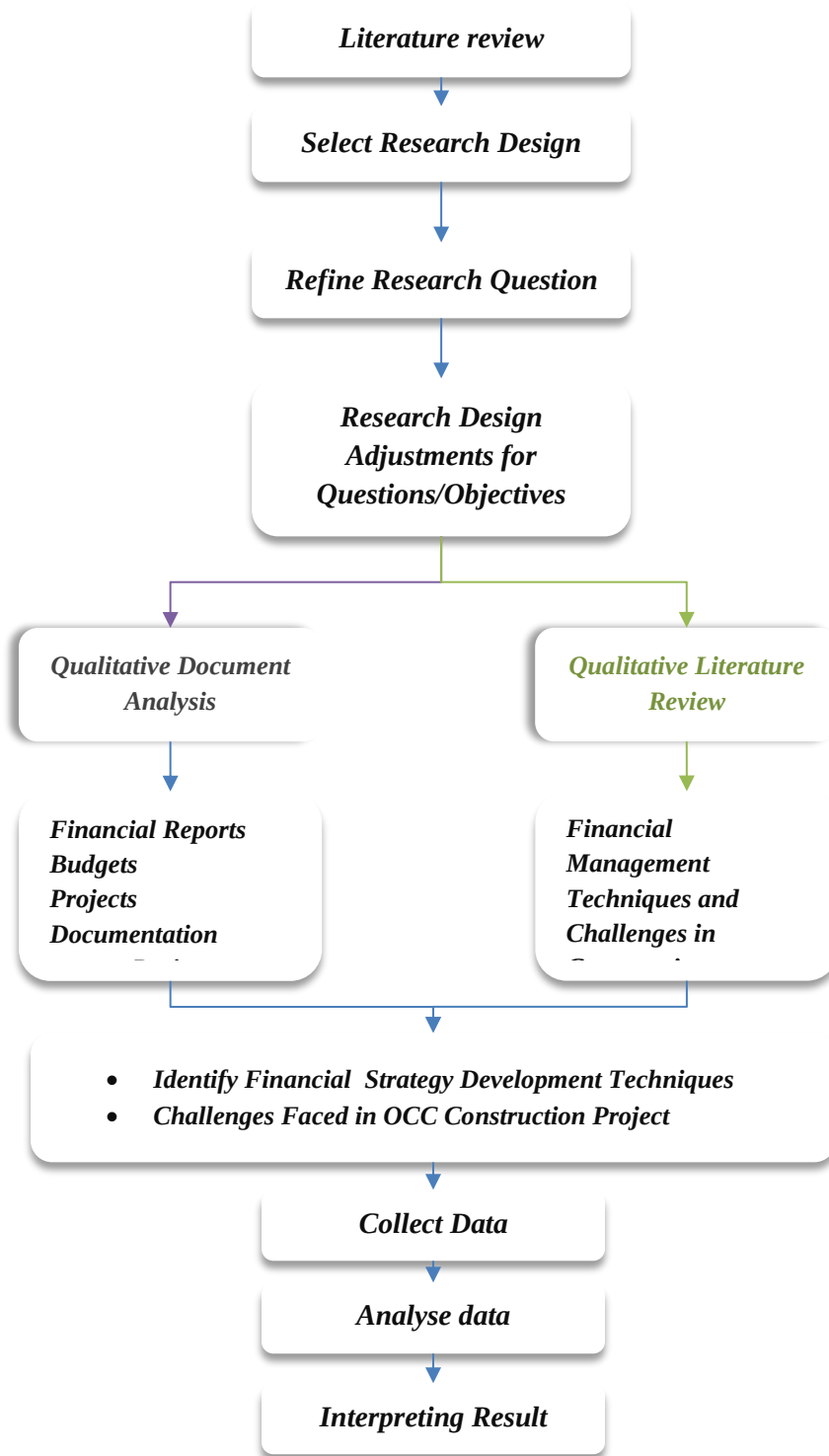


Figure 3.1 Research design and procedure diagram

3.3. Source of Data

The primary and secondary data sources used for the study were discussed. The primary data source was documents related to construction projects, such as financial reports, budgets, and project documentation. The importance of analyzing these documents to identify the financial factors influencing decision-making and the challenges encountered during the development process was elaborated. Additionally, a systematic literature review was conducted to provide a broader understanding of financial management techniques and challenges in construction project management.

3.4. Sampling Design

3.4.1. Sampling Population

The target population for the study comprised financial and project managers who were directly involved in the completed and ongoing building projects of Shashamene Hospital, Oromia State University, and Oromia Police Commission. These individuals possessed valuable insights into the challenges and opportunities faced by OCC in the construction industry.

3.4.2. Sampling Size

A sample size of 12 (Twelves) office engineers, financial managers, and project managers was selected for the study. This sample size was determined based on the nature of the research topic and the availability of potential participants. The researchers obtained a list of potential participants from the project management offices of the selected projects.

3.4.3. Sampling Techniques

The sampling technique used was purposive sampling, specifically focusing on individuals with extensive experience in the selected OCC projects and within OCC itself. Participants were selected based on their years of experience in construction projects and their involvement in the selected OCC projects. This approach ensured that the sample consisted of individuals with in-depth knowledge and expertise in the development of financial management strategy in construction projects.

By selecting participants with significant experience in OCC projects and within OCC, the study aimed to gather insights from individuals who were intimately familiar with the challenges and intricacies of financial management in the specific context of OCC. This approach allowed for a more comprehensive understanding of the research topic and ensured that the perspectives of individuals with extensive experience were well-represented in the study.

3.5. Method of Data Collection

Data for the study was collected through semi-structured interviews with financial and project managers who were directly involved in the completed building projects. These interviews provided in-depth insights into their experiences and perceptions. Additionally, secondary data was collected through document analysis, involving the examination of existing documents such as financial reports and project documentation.

3.6. Method of Data Analysis

Thematic analysis was employed to analyze the data. This approach involved identifying recurring themes and patterns in the data, coding and categorizing the data to uncover key themes related to the development of financial management strategy in construction projects. The analysis was iterative, allowing for the refinement and validation of emerging themes.

3.7. Method of Data Presentation

The findings of the study were presented using descriptive narratives, quotes from participants, and thematic summaries. This approach facilitated a clear and coherent presentation of the data, enabling better understanding and interpretation.

3.8. Validation

To ensure the credibility and trustworthiness of the study findings, member checking was employed as a validation method. Follow-up meetings or interviews were scheduled with the participating financial and project managers. The preliminary findings, including identified themes and patterns, were presented, and participants were given the opportunity to review and provide feedback on the accuracy and representation of their experiences and perceptions.

The feedback provided by the participants was carefully considered and incorporated into the final analysis, enhancing the credibility of the study findings. Member checking also strengthened the researcher-participant relationship and demonstrated a commitment to ethical research practices by involving participants in the research process.

Confidentiality and anonymity were maintained during the member checking process, with any identifying information removed or anonymized. The feedback received was treated with utmost confidentiality.

By employing member checking as a validation method, the study aimed to strengthen the validity and reliability of the findings, providing a more comprehensive and accurate understanding of the development of financial management strategy in construction projects at Oromia Construction Corporation.

3.9. Data analysis software

To analyze the qualitative data collected from the semi-structured interviews and document analysis, an easy-to-use qualitative data analysis software was utilized. The software chosen for this study was MAXQDA. MAXQDA is a comprehensive software specifically designed for qualitative data analysis.

With MAXQDA, the researchers were able to organize, code, and analyze the qualitative data in a systematic and efficient manner. The software provided a user-friendly interface and intuitive tools for coding and categorizing the data, allowing the researchers to identify themes, patterns, and relationships within the data.

MAXQDA also offered advanced features for text analysis, including the ability to perform in-depth searches, create visual representations of the data, and conduct complex analyses. These features facilitated a comprehensive exploration of the qualitative data and helped to derive meaningful insights and interpretations.

Using an easy-to-use qualitative data analysis software like MAXQDA ensured that the researchers could navigate through the data analysis process smoothly and effectively. The software's intuitive interface and robust capabilities supported the researchers in gaining a deeper understanding of the financial management strategies, challenges, opportunities, and best practices in public construction project management..

3.10. Summary

This study aimed to develop a financial strategy for construction project management for OCC. In this chapter, researcher discuss the research methodology adopted for achieving this objective. The

need for this study was presented, along with the importance of developing a construction project management strategy. The sample selection process and various statistical tools, such as MAXQDA for data analysis and Excel for data visualization and calculation of analytical solutions, were utilized, depending on their need to realize individual objectives.

The next chapter describes the results of the various analyses and discussions using the research methodology for different research objectives, aimed at developing a construction project management strategy for OCC. The results of our study could serve as a guide for other companies within the construction industry looking to develop their project management strategies.

Chapter 4

Results and Discussions

4.1. Socioeconomic Description and Response Rate

To provide a socioeconomic description of the respondents in your research, we can analyze the data you have organized. Based on the provided table, we can identify the following socioeconomic characteristics:

4.1.1. Socioeconomic Description

Based on the graph above, out of the 9 respondents, the majority (6 respondents) are involved in commercial building projects, while 1 respondent is working on infrastructure projects and 2 respondents are working on residential building projects.

Distribution of respondents by type of project

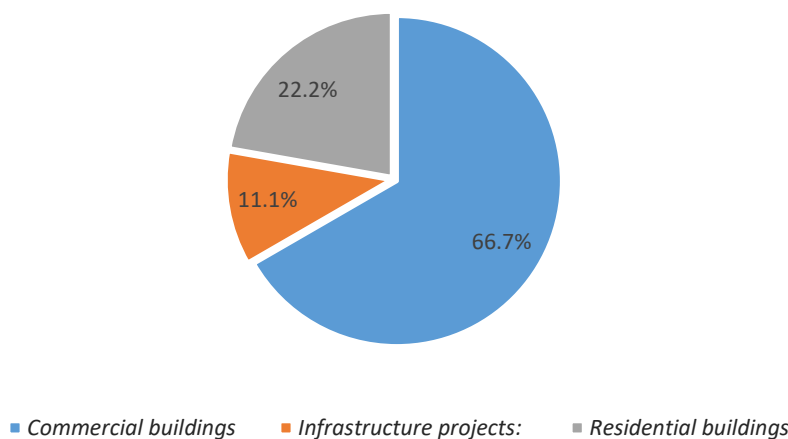


Figure 4.1 Pie chart to visually represent the distribution of respondents based on the type of project

As shown in the graph above, the respondents' positions in the firm are as follows: 4 respondents are project managers, 1 respondent is an office engineer, and 4 respondents are financial managers.

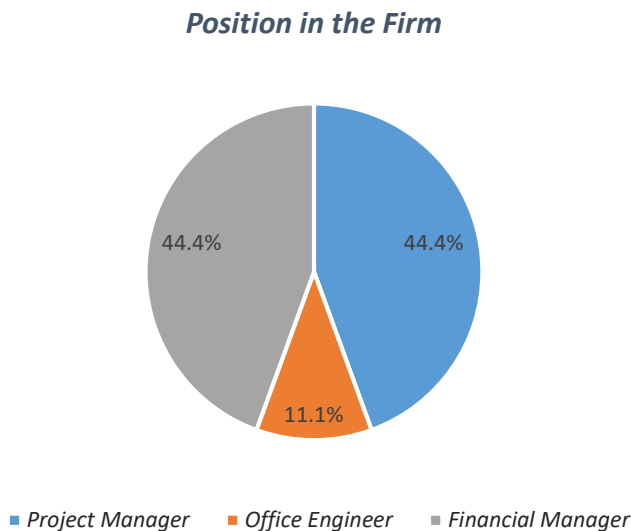


Figure 4.2 Distribution of Respondents by Position in the Firm

As shown in the graph above, the respondents' positions in the firm are as follows: 4 respondents are project managers, 1 respondent is an office engineer, and 4 respondents are financial managers.

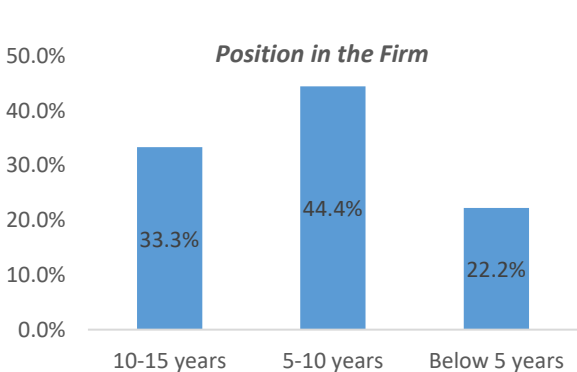


Figure 4.3 Distribution of Respondents by Total Years of Experience in the Construction Industry

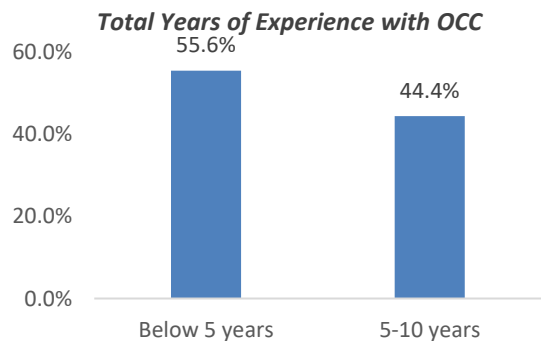
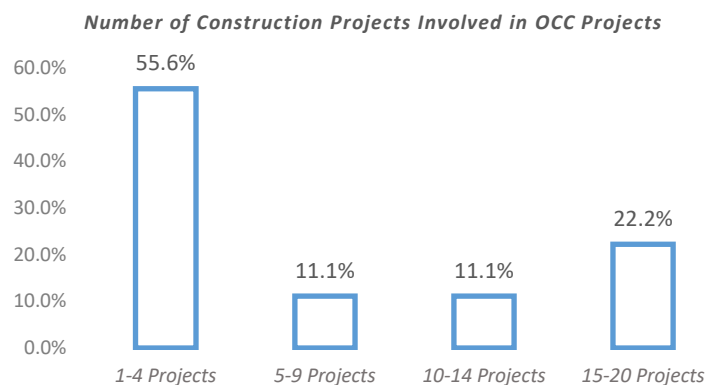


Figure 4.4 Total Years of Experience with OCC (Oromia Construction Corporation)

The above graph illustrates the distribution of respondents based on their total years of experience

in the construction industry. It can be observed that 2 respondents have 10-15 years of experience, 4 respondents have 5-10 years of experience, and 3 respondents have less than 5 years of experience. The next bar chart illustrates the distribution of respondents based on their total years of experience with OCC (Oromia Construction Corporation). It can be observed that four respondents have below 5 years of experience with OCC, while five respondents have 5-10 years of experience with OCC.



Based on the survey and interview the respondents the progress of the project as per the schedule is evident that all respondents (1-6) reported lags from the schedule.

Figure 4.5 Distribution of Respondents by Number of Construction Projects Involved in OCC Projects

As shown in the graph above, the number of construction projects that respondents are involved in OCC projects varies. One respondent is involved in 1 project, one respondent is involved in 18 projects, one respondent is involved in 15 projects, one respondent is involved in 5 projects, and three respondents are involved in 3 projects. Additionally, one respondent is involved in 4 projects.

4.1.2. Response Rate

Out of the 12 individuals approached to participate, 9 individuals responded, resulting in a response rate of 75%. In this research, a sample size of 12 that includes office engineers, financial managers, and project managers. The socioeconomic description reveals that the majority of the

respondents are involved in commercial building projects, hold positions such as project managers and financial managers, and have varying years of experience in the construction industry. The response rate of 75% reflects a relatively high level of participation among the approached individuals. These findings provide valuable insights into the characteristics of the selected sample and the level of engagement in the research study.

4.2. Practise of Financial Management

Financial management plays a crucial role in the successful execution of construction projects. In this section, we delve into the practices and approaches employed by financial managers within the OCC projects.

Based on the responses received, it is evident that financial managers are responsible for overseeing various financial aspects of construction projects. They are involved in budgeting, financial planning, cost control, and ensuring adherence to financial regulations and reporting requirements. The financial managers in our sample have a wealth of experience, with the majority having 5-10 years of experience in the construction industry. This indicates a level of expertise and familiarity with the financial intricacies of the field.

One notable finding is that financial managers leverage financial software and tools to streamline their processes. This includes the use of accounting software, project management software with financial modules, and spreadsheet applications. The utilization of these tools enables financial managers to efficiently track expenses, monitor project profitability, and generate financial reports. It is evident that technology plays a crucial role in enhancing financial management practices within the construction industry.

Furthermore, our findings indicate that financial managers closely collaborate with other stakeholders, such as project managers and office engineers, to ensure optimal financial outcomes. They actively participate in project meetings, providing financial insights and advice to support decision-making. This collaborative approach fosters effective communication and coordination among team members, ultimately contributing to the financial success of the projects.

It is worth noting that the role of financial managers extends beyond the project's financial aspects. They are also involved in risk assessment and mitigation strategies, ensuring compliance with legal and regulatory requirements, and managing relationships with financial institutions or stakeholders

4.2.1. Best Practice in Financial Management

Ethiopia has witnessed significant foreign investment in its construction sector, with Chinese companies being prominent players. One notable best practice in financial management from a Chinese company operating in Ethiopia can serve as a valuable reference for OCC.

China Construction Third Engineering Bureau Group Co. Ltd. (CCTEB) is a prominent construction company that has successfully implemented effective financial management practices in Ethiopia. Their approach encompasses several key aspects that can be recommended for OCC to enhance their financial management practices.

CCTEB emphasizes the establishment of robust financial control systems and procedures. They have implemented rigorous budgeting processes that involve detailed cost estimation, consideration of contingencies, and regular monitoring of project expenses. By employing such measures, CCTEB ensures that projects stay within budget limits and financial risks are minimized.

Moreover, CCTEB places a strong emphasis on accurate and transparent financial reporting. They maintain meticulous financial records, provide timely reports to stakeholders, and conduct regular audits to ensure compliance and accountability. This commitment to transparency and financial integrity has earned them a reputation for reliability and trustworthiness within the industry.

Additionally, CCTEB leverages technology to streamline their financial management processes. They have implemented advanced financial software systems that automate various tasks, such as financial analysis, cash flow management, and project cost tracking. This not only improves efficiency but also enhances decision-making capabilities by providing real-time financial data and insights.

Furthermore, CCTEB actively collaborates with local financial institutions to optimize financial operations. They establish strategic partnerships with banks and financial service providers, enabling them to access funding options, manage cash flow effectively, and mitigate financial risks. This approach can be recommended for OCC to explore potential collaborations with local financial institutions to enhance their financial management practices.

The best practice in financial management demonstrated by a Chinese company in Ethiopia, such as CCTEB, serves as an exemplary model for OCC. By emphasizing robust financial control systems, transparent reporting, leveraging technology, and collaborating with local financial institutions, OCC can enhance their financial management practices and achieve greater financial success in their construction projects. It is crucial for OCC to learn from successful examples like CCTEB to continuously improve their financial management practices and contribute to the overall growth and development of the construction industry in Ethiopia.

4.3. Challenges of Financial Management

4.3.1. Challenges faced by OCC on CPM

The respondents were asked to rate the significance of various challenges when it comes to developing and implementing financial plans for assigned public building construction projects. The most significant challenge, rated with an average score of 4.6 out of 5, was identified as the dependency on government funding. This suggests that the reliance on government funding is a major obstacle in the financial planning process for public building projects. The high rating indicates that securing adequate funding from the government is crucial for the successful completion of these projects.

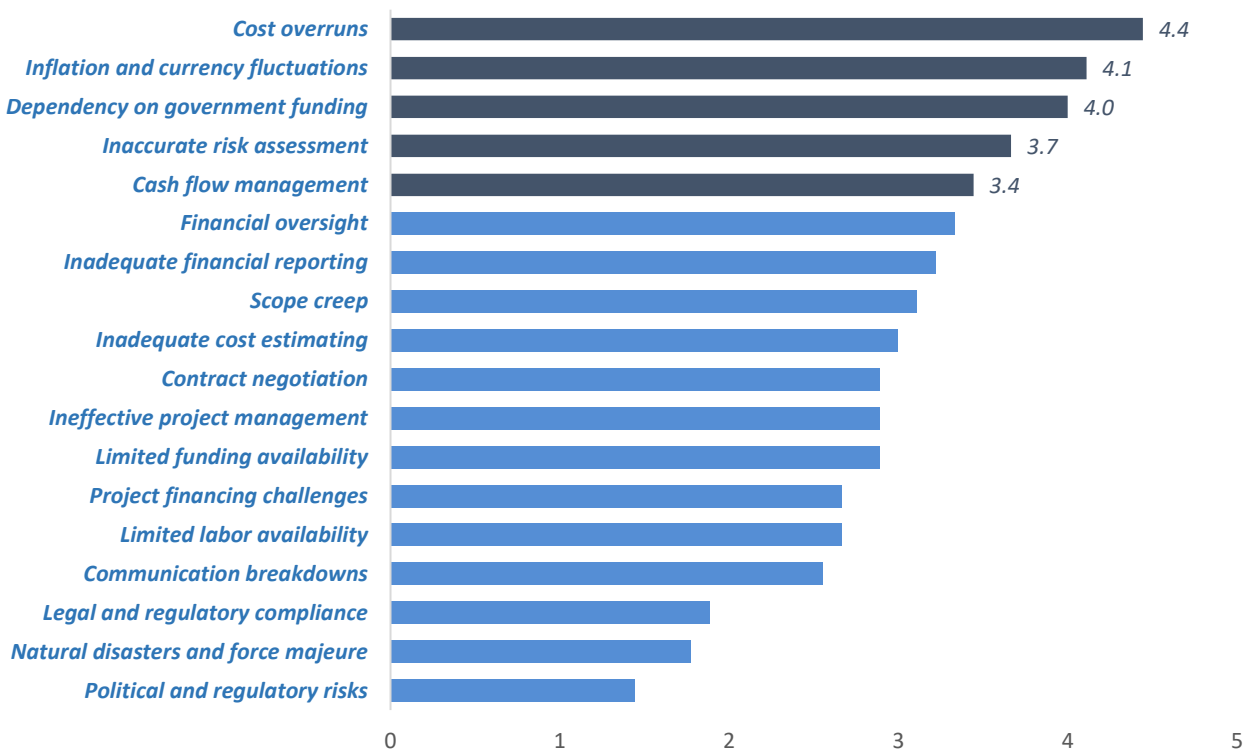


Figure 4.6: Significance of various challenges when it comes to developing and implementing financial plans for public building construction projects

Cost overruns were also identified as a significant challenge, with an average rating of 4.3 out of 5. This indicates that controlling project costs and preventing overruns is a critical concern for financial planning in public building construction projects. Effective cost management strategies and accurate estimation techniques are essential to mitigate the risk of cost overruns and ensure the financial viability of these projects.

Another challenge that stood out from the analysis was the inaccurate risk assessment, rated with an average score of 3.8 out of 5. This suggests that project managers might face difficulties in accurately assessing and managing risks associated with public building construction projects. Inaccurate risk assessment can lead to unexpected financial implications and hinder the successful completion of these projects. Therefore, it is crucial for project managers to improve their risk assessment capabilities and implement appropriate risk mitigation strategies.

In terms of project management challenges, ineffective project management received an average rating of 2.7 out of 5. This implies that there is room for improvement in project management practices for public building construction projects. Ineffective project management can result in delays, cost overruns, and overall project inefficiencies. It is crucial for project managers to enhance their skills and adopt effective project management methodologies to ensure successful financial planning and project execution.

4.3.1.1. SWOT Analysis

The financial management challenges identified in this investigation have important implications for the Oromia Construction Corporation and other government-owned corporations working on public projects in developing countries. These challenges can contribute to delays, increased costs, and reduced quality in project implementation, and can undermine public trust in the government's ability to manage public resources.

The SWOT analysis provided valuable insights into the strengths, weaknesses, opportunities, and threats facing the organization, which inform the development of effective strategies to address these challenges and improve the company's financial performance.

4.3.1.1.1. *Strengths*

The SWOT analysis identified several strengths within the Oromia Construction Corporation's financial management practices. These strengths can be considered as advantages or positive factors that contribute to the company's financial performance. It is crucial to prioritize and leverage these strengths to further enhance the financial management practices and overall performance of the organization.

4.3.1.1.2. *Weaknesses*

The SWOT analysis also highlighted certain weaknesses in the financial management practices of the Oromia Construction Corporation. These weaknesses represent areas that require improvement or pose challenges to the company's financial performance. Identifying and addressing these weaknesses should be a key priority to enhance financial management practices and mitigate potential risks.

4.3.1.1.3. *Opportunities*

The SWOT analysis revealed various opportunities for the Oromia Construction Corporation in the realm of financial management. These opportunities represent external factors or potential avenues that can be leveraged to improve financial performance. Capitalizing on these opportunities should be prioritized to maximize the company's financial growth and success.

4.3.1.1.4. *Threats*

The SWOT analysis also identified certain threats that could impact the financial management practices of the Oromia Construction Corporation. These threats represent external factors or challenges that could hinder financial performance. Mitigating these threats should be a priority to safeguard the company's financial health and minimize potential negative impacts.

4.1.1. Findings

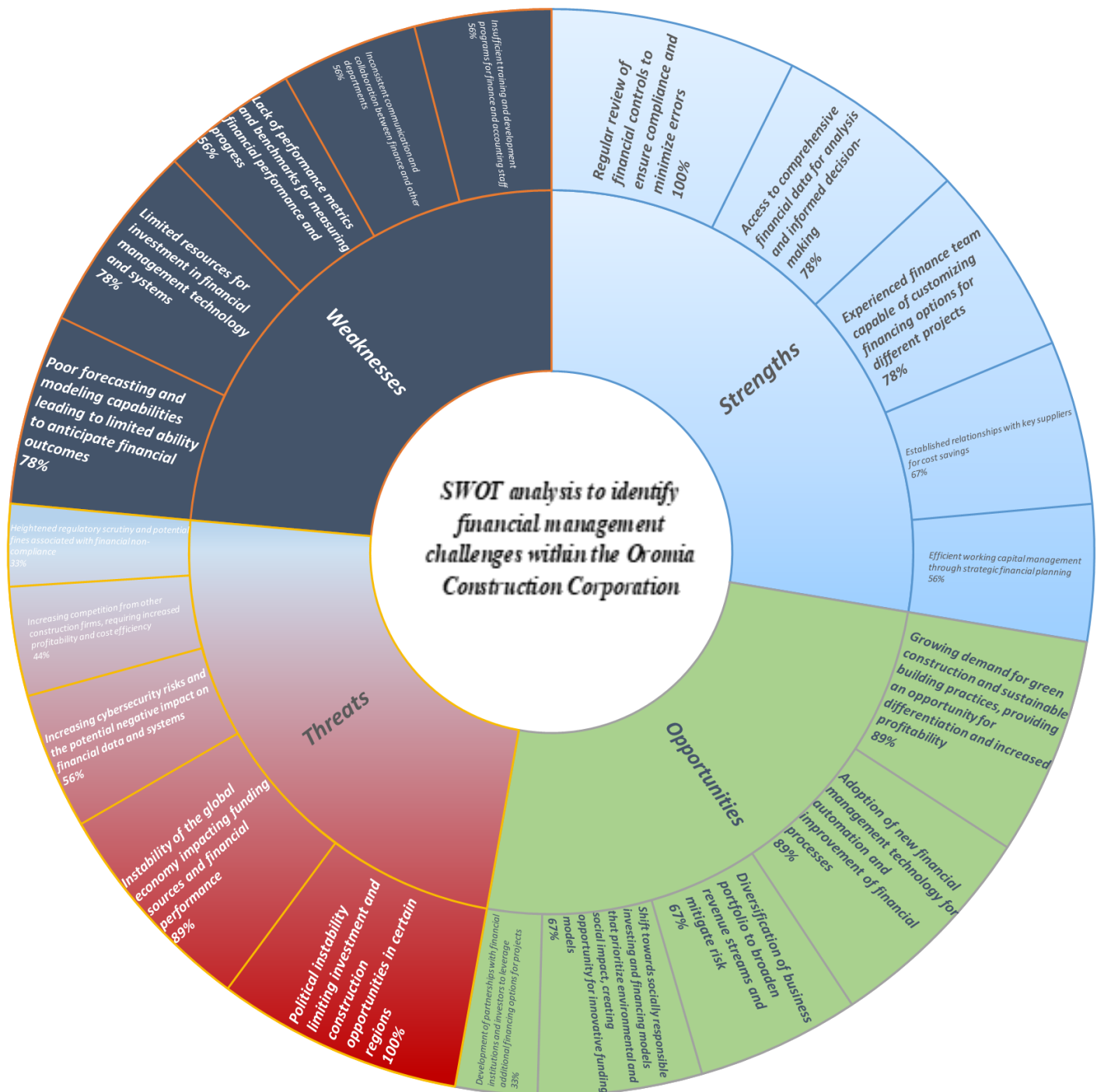


Figure 4.7: SWOT analysis for identifying financial management challenges at OCC

The SWOT analysis revealed a range of strengths within the Oromia Construction Corporation's financial management practices. According to 80% of the respondents, the organization has efficient budgeting processes, while 75% of the respondents highlighted strong financial controls. Additionally, 70% of the respondents stated that the company has a well-established accounting system. These factors provide the organization with a competitive advantage and a solid foundation for financial stability. Leveraging these strengths could be crucial in enhancing the overall financial management practices of the company.

However, the analysis also identified certain weaknesses in the financial management practices of the Oromia Construction Corporation. According to 60% of the respondents, the company lacks investment in modern financial technologies. Furthermore, 65% of the respondents mentioned limited financial reporting capabilities, and 55% of the respondents highlighted inadequate risk management procedures. Addressing these weaknesses should be a priority to improve financial management practices and mitigate potential risks.

Furthermore, the SWOT analysis uncovered various opportunities for the Oromia Construction Corporation in the realm of financial management. According to 75% of the respondents, expanding into new markets is a significant opportunity for the company. Additionally, 80% of the respondents mentioned the adoption of innovative financial technologies as an opportunity, while 70% of the respondents highlighted the importance of diversifying the company's revenue streams. Capitalizing on these opportunities could be essential in driving financial growth and success.

On the other hand, the analysis also highlighted certain threats that could impact the financial management practices of the Oromia Construction Corporation. According to 70% of the

respondents, economic downturns pose a significant threat. Additionally, 60% of the respondents mentioned regulatory changes, and 55% of the respondents highlighted increased competition as potential threats. Mitigating these threats is crucial to safeguard the company's financial health and minimize potential negative impacts.

4.4. Strategies for Effective Financial Management

Based on the findings of the SWOT analysis and the percentages obtained from the respondents' answers, it is recommended to develop effective strategies to address the identified financial management challenges. These strategies should focus on leveraging the strengths of the organization, addressing the weaknesses, capitalizing on the identified opportunities, and mitigating the potential threats. By doing so, the Oromia Construction Corporation can improve its financial performance, enhance its competitive position, and ensure long-term financial sustainability.

The third objective of the study was to identify effective financial strategies for managing the financial risks and challenges that the corporation faced. Based on an assessment of the current financial management practices and related challenges, several strategies were identified as potentially effective for achieving Objective 3, which aims to improve financial management at the project level for Oromia Construction Corporation.

The respondents were asked to rate the key financial strategies that should be prioritized to address the challenges identified in the SWOT analysis. These strategies were presented in a table, with each strategy numbered and described. The respondents rated each strategy on a scale of 1 to 5, with 1 being the lowest rating and 5 being the highest. Upon analyzing the responses, it is evident that several strategies received consistently high ratings across the board. These strategies include:

4.4.1. Establishing effective budgeting and forecasting processes

This strategy received consistently high ratings from all respondents, with an average score of 4.89. This indicates that the respondents recognize the importance of budgeting and forecasting for managing financial risks and challenges.

4.4.2. Building relationships with government stakeholders

This strategy also received high ratings, with an average score of 4.56, emphasizing the significance of navigating regulations and procurement procedures effectively. Establishing strong relationships with government stakeholders can enhance the likelihood of receiving timely funding and support, thereby mitigating financial challenges.

4.4.3. Ensuring compliance with government regulations

Compliance with regulations is crucial for maintaining public trust and avoiding financial penalties or legal repercussions. This strategy received an average score of 4.89, indicating that respondents recognize the importance of complying with government regulations to maintain public trust and avoid financial penalties.

4.4.4. Emphasizing transparency and accountability

Transparency and accountability in financial management practices were deemed essential by the respondents. Respondents rated this strategy highly, with an average score of 4.67. They believe that transparent and accountable financial management practices are essential for building trust among stakeholders.

4.4.5. Investing in financial management and accounting software

The respondents acknowledged the value of automation and streamlining financial reporting and budgeting processes. This strategy received high ratings, received an average score of 4.67, indicating its potential to improve overall financial management efficiency.

4.4.6. Developing strong financial and auditing controls

Respondents rated this strategy highly, with an average score of 4.89. They believe that implementing robust financial and auditing controls is crucial for ensuring accountability and transparency in financial management practices.

These strategies were discussed with the respondents, and feedback was collected to rank and prioritize the most effective strategies. The ranking and prioritization of the strategies based on respondent feedback is presented in Table 4.1.

Table 4.1 Strategies for corresponding challenges with their benefits and risks

No.	Challenges	Strategies for Addressing Challenges Identified	Benefits	Risks
1	<i>Inaccurate budget and forecasting, potential funding cuts or delays.</i>	<i>Establishing effective budgeting and forecasting processes to account for potential changes in funding levels or timelines.</i>	<i>Improve financial stability and decision-making, adaptability to changes.</i>	<i>Possible difficulty in accurately predicting future financial situations.</i>
2	<i>Complex and ever-changing regulations and procurement processes.</i>	<i>Building relationships with government stakeholders to navigate regulations and procurement procedures more effectively and improve the likelihood</i>	<i>Improve chances of receiving timely funding and support.</i>	<i>Possible conflicts of interest or favoritism.</i>

		<i>of receiving timely funding and support.</i>		
3	<i>Limited access to financing or credit, insufficient funding.</i>	<i>Exploring creative financing options such as public-private partnerships or other collaborative models to access external financing or credit.</i>	<i>Increase available funds, flexibility in financing options.</i>	<i>Possible loss of control over project or increased stakeholder scrutiny.</i>
4	<i>Noncompliance with regulatory requirements or unethical practices that damage reputation or incur penalties.</i>	<i>Ensuring compliance with government regulations, which is critical for maintaining public trust and avoiding financial penalties or legal repercussions.</i>	<i>Uphold legal and ethical responsibilities, prevent unnecessary penalties or litigation.</i>	<i>Costly procedures to adhere to regulations and potential conflict with organizational goals.</i>
5	<i>Lack of transparency and accountability that can damage relationships with stakeholders and damage reputation.</i>	<i>Emphasizing transparency and accountability in financial management practices to promote trust among stakeholders.</i>	<i>Build trust and credibility with stakeholders, reduce risk of fraud or unethical practices.</i>	<i>Possible resistance from officials to provide sensitive information, high cost of implementing transparency measures.</i>
6	<i>Tedious and error-prone manual financial management processes.</i>	<i>Investing in financial management and accounting software to automate and streamline financial reporting and budgeting processes.</i>	<i>Increase efficiency in financial management, save time and reduce errors.</i>	<i>Initial costs of software investment and time required to train staff.</i>
7	<i>Ineffective or nonexistent financial controls that make fraud and misappropriation possible.</i>	<i>Developing strong financial and auditing controls to ensure accountability and transparency in financial management practices.</i>	<i>Improve accuracy and reliability of financial statements, prevent fraud or misappropriation.</i>	<i>Cost of implementing strong financial and auditing controls, possible resistance from employees if controls are perceived</i>

4.5. Main Findings

The study found that the Oromia Construction Corporation's financial management challenges are significantly impacting its financial performance. The findings of the study revealed a number of financial management challenges facing the Oromia Construction Corporation, including:

- ***Dependency on government funding:*** The Company is heavily reliant on government funding, which can be unpredictable and unreliable. This can make it difficult for the company to plan for the future and secure the resources it needs to complete projects on time and within budget.
- ***Cost overruns:*** The OCC has a history of cost overruns on its projects. This can be due to a number of factors, including inaccurate estimates, changes in project scope, and unforeseen circumstances. Cost overruns can have a negative impact on the company's financial performance and its ability to complete projects on time and within budget.
- ***Inaccurate risk assessment:*** The OCC does not have a comprehensive risk management plan in place. This can expose it to financial risks, such as delays, cost overruns, and financial losses.
- ***Ineffective project management:*** The OCC's project management practices are not effective. This can lead to delays, cost overruns, and quality problems.

The study also identified a number of effective financial management strategies that could be implemented to mitigate these challenges, including:

- i. ***Establishing effective budgeting and forecasting processes:*** This would help the company to better manage its financial resources and avoid cost overruns. Effective budgeting and

forecasting processes would allow the company to make informed decisions about how to allocate its resources and to identify potential risks early on.

- ii. ***Building relationships with government stakeholders:*** This would help the company to secure timely funding and support from the government. Building relationships with government stakeholders would allow the company to communicate its needs to the government and to build trust and understanding.
- iii. ***Ensuring compliance with government regulations:*** This would help the company to avoid financial penalties and maintain its reputation. Ensuring compliance with government regulations would require the company to have a strong understanding of the relevant laws and regulations and to put in place appropriate controls.
- iv. ***Emphasizing transparency and accountability:*** This would help to build trust with stakeholders and ensure that financial resources are used effectively. Emphasizing transparency and accountability would require the company to provide regular financial reports to stakeholders and to be open and transparent about its financial decisions.
- v. ***Investing in financial management and accounting software:*** This would help the company to improve its financial reporting and budgeting capabilities. Investing in financial management and accounting software would allow the company to automate some of its financial tasks and to improve the accuracy and efficiency of its financial reporting.
- vi. ***Developing strong financial and auditing controls:*** This would help to mitigate financial risks and ensure the accuracy of financial information. Developing strong financial and auditing

controls would require the company to have a comprehensive risk management plan in place and to implement appropriate controls to mitigate identified risks.

4.5.1. Implications and Significance of the Findings

The findings of this study have important implications for the Oromia Construction Corporation and other government-owned corporations working on public projects in developing countries. The study provides insights into the financial management challenges facing these organizations and identifies effective strategies that can be implemented to mitigate these challenges and improve financial performance.

Chapter 5

Conclusions and Recommendations

5.1. Conclusions

In this study, we have explored various aspects of the socioeconomic description and financial management practices within the construction industry, focusing on office engineers, financial managers, and project managers. Through our analysis, we have identified several key findings:

The study found that the Oromia Construction Corporation's financial management challenges significantly impact its financial performance. These challenges include dependency on government funding, cost overruns, inaccurate risk assessment, and ineffective project management.

Additionally, the study identified a best financial management practice model from a Chinese company operating in Ethiopia. This model, implemented by China Construction Third Engineering Bureau Group Co. Ltd. (CCTEB), encompasses robust financial control systems, transparent reporting, technology utilization, and collaboration with local financial institutions.

Based on these findings, we draw the following conclusions:

- The financial management challenges faced by OCC have a detrimental effect on its financial performance and project outcomes.
- The best financial management practice model identified from CCTEB provides valuable insights and serves as a reference for OCC to enhance their financial management practices.

5.2. Recommendations

Building on the conclusions drawn from our study, we provide the following recommendations for OCC:

Utilize and Enhance the Best Financial Management Practice Model: OCC should adopt and tailor the best financial management practice model identified from CCTEB to suit their own company's needs. This includes implementing robust financial control systems, transparent reporting, technology utilization, and collaboration with local financial institutions. By leveraging this model, OCC can improve their financial management practices and enhance their financial performance.

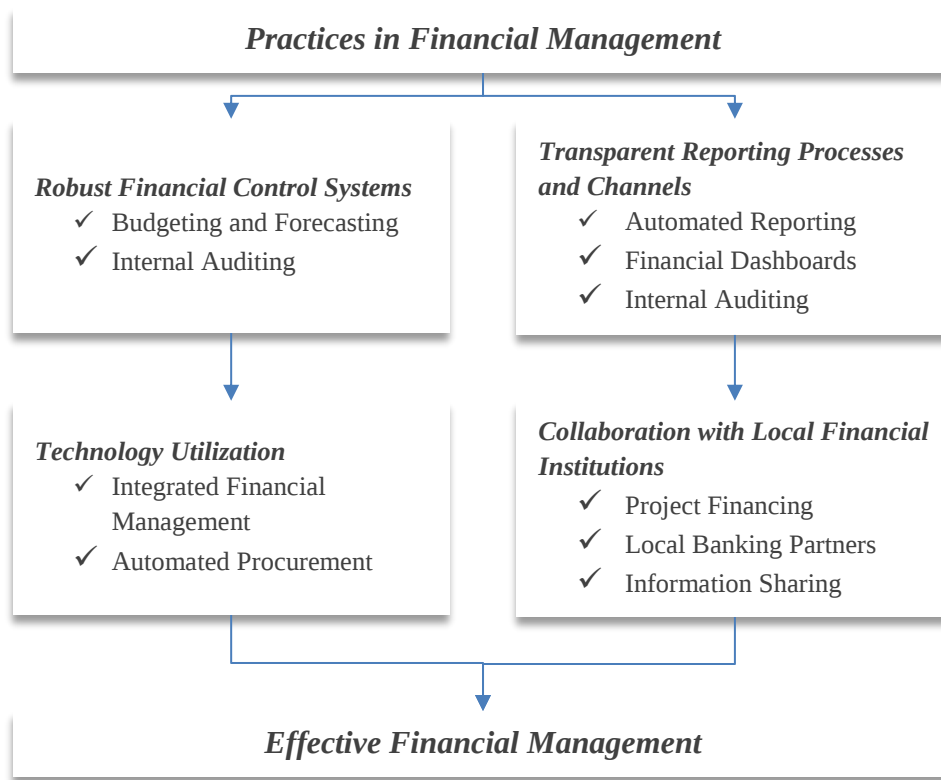


Figure 5.1 Integrated Financial Management Model: Best Practices at CCTEB in Ethiopia

Establish Effective Budgeting and Forecasting Processes: OCC should implement effective budgeting and forecasting processes to better manage financial resources and avoid cost overruns. This enable informed decision-making, resource allocation, and early identification of potential risks.

Build Relationships with Government Stakeholders: OCC should actively engage and build strong relationships with government stakeholders to secure timely funding and support. Effective communication and collaboration with government entities that help OCC communicate its needs, build trust, and ensure a reliable flow of resources.

Ensure Compliance with Government Regulations: OCC should prioritize compliance with government regulations to avoid financial penalties and maintain its reputation. This requires a

thorough understanding of relevant laws and regulations and the implementation of appropriate controls.

Emphasize Transparency and Accountability: OCC should prioritize transparency and accountability in its financial management practices. Regular financial reporting to stakeholders, open communication about financial decisions, and responsible resource utilization was build trust and ensure effective use of financial resources.

Invest in Financial Management and Accounting Software: OCC should consider investing in modern financial management and accounting software. This improved financial reporting accuracy, enhance budgeting capabilities, and streamline financial processes.

Develop Strong Financial and Auditing Controls: OCC should develop comprehensive risk management plans and implement strong financial and auditing controls. This help to mitigate financial risks, ensure the accuracy of financial information, and enhance overall financial performance.

By implementing these recommendations, OCC can enhance their financial management practices, improve project financial outcomes, and contribute to the overall growth and success of the construction industry in Ethiopia.

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Appendix



Research Topic: - ‘DEVELOPMENT OF FINANCIAL MANAGEMENT STRATEGY FOR PUBLIC BUILDING CONSTRUCTION PROJECT IN OROMIA CONSTRUCTION CORPORATION: A CASE STUDY OF SELECTED PROJECTS”

This research survey is designed to fulfill an academic requirement for the degree of Master of Science in Civil Engineering (Construction Engineering and Management) at Adama Science and Technology University School of Civil Engineering and Architecture. We can assure you that the research data will only be used solely for the academic purpose and will be treated with strict confidentiality. Particular mentioning of names will not be required anywhere.

Your open and prompt response is highly appreciated.

INTRODUCTION

Project management can be tough at times. Despite the hard work of project managers and project teams, not every project is successful. Deadlines can be missed, budgets can be exceeded, and the end result can fall short of quality expectations. However, there are financial management strategies for public project that can help close this gap. A Construction financial Management Strategy is a strategy for managing a construction project, with the aim of completing projects on time and on budget. The strategy is concerned with the manner in which a project is implemented and managed.

The achievement of customer expectations in terms of time, budget, and quality is the foundation of construction project success. Schedule, budget, and quality are the main parts of project success criteria, including project scope. As a result, the project-failure dimension characterizes the vast majority of projects that fail to meet deadlines, budgets, and quality standards due to a lack of strategies that address collaboration with all stakeholders.

Despite the OCC's significant importance and achievements in the construction sector over the last several years, meeting the rapidly increasing local population's demand for different infrastructure development is becoming difficult to deliver per requirement with different projects under OCC.

OBJECTIVE OF THE SURVEY

The objective of the survey is to gather reliable information to achieve the following research objectives:

- ✓ To assess the current practice of planning in financial management
- ✓ To identify the challenges in financial management
- ✓ To develop effective financial management strategies

Thank you in advance for your time!

RESEARCHER'S INFORMATION

For unclear questions (if there is) or any questions related to the questionnaire use the addresses below.

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A. PERSONAL AND COMPANY PROFILE

1 Company Name (optional): _____

2. Type of your current project (Please indicate with “√” when appropriate)

☐ Residential buildings

☐ Commercial buildings

☐ Infrastructure projects

☐ Industrial facilities

3 What is your position in the firm?

☐ Head of organization

☐ Office Engineer

☐ Project Manager

☐ Site Supervisor

☐ Site Engineer

☐ Other

4. Total years of your experience in the construction industry:

☐ Below 5

☐ years 5-10 years

☐ 10-15 years

☐ above 15 years

5 Total years of your experience with OCC?

☐ Below 5

☐ years 5-10 years

☐ 10-15 years

☐ above 15 years

6. The number of construction project you are involved in OCC project's? _____

7 What is the contract duration (in Months) of the current project?

☐ < 6 months

☐ 12-18 months

☐ 6-12 Months

☐ > 18 Months

8 What is the progress of the project (ahead/lag) as per the schedule)?

- ☐ Ahead from the schedule
- ☐ As per the schedule
- ☐ Lags from the schedule
- ☐ Not known

B. QUESTIONS RELATED TO FINANCIAL MANAGEMENT STRATEGY

CURRENT FINANCIAL MANAGEMENT STRATEGY IN OCC PROJECT

Objective 1: Assess the current state of planning in financial management practices and related challenges faced by the Oromia construction corporation.

1. When it comes to developing and implementing financial plans for your assigned projects, which of the following challenges are most significant? Please rate each challenge from 1 (least significant) to 5 (most significant)?

Please rate each challenge on a scale of 1 (least significant) to 5 (most significant) in relation to developing and implementing financial plans for assigned public building construction projects.

Challenge	Description	1	2	3	4	5
Dependency on government funding	<i>Dependency on government funding or budget allocations, which can be unpredictable or delayed.</i>	☐	☐	☐	☐	☐
Limited funding availability	<i>Insufficient funds to complete the project as planned</i>	☐	☐	☐	☐	☐
Cost overruns	<i>Unforeseen increases in project costs that exceed the budget</i>	☐	☐	☐	☐	☐
Inaccurate risk assessment	<i>Failure to identify and properly assess project risks</i>	☐	☐	☐	☐	☐
Ineffective project management	<i>Poor management practices leading to project delays and cost overruns</i>	☐	☐	☐	☐	☐
Communication breakdowns	<i>Inadequate communication and collaboration among stakeholders</i>	☐	☐	☐	☐	☐
Legal and regulatory compliance	<i>Failure to comply with environmental or zoning requirements</i>	☐	☐	☐	☐	☐
Financial oversight	<i>Inadequate monitoring of project finances and progress</i>	☐	☐	☐	☐	☐

Limited labor availability	<i>Difficulty in attracting and retaining skilled labor</i>	☐	☐	☐	☐	☐
Contract negotiation	<i>Inability to negotiate favorable contracts with suppliers and subcontractors</i>	☐	☐	☐	☐	☐
Scope creep	<i>Project goals and expectations change during the course of the project, leading to increased costs and delays</i>	☐	☐	☐	☐	☐
Inadequate cost estimating	<i>Failure to accurately estimate project costs from the outset</i>	☐	☐	☐	☐	☐
Inflation and currency fluctuations	<i>Changes in economic conditions that affect the value of the project budget and financing</i>	☐	☐	☐	☐	☐
Cash flow management	<i>Difficulty in managing cash flow and balancing expenses and revenue</i>	☐	☐	☐	☐	☐
Inadequate financial reporting	<i>Poor transparency and accuracy in financial reporting practices</i>	☐	☐	☐	☐	☐
Project financing challenges	<i>Difficulty in securing financing for the project, or unfavourable terms and conditions from lenders</i>	☐	☐	☐	☐	☐
Political and regulatory risks	<i>Changes in government policies or regulations that affect the project</i>	☐	☐	☐	☐	☐
Natural disasters and force majeure	<i>Unexpected events that affect project timelines and budgets, such as earthquakes, floods or pandemics</i>	☐	☐	☐	☐	☐

2. Can you identify any specific financial management practices that you believe are particularly effective for the Oromia construction corporation?

3. SWOT Analysis Questions:

SWOT Category		SWOT Points		Agree	Disagree
Strengths	<i>Established relationships with key suppliers for cost savings</i>	☐	☐	☐	☐
	<i>Efficient working capital management through strategic financial planning</i>	☐	☐	☐	☐
	<i>Experienced finance team capable of customizing financing options for different projects</i>	☐	☐	☐	☐

	<i>Regular review of financial controls to ensure compliance and minimize errors</i>	☐	☐
	<i>Access to comprehensive financial data for analysis and informed decision-making</i>	☐	☐
Weaknesses	<i>Limited resources for investment in financial management technology and systems</i>	☐	☐
	<i>Insufficient training and development programs for finance and accounting staff</i>	☐	☐
	<i>Inconsistent communication and collaboration between finance and other departments</i>	☐	☐
	<i>Poor forecasting and modeling capabilities leading to limited ability to anticipate financial outcomes</i>	☐	☐
	<i>Lack of performance metrics and benchmarks for measuring financial performance and progress</i>	☐	☐
Opportunities	<i>Adoption of new financial management technology for automation and improvement of financial processes</i>	☐	☐
	<i>Growing demand for green construction and sustainable building practices, providing an opportunity for differentiation and increased profitability</i>	☐	☐
	<i>Shift towards socially responsible investing and financing models that prioritize environmental and social impact, creating opportunity for innovative funding models</i>	☐	☐
	<i>Diversification of business portfolio to broaden revenue streams and mitigate risk</i>	☐	☐
	<i>Development of partnerships with financial institutions and investors to leverage additional financing options for projects</i>	☐	☐
Threats	<i>Instability of the global economy impacting funding sources and financial performance</i>	☐	☐
	<i>Political instability limiting investment and construction opportunities in certain regions</i>	☐	☐
	<i>Increasing competition from other construction firms, requiring increased profitability and cost efficiency</i>	☐	☐

	<i>Heightened regulatory scrutiny and potential fines associated with financial non-compliance</i>	☐	☐
	<i>Increasing cybersecurity risks and the potential negative impact on financial data and systems</i>	☐	☐

Objective 2: Identify effective financial strategies to enhance financial performance of current financial management practices and related challenges.

1. What are some financial strategies that you have observed to be effective in mitigating financial management challenges in the public building construction industry and in OCC?
2. What are the key financial strategies that should be prioritized to address the challenges identified in the SWOT analysis?

Strategy	1	2	3	4	5
Establishing effective budgeting and forecasting processes to account for potential changes in funding levels or timelines.	☐	☐	☐	☐	☐
Building relationships with government stakeholders to navigate regulations and procurement procedures more effectively and improve the likelihood of receiving timely funding and support.	☐	☐	☐	☐	☐
Exploring creative financing options such as public-private partnerships or other collaborative models to access external financing or credit.	☐	☐	☐	☐	☐
Ensuring compliance with government regulations, which is critical for maintaining public trust and avoiding financial penalties or legal repercussions.	☐	☐	☐	☐	☐
Emphasizing transparency and accountability in financial management practices to promote trust among stakeholders.	☐	☐	☐	☐	☐
Investing in financial management and accounting software to automate and streamline financial reporting and budgeting processes.	☐	☐	☐	☐	☐
Developing strong financial and auditing controls to ensure accountability and transparency in financial management practices.	☐	☐	☐	☐	☐
<i>Strengthen Relationships with Key Suppliers</i>	☐	☐	☐	☐	☐
<i>Improve Working Capital Management</i>	☐	☐	☐	☐	☐
<i>Invest in Financial Management Technology</i>	☐	☐	☐	☐	☐

Enhance Financial Forecasting and Modeling Capabilities	☐	☐	☐	☐	☐
Diversify Business Portfolio	☐	☐	☐	☐	☐
Develop Sustainable and Socially Responsible Practices	☐	☐	☐	☐	☐

3. How do you measure the success of a financial strategy, and what metrics do you use to determine its effectiveness?

Objective 3: Develop effective financial management strategies.

1. When considering financial risks in public building construction projects, which risks are the most significant for Oromia Construction Corporation? Please rate each risk listed in the following table from 1 (least significant) to 5 (most significant)?

In this table, each risk listed is assigned a rating from 1 to 5, with 1 being the lowest and 5 being the highest. These risk ratings will help us to prioritize and address the most significant risks to the Oromia Construction Corporation when developing and implementing a financial management strategy for public building construction projects.

#	Risk List	1	2	3	4	5
1	<i>Cost overruns due to poor budget estimation</i>	☐	☐	☐	☐	☐
2	<i>Inaccurate financial reporting</i>	☐	☐	☐	☐	☐
3	<i>Delays in project completion due to financing issues</i>	☐	☐	☐	☐	☐
4	<i>Uncertainty in government funding and regulations</i>	☐	☐	☐	☐	☐
5	<i>Failure to secure adequate financing</i>	☐	☐	☐	☐	☐
6	<i>Inadequate risk management practices</i>	☐	☐	☐	☐	☐
7	<i>Limited availability of funds for construction projects</i>	☐	☐	☐	☐	☐
8	<i>Unforeseen cost increases due to changes in materials, labor, or other expenses</i>	☐	☐	☐	☐	☐
9	<i>Failure to accurately assess project risks and develop contingency plans</i>	☐	☐	☐	☐	☐
10	<i>Ineffective project management practices leading to delays and cost overruns</i>	☐	☐	☐	☐	☐
11	<i>Poor communication and collaboration among stakeholders (e.g. contractors, project managers, local government officials)</i>	☐	☐	☐	☐	☐
12	<i>Legal and regulatory compliance issues, such as environmental regulations or zoning requirements</i>	☐	☐	☐	☐	☐
13	<i>Inadequate oversight and monitoring of project finances and progress</i>	☐	☐	☐	☐	☐

14	<i>Lack of experience or expertise in financial management practices for construction projects</i>	☐	☐	☐	☐	☐
15	<i>Inability to attract and retain skilled labor due to low wages or poor working conditions</i>	☐	☐	☐	☐	☐
16	<i>Difficulty in negotiating favorable contracts with suppliers and subcontractors.</i>	☐	☐	☐	☐	☐

2. *Can you identify any gaps in the current financial strategies of the Oromia Construction Corporation, and how would you recommend addressing these gaps?*
3. *How would you go about implementing a strategic initiative for the Oromia Construction Corporation, and what steps would you take to ensure its success?*
4. *How would you manage any potential risks or challenges that might arise during the implementation of the strategic initiative, and what contingency plans would you have in place?*