ASSESSMENT OF PROJECT PERFORMANCE IN HIGH-RISE BUILDING CONSTRUCTION: THECASE OF HIBRET BANK HEADQUARTER BUILDING PROJECT

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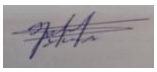
External Examiner: Yilkal Wassie (Asset Prof) **Signature**  **Date: 03/07/24**

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Advisor: Maru Shete (Asst. Prof.) **Signature**  **Date: 03/07/24**

DECLARATION

I hereby declare that the work entitled: "Assessment of project performance in high-rise building construction: the case of hibret bank headquarter building project "is the outcome of my own effort and study and that all source of materials used for the study have been duly acknowledged.

I have produced it independently except of the guidance and Suggestion of my Research Advisor.

This study has not been submitted for any degree in this University or any other university.

It is offered for the Partial Fulfillment of Requirements for Award of Masters of Art in Project Management.

Declared by:

Name: - Edmealem Aragaw beyene

Signature: - _____

St. Mary's University, Addis Ababa

CERTIFICATION

This is to certify that Edmealem Aragaw Beyene has carried out this research project on the topic Entitled "Assessment of project performance in high-rise building construction: the case of hibret bank headquarter building project". This work is original in nature and it is sufficient for submission for the partial fulfillment for the award of Degree of Masters of Art in Project and Management.

Name of Advisor: Maru Shete (Asst. Prof.)

Signature: 

Date: 22 May 2024

St. Mary's University Addis Ababa/Ethiopia

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ACRONYMS AND ABBREVIATIONS

NFPA ……National Fire Protection Association

PMBOK …… Project Management Body of Knowledge

AACPPO…… *Addis Ababa city structure plan*

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Abstract

The assessment of project performance is crucial for the successful delivery of high-rise building construction projects. This study aims to address the following problem that insufficient project performance assessment and suboptimal construction practice this study employed a mixed-methods approach to comprehensively evaluate the performance of the Hibret Bank Headquarters building project. The research combined quantitative data on project performance indicators, such as cost, schedule, and quality, with qualitative insights gathered from interviews with key project stakeholders. The study population consisted of the various stakeholders involved in the Hibret Bank Headquarters project, including project managers, contractors, subcontractors, architects, and engineers. Purposive sampling was used to select participants who had direct involvement and expertise in the project, ensuring the sample could provide valuable perspectives on project performance. Multiple data sources were utilized, including semi-structured interviews, surveys, and a review of project documentation. Qualitative data from the interviews was analyzed using content analysis techniques to identify common themes, patterns, and contextual factors influencing project performance. Quantitative data from the surveys was assessed through statistical methods, such as descriptive statistics and frequency analyses. This study contributes to the growing body of research on project performance assessment in the context of high rise building construction projects. The survey results suggest that the Hibret Bank Headquarters high-rise building construction project had a generally satisfactory performance, with some areas for improvement. The project was able to meet the cost, quality, and safety objectives, but faced challenges in time performance and coordination and communication.

Key words: Building construction, high-rise building construction project, project performance, project performance assessment, Project Management, Hibret Bank

CHAPTER ONE

INTRODUCTION

1.1 Background

The construction sector worldwide in general is a multibillion-dollar industry that almost always grows in size and complexity of technology. It is a vital sector of the economy that has a significant effect on the efficiency and productivity of other industry sectors. In some developing countries, the growth rate of construction activity outstrips that of population and GDP (Chitkara, 2011). The construction industry plays a vital role in developing countries which are highly dependent on the growth and development of physical infrastructures. Furthermore, its relation to both economic and social sectors is very significant (Habenom, 2017) the construction industry is a multi-billion dollar industry with increasing scale and technological sophistication. The construction industry is the backbone of economic development. Due to the harsh field conditions and heavy materials used (Habtemariam, 2019). A "construction project" is a high-value, time-bound, special construction mission of creating a construction facility or service, with predetermined performance objectives defined in terms of quality specification, completion time, budgeted cost, and other specified constraints (Chitkara K. , 2004). In Ethiopia construction project performance problems appear through different directions. Due to several reasons construction projects in Ethiopia construction projects challenges in their performance instead of achieving their planned goals. Most of these challenges are related to what we call project performance problems. (Habenom, 2017).

The level of success in carrying out construction project development activities will depend heavily on the quality of the managerial, financial, technical, and organizational performance of The respective parties while taking into consideration the associated risk management, the Business environment, and economic and political stability (Takin, 2004).

On-time completion within budget required quality standards, and performance measured by customer satisfaction are all critical factors in the long-term success of a construction project. (Omran., 2012). The success of a construction project depends on its performance, which is

measured based on timely completion, within the budget, required quality standards, and customer satisfaction (Omran., 2012).

Poor construction performances have created an economic situation that the industry cannot manage and at the same time the industry stakeholders or contractors do not know how to document these problems for future reference. The construction industry's performance is affected by national economies (Navon, 2005).

High-rise buildings present several unique challenges that are not found in traditional low-rise buildings due to parameters like longer egress time and distance, evacuation strategies, fire department accessibility, smoke movement, and fire control (NFPA., 2017). High-rise buildings play an increasingly important role in contemporary architecture. Their rising is a necessity for the process of population growth and its concentration in cities, as well as for the high demand for areas in city centers (Ali & Moon, 2018). It can be observed the dynamic development of their construction in terms of both quantity and quality (Rychter, 2013).

High-rise buildings pose unique challenges compared to traditional low-rise buildings. Factors such as longer egress time and distance, evacuation strategies, fire control, and smoke movement require specific considerations in their construction. High-rise buildings are increasingly important for accommodating population growth and meeting the demand for urban areas. The specific case mentioned is the construction project of the Hibret Bank headquarters building in Addis Ababa, Ethiopia. This high-rise building project is significant in terms of its scale, complexity, and impact on the city's skyline and infrastructure. Assessing the performance of this project will be crucial in understanding the challenges and factors that contribute to its success or failure. Overall, understanding the performance of the Hibret Bank headquarters building project and addressing the challenges faced in the construction industry can contribute to improving project outcomes, enhancing economic growth, and meeting the demands of urban development in Ethiopia.

1.2 Statement of the problem

Construction projects in general and high-rise building projects, in particular, are somewhat difficult to manage and challenging due to the nature of the industry and the project; such as its complex and unique nature, mobile workforce, ingrained culture, working conditions, and

project-based setup, diverse sub-contractors, and suppliers; in addition to regulatory bodies and changes in government policies during the production process (Arditi, 2009). The High-rise building construction period is long, the work is high above the more, the construction difficulty is high, a big workload and complicated technology. As a result, vertical transport, high safety, fire prevention, communications, water, and the processing of construction waste problems become one of the characteristics of high-rise building construction. The High-rise building construction period is generally long, and the huge manpower, material consumption, staff, and engineering quality put forward higher requirements (Cheng, 2014)

Any structure where the height can have a serious impact on evacuation is classified to be a high-rise building. According to the building code of Hyderabad, a high-rise building is one with four floors or more, or 15 to 18 Meters (49 to 59 ft.) or more in height. (Emporis., 2000) defines a high rise as a multistory structure between 35-100 meters tall or a building of unknown height from 12-39 floors while (Association, 2017) states that a high rise only comprises buildings higher than 23 meters or about 7 stories. The International Conference on Fire Safety in High-Rise Buildings defined a high-rise as "any structure where the height can have a serious impact on evacuation". In the U.S., the National Fire Protection Association defines a high-rise as being higher than 75 feet (23 m), or about seven stories. High-rise building development is known to be problematic and difficult to handle right from conception to the completion and occupation stage. Each stage has its challenges which require independent solutions as they occur or are anticipated (Z.k, 2015)In Ethiopia, almost all building construction projects face both time and cost performance problems. Most Ethiopian scholars argued that Ethiopian building construction project performances were majorly challenged by time and cost overruns (Alemayehu, 2016).

The construction of high-rise buildings is complex and poses unique challenges and requires careful project management to ensure successful outcomes. However, there is a need to assess project performance and identify areas for improvement to enhance the construction process and achieve better results. The construction of high-rise buildings is a complex and demanding process that requires effective project management and adherence to strict quality standards. However, some persistent challenges and issues impact project performance and hinder the successful completion of high-rise building projects.

This study aims to address the following problem: Insufficient project performance assessment: There is a lack of complete and systematic assessment methods to evaluate the performance of high-rise building construction projects.

Suboptimal construction practices: High-rise building construction involves intricate coordination of multiple disciplines, technologies, and stakeholders. However, there is a need to identify and address common inefficiencies, bottlenecks, and shortcomings in construction practices that impede project success, including issues related to scheduling, cost management, safety protocols, quality control, and coordination among different trades like electromechanical, communication and fire protection systems

1.3 Research question

1 What is the cost of the Hibret Bank headquarters building project?

2 What are the time, and quality performance of the Hibret Bank headquarters building project?

3 What is the quality performance of the Hibret Bank headquarters building project?

4 How effectively was project coordination among different trades (electromechanical, communication, fire control) managed in the Hibret Bank head quarter building project?

5 How effectively did the implemented safety and protection systems perform in ensuring the safety of the occupants and assets during the construction Hibret Bank headquarter building project?

1.4 Research objective

1.4.1 General objective

The general objective of this study is to assess project performance in the high-rise building in the case of the Hibret Bank headquarter building project.

1.4.2 Specific objectives

1. To examine the project cost performance of the Hibret Bank headquarter building project.
2. To examine the project time performance of the Hibret Bank headquarter building
3. To examine the project quality performance of the Hibret Bank headquarter building project.
4. To assess the project coordination among different trades performance of Hibret bank head quarter building project.
5. To assess the safety and protection systems performance of Hibret Bank headquarter building project.

1.5 Significance of the study

Filling the research gap: The study addresses the lack of a comprehensive evaluation of project performance in high-rise building construction projects, focusing specifically on the case of the Hibret Bank headquarter building project. By conducting this assessment, the study contributes to the existing body of knowledge by providing insights and recommendations for improving project performance in similar contexts.

Practical implications for the construction industry: The findings of the study can have practical implications for the construction industry, especially in the context of high-rise building projects. By identifying and analyzing the specific challenges and issues faced during the construction of the Hibret Bank headquarter building, the study can help project managers, contractors, and stakeholders gain a better understanding of the factors that impact project performance and make informed decisions to enhance future projects.

Enhancing project management practices: Through the examination of project cost, time, and quality performance, as well as project coordination among different trades and safety and protection systems performance, the study aims to identify areas for improvement in project management practices. The insights gained from this assessment can contribute to the development of effective strategies and best practices for managing high-rise building construction projects, ultimately leading to improved project outcomes. Promoting safety and quality standards: The assessment of safety and protection systems performance in the Hibret Bank headquarters building project can contribute to the promotion of safety and quality standards in high-rise building construction. By evaluating the effectiveness of implemented

safety measures and identifying any shortcomings, the study can provide recommendations for enhancing safety protocols and ensuring the well-being of occupants and

Assets in similar projects: Overall, the study's significance lies in its potential to contribute to the improvement of project performance, project management practices, and safety standards in the context of high-rise building construction projects, using the specific case of the Hibret Bank headquarter building project as a basis for analysis and recommendations

1.6 Scope and limitation of the study

The scope of the study "Assessment of Project Performance in High-Rise Building Construction: The Case of Hibret Bank Headquarter Building Project" includes the evaluation of project performance in the construction of the Hibret Bank headquarter building. The study focuses on specific aspects of project performance, namely project cost, time, and quality performance, project coordination among different trades, and safety and protection systems performance. The study aims to assess these areas and provide insights into the challenges and issues faced during the construction of the high-rise building. However, it's important to acknowledge the limitations of the study: The findings and recommendations of the study may be specific to the Hibret Bank headquarter building project and may not be directly applicable to all high-rise building construction projects. The unique characteristics, context, and circumstances of the project may limit the generalizability of the study's findings to other projects. The study's findings and analysis rely on the availability and accuracy of data related to the Hibret Bank headquarter building project. The availability of comprehensive and reliable data may pose challenges, and the study's conclusions may be influenced by the quality and completeness of the data obtained.

1.7 Organization of the Study

The study is organized into five chapters. Chapter One Introduction: Provides an overview of the research, including the background, problem statement, research objectives, significance, scope, and limitations. Chapter two contains Literature Review: Presents relevant theoretical and empirical literature related to project performance in high-rise building construction and Identification of gaps in the literature and research that the current study aims to address. Chapter Three Research Methodology:

Describe the research approach, design, population, sample size, sampling procedure, data sources, data collection methods, and data analysis techniques. Performance Assessment

Framework: Data Collection and Analysis: Presents the details of data collection, analysis, and interpretation procedures. Findings: Presents the findings of the performance assessment, addressing each specific objective. Improvement Recommendations: Provides recommendations based on the findings to enhance project performance in high-rise building construction. Conclusion: Summarizes the key findings, implications, and future directions. References: Lists the sources cited in the research proposal. Annexes/Appendices: Includes any additional materials or supporting documents.

CHAPTER TWO

REVIEW OF RELATED LITRATURES

2. Literature review

2.1 Theoretical literature

This chapter comprises a comprehensive review of theoretical and empirical literature that is crucial to the research inquiry. The first section focuses on exploring relevant theoretical literature related to the study variables, aiming to establish a strong foundation for the research. Additionally, this chapter delves into project management practices within the construction industry and examines related studies. Finally, a concise summary of relevant previous work on this study is provided.

2.1 .1 Review of Theoretical Literature

In this section, the fundamental concepts associated with the main study variables are conceptually defined. Furthermore, a review of theoretical literature concerning performance in high-rise building constructions and other pertinent aspects of the study is presented.

2.1.2. Project and project management

Many authors have defined projects in several ways. According to (Tuman, 1983)who states: "A project is an organization of people dedicated to a specific purpose or objective. Projects generally involve large, expensive, unique, or high-risk undertakings that have to be completed by a certain date, for a certain amount of money, with some expected level of performance. At a minimum, all projects need to have well-defined objectives and sufficient resources to carry out all the required tasks." As defined in a Guide to the Project Management Body of Knowledge (Institute, 2013)a project is "a temporary endeavor undertaken to create a unique product or service." Temporary means that every project has a definite beginning and a definite end. The end is reached when the project's objectives have been achieved, or when it becomes clear that the project objectives will not or cannot be met, or the need for the project no longer exists and the project is terminated. Unique means that the product or service is different in some distinguishing way from all other projects or services. Though the desired results may have been achieved elsewhere, they are at least unique to the organization. Moreover, every project has

some unique elements (Manalebih, 2018). Projects need to be completed within the time frame, budgeted cost, and required Quality. A project is considered a failure if a project fails to meet the expectations in line with the stakeholders and the failure incident of the project is associated with consideration of cost, quality, and time (B. Prakash Rao, 2016). Also, Project Management is the application of knowledge, skills, tools, and techniques to project activities to meet or exceed stakeholder's needs and expectations from a project" (PWG.Morris, 2006) Also Project Management Effectiveness is a measure of the quality of attainment in meeting objectives. It is the extent to which the goals of a project are attained or the degree to which a system can be expected to achieve a set of specific requirements (Wideman, 2002) .

2 .1.3 Construction Industries

Project Management is the application of knowledge, skills, tools, and techniques to project activities to meet or exceed stakeholder's needs and expectations from a project" (PWG.Morris, 2006) .

Construction project management does not differ much from project management in general; Walker defined it as "The planning, Co-ordination, and control of a project from conception to completion on behalf of a client requiring the identification of the client's objectives in terms of utility, function, quality, time and cost, and the establishment of relationships between resources, integrating, monitoring and controlling the contributors to the project and their output, and evaluating and selecting alternatives in pursuit of the client's satisfaction with the project outcome". (Douglas c.bower, 2007).

2.1.4 Performances

Performance can be considered as an evaluation of how well individuals, groups of individuals, or organizations have done in pursuit of a specific objective (Ankrah, 2005). These objectives vary significantly, but from an industry or organizational perspective, they generally revolve around satisfying key stakeholders such as customers, employees, shareholders, various suppliers, government, and society as a whole. (Mullins, p. 2011) Described performance as relating to such factors as increasing profitability, improved service delivery, or obtaining the best results in important areas of organizational activities

2.1.5 Measures of Performance

Performance measurement is defined as the process of evaluating performance relative to a defined goal. It provides a sense of where the project is and, more importantly, where they are going further stated that measurement can guide steady advancement toward established goals and identify shortfalls or stagnation. (Willis, p. 2019) Maintained the importance of measuring performance because it will indicate the status and direction of a project. It is a widely accepted view that, at a minimum, performance measures of a project are based on time cost, and quality (Barkley, p. 2019). (Atkinson, p. 2020) Noted that these three components of project performance as the 'iron triangle'. However, (Kumaraswamy, 2002) considered a variety of criteria in measuring a project. This includes meeting budget, schedule, and the quality of workmanship, stakeholder satisfaction, transfer of technology, and health and safety. Similarly, (Chan, 2000) noted that various other key components are also used in measuring project performance such as health and safety, environmental performance, user expectation/satisfaction, actor's satisfaction, and commercial value. Therefore, in this article, six variables have been identified for measuring project performance. They are cost, time, quality, clients' satisfaction, health and safety, and functionality.

According to (Mbugua, p. 2018)., performance indicators specify the measurable evidence necessary to prove that a planned effort has achieved the desired result. In other words, when indicators can be measured with some degree of precision and without ambiguity, they are called measures. However, when it is not possible to obtain a precise measurement, it is usual to refer to performance indicators. Performance measures are the numerical or quantitative indicators

According to (Sinclair D., p. 2020). On the other hand, performance measurement is a systematic way of evaluating the inputs and outputs in manufacturing operations or construction activity and acts as a tool for continuous improvements (Sinclair D., p. 2021) In response to calls for continuous performance improvement, many performance measurements have emerged in management literature. Some examples include project performance measures (Belassi, p. 2022) and industry measures (Egan, p. 2019). Classifies performance measurement based on the method of measurement and area of measurement. The methods of measurement of performance can be in terms of the technical performance, the commercial performance, and the overall performance. The areas of measurement are at the planning & design level, the marketing level,

and manufacturing level, etc., and the overall performance is at the level of a firm or strategic business unit.

According to (Karim K. and Marosszeky M., p. 2013) Defined the purpose of key performance indicators as to enable a comparison between different projects and enterprises to identify the existence of particular patterns. They used different representation values to evaluate time and cost performance such as project characteristics, procurement system, project team performance, client representation characteristics, contractor characteristics, design team characteristics, and external conditions. Samson and Cheung et al (2004) remarked on seven main key indicators for performance which are: time, cost, quality, client satisfaction, client changes, business performance, and safety and health. (Pheng Low Sui and Chuan Quek Tai, 2006)Stated that project performance can be determined by two common sets of indicators. The first set is related to the owner, users, stakeholders, and the general public which are the groups of people who will look at project performance from the macro viewpoint. The second are the developer, a non-operator, and the contractor which are the groups of people who will look at project performance from the micro viewpoint. (T.C., 2007) Developed and validated Key performance indicators for sustainability appraisal using South Africa as a case study. It used four main levels in a questionnaire to identify the relative importance of Key performance indicators. The main indicators were: economy, environment, society, resource utilization, health and safety, and project management and administration. (Luu Van Truong, 2007) Provided nine Key performance indicators that can be applied to measure project management performance and evaluate potential contractors as well as their capacity by requesting these indices.

2.1.6 High-rise Building

Various definitions are given to describe what a high-rise building is. According to Craighead, (2019), any structure where the height can have a serious impact on evacuation is classified to be a High rise building. (Emporis., www.emporis.com., 2019) , defines a high rise as a multistory structure between 35-100 Meters tall or a building of unknown height from 12-39 floors while (NFPA, 2016), states that a High rise only comprises buildings higher than 23 meters or about 7 stories. In Ethiopia, provisions in 1986, 2002, and 2010 were made for building height classification. The New regulation for building height classifies building heights based on building height zones. The Zones are elaborated as follows (AACPPO, 2017),

- Building Height Zone 1: - has 70m minimum height and adds no limit on the maximum Height.

- Building Height Zone 2: - Maximum building height of 70m.
- Building Height Zone 3: - Maximum Building height is 35m.
- Building Height Zone 4: - Maximum Building height is 35m but the floor area ratio is Different from zone 3. This research uses Building Height Zone 4 and above buildings which is similar to the Emporis standard definition of high rise. Therefore, the research evaluated and studied Buildings with a height of more than 35 meters.

According to: (Emporis., www.emporis.com., 2019), Addis Ababa currently has 101 Buildings that are considered

Table 1:- Some of the High-rise Buildings under Construction around Addis Ababa (Emporis., www.emporis.com., 2019)

High Rise Building name	Estimated height in meters	Floors	Type	Status
1. Commercial Bank of Ethiopia headquarters	198	48	Skyscraper	Under construction
2. Amhara Credit & Savings Institution HQ	135	36	High rise	Under construction
3. United Bank Headquarters	131	35	High rise	Under construction
4. NIB Bank Headquarters	131	35	High rise	Under construction
5. EEPCo Headquarters	127	34	High rise	Under construction
6. Four Points by Sheraton	120	32	High rise	Under construction
7. Zemen Bank Headquarters	112	30	High rise	Under construction
8. Red Cross Headquarters	112	30	High rise	Under construction
9. ORDA Headquarters	101	27	High rise	Under construction
10. Nile Insurance Company Headquarters	94	25	High rise	Under construction
11. Kebede Ketema Tower (KK Tower)	82	22	High rise	Under construction
12. Eleli building	79	21	High rise	Under construction

Table 1:- Some of the High-rise Building

However, they are almost finished at the moment, especially the Commercial Bank of Ethiopia Headquarters, United Bank Headquarters, and NIB Bank Headquarters.

2.1.7 Project Performance in the Construction Industry

Project success is almost the ultimate goal for every project. The success of construction projects depends mainly on the success of performance. Many previous researches have been conducted on the performance of construction projects. (M. D. S., 1999)Remarked that one of the principal reasons for the construction industry's poor performance has been attributed to Construction performance is necessary to the achievement of supportable development. Various techniques and management skills have previously been developed to help improve performance from implementing construction projects. However, these techniques seem not to be effectively implemented due to the fragmentation and poor coordination among various construction participants.

There is a lack of consistency and holistic methods to help participants implement construction practices at various stages of project realizations. The characteristics of the construction industry are such that a project is often a major business endeavor representing a major investment by the client; however, most research published in the construction management literature on performance in the construction context mainly focuses attention on the contractor's role (Hobday, 2000). This implies that ultimately it is the project performance that determines overall business performance. These characteristics make project performance critical. Thomas (2002) identified the main performance criteria of construction projects as financial stability, the progress of work, the standard of quality, health, and safety, resources, relationship with clients, relationship with consultants, management capabilities, claim and contractual disputes, relationship with subcontractors, reputation and amount of subcontracting. Chan (Kumaraswamy, 2002) stated that construction time is increasingly important because it often serves as a crucial benchmark for assessing the performance of a project and the efficiency of the project organization. Two models developed for measuring construction project performance is the integrated performance index (Pillai, 2002) and the key performance indicator (Force, 1998).

The Integrated Performance Index was developed initially for performance measurement of R&D projects, based on their real-life experiences of working on the management system for the integrated guided missile development program of India. The model identified three project phases and dealt with performance elements such as performance indicators or key factors associated with each phase; the stakeholders; and the performance measurements. The three

project phases identified are the project selection phase, the project execution phase, and the implementation phase. The usefulness of the integrated performance index is that it can be applied at all the phases of the project life cycle to rank the project for selection, to compare project performance under the execution phase, and to act as an input for the management of future projects. One problem of the model is the lack of clarity in the way the mathematical formulae are used to integrate the identified key factors into an integrated performance index. Given this shortcoming, this model is not well received by practitioners. Key Performance Indicators (KPIs) are the UK construction industry's response to Egan's report (Force, 1998).to measure project performances, based on 10 identified parameters. These consist of seven project performance indicators; construction cost, construction time, cost predictability (design and construction), time predictability (design and construction), defects, client satisfaction with the product, and client satisfaction with the service; and three company performance indicators namely; safety, profitability and productivity.

The strength of this model is that the overall concepts are easily understood and easily implemented by clients, designers, consultants, contractors, sub-contractors, and suppliers. One problem with the model is that the KPIs are not compartmentalized along project phases. Performance measures are vital signs of an organization that help to recognize whether the activities of a process or the outputs of the process achieve the specified objectives. (Horonec, 1993). They can be used to translate the strategy of the organization into a set of goals and objectives and the results obtained through the measures reflect the successfulness of achieving the strategy (Eccles, 1991).

2.1.8 Problem of Performance in the Construction Industry

The failure of any construction project is mainly related to the problems and failure in performance. Moreover, there are many reasons and factors which contribute to such a problem. (Long Nguyen Duy, 2004) Stated that the construction industry performance problems in developing economies can be classified into three layers: problems of shortages or inadequacies in industry infrastructure (mainly supply of resources), problems caused by clients and Consultants, and problems caused by contractor incompetence/inadequacies (Okuwoga Adeyinka, 1998)Identified that the performance problem is related to poor budgetary and time control (Long Nguyen Duy, 2004)Remarked that performance problems arise in large

construction projects due to many reasons such as incompetent designers/contractors, poor estimation and change management, social and technological issues, site-related issues, and improper techniques and tools. Navon (2005) stated that the main performance problem can be divided into two groups: (1. unrealistic target setting (i.e., planning) or

2. Causes originating from the actual construction (in many cases, the causes for deviation originate from sources).

2.2 Review of Empirical Literature

According to (Hailu, 2019) was done to identify which processes of project management are effective for attaining the success of a project by studying cases of a successful and failed project. The research was carried out on two major building construction projects. The study on the two projects used a survey questionnaire as an instrument of the research. The research pointed out that if 88% of those effective knowledge area processes like quality, cost, time & communication processes are applied, then the success of a project is inevitable. The study output has shown that the triple constraints like cost, quality, and time, and the communication processes of the subject groups are the most effective project management processes towards the project's success. Moreover, planning processes from the process groups are useful for achieving the success of projects. The study also concluded that a significant number of projects in Ethiopia are under the failed category. So, it recommends project management processes like planning, time, quality, cost, and communication processes have to be given considerable attention during the implementation of the project.

According to (Hobday, 2000)Construction performances are necessary for the achievement of supportable development. Various techniques and management skills have previously been developed to help improve performance from implementing construction projects. However, these techniques seem not to be effectively implemented due to the fragmentation and poor coordination among various construction participants.

There is a lack of consistency and holistic methods to help participants implement construction practices at various stages of project realizations. The characteristics of the construction industry are such that a project is often a major business endeavor representing a major investment by the

client; however, most research published in the construction management literature on performance in the construction context mainly focuses attention on the contractor's role (Hobday, 2000). This implies that ultimately it is the project performance that determines overall business performance. These characteristics make project performance critical.

According to (ZEWDU, 2022), the study has come a long way in discussing the challenging project management practices of the CBE headquarter project. Based on the findings of the study discussed the study concludes. The study concludes that having skillful experts, documenting every project instruction in written form, providing discrete authority to the contractor with full responsibility (empowerment), harmonization of stakeholders, and back-to-back evaluation with continuous

Progress review meetings were identified as to how effectively project term management can be used to bring the project finally to be completed based on the experience of the case study. However, the study also concludes that from what has been said by the interview respondents, the effectiveness of the DB contract delivery system of the CBE HQ project on time, cost, quality, and scope of work is summarized. Recommendation

Having a well-established contract is as good as having a good fence which leads to a smooth relationship with the stakeholders. It is hence recommended to have a clear contract first which later on leads to success with a proper follow-up & monitoring of a project. The number of skilled local workers in the electromechanical work and female workers in the project is less. Especially the number of skilled/professional local workers in the electromechanical work better increased for future maintenance and knowledge transfer and for the contractor, it reduces salary cost in comparison with the foreigner. However, there is a need to assess project performance and identify areas for improvement to enhance the construction process and achieve better results. The construction of high-rise buildings is a complex and demanding process that requires effective project management and adherence to strict quality standards. However, some persistent challenges and issues impact project performance and hinder the successful completion of high-rise building projects.

2.3 conceptual frameworks

In the study "Assessment of Project Performance in High-Rise Building Construction: The Case of Hibret Bank Headquarter Building Project," several conceptual frameworks could be considered to guide the assessment of project performance. Here are a few potential conceptual frameworks that could be relevant to the study:

The Balanced Scorecard is a strategic management framework that incorporates multiple perspectives to evaluate project performance. It goes beyond the traditional focus on cost, time, and quality and includes additional dimensions such as safety protocols and coordination among different trades. Applying the Balanced Scorecard framework can provide a comprehensive assessment of project performance in the context of the Hibret Bank headquarter building project.

Safety management systems provide a conceptual framework for assessing the effectiveness of safety measures and protocols in construction projects. This framework encompasses elements such as hazard identification, risk assessment, safety training, and emergency response planning. Applying a safety management systems

Framework can help evaluate the performance of safety and protection systems in the Hibret Bank headquarter building project, identifying strengths and areas for improvement. These conceptual frameworks can provide a structured approach to assess project performance in the context of the Hibret Bank headquarter building project. Each framework offers a unique perspective and set of criteria for evaluation, enabling a comprehensive analysis of different aspects of project performance. The specific choice of conceptual framework(s) would depend on the research objectives, research questions, and the specific focus of the study.

2.3 Knowledge gap

Previous literature on the Assessment of project performance in high-rise building construction does not cover all aspects of project performance assessment in a single study. Most of them focus on a single or some parts of project performance. However, there is a need to assess project performance and identify areas for improvement in order to enhance the construction process and achieve better results. The construction of high-rise buildings is a complex and demanding process that requires effective project management and adherence to strict quality standards.

However, there are persistent challenges and issues that impact project performance and hinder the successful completion of high-rise building projects.

The problem addressed in this study is the lack of a comprehensive evaluation of project performance in high-rise building construction the case of hibret bank headquarters building project .This study aims to address the following problem:

Insufficient project performance assessment: There is a lack of complete and systematic assessment methods to evaluate the performance of high-rise building construction projects.

Suboptimal construction practices: High-rise building construction involves intricate coordination of multiple disciplines, technologies, and stakeholders. However, there is a need to identify and address common inefficiencies, bottlenecks, and shortcomings in construction practices that impede project success, including issues related to scheduling, cost management, safety protocols, quality control, and coordination among different trades like electromechanical, communication and fire protection systems.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

Introduction

In this chapter, the researcher describes the procedures to ensure a methodical and well-informed investigation, focusing on sampling procedure, data collection, and analysis methods. Data collection instruments and procedures are discussed as well as the target population and sampling procedures

3.1 Research Approach and Design:

The research approach and design for the study was a descriptive research design assessment of Project Performance in Hibret Bank headquarters Building Project was use a mixed-methods approach, combining both qualitative and quantitative data to gain a comprehensive understanding of project performance. Quantitative data provides numerical measurements and statistical analysis of project performance indicators such as cost, schedule and quality. This data helps to quantify and compare different aspects of project performance. On the other hand, qualitative data obtained from interviews and open-ended questions can capture the experiences, perceptions, safety, coordination and contextual factors that influence project performance. The combination of both types of data provides a more comprehensive understanding of the phenomena under study. High-rise building construction projects are complex and involve various stakeholders, including project managers, contractors, architects, and engineers. Qualitative methods, such as interviews, allow researchers to explore and understand the contextual factors, challenges, and success factors that influence project performance. These insights provide a more nuanced understanding of the project dynamics and help identify potential areas for improvement.

3.2 Population and Sample Size

The population of the study was consist of the stakeholders involved in the Hibret Bank headquarter building project, such as project managers, contractors, subcontractors, architects, engineers, and other relevant parties.

The sample size of the research was determined by purposive sampling to select participants from each party who have direct involvement and expertise in the project. This sampling procedure will ensure that the sample includes individuals who can provide valuable insights into the project's performance. Purposive sampling is a non-probability sampling technique in which researchers purposefully select individuals or cases based on specific criteria relevant to the research question or objectives. In the case of the research on the assessment of project performance in high-rise building construction, purposive sampling was used to select participants who have direct involvement and knowledge of the Hibret Bank headquarters building project. The use of purposive sampling is appropriate in this context because I was want to gather insights and perspectives from key stakeholders who have experience and expertise related to the project. By purposefully selecting participants who are directly involved in the project, such as project managers, contractors, architects, and engineers, the researchers can obtain in-depth and relevant information that can contribute to the assessment of project performance.

3.3 Data Sources and Data Collection Method:

The research had utilized multiple data sources primary and secondary to gather relevant information for the study. Potential data sources could include:

Interviews: Conduct semi-structured interviews with key project stakeholders to gather their perspectives on project performance, challenges faced, and factors contributing to success or failure.

Surveys: Distributing questionnaires to a wider range of participants to obtain quantitative data on project performance indicators, such as cost, time, quality, coordination, and safety. Project documentation: Reviewing project documents, reports, contracts, and other relevant materials to gather information on project specifications, milestones, budgets, and safety protocols.

3.4 Data Analysis Method:

The data analysis method was depending on the nature of the data collected. For qualitative data from interviews, content analysis techniques were employed to identify common themes, patterns, and insights related to project performance. Quantitative data from surveys was analyzed using statistical methods such as descriptive statistics, frequency tables, and percentages. I was interpreting the findings from both qualitative and quantitative analyses to draw conclusions about the project performance in the Hibret Bank headquarter building project.

3.5 Validity and Reliability

Validity Test: After the researcher constructs the questionnaire, pre-testing was done with persons who have knowledge of the area by allowing them to read it. This is done to ensure that the questionnaire is clear to respondents and can be completed in useful way.

Reliability: A comprehensive measurement must fulfill the tests of validity and reliability; validity is the most critical criterion that indicates the degree to which an instrument measures what it is supposed to measure .To ensure this, the study's advisor has evaluated and verified the instrument's content appropriateness and questionnaire reliability test is 0.81 by SPSS so if >0.7 indicates the questionnaire was reliable.

3.6. Ethical Consideration

The researcher was address ethical considerations of confidentiality, privacy, and informed consent. All the study participants were informed about the purpose, risks, and benefits of the study, and they should voluntarily agree to participate without coercion or deception.

The researcher was informed that they have the full right to discontinue or refuse to participate in the study. To ensure confidentiality, the name of the interviewee was not written on the questionnaire.

CHAPTER FOUR

ANALYSIS AND INTERPRETATION

Introduction

This chapter covers the presentation, analysis, and interpretation of data gathered through semi-structured interviews and Surveys with key project stakeholders of the project. To analyze the collected data in line with the overall objective of the study, qualitative and Quantitative data analysis was applied by combining and summarizing the results. The data contains assessment of project performance in high-rise building construction with the specific case of hibret bank headquarter building project which are drawn from interview and Surveys data and different literatures. The data were collected from semi-structural interview, questionnaires` and through reviewing secondary data. The data collected was analyzed with the Statistical Package for Social Science (SPSS 24.0). The main purpose of this study was to assess project performance in high-rise building construction with the specific case of hibret bank headquarter building project. This study aims to achieve the research objectives as well as answers the research questions highlighted in chapter one.

4.1 General Information about Respondents

The researcher distributed 40 questionnaires for project managers, contractors, architects, and engineers and was able to collect 40 questionnaires back. That means the response rate for this research was about 100%. The study sought information on aspects of respondents‟ background, particularly, gender Distribution, age distribution, educational back ground, experience and job title of the population filling the questionnaire. Table 4.1 shows general information about gender, age, educational qualification, and work experience and job position of the respondents.

4.1.1. Respondents Demographic Characteristics

Table 4.1: Respondents Demographic Characteristic

Characteristic	Response	Frequency	Percent
Sex of Respondents	Female	11	27.5
	Male	29	72.5
	Total	40	100.0
Age of Respondents	18-30	3	7.5
	31-40	18	45.0
	41-50	15	37.5
	51-60	4	10.0
	Total	40	100.0
Educational Background of Respondents	BA/BSc	18	45.0
	MA/MSc	22	55.0
	Total	40	100.0
Relevant Work Experience of Respondents	1-5 years	5	12.5
	6-10 years	10	25.0
	11-15 years	19	47.5
	Above 15 years	6	15.0
	Total	40	100.0
Job Position of Respondents	Project Manager	13	32.5
	Site Engineer	16	40.0
	Office Engineer	11	27.5
	Total	40	100.0

Source: Survey Result 2024 (SPSS 24.0)

Sex of Respondents: The majority of the respondents (72.5%) are male, while 27.5% are female. This suggests that the sample is male-dominated, which may be reflective of the gender distribution in the project being studied. Age of Respondents: The largest age group represented in the sample is 31-40 years old, accounting for 45% of the respondents. This is followed by the 41-50 age group (37.5%), the 51-60 age groups (10%), and the 18-30 age groups (7.5%). This indicates that the sample is predominantly composed of middle-aged professionals, with relatively fewer younger and older participants. Educational Background of Respondents: The

educational background of the respondents is relatively balanced, with 55% holding a Master's degree (MA/MSc) and 45% holding a Bachelor's degree (BA/BSc). This suggests a well-educated sample, which is important for the reliability and validity of the data collected Relevant Work Experience of Respondents: The majority of the respondents (47.5%) have 11-15 years of relevant work experience, followed by those with 6-10 years (25%), above 15 years (15%), and 1-5 years (12.5%). This indicates that the sample comprises mainly experienced professionals, which is likely to provide valuable insights into the topic being studied. Job Position of Respondents: The largest group of respondents (40%) is Site Engineers, followed by Project Managers (32.5%) and Office Engineers (27.5%). This distribution aligns with the typical job roles in project being studied, and the responses are likely to capture perspectives from various levels of the project hierarchy. Overall, the demographic characteristics of the respondents suggest a well-rounded sample that includes a diverse range of perspectives and experiences, which can provide valuable insights for the study. The relatively high levels of education, work experience, and representation across different job positions indicate that the data collected is likely to be reliable and informative

4.2 Cost performance of high-rise building construction project

Part I of the questionnaire had four items which sought to identify the assessment of project Cost performance in high-rise building construction with the specific case of hibret bank headquarter building project. The respondents were required to give their opinions on a Likert scale by ticking option 1 for Strongly Disagree to 5 for Strongly Agree. The data is as presented in the table below.

Table 4.2 Cost performance of high-rise building construction project

Statement	Response	Frequency	Percent
The project was within the allocated budget	Strongly Disagree	8	20.0
	Disagree	6	15.0
	Neutral	9	22.5
	Agree	17	42.5
	Total	40	100.0
Changes in scope were effectively managed to control costs	Disagree	3	7.5
	Neutral	11	27.5
	Agree	20	50.0
	Strongly agree	6	15.0
	Total	40	100.0
Cost estimates were accurate and reliable	Disagree	1	2.5
	Neutral	12	30.0
	Agree	25	62.5
	Strongly agree	2	5.0
	Total	40	100.0
Overall cost performance was satisfactory	Disagree	7	17.5
	Neutral	3	7.5
	Agree	26	65.0
	Strongly agree	4	10.0
	Total	40	100.0

Source: Survey Result 2024 (SPSS 24.0)

The survey results Overall cost performance was satisfactory. A project was generally within the allocated budget, with (17out of 40) respondents agreed and majority of respondents (30out of 40) agreed that overall cost performance was satisfactory, there were some issues with managing scope changes effectively (26 out of 40 agreed) and ensuring cost estimates were accurate and reliable (27 out of 40 agreed and Strongly agreed).so suggest that Implement more robust change management processes to better control the impact of scope changes on the project budget. Enhance the cost estimating procedures, potentially by leveraging historical data, industry benchmarks, and expert inputs.

4.3 Time performance of high-rise building construction project

Part II of the questionnaire had three items which sought to identify the assessment of project Time performance in high-rise building construction with the specific case of hibret bank headquarter building project. The respondents were required to give their opinions on a Likert scale by ticking option 1 for Strongly Disagree to 5 for Strongly Agree. The data is as presented in the table below.

Table 4.3 Time performance of high-rise building construction project

Statement	Response	Frequency	Percent
The project was completed within the planned time frame	Strongly Disagree	1	2.5
	Disagree	8	20.0
	Neutral	11	27.5
	Agree	17	42.5
	Strongly Agree	3	7.5
	Total	40	100.0
Milestones and deliverable were achieved on schedule	Disagree	18	45.0
	Neutral	5	12.5
	Agree	16	40.0
	Strongly Agree	1	2.5
	Total	40	100.0
The project experienced minimal delays	Disagree	15	37.5
	Neutral	3	7.5
	Agree	22	55.0
	Total	40	100.0

Source: Survey Result 2024 (SPSS 24.0)

The survey responses indicate challenges with time performance. While a majority of respondents (17 out of 40) agreed that the project was completed within the planned timeframe, there were issues with meeting milestones and deliverables on schedule (16 out of 40 agreed) and experienced minimal delays (22 out of 40 agreed). So suggest that conduct a comprehensive

review of the project schedule to identify and address bottlenecks, resource constraints, and critical path issues. Implement more effective progress monitoring and reporting mechanisms to proactively identify and mitigate delays. Enhance the project team's capability in schedule management, including techniques like critical path analysis, resource leveling, and schedule risk assessment.

4.4 Quality performance of high-rise building construction project

Part III of the questionnaire had four items which sought to identify the assessment of project Quality performance in high-rise building construction with the specific case of hibret bank headquarter building project. The respondents were required to give their opinions on a Likert scale by ticking option 1 for Strongly Disagree to 5 for Strongly Agree. The data is as presented in the table below

Table 4.4 Quality performance of high-rise building construction project

Statement	Response	Frequency	Percent
The project met the specified quality standards and requirements	Disagree	7	17.5
	Neutral	1	2.5
	Agree	23	57.5
	Strongly Agree	9	22.5
	Total	40	100.0
Deliverable s were free from defects or rework	Disagree	16	40.0
	Neutral	2	5.0
	Agree	22	55.0
	Total	40	100.0
Stakeholders were satisfied with the quality of the project	Disagree	6	15.0
	Neutral	3	7.5
	Agree	29	72.5
	Strongly Agree	2	5.0
	Total	40	100.0
Overall quality	Disagree	7	17.5

performance was satisfactory	Neutral	2	5.0
	Agree	29	72.5
	Strongly Agree	2	5.0
	Total	40	100.0

Source: Survey Result 2024 (SPSS 24.0)

The project met the specified quality standards and requirements: A majority of respondents (32 out of 40) agreed or strongly agreed that the project met the specified quality standards and requirements, indicating a satisfactory level of quality performance. Deliverables were free from defects or rework: The responses suggest that the majority of respondents (22 out of 40) agreed or strongly agreed that deliverables were free from defects or rework, indicating a satisfactory quality outcome. Stakeholders were satisfied with the quality of the project: A significant majority of respondents (31 out of 40) agreed or strongly agreed that stakeholders were satisfied with the quality of the project, indicating successful satisfaction of stakeholders' expectations. Overall quality performance was satisfactory: A large proportion of respondents (31) agreed or strongly agreed that the overall quality performance was satisfactory, indicating a positive perception of the project's quality outcomes. So suggest that strengthen the quality assurance and quality control processes. Implement more rigorous inspections, testing, and quality audits throughout the project lifecycle. Enhance the project team's capability in quality management, including process improvement, root cause analysis, and defect prevention. Regularly engage with stakeholders to gather feedback and address any quality-related concerns.

4.5 Coordination and communication performance of high-rise building construction project

Part IV of the questionnaire had three items which sought to identify the assessment of project Coordination and communication performance in high-rise building construction with the specific case of hibret bank headquarter building project. The respondents were required to give their opinions on a Likert scale by ticking option 1 for Strongly Disagree to 5 for Strongly Agree. The data is as presented in the table below

Table 4.5 Coordination and communication performance of high-rise building construction project

Statement	Response	Frequency	Percent
There was effective coordination among different trades like electro mechanical, communication, and fire protection systems	Disagree	21	32.5
	Neutral	3	7.5
	Agree	13	52.5
	Strongly Agree	3	7.5
	Total	40	100.0
Communication channels were clear and efficient	Strongly Disagree	1	2.5
	Disagree	11	27.5
	Neutral	2	5.0
	Agree	22	55.0
	Strongly Agree	4	10.0
	Total	40	100.0
Issues and conflicts were addressed promptly and adequately	Disagree	5	12.5
	Neutral	6	15.0
	Agree	23	57.5
	Strongly Agree	6	15.0
	Total	40	100.0

Source: Survey Result 2024 (SPSS 24.0)

The survey responses indicate challenges with coordination and communication performance. A majority of respondents (21 out of 40) disagreed that there was effective coordination among different trades, and that communication channels were clear and efficient and the majority of respondents (23 out of 40) agreed or strongly agreed that Issues and conflicts were addressed promptly and adequately. So suggest that to assess the project's communication and coordination mechanisms, and identify areas for improvement. Implement clear communication protocols, regular progress meetings, and cross-functional collaboration forums to enhance coordination

among various project components and stakeholders. Provide training to the project team on effective communication and conflict resolution techniques.

4.6 Safety performance of high-rise building construction project

Part V of the questionnaire had four items which sought to identify the assessment of project Safety performance in high-rise building construction with the specific case of hibret bank headquarter building project. The respondents were required to give their opinions on a Likert scale by ticking option 1 for Strongly Disagree to 5 for Strongly Agree. The data is as presented in the table below

Table 4.6 Safety performance of high-rise building construction project

Statement	Response	Frequency	Percent
Safety procedures were consistently followed on the project site	Neutral	13	32.5
	Agree	23	57.5
	Strongly Agree	4	10.0
	Total	40	100.0
Safety training programs were provided and attended by project personnel	Neutral	18	45.0
	Agree	20	50.0
	Strongly Agree	2	5.0
	Total	40	100.0
There were minimal safety incidents or accidents	Strongly Disagree	5	12.5
	Disagree	13	32.5
	Neutral	11	27.5
	Agree	6	15.0
	Strongly Agree	5	12.5
	Total	40	100.0
Overall safety performance was satisfactory	Neutral	8	20.0
	Agree	26	65.0
	Strongly Agree	6	15.0
	Total	40	100.0

Source: Survey Result 2024 (SPSS 24.0)

The survey results present a safety performance was satisfactory. While a majority of respondents (23 out of 40) agreed that safety procedures were consistently followed, there were concerns around safety incidents or accidents (13 out of 40 disagreed) and the overall satisfaction with safety performance (26 out of 40 were agreed). The majority of respondents (22 out of 40) agreed or strongly agreed that safety training programs were provided and attended by project personnel, indicating a positive safety management approach. So suggest that conduct a comprehensive safety audit to identify gaps and areas for improvement. Enhance the safety training programs and ensure consistent participation by all project personnel.

4.7 Cost Management of high-rise building construction project

Part VI of the questionnaire had three items which sought to identify the assessment of project Cost Management in high-rise building construction with the specific case of hibret bank headquarter building project. The respondents were required to give their opinions on a Likert scale by ticking option 1 for Strongly Disagree to 5 for Strongly Agree. The data is as presented in the table below

Table 4.7 Cost Management of high-rise building construction project

Statement	Response	Frequency	Percent
A detailed project budget was developed and monitored	Disagree	1	2.5
	Neutral	4	10.0
	Agree	35	87.5
	Total	40	100.0
Cost estimation techniques were accurate and reliable	Disagree	1	2.5
	Neutral	10	25.0
	Agree	27	67.5
	Strongly Agree	2	5.0
	Total	40	100.0
Effective cost control measures were	Disagree	1	2.5
	Neutral	7	17.5

implemented	Agree	32	80.0
	Total	40	100.0

Source: Survey Result 2024 (SPSS 24.0)

The survey results indicate a strong performance in cost management. A majority of respondents (35 out of 40) agreed that a detailed project budget was developed and monitored effectively. Additionally, the respondents largely agreed (29 out of 40) that cost estimation techniques were accurate and reliable, and effective cost control measures were implemented (32 out of 40).so suggest The project team should continue to leverage the effective cost management practices demonstrated. Focus should be placed on continuously monitoring the budget, proactively identifying and mitigating cost risks, and implementing rigorous change control procedures to manage the impact of scope changes on the project budget.

4.8 Time Management of high-rise building construction project

Part VII of the questionnaire had three items which sought to identify the assessment of project Time Management in high-rise building construction with the specific case of hibret bank headquarter building project. The respondents were required to give their opinions on a Likert scale by ticking option 1 for Strongly Disagree to 5 for Strongly Agree. The data is as presented in the table below

Table 4.8 Time Management of high-rise building construction project

Statement	Response	Frequency	Percent
A comprehensive project schedule was developed and followed	Disagree	1	2.5
	Neutral	16	40.0
	Agree	21	52.5
	Strongly Agree	2	5.0
	Total	40	100.0
Activities and tasks were sequenced and prioritized	Disagree	10	25.0
	Neutral	21	52.5
	Agree	7	17.5

appropriately	Strongly Agree	2	5.0
	Total	40	100.0
Effective time management techniques were utilized to control project schedule	Disagree	2	5.0
	Neutral	22	55.0
	Agree	16	40.0
	Total	40	100.0

Source: Survey Result 2024 (SPSS 24.0)

The survey responses present a mixed picture of time management performance. While a majority of respondents (21 out of 40) agreed that a comprehensive project schedule was developed and followed, there were issues with activity sequencing and prioritization (21 out of 40 were neutral) as well as the utilization of effective time management techniques (22 out of 40 were neutral). So suggest Conduct a thorough review of the project's time management practices. Invest in improving the project scheduling process, including better activity dependency mapping, resource leveling, and critical path analysis. Enhance progress tracking and issue resolution mechanisms to proactively identify and address schedule delays. Provide training to the project team on effective time management techniques.

4.9 Quality Management of high-rise building construction project

Part VIII of the questionnaire had three items which sought to identify the assessment of project Quality Management in high-rise building construction with the specific case of hibret bank headquarter building project. The respondents were required to give their opinions on a Likert scale by ticking option 1 for Strongly Disagree to 5 for Strongly Agree. The data is as presented in the table below.

Table 4.9 Quality Management of high-rise building construction project

Statement	Response	Frequency	Percent
Quality requirements and standards were clearly defined	Disagree	1	2.5
	Neutral	17	42.5
	Agree	22	55.0
	Total	40	100.0
Quality assurance activities were conducted throughout the project	Disagree	1	2.5
	Neutral	14	35.0
	Agree	25	62.5
	Total	40	100.0
Effective quality control measures were implemented	Strongly Disagree	1	2.5
	Neutral	14	62.5
	Agree	25	35.0
	Total	40	100.0

Source: Survey Result 2024 (SPSS 24.0)

Quality requirements and standards were clearly defined: A majority of respondents (22 out of 40) agreed or strongly agreed that Quality requirements and standards were clearly defined, indicating a satisfactory level of quality management. Quality assurance activities were conducted throughout the project: The responses suggest that the majority of respondents (25 out of 40) agreed or strongly agreed that Quality assurance activities were conducted throughout the project, indicating a satisfactory quality management.

Effective quality control measures were implemented: A significant majority of respondents (25 out of 40) agreed or strongly agreed that Effective quality control measures were implemented, indicating satisfactory quality control management. So suggest continue the effective quality management practices but focus on enhancing quality assurance activities, such as inspections, testing, and continuous quality monitoring. Establish clear quality metrics and key performance indicators to track quality performance. Empower the quality assurance team to have greater oversight and enforcement of quality control measures across the project.

4.10 Risk Management of high-rise building construction project

Part IX of the questionnaire had three items which sought to identify the assessment of project Risk Management in high-rise building construction with the specific case of hibret bank headquarter building project. The respondents were required to give their opinions on a Likert scale by ticking option 1 for Strongly Disagree to 5 for Strongly Agree. The data is as presented in the table below

Table 4.10 Risk Management of high-rise building construction project

Statement	Response	Frequency	Percent
Risks were identified, assessed, and properly managed	Disagree	1	2.5
	Neutral	9	22.5
	Agree	30	75.0
	Total	40	100.0
Effective risk response strategies were implemented	Disagree	2	5.0
	Neutral	9	22.5
	Agree	29	72.5
	Total	40	100.0
Continuous monitoring and review of risks were conducted	Neutral	27	67.5
	Agree	11	27.5
	Strongly Agree	2	5.0
	Total	40	100.0

Source: Survey Result 2024 (SPSS 24.0)

The survey responses suggest that risk identification, assessment, and response strategies were effective, with a majority of respondents (30 out of 40) agreeing that risks were properly managed. However, the neutral feedback (27 out of 40) on continuous risk monitoring and review indicates room for improvement. So suggest Continue the effective risk management practices, but also focus on enhancing the risk monitoring and review processes. Implement regular risk reviews, update the risk register, and ensure risk mitigation actions are effective and up-to-date. Foster a culture of proactive risk management across the project team.

4.11 Integration Management of high-rise building construction project

Part X of the questionnaire had three items which sought to identify the assessment of project Integration Management in high-rise building construction with the specific case of hibret bank headquarter building project. The respondents were required to give their opinions on a Likert scale by ticking option 1 for Strongly Disagree to 5 for Strongly Agree. The data is as presented in the table below

Table 4.11 Integration Management of high-rise building construction project

Statement	Response	Frequency	Percent
Project objectives and scope were clearly defined and understood	Disagree	2	5.0
	Neutral	8	20.0
	Agree	30	75.0
	Total	40	100.0
There was effective change control and configuration management	Disagree	1	2.5
	Neutral	13	32.5
	Agree	24	60.0
	Strongly Agree	2	5.0
	Total	40	100.0
Project integration was well-coordinated among different project components	Neutral	21	52.5
	Agree	17	42.5
	Strongly Agree	2	5.0
	Total	40	100.0

Source: Survey Result 2024 (SPSS 24.0)

The survey results indicate that project objectives and scope were clearly defined and understood. However, there were challenges with effective change control, configuration management, and cross-component integration coordination, with a majority of respondents (21 out of 40) being neutral on these aspects. So suggest Strengthen the project's integration management processes. Invest in improving change control procedures to better manage scope changes. Enhance configuration management to ensure project artifacts and deliverables are properly controlled. Improve cross-functional collaboration and communication to enhance overall project integration and delivery.

4.12 Discussion of the interview

Based on the interview responses from 10 respondents, the overall performance of the project was reported to be good. However, the respondents highlighted some gaps in the project's time performance and coordination between certain disciplines, particularly between the civil construction and electromechanical components. The key findings from the respondents' feedback are: Uneven Completion Timelines: While the civil construction portion of the project was completed a year ahead of schedule, the elevator contractor faced delays due to some defects, and their work remained unfinished even after the project's overall closure. This indicates a lack of effective coordination and synchronization between the different disciplines involved in the project.

Need for Holistic Approach: The respondents suggested that all disciplines, including civil construction, electromechanical, and communication, should be considered equally and integrated more effectively throughout the project lifecycle. This would help ensure that interdependent components are completed in a timely and coordinated manner.

Importance of Early electro mechanical Involvement: The respondents recommended that the project should consider involving electro mechanical maintenance engineers from the early stages of construction, rather than bringing them in later. This proactive approach could help

identify and address potential issues related to the electromechanical systems during the construction phase, improving the overall project delivery.

To address these challenges and enhance the project's overall performance, the following recommendations are proposed:

Improve Cross-Functional Coordination: Establish robust communication channels and collaborative mechanisms between the various disciplines involved in the project, such as civil, electrical, mechanical, and communication teams. This will ensure timely information sharing, problem-solving, and synchronization of tasks.

Implement Comprehensive Project Management Practices: Adopt a holistic project management approach that integrates all disciplines and their interdependencies from the outset. This may involve utilizing project management tools, techniques, and methodologies that facilitate effective planning, monitoring, and control of the project's progress.

Engage electro mechanical Experts Early: Involve electro mechanical maintenance engineers during the initial stages of the project, even before the construction phase begins. This will allow for the anticipation and resolution of potential issues related to the electromechanical systems, leading to a more seamless and timely project delivery.

By addressing these key areas, the project can enhance its overall performance, ensure better coordination and integration between various disciplines, and deliver the project more efficiently and effectively.

4.13 Discussion of Findings with Past Empirical Findings

The findings from this mixed-methods assessment of project performance in the Hibret Bank headquarter building project provide valuable insights that can be linked to past empirical studies and the theoretical and conceptual framework guiding the research. The quantitative analysis of cost, schedule, and quality performance indicators aligns with previous studies on high-rise building construction projects. For instance, Ling et al. (2009) found that factors such as project complexity, client influence, and project management competence significantly impacted cost and schedule performance in high-rise building projects. The current study's findings on the influences of stakeholder coordination, safety protocols, and contextual challenges corroborate

these past empirical observations. Additionally, the qualitative insights gathered from stakeholder interviews echo the findings of Enshassi et al. (2017), who identified critical success factors for high-rise projects, including effective communication, risk management, and resource allocation. The current study's exploration of the experiences, perceptions, and contextual factors shaping project performance provides a more nuanced understanding of these dynamics.

4.13.1 Theoretical and Conceptual Alignment

The study's adoption of a mixed-methods approach aligns with the conceptual framework proposed by Creswell and Creswell (2018), which emphasizes the integration of quantitative and qualitative data to gain a comprehensive understanding of complex phenomena. The use of both numerical performance indicators and in-depth stakeholder perspectives reflects this integrative approach. Furthermore, the study's focus on the Hibret Bank headquarter building project as a case study corresponds with the theoretical perspectives of Yin (2018), who advocates for the use of case study research to explore context-dependent phenomena in-depth. The rich, contextual data gathered through interviews and document review provides a nuanced understanding of the factors influencing project performance, as suggested by this theoretical framework.

4.13.2 Implications

The findings from this study offer several practical implications and recommendations for improving project performance in high-rise building construction: Enhancing stakeholder coordination and communication: The insights from stakeholder interviews highlight the importance of effective coordination and communication among project participants, such as project managers, contractors, architects, and engineers. Implementing strategies to facilitate information sharing, joint decision-making, and conflict resolution can contribute to improved project outcomes. By aligning the current study's findings with past empirical research and the theoretical and conceptual framework, the researchers can provide a comprehensive understanding of project performance in the Hibret Bank headquarter building project. The practical implications and recommendations derived from this study can inform the development of effective strategies and best practices for high-rise building construction projects.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

This section presents summary, conclusions and recommendations of findings of the study in chapter four according to the study objectives in short. The project work was an objective to assess the performance of high-rise building construction project with the case of hibret bank headquarter building project. Based on this, the chapter presents the conclusion and recommendations that comprise further actions, which the study proposes for improving the project performance of high-rise building.

5.1. Summary of major finding

The aim of this research was to assess project performance in the high-rise building in the case of the Hibret Bank headquarter building project. To achieve these objectives, the study used literature review, semi-structure interview, and Questionnaire and site observation as a research instrument where qualitative and quantitative analysis was used to make discussion of the finding. In this section, the major findings of the research which have been discussed before are summarized in accordance with the objectives of the research. The key findings are:

- Cost Performance: Overall cost performance was satisfactory, with the project generally within the allocated budget. However, there were challenges in managing scope changes effectively and ensuring accurate and reliable cost estimates.
- Time Performance: While the project was completed within the planned timeframe, there were issues with meeting milestones and deliverables on schedule, and the project experienced some delays.
- Quality Performance: The project met the specified quality standards and requirements, with deliverables largely free from defects or rework. Stakeholders were generally satisfied with the quality of the project.
- Coordination and Communication Performance: There were challenges with effective coordination among different trades and clear communication channels. However, issues and conflicts were addressed promptly and adequately.

- Safety Performance: Safety procedures were consistently followed, and safety training programs were provided and attended by project personnel. There were some concerns around safety incidents or accidents, and overall satisfaction with safety performance.

Overall, the project's performance and management was reported to be good, but there were some gaps in time management and integration management between the civil construction and electromechanical components.

5.2 Conclusion

The survey results suggest that the Hibret Bank Headquarters high-rise building construction project had a generally satisfactory performance, with some areas for improvement. The project was able to meet the cost, quality, and safety objectives, but faced challenges in time performance and coordination and communication. The project demonstrated strong cost management practices, but there is room for improvement in time management, quality assurance, risk monitoring, and integration management. The uneven completion timelines between the civil construction and electromechanical components indicate a lack of effective coordination and synchronization between the different disciplines involved. A more holistic and integrated approach, as well as early involvement of electromechanical experts, could have helped address the challenges faced by the project.

5.3. Recommendation

Based on the findings obtained from study, the study makes the following recommendations for high rise building project client:

- Improve cross-functional coordination between the various disciplines involved in the project
- Implement comprehensive project management practices that integrate all disciplines and their interdependencies from the outset.
- Engage electromechanical maintenance engineers during the initial stages of the project to anticipate and resolve potential issues related to the electromechanical systems.
- Strengthen the project's integration management processes, including enhancing change control procedures, configuration management, and cross-functional collaboration.

- Invest in improving the project scheduling process, including better activity dependency mapping, resource leveling, and critical path analysis.
- Enhance the risk monitoring and review processes to ensure risk mitigation actions are effective and up-to-date.
- Continue the effective cost and quality management practices demonstrated in the project.

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APPENDIX

Appendix I

ST. MARY'S UNIVERSITY SCHOOL OF GRADUATE STUDIES Masters of Art in Project Management

ASSESSMENT OF PROJECT PERFORMANCE IN THE CASE OF HIBRET BANK HEADQUARTERS BUILDING PROJECT

Dear respondent: My name is Edmealem aragaw, pursuing a Master of Arts Degree in project Management at St. Mary's University. The research is entitled as "ASSESSMENT OF PROJECT PERFORMANCE IN THE CASE OF HIBRET BANK HEADQUARTERS BUILDING PROJECT" for the partial fulfillment of academic requirement. This questionnaire is designed to collect primary data for this study only and your genuine Responses to the questionnaires are highly demanded on which the success is depending on.

All the information you provide will kept in strict confidentiality and it will be used only for academic research. Please answer each question carefully. If you need any explanations or description concerning the study and the questions provided, don't hesitate to reach me through the mobile phone number: +251 921639327 or email: edmebeyene22@gmail.com

SECTION I: Survey Questionnaire

I kindly request you to spend a few minutes of your valuable time to answer the questions as per the instruction below

- You do not need to write your name
- All of the questions are responded by your selves
- You are required to encircle only one out of the given alternative numbers which is your best choice to say.
- For some of the questions that need your explanations, please try to honestly describe as per the questions on the space provided.
- Please use (√) in the relevant box for Your response

Thank you in advance for your participation in the study!

Part I. Back ground information about the respondents.

A Gender:

Female ☐ Male ☐

B. Age

1. 18-30 years ☐ 2. 31-40 years ☐

3. 41-50 years ☐ 4. 51-60 years ☐

5. Over 60 years ☐

C. Educational back ground

1. College / Diploma ☐ 2. BA/BSC ☐

3. MA/MSC ☐ 4. PHD ☐

D. Relevant Work Experience

1. 1-5 years ☐ 2. 6-10 years ☐

3. 11-15 years ☐ 4. Above 15 year ☐

E. Your current Job title in your company

1. General Manager ☐
2. Project Manager ☐
3. Site Engineer ☐
4. Office Engineer ☐
5. Forman ☐
6. Other ……

Part II. Detail Survey Questionnaire

Please indicate the significance of each factor by ticking (√) the appropriate boxes. Add any remarks relating to each factor on the last column.

Strongly Disagree 1

Disagree 2

Neutral, 3

Agree 4

Strongly agree 5

No	**Cost performance**	5	4	3	2	1	Remark
1	The project was within the allocated budget						
2	Changes in scope were effectively managed to control costs						
3	Cost estimates were accurate and reliable						
4	Overall cost performance was satisfactory						
	Time performance						
5	The project was completed within the planned timeframe						
6	Milestones and deliverables were achieved on schedule						
7	The project experienced minimal delays						
	Quality performance						
8	The project met the specified quality standards and requirements						
9	Deliverables were free from defects or rework						
10	Stakeholders were satisfied with the quality of the project						
11	Overall quality performance was satisfactory						
	Coordination and communication performance						
12	There was effective Coordination among different trades like electromechanical, communication and fire protection systems.						
13	Communication channels were clear and efficient						

14	Issues and conflicts were addressed promptly and adequately						
	Safety performance						
15	Safety procedures were consistently followed on the project site						
16	Safety training programs were provided and attended by project personnel						
17	There were minimal safety incidents or accidents						
18	Overall safety performance was satisfactory						
	Cost Management:						
19	A detailed project budget was developed and monitored.						
20	Cost estimation techniques were accurate and reliable.						
21	Effective cost control measures were implemented.						
	Time Management:						
22	A comprehensive project schedule was developed and followed.						
23	Activities and tasks were sequenced and prioritized appropriately.						
24	Effective time management techniques were utilized to control project schedule.						
	Quality Management						
25	Quality requirements and standards were clearly defined.						
26	Quality assurance activities were conducted throughout the project.						
27	Effective quality control measures were implemented. Resource Management:						
	Risk Management:						
28	Risks were identified, assessed, and properly managed.						
29	Effective risk response strategies were implemented.						

30	Continuous monitoring and review of risks were conducted.						
	Integration Management:						
31	Project objectives and scope were clearly defined and understood.						
32	There was effective change control and configuration management.						
33	Project integration was well-coordinated among different project components.						

SECTION I I: Interview Guide questions

The purpose of this interview is to collect data for the study entitled " assessment of project performance in the Hibret Bank headquarters High-Rise building project: " for partial fulfillment of the requirements for the Master of Art (MA) in Project Management in St. Merry University. This interview is required to assist in determining the objectives of the study. Your participation in this survey is voluntary. The information you provide will be used only for the purpose of the study and will be kept strictly confidential. Therefore, you are kindly requested to provide your genuine responses to different questions followed.

Thanks in advance for your cooperation for this interview.

1. Can you provide an overview of your role and responsibilities in the Hibret Bank headquarters building project?
2. In your opinion, what are the key indicators of project performance in terms of cost, time, quality, coordination, and safety?
3. How would you assess the project's performance in each of these areas? Can you provide specific examples?
4. What were the main challenges faced during the project, and how were they addressed?
5. What factors do you consider critical for the success or failure of the project?
6. Were there any unexpected events or external factors that affected the project's performance? If yes, how were they managed?
7. What measures were taken to ensure effective communication and coordination among project stakeholders?

8. How do you evaluate the overall satisfaction of the project stakeholders (e.g., clients, contractors, subcontractors) with the project's performance?
9. Are there any lessons learned from this project that can be applied to future high-rise building projects?

Thank you for your invaluable input and insight