



St. Mary's University School of Graduate Studies

**Assessment of Practices and Challenges of Project Quality Management: The
Case of Gift Real Estate Addis Ababa.**

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St. Mary's University

School of Graduate Studies

Department of Project Management

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Lists of Acronyms

AAHDPO: Addis Ababa Housing Development Project Office

CSFs: Critical Success Factors

ISO: International Organization for Standardization

KPIs: Key Performance Indicators

PMBOK: Project Management Body of Knowledge

PMI: Project Management Institute

PQP: Project Quality Plan

QM: Quality Management

QMS: Quality Management System

TQM: Total Quality Management

Abstract

Background: Quality is a highly prevalent idea that has gained significance in numerous organizations. The real estate industry has been growing rapidly, and quality management has become increasingly important in ensuring the reliability and credibility of real estate companies. However, little is known about the practice and challenges that real estate companies, such as Gift Real Estate, face in implementing quality management systems

Objective: To assess the practices and challenges of Project quality management in Gift Real Estate Addis Ababa, Ethiopia

Methods and Material: cross-sectional study was conducted among 31 participants who fulfilled the inclusion criteria and were selected using purposive sampling technique. A structured questionnaire was used to collect data. The data was entered to SPSS versions 25 for analysis. Mean, standard deviation, frequency, percentage was done to present the result.

Result: The study achieved a response rate of 90.3%, with a majority of male participants (78.6%) and a mean age of 31.25 years. The average years of experience were 7.18 years. Quality planning, assurance, control, and top management commitment were deemed important in quality management. Seventeen prevalent problems were identified and acknowledged, while two problems had mixed responses. Only one problem, related to raw material shortages due to inflation, was disagreed upon. The organization utilizes trend analysis, statistical sampling, inspection, quality audits, flowcharting, and benchmarking for quality management. The usage of inspection, Pareto diagrams, and benefit/cost analysis received mixed responses.

Conclusion and recommendation: In conclusion, the study revealed a high response rate and identified key components of quality management, including planning, assurance, control, and top management commitment. Prevalent problems were acknowledged, while some received mixed responses, indicating areas for further investigation. The organization utilizes various tools and techniques for quality management, although the usage of certain tools received mixed responses. Based on these findings, it is recommended to address the identified problems, further investigate the mixed responses, and ensure consistent implementation of quality management tools and techniques throughout the organization. This can contribute to enhancing overall quality performance and organizational success.

Key Words: Quality, quality management, quality planning, quality assurance

CHAPTER ONE

INTRODUCTION

1.1. Back ground of the study

Quality is a highly prevalent idea that has gained significance in numerous organizations. It has become a crucial aspect for organizations to contend with and overcome the formidable impacts of globalization. The intense global competition necessitates organizations to proactively strive in order to guarantee that their products and services attain the utmost level of quality. Moreover, it is imperative for organizations to create, execute, and sustain a system that enables the provision of products possessing the appropriate quality characteristics to meet the requirements of customers, regulatory authorities, and other internal and external stakeholders (Soriano, 2016).

Real estate housing development serves as a fundamental component of urban activities aimed at meeting the residential housing needs of towns. It is crucial to manage these activities within a proper quality management system to ensure client satisfaction. The implementation of a Quality Management System (QMS) based on ISO 10006 (2017) holds significance in enhancing the competitiveness of construction projects within the construction industry (10006 ISO, 2017).

According to Mane (2015), quality in the housing construction industry is directly linked to client satisfaction, and the adoption of a quality management system is a vital tool for consistently and reliably managing construction activities. QMS plays a pivotal role in improving the performance level of housing construction companies, enabling them to survive and thrive in a highly challenging and competitive construction market (Mane, 2015)

From the perspective of a real estate housing Construction Company, quality management is essential for ensuring that housing construction works meet the required standards and satisfy customers. This, in turn, leads to long-term competitiveness and the survival of the business. Additionally, it is crucial to deliver project outputs that are fit-for-purpose. Implementing QMS presents an important opportunity to reorganize and modernize the organization. It serves as an external and widely accepted driving force for transforming functions, procedures, and outdated practices within the organization. Without the implementation of a QMS, such efforts might be seen as unnecessary and unjustified. Furthermore, it provides an excellent opportunity to introduce new tools and work techniques, leading to the restructuring

of the organization not only to achieve certification but also to enhance effectiveness and efficiency (Al-Sabek, 2018)

Real estate housing development serves as a fundamental pillar of urban activities aimed at meeting the residential housing needs of towns. Undoubtedly, it is crucial to manage these activities within a robust quality management system to satisfy clients. The implementation of QMS based on ISO 10006 (2017) holds significant importance in enhancing the competitiveness of construction projects in the industry (10006 ISO, 2017)

According to Mane (2015), the quality of housing construction is directly linked to client satisfaction, and the adoption of a quality management system is a vital tool for consistently and reliably managing construction activities. QMS plays a critical and influential role in improving the performance of housing construction companies, enabling them to thrive and maintain a strong presence in the highly challenging and competitive construction market (Mane, 2015).

Quality management is essential for real estate housing construction companies to maintain the desired level of quality in their construction works, ensuring customer satisfaction and long-term competitiveness. Implementing QMS provides an opportunity to reorganize and modernize the organization, prompting changes in functions, procedures, and outdated practices. This not only helps achieve certification but also enhances the overall effectiveness and rationality of the organization. Companies that prioritize quality management gain strategic advantages, improve business excellence, and enhance performance. Different forms of quality management systems, such as ISO, BS, and TQM, are being adopted and implemented by companies to attract more customers and provide higher quality services and products (Al-Sabek, 2018).

The implementation of QMS is crucial for achieving consistent and effective management within an organization. It establishes standardized procedures that ensure the organization can meet its objectives and project scope as defined in its strategy. By promoting stability and reliability in techniques, equipment, and resources, the QMS integrates all project activities towards the delivery of high-quality products. The system begins by identifying customer needs and expectations and aims to achieve customer satisfaction. It also encourages continuous self-assessment and improvement within the organization, involving personnel at all levels in the pursuit of enhanced performance. Just as in other sectors, committing to a

QMS has the potential to bring about improvements in the construction industry (Ong *et al.*, 2020).

According to Ashokkumar's study on quality management in the real estate construction industry (2019), construction companies have increasingly adopted quality management as a solution to quality issues and to meet customer needs. However, implementing quality management principles in the real estate construction industry is challenging due to the involvement of multiple parties and the unique characteristics of the industry. This research aims to assess the current quality management practices and identify major challenges in implementing the system in order to propose improvement actions (Bravi, Murmura and Santos, 2019).

Urbanization, as a demographic phenomenon in the twenty-first century, has led to a significant increase in people migrating from rural to urban areas. This has created a high demand for residential housing in urban areas. According to the World Population Prospects (2015), the demand for housing is rapidly increasing, putting pressure on urban settlers and requiring the expansion of infrastructure in cities. Addis Ababa, the capital city of Ethiopia, also faces an unmet demand for residential housing, with an annual increase of 10,000 housing demands according to AAHDPO (2007). This demand indicates a significant backlog in housing units, estimated to be around 230,000 in 2002 (Mekonnen, 2017).

1.2. Back ground of the organization

Gift Real Estate PLC is engaged in real estate development business in Ethiopia., which was established first as Gift Trading During the mixed economic era (early 1990s or 30 years ago) by its founder and MD, Ato Gebreyesus Igata who has been interested in business since childhood and long term exposure in other countries. It was established in 2005 and has since been engaged in the development of Residential and Commercial building and selling of Real Estate property. It was very difficult to start Real Estate Business at that time because of limited experience in the government, no local Customers, high failure rate of real estate companies, etc. Thus, it took us about 2 years for completing our establishment process and to secure plots of land. GRE obtained 160,000 m2 land plot from AA City Administration and it makes GRE one of the pioneers in the sector. It has Four sister companies namely the pioneer GIFT trading, GIFT Construction, Gift Nail Manufacturing (Gift Steel) and GIFT Building materials Manufacturing.

Gift Real Estate has completed several real estate projects in the Ethiopian capital, including the Gift Mall, a mixed-use development that comprises commercial and residential units. Located in the heart of the city, the Gift Mall is a modern, multi-level shopping center that houses a variety of retail outlets, restaurants, and entertainment facilities. The mall is spread over four floors, with the ground floor and first three levels consisting of shops, while the fourth floor comprises of apartments. The residential units in Gift Mall offer a mix of one, two, and three-bedroom apartments that are designed to provide comfortable living spaces to residents. In addition to Gift Mall, Gift Real Estate has also completed several other large-scale real estate development projects in Addis Ababa, including high-rise apartment buildings and commercial complexes. Some of these developments include buildings with 18, 14, and 10 stories, offering a mix of residential and commercial spaces.

Gift Real Estate's focus on quality, innovative design, and customer satisfaction has earned the company a reputation as one of the best real estate development firms in Ethiopia. The company prides itself on its commitment to excellence and maintaining strong relationships with its customers and stakeholders. Overall, Gift Real Estate is a leading player in the Addis Ababa real estate market, with a portfolio of high-quality, innovative developments that cater to the needs of a diverse range of customers.

1.3. Statements of the problem

The real estate industry has been growing rapidly, and quality management has become increasingly important in ensuring the reliability and credibility of real estate companies. However, little is known about the practice and challenges that real estate companies, such as Gift Real Estate, face in implementing quality management systems.

Gift Real Estate has been in the real estate industry for several years and has established a reputation for providing quality services. However, there is a need to assess the practice and challenges of quality management in Gift Real Estate to identify areas for improvement and to maintain its competitive edge in the market.

Quality management is crucial in ensuring customer satisfaction and maintaining long-term relationships with clients. It is imperative to understand the existing challenges and practices of quality management in Gift Real Estate to improve its operations and reputation.

The implementation of quality management practices in the real estate industry, particularly in Gift Real Estate, is an area that requires further exploration to understand the challenges, benefits, and limitations associated with it.

Despite the growing importance of quality management in the real estate industry, there is limited research on the practice and challenges faced by real estate companies such as Gift Real Estate. It is essential to fill this gap in the literature to gain a comprehensive understanding of the benefits and limitations of quality management practices in the industry.

1.4. Research Questions

Research Question 1: What are the current quality management practices employed by Gift Real Estate?

Research Question 2: What are the challenges faced by Gift Real Estate in implementing quality management practices?

Research Question 3: How does Gift Real Estate measure and monitor the effectiveness of quality management practices?

Research Question 4: How can Gift Real Estate improve its quality management practices to enhance customer satisfaction and business performance?

1.5. Research objectives

1.5.1. General Objective

The aim of this study was to assess the Practices and Challenges of Project Quality Management: The Case of Gift Real Estate Addis Ababa, Ethiopia

1.5.2. Specific Objectives

- ❖ To identify the current quality management practices employed by Gift Real Estate.
- ❖ To assess the challenges faced by Gift Real Estate in implementing quality management practices.
- ❖ To analyze the methods used by Gift Real Estate to measure and monitor the effectiveness of quality management practices.
- ❖ To recommend strategies for improving quality management practices at Gift Real Estate to enhance customer satisfaction and business performance

1.6. Rationale of the study

The real estate sector is an important economic driver that plays a critical role in providing affordable housing, developing infrastructure, and creating employment opportunities. As the sector continues to grow, it becomes increasingly important for real estate firms to implement effective quality management practices in order to remain competitive and satisfy customer needs. In this regard, the present study aimed to assess the challenges and practice of quality management in the case of Gift Real Estate.

Gift Real Estate is one of the established real estate firms in the region, and has been serving its customers for many years. However, the quality of its services can be varied and the firm struggles to maintain consistent quality across its operations. This highlights the need for a comprehensive assessment of the effectiveness of quality management practices in place at Gift Real Estate. The study aimed to determine the current status of quality management practices in Gift Real Estate, and identify the challenges that impact the effectiveness of these practices. The assessment would shed light on the areas that require improvement, and provide recommendations to enhance the quality management practices to yield better results.

The study is significant as it provides insights into the importance of quality management practices in the real estate industry, and will serve as a guide for companies in the sector to improve their quality management practices. Ultimately, the research would help to enhance the competitiveness of real estate firms and ensure that customers receive high-quality services.

1.7. Significance of the study

The study sheds light on the current practices and challenges faced by an important sector of the economy, namely real estate. It analysed the quality management system of one particular real estate company and highlights areas where improvements can be made.

The findings of this study have practical implications for the management of all real estate companies, as they provide insights into the challenges they face in maintaining a high level of quality in their operations. The study is also significant in terms of its contribution to the academic literature on quality management in real estate, as it provides a case study that can be used for future research.

Moreover, this study has practical implications for the real estate industry. It provides a framework for the implementation of quality management systems and highlights the importance of integrating quality management into the organizational culture of real estate companies. By doing so, the industry can improve the quality of its products and services, which can lead to increased customer satisfaction and loyalty.

The study is significant because it provides insights into the current practices and challenges faced by the real estate industry. Its findings have practical implications for both the management of real estate companies and the academic literature on quality management in real estate.

1.8. Scope of the study

The scope of the study limited to Gift Real Estate Addis Ababa, but its findings can be beneficial to other companies operating in the same industry in Ethiopia and beyond.

1.9. Organization of the study

This study is organized in five consequent chapters. The first chapter introduces the background of the study, statement of the problem, basic research questions, and background of the organization, objectives, and rationale of the study, significance, scope of the study, organization of the study and operational definition of key terms. The second chapter discusses on review of literatures with descriptions of different researchers related to the topics. The third chapter deals with the research methodology, design, sources of data, target population, sampling technique and sample size, validity and reliability of instrument and research ethics throughout the data collection and analysis. The fourth chapter will present the data analysis, presentation and discussion. The fifth chapter, which is the final chapter of the study, will be about the summary of major findings, conclusion and recommendations.

1.10. Limitations of the study

Several limitations should be considered in interpreting the study findings:

- * The study was conducted within a specific organization and may not be fully representative of the broader industry or other geographical locations.
- * The self-reported nature of the data may introduce response bias or inaccuracies.
- * The study did not assess the causal relationships between quality management practices and project outcomes, as it focused primarily on identifying perceptions and prevalent problems.
- * The sample size of the study was relatively small, which may limit the generalizability of the findings.

1.11. Operational definition of key terms

- ❖ **Project Quality Management:** The methodology used by Gift Real Estate to ensure that projects are delivered according to predetermined quality standards
- ❖ **Practices:** The specific actions taken by Gift Real Estate during the project management process to ensure quality outcomes.
- ❖ **Challenges:** The obstacles or difficulties facing Gift Real Estate in implementing effective project quality management practices.
- ❖ **Stakeholders:** The individuals and groups involved in the project, including clients, contractors, and internal team members
- ❖ **Risk Management:** The process of identifying and mitigating potential risks that could impact project quality Learning culture
- ❖ **Quality Control:** The on-going monitoring and inspection of project deliverables to ensure they meet client requirements and industry standards.
- ❖ **Key Performance Indicators (KPIs):** The specific metrics used by Gift Real Estate to measure the success of project quality management practices, such as budget adherence and customer satisfaction.
- ❖ **Continuous Improvement:** The process of constantly evaluating and improving project quality management practices to enhance efficiency and effectiveness.

CHAPTER TWO

LITERATURE REVIEW

2.1. Theoretical Review

2.1.1. Project Management

According to Lund (2011), a project can be defined as a task carried out by a temporary organization with the aim of achieving a predetermined outcome. Projects are not limited in size or the number of people involved but always has a defined timeframe with a clear start and end. Similarly, the real estate housing construction development task is also undertaken for a specific period with the goal of delivering a house to the owner based on predetermined requirements (Lund, 2011). Harri and McCaffer (2013) support this notion by explaining that construction management involves overall planning, coordination, and control to meet client requirements and produce a financially viable and functional project. In order for the construction industry to maintain productivity and success, it is crucial to establish a proper construction quality management system (Harri, H., & McCaffer, 2013).

A project management plan encompasses various aspects, including project overview, organization and staffing, project management and controls, conceptual design phase, final design phase, construction phase, closeout phase, quality and risk management, and procurement and contract administration. The objectives of project management are to execute a project in a way that ensures the deliverables meet scope requirements within the allocated budget and schedule, while maintaining acceptable levels of risk, quality, safety, and security (PMBOK, 2013; PMI, 2013).

According to the Project Management Body of Knowledge (PMBOK) (2013), effective project management involves identifying requirements, addressing stakeholders' concerns and expectations, and maintaining internal and external stakeholder management and communication. Additionally, it requires balancing competing constraints such as scope, quality, schedule, budget, resources, and risks, as these factors are interdependent and can influence one another. For example, if there are times or cost overruns in a project, it directly impacts the targeted quality (Nader, 2013).

According to the International Organization for Standardization (ISO) 10006 (2017), a project's Quality Management System (QMS) includes project characteristics, quality management principles, project quality management processes, and a quality plan for the project (ISO, 2017).

2.1.2. Quality Management System

Implementing a Quality Management System (QMS) in real estate construction projects does not guarantee flawless outcomes, but it does establish a structured framework to consistently enhance the quality of project activities. This framework should encompass provisions for training and qualifying specific construction procedures, conducting audits, and implementing corrective actions. By incorporating these elements at an early stage of the processes, it becomes possible to consistently achieve the project's quality objectives.

According to the ISO 9001:2015 standard, the implementation of a Quality Management System (QMS) involves the planning, definition, verification, and updating of processes and procedures. The standard introduces the "plan-do-check-act cycle" as a framework for continuous improvement. It emphasizes a shift from a reactive to a proactive attitude, where proactive planning and prevention take precedence over constantly solving unexpected urgent problems. In the construction industry, various QMS approaches are utilized, including Investors in People (IIP), ISO 9000, EFQM, custom-designed systems, and third-party certifications (Griffith, A., & Watson, 2004; ISO, 2015; Hakim, A., Marosszky, M., & Davis, 2016).

According to Hakim et al. (2016), a Quality Management System (QMS) encompasses all activities within the overall management function that determine the quality policy, objectives, and responsibilities. It involves various means such as quality planning, quality control, quality assurance, and quality improvement implemented within the quality system. To ensure continuous improvement of the QMS, it is crucial for top management to provide full support and commitment, particularly in the development and implementation of construction projects (Hakim, A., Marosszky, M., & Davis, 2016).

This highlights the importance of managing quality in a manner that is clearly defined, well-documented, and efficiently planned, implemented, and controlled. A Project Quality Plan (PQP) is prepared to establish project-level quality procedures that integrate project information with company policies, procedures, and inspection routines (Griffith & Watson, 2004).

ISO 9001:2015 is a standard that establishes a set of standardized requirements for implementing a quality management system, regardless of the nature of the user organization, its size, or whether it operates in the private or public sector. While certification is not mandatory, ISO 9001:2015 is the only standard in its family against which organizations can

seek certification. Ensuring customer satisfaction is crucial for the success of any organization. To achieve this, the organization must meet customer requirements effectively. The ISO 9001:2015 standard provides a proven framework for adopting a systematic approach to managing the organization's processes, thereby consistently delivering products that meet customer expectations. The international standard for quality management (ISO 9001:2015) incorporates several management principles that can guide top management in improving organizational performance. These principles include customer focus, leadership, and engagement of people, process approach, improvement, evidence-based decision making, and relationship management. Given the interdependent nature of construction firms and their suppliers, fostering a mutually beneficial relationship enhances the ability of both parties to add value. These seven principles form the foundation of the ISO 9001:2015 quality management system standard (ISO, 2015).

The construction project has both internal and external customers, including employees and society as a whole, who are significant stakeholders for the construction firm. The success of the project relies on the knowledge, skills, creativity, and motivation of the employees and partners involved. Consequently, construction firms should demonstrate their commitment to employees by providing opportunities for their development and growth (Al-Sabek, 2018).

The quality of construction is influenced by several factors, such as the availability of skilled personnel and construction materials, including raw materials, finished products, semi-finished products, components, and parts. Additionally, the use of advanced technology and innovative machinery and equipment in construction is essential for demonstrating the firm's capabilities, directly impacting project progress and quality (Assaf, S. A., Al-Hejji, S., & Al-Sayegh, 2016).

The concept of continuous improvement in construction can be achieved through enhancing customer value by offering modern, new, and innovative products and services, minimizing waste and associated costs, effectively utilizing resources to boost productivity, and improving responsiveness while minimizing customer complaints and subpar quality inputs in construction activities (Chan, A. P., & Chan, 2010).

According to Crawford (2002), the primary objective of quality management is to satisfy customers, meet requirements, ensure fitness for purpose, and provide a usable product. In the project model, quality management is viewed as a set of activities or tasks necessary to ensure that the project fulfils all the intended purposes outlined in the project's documented

scope of work. It involves a focus on quality management from the perspectives of product, processes, and the people involved, with the aim of making quality an effective and efficient aspect of successful project completion (Crawford, 2014).

2.1.3. Quality Management System in Project as per ISO 10006:2017

The ISO 10006:2017 standard provides guidelines for implementing quality management in projects. It is applicable to organizations involved in projects of various complexities, sizes, durations, and environments, regardless of the type of product, service, or process. The purpose of ISO 10006 is to satisfy the interested parties of the project by introducing quality management practices. However, the guidance may need to be tailored to suit specific projects. It is important to note that ISO 10006 is not a guide to project management itself but focuses on quality management within project management processes. For guidance on project management and related processes, ISO 21500 is the relevant standard (10006:2017, 2017).

ISO 10006 addresses two concepts: "quality management in projects" and "quality management systems in projects." These concepts are distinguished and covered separately in different topics and clauses. Quality management in projects includes aspects such as quality management systems, management responsibility, resource management, product/service realization, and measurement, analysis, and improvement. On the other hand, quality management systems in projects encompass project characteristics, quality management principles, project quality management processes, and the development of a quality plan for the project (PMI, 2017).

2.1.4. Quality Management in Construction

Many construction companies have been striving to implement a Quality Management System (QMS) over the past two decades. While larger companies are giving significant attention to this concept to gain a competitive advantage, smaller and medium-sized construction companies have shown hesitation and delayed taking this step. Despite recognizing the benefits of implementing an ISO 9001-compliant QMS, these companies have been reluctant due to the challenge of fully understanding the requirements involved. The literature and practical experiences reveal common issues that arise during QMS implementations across different industries, company sizes, and geographical locations. Implementing a QMS in construction companies can address longstanding issues and provide opportunities for restructuring, modernization, and a departure from traditional practices that have been followed without thorough analysis (Bubshait, A. A., & Al-Atiq, 2014).

Basically, in the construction housing industry, the Quality Management System (QMS) encompasses quality planning, quality assurance, and quality control. The implementation of quality management in construction housing projects involves the identification of quality standards, evaluation of overall project performance, and monitoring of specific project results within the quality management processes as defined by the Project Management Institute. Real estate developers, as construction firms, need to emphasize continuous improvement through the quality management process to meet customer needs and address issues such as workmanship defects, time, and cost overruns defines construction project quality management as the fulfilment of owner's needs within defined scope, budget, and schedule to satisfy their requirements. These three components form the construction project trilogy (PMI, 2015).

Construction projects are characterized by being custom-oriented and designed to meet specific customer requirements within a finite duration and assigned budget. Each project is unique, tailored to the owner's desires and expectations. The design and construction of each project are aimed at serving a specific purpose, making construction projects more customized compared to routine and repetitive businesses. Therefore, a comprehensive and effective quality management system that encompasses all components and participants in the construction activities is essential for successful implementation and ensuring the required standards of quality construction (Rumane, 2011).

The implementation process of a QMS requires extra effort from all levels of the organization. Sometimes, there is a belief among company leaders that this process can be achieved without impacting their own functions. However implementation is purposeful activities designed to put into practice a known activity or program. The implementation processes should be described in sufficient detail to allow independent observers to detect the presence and strength of the specific set of activities related to implementation. Additionally, the activity or program being implemented should be described in sufficient detail for independent observers to assess its presence and effectiveness (Fixsen, D. L., Naom, S. F., Blase, K. A., Friedman, R. M., & Wallace, 2016).

In summary, the implementation of a QMS in the construction housing industry requires attention to quality planning, assurance, and control. It is crucial for real estate developers to focus on continuous improvement and meet customer needs. Construction projects are unique and customized, necessitating a comprehensive quality management system to ensure the

required standards are achieved. The implementation process requires effort from all levels of the organization and should be well-defined to enable effective execution and assessment.

2.2. Empirical Review

The practical application of quality management practices in construction projects is supported by empirical literature. Construction companies have increasingly implemented Quality Management Systems (QMS) to address quality issues and fulfil customer requirements. Therefore, this section focuses on other relevant studies conducted in the same field.

2.2.1. Global Perspective

Saraph conducted an early empirical study in the field of Quality Management (QM). The study involved gathering data from 162 managers representing 20 manufacturing and service industries in the USA. The objective of the study was to identify the Critical Success Factors (CSFs) of Total Quality Management (TQM). The researchers identified eight key factors that were found to be significant: top management leadership, the role of the quality department, training, product design, supplier quality management, process management, quality data reporting, and employee relations (Saraph, J. V., Benson, P. G., & Schroeder, 2015).

2.2.2. Regional Perspective

Study conducted by Agbenyega in 2014 specifically explores the quality management practices employed by construction companies in Ghana. The study primarily focuses on addressing the key obstacles that need to be addressed, which include aspects such as management commitment, effective communication between managers and employees, active employee involvement, the implementation of a detailed and coherent work program, regular inspections, the use of quality audit reports, addressing gaps in training and education among team members, and conducting comprehensive reviews and analysis of processes and outcomes (Agbenyega, 2014).

2.2.3. Local Perspective

A separate study conducted by Berhanu highlighted various challenges that hinder the achievement of project quality. These challenges include ineffective supervision, inadequate communication, and insufficient management commitment, inadequate availability of equipment and materials, inefficient resource management, and issues with contractors. (Birhanu, 2013).

2.2.4. Conceptual framework for Practices and Challenges of Project Quality Management

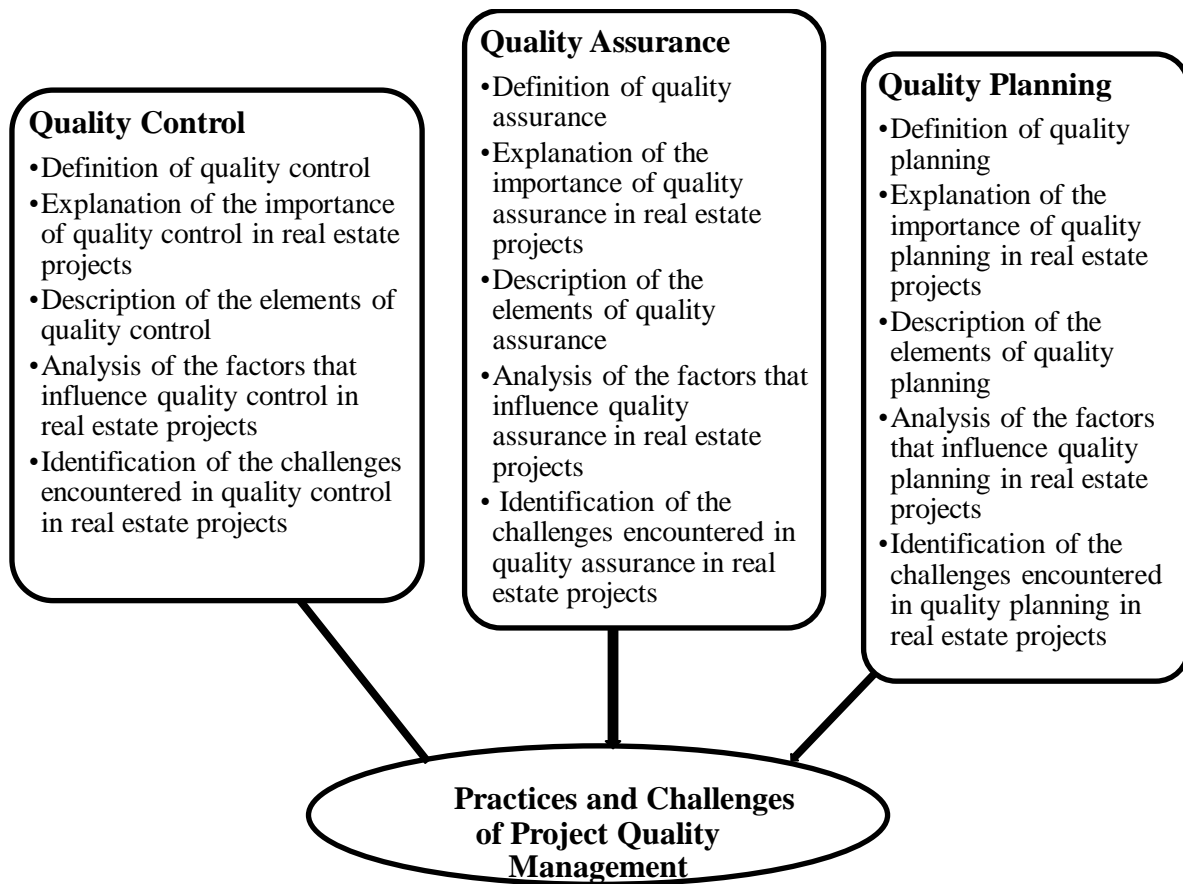


Figure 1. Framework for Practices and Challenges of Project Quality Management

Overall, this conceptual framework will help to identify the practices and challenges of project quality management in the real estate industry, focusing on the case of Gift Real Estate in Addis Ababa. By examining the quality management process, quality planning, quality assurance, and quality control, the study can provide insights into the strategies and tools that are used to ensure project quality, as well as the challenges that must be overcome to achieve effective quality management.

CHAPTER THREE

METHODOLOGY

3.1. Research approach

The study used a mixed-method research approach, enabling to address the research questions using both qualitative and quantitative data. By utilizing various data sources, data collection methods, and analysis techniques from both quantitative and qualitative research, the study achieved a comprehensive exploration of the research topic.

3.2. Research design

A cross-sectional study design was used to assess the Practices and Challenges of Project Quality Management: The Case of Gift Real Estate Addis Ababa, Ethiopia

3.3. Population

Target population

- ❖ The target population of this study was individuals who are involved in the management of construction projects in the Gift real estate sector. This includes project managers, architects, engineers, contractors, and other stakeholders who are responsible for overseeing the planning, design, and construction of real estate projects.

Study population

- ❖ The study population of this study comprised of selected individuals who are actively involved or have recent experience in construction project management in Gift real estate sector of Addis Ababa. The sample of this study included project managers, architects, engineers, contractors, and other stakeholders who are responsible for overseeing the quality management of real estate projects completed by Gift Real Estate.

3.4. Eligibility criteria

Inclusion criteria

- ❖ Individuals who had direct experience in project management and quality assurance within the context of Gift Real Estate.

Exclusion criteria

- ❖ Individuals who didn't have any experience in project management or quality assurance.
- ❖ Participants who didn't work for Gift Real Estate or did not have knowledge of the company's project quality management practices

3.5. Study variables

Independent variables

- ❖ Quality Management Process
- ❖ Quality Planning
- ❖ Quality Assurance
- ❖ Quality Control

Dependent variables

- ❖ Quality management practices and Challenges encountered in implementing project quality management practices in Gift Real Estate Company.

3.6. Data sources

Primary data sources

- ❖ Structured and questionnaire

Secondary data sources

- ❖ Document review of project reports, meeting minutes, and other relevant documents.

The primary data sources provided the detailed information needed to analyze the relationships between the independent variables, dependent variables. The secondary data sources provided contextual information about the quality management practice which can help in understanding the findings from the primary data sources.

3.7. Sampling techniques and sample size

Sampling Technique and procedure for the projects

The sampling technique for this study was purposive sampling

Sample size calculation for the study participants

$$n = \frac{N}{1 + Ne^2}$$

Where N=Population size, n=sample size, e=margin of error

The taking $N=35$, $e=0.05$, n will become **31**

As a sample, project manager, project supervisor, project consultancy, contract administration team, technical team member and project expert were taken using purposive sampling techniques.

3.8. Data collection methods, tools and process

Data collection methods

The Likert scale questionnaire developed based on the conceptual framework was used to collect data from the study participants. The questionnaire was self-administered to the participants to minimize any potential bias from the presence of a researcher. In addition to the self-administered questionnaires, key informants such as project managers were interviewed to gather in-depth information the interviews was conducted using a semi-structured interview guide. The researchers observed the process of data collection, analysis, and reporting in the on-going projects.

The data collection process

The questionnaire and interview guide was pilot-tested with a small sample of the study participants to ensure the clarity, consistency, and relevance of the questions. The self-administered questionnaires and interviews were conducted with the selected participants.

3.9. Data analysis and processing

The data collected for the study was analysed using SPSS version 25. The data analysis process involved cleaning, coding, and transforming the data as needed. Descriptive statistics such as mean, standard deviation, frequency, and percentage was used to summarize the data. To analyse the qualitative data collected from the interviews, content analysis was used. The transcripts of the interviews was read and re-read several times to identify recurring themes and patterns. The data was coded and categorized into themes and sub-themes. The themes was then be used to generate a comprehensive report of the findings.

The results of the data analysis were presented in tables, graphs, and charts. The findings were discussed in the context of the study objectives and research questions. The limitations of the study were also discussed, and recommendations for future research were made. Overall, the data analysis process was conducted with rigor and transparency to ensure the validity and reliability of the findings.

3.10. Data quality assurance

Data quality assurance is a critical component of any research study as it ensures that the data collected is accurate, reliable, and valid. The research instruments were pre-tested on a small sample of participants to assess their clarity, comprehensiveness, and applicability. The research team will be trained on how to collect data consistently and accurately. This included training on how to approach respondents, ask questions, and record responses. Data collection activities was closely monitored and supervised to ensure that the data was being collected appropriately. After data collection, the data was cleaned to identify and correct any errors, inconsistencies, or missing values. The data was analysed using appropriate statistical software to ensure the accuracy and validity of the findings. The findings were cross-checked with the research objectives and questions to ensure that they are consistent with the study objectives. The research findings were reviewed by experts in the field to ensure that the research methods, analysis, and results were accurate and valid.

3.10.1. Measuring tool Validity Report

The research measurement questionnaire used in this study underwent face and content validity assessment by two experts. The understandability index, clarity index, and readability index were also measured, with scores of 1, 1, and 0.93, respectively. These results imply that the questionnaire items were clear, understandable, and easily readable, making them suitable for use in this study. The questionnaires were reviewed by these experts to ensure that the questions were relevant and appropriate for the intended study. The overall expert consensus suggested that the questionnaire had sufficient content validity to be useful for the purposes of this study. Thus, based on the face validity assessment conducted by the two experts and the understandability, clarity, and readability indices, it can be concluded that the questionnaire used in this study has acceptable face validity and content validity.

3.10.2. Measuring tool Reliability Report

The internal consistency of the questionnaire used in this study was assessed using Cronbach's alpha. The scale's overall Cronbach's alpha value was found to be 0.774, indicating high internal consistency. In addition, the value ranges for the questionnaire domains were 0.725 to 0.767. These results demonstrate that the questionnaire used in this study has high reliability for measuring the study's constructs. The high internal consistency value indicates that the scale's items were homogenous and consistent in measuring the same construct. The value range for the questionnaire domains similarly indicates that the domains

were reliable in measuring the constructs they sought to assess. Thus, based on the Cronbach's alpha analysis, it can be concluded that the questionnaire used in this study has high reliability, making it a suitable instrument for measuring the study's constructs.

3.11. Ethical Consideration

A letter of support was sought from the Institutional of St. Marry School of graduate study. Then permission to carry out the study was sought from Gift Real state administrations. Participation in the study was on voluntary basis. After a detailed explanation of the study purpose, written informed consent was sought from participants. Confidentiality and privacy of the participant was maintained throughout the process of data collection.

3.12. Plan for dissemination of findings

The result of the study is going to be presented for research defence and a formal report will be submitted to School of St. Marry School of Graduate studies. Furthermore, the findings of this study will be disseminated for publication in national or international peer reviewed reputable journal. The study will also be presented during various research symposiums, conferences or on seminars.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1. Introduction

This chapter comprises of data analysis, presentation and interpretation of the findings. The data presented includes response rate, and general information of the respondent, presentation of findings based on each objectives of the study. The data was analysed based on responses to the items in the questionnaires. Results are shown in form of tables showing frequencies, percentages, Mean and standard deviation

4.2. Sociodemographic characteristics of participants

A total of 28/31 participants currently working Gift Real Estate Addis Ababa were participated in research project which gave response rate of (90.3%).The mean age for the overall population was found to be 31.25 years with ± 4.51 standard deviations (SD) years. And the mean age is comparable for male and female. Majority of participants are male 22 (78.6%), and female 06 (21.4%). The mean years of experience for the overall population were found to be 7.18 years with ± 2.09 standard deviations (SD) years. About 21 (75%) of the respondents had bachelor degree, while the rest 07(25%) had masters degrees. Details of Sociodemographic characteristics are shown in table 1 and table 2 below.

Table 1: Sociodemographic characteristics for continuous variables

Variable	Response	Mean \pm SD
Age in years (N=28)	Overall	31.25 \pm 4.51
	Male	31.77 \pm 4.97
	Female	29.33 \pm 0.82
Years of Experience(N=64)	Overall	7.18 \pm 2.09
	Male	7.59 \pm 2.17
	Female	5.67 \pm 0.52

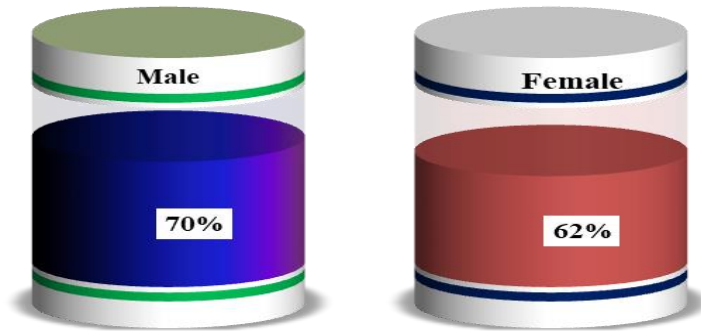


Figure 2: Sex of the respondents in assessment of Practices and Challenges of Project Quality Management in Gift Real Estate Addis Ababa June 2023

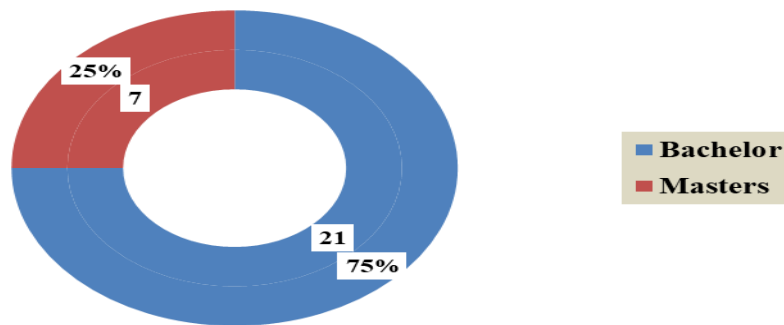


Figure 3: Level of education of the respondents in assessment of Practices and Challenges of Project Quality Management in Gift Real Estate Addis Ababa June 2023.

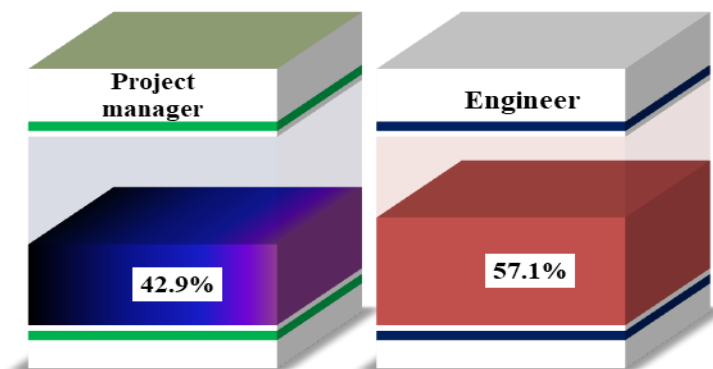


Figure 4: Work division of the respondents in assessment of Practices and Challenges of Project Quality Management in Gift Real Estate Addis Ababa June 2023.

4.3. Quality Management Process, Tools and Techniques, Top Management Commitment, and problems encountered in Gift Real Estate Addis Ababa

The mean level of agreement among the participants is categorized on the scale; Strongly Agree (4.3 or greater); Agree (3.50 – 4.2); Neither Agree nor Disagree (2.7 – 3.4); Disagree (1.9 – 2.6); and, strongly Disagree (1.8 or less). To determine monitoring practice level the mean level of agreement is transformed to percentage based of the following formula

Quality planning

The results of the survey indicate that quality planning in project quality management needs to contain at least 17 important components listed in the table 3 above. All respondents agreed that the quality planning contains those listed with a minimum mean agreement level of with 3.50 ± 4.51 standard deviations (SD) and a maximum mean agreement level of 4.46 ± 0.693 standard deviations (SD). These results suggest that there is a general consensus among the respondents that a comprehensive quality planning is essential in project quality management. However, when it comes to the specific component of whether quality planning should contain lists of contract documents and drawings, the respondents neither agreed nor disagreed with a mean agreement level of 3.43 ± 1.03 . This indicates that there is some variability in the perceptions of the respondents regarding this component. Overall, the results suggest that quality planning is viewed as an important aspect of project quality management, and that there is generally a high level of agreement among the respondents regarding the essential components of quality planning. Details are shown in table 3 below.

Table 2: Quality planning in the assessment of Practices and Challenges of Project Quality Management in Gift Real Estate Addis Ababa June 2023

Does your quality plan contain the following?	N	Minimum	Maximum	Mean	Std. Deviation
Brief description of the project	28	3	5	3.86	0.705
List of contract documents and drawings	28	2	5	3.43	1.034
Project quality objectives.	28	3	5	3.57	0.634
Site organization chart, with named personnel if known	28	3	5	4.00	0.667
Responsibilities and authorities of project staff	28	3	5	4.46	0.693
Site layout plan	28	2	5	3.93	1.016
Construction Programme and sub programmes	28	2	5	3.86	0.803
Schedules of subcontractor nomination, material and equipment	28	2	5	3.61	0.629
Procurement, based on the construction Programme	28	2	5	3.61	0.875
List(s) of materials and appliances used for the project, showing the verification requirement of each	28	3	5	3.82	0.548
Inspection and test plans, or list thereof	28	3	5	3.50	0.694
List of quality procedures and work instructions applicable to project by making reference to the company's Quality Manual and Procedures	28	3	5	3.71	0.659
List of project-specific procedures, work instructions and inspection	28	2	5	4.04	0.744
Checklists, or target dates for their provision	28	3	5	4.21	0.568
list of quality records to be kept, including appropriate quality records from subcontractors	28	3	5	4.11	0.737
Frequency (or provisional dates if possible) of internal quality audits	28	3	5	4.25	0.585
Frequency of updating the quality plan	28	1	5	3.86	1.208

Quality Assurance

The results of the survey indicate that quality assurance in project quality management needs to contain at least four important components listed in the table 4 above. All respondents agreed that the quality assurance contains those listed with a minimum mean agreement level of with 3.61 ± 0.629 standard deviations (SD) and a maximum mean agreement level of 4.36 ± 0.621 standard deviations (SD). These results suggest that there is a general consensus among the respondents that a comprehensive quality assurance is essential in project quality management. Overall, the results suggest that quality assurance is viewed as an important aspect of project quality management, and that there is generally a high level of agreement among the respondents regarding the essential components of quality assurance. Details are shown in table 4 below

Table 3: Quality assurance in the Assessment of Practices and Challenges of Project Quality Management in Gift Real Estate Addis Ababa, June 2023

Do you consider the following factors in your quality assurance mechanism?	N	Minimum	Maximum	Mean	Std. Deviation
Selects the appropriate quality management system requirements for each contract.	28	3	5	4.36	0.621
Clearly specifies the quality management system requirements in tender and contract documents.	28	2	5	4.11	0.737
Evaluates and selects subcontractors on their ability to satisfy specified requirements.	28	2	4	3.61	0.629
Appropriate checking, measurement or testing of products and keeping proper records	28	3	5	4.14	0.525

Quality Control

The results of the survey indicate that quality control in project quality management needs to contain at least four important components listed in the table 5 below. All respondents agreed that the quality control contains those listed with a minimum mean agreement level of with 3.64 ± 1.096 standard deviations (SD) and a maximum mean agreement level of 4.225 ± 0.645 standard deviations (SD). These results suggest that there is a general consensus among the respondents that a comprehensive quality control is essential in project quality management. Overall, the results suggest that quality control is viewed as an important aspect of project quality management, and that there is generally a high level of agreement among the respondents regarding the essential components of quality control. Details are shown in table 5 below

Table 4: Quality control in the Assessment of Practices and Challenges of Project Quality Management in Gift Real Estate Addis Ababa, June 2023

Do you consider the following factors in your quality control mechanism?	N	Minimum	Maximum	Mean	Std. Deviation
Select what to control and set standards that provide the basis for decisions regarding possible corrective action	28	3	5	4.11	0.685
Establish the measurement methods used, 29 compare the actual results to the quality standards.	28	2	5	4.25	0.645
Act to bring nonconforming processes and material back to the standard based on the information collected	28	3	5	3.89	0.567
Monitor and standardize measuring devices, include detailed documentation for all processes	28	2	5	3.64	1.096

Top Management Commitment to Quality Management

The results of the survey indicate that Top Management Commitment to Quality Management in project quality management needs to contain at least four important components listed in the table 6 below. All respondents agreed that the Top Management Commitment to Quality Management contains those listed with a minimum mean agreement level of with 3.86 ± 0.591 standard deviations (SD) and a maximum mean agreement level of 4.39 ± 0.629 standard deviations (SD). These results suggest that there is a general consensus among the respondents that a Top Management Commitment to Quality Management is essential in project quality management. Overall, the results suggest that Top Management Commitment to Quality Management is viewed as an important aspect of project quality management, and that there is generally a high level of agreement among the respondents regarding the essential components of Top Management Commitment to Quality Management. Details are shown in table 6 below

Table 5: Top Management Commitment to Quality Management in the Assessment of Practices and Challenges of Project Quality Management in Gift Real Estate Addis Ababa, June 2023

Top Management Commitment to Quality Management	N	Minimum	Maximum	Mean	Std. Deviation
Communicate the importance of meeting customer requirements	28	3	5	4.25	0.799
Setting quality policies.	28	3	5	4.39	0.629
Conduct management reviews on project quality.	28	3	5	3.86	0.591
Seek to have more financial resources	28	3	5	3.96	0.576
Seek to have more human resources.	28	3	5	3.89	0.737

Quality Management Implementation Problems /challenges

Table 6: Quality Management Implementation Problems /challenges in the Assessment of Practices and Challenges of Project Quality Management in Gift Real Estate Addis Ababa, June 2023

<i>Problems /challenges</i>	N	Minimum	Maximum	Mean	Std. Deviation
Seek to have more financial resources	28	3	5	3.96	0.576
Inadequate management support	28	1	5	4.57	0.836
Unwillingness of project staff to accept the quality system	28	1	5	3.64	0.989
Difficulties in understanding the quality system	28	2	5	4.07	0.858
Problem with more paper works	28	2	5	3.46	0.793
Problem with documentation	28	2	5	3.75	0.844
Difficulties in measuring results	28	1	5	4.14	0.803
Problems with contractors“ performance	28	2	5	4.07	0.766
Problems with consultants performance	28	2	4	3.89	0.416
Ineffective communication	28	3	5	4.00	0.272
Increase of cost	28	3	5	4.00	0.272
Increase of time	28	3	5	4.00	0.272
Inadequate information	28	2	5	3.79	0.686
Inadequate technical expertise/skills	28	3	5	4.00	0.272
Problem with Government bureaucracy	28	2	4	3.93	0.378
Problem with raw materials shortage due to inflation	28	2	5	2.54	0.962
Problem with Right of way	28	2	4	3.18	0.476
Problem with scope change	28	2	4	3.93	0.378
Lack of standardized quality management guidelines	28	2	5	3.25	0.645
Employee turnover	28	2	5	2.64	0.989

The result revealed that 17 of the commonly known problems were prevalent, and respondents agreed to their existence all respondents agreed that the with a minimum mean agreement level of with 3.64 ± 0.989 standard deviations (SD) and a maximum mean agreement level of 4.57 ± 0.836 standard deviations (SD). Two of the commonly known problems were neither agreed nor disagreed among the respondents. These two problems were problems with the right way and employee turnover. This indecisiveness may be a clear indication that these two problems are not as prevalent as the others mentioned above. Surprisingly, only one of the commonly known problems was disagreed upon by the

respondents. This problem was problems with raw materials shortages due to inflation, which is not a major problem in Gift real estate.

Quality Management Tools and Techniques organizations Applied

The results of the survey indicate that all respondents agreed with a minimum mean agreement level of with 3.57 ± 0.836 standard deviations (SD) and a maximum mean agreement level of 4.11 ± 0.315 standard deviations (SD) that Trend analysis, Statistical sampling, Inspection, Quality audits, Flowcharting and Benchmarking are used in the organization for quality management process. Inspection, Pareto diagrams and Benefit/ cost analysis are neither agreed nor disagreed among respondents that those mentioned are used as a tool for quality management. Details are shown in table 7 below

Table 7: Quality Management Tools and Techniques organizations Applied

Tools and Techniques	N	Minimum	Maximum	Mean	Std. Deviation
Benefit/ cost analysis	28	2	5	3.14	0.705
Benchmarking	28	3	5	3.89	0.416
Flowcharting	28	2	5	3.75	0.752
Design of experiments	28	3	5	3.36	0.678
Quality audits	28	4	5	4.11	0.315
Inspection	28	3	5	3.89	0.416
Control charts	28	2	5	2.75	1.076
Pareto diagrams	28	3	4	3.18	0.390
Statistical sampling	28	3	4	3.79	0.418
Trend analysis	28	2	4	3.57	0.836

Interview Questions analysis

The following report provides a qualitative analysis of the interview responses collected from a group of participants. The analysis aimed to identify recurring themes and patterns in the responses, as well as identify any significant variations between the participants. The analysis has been conducted using a rigorous approach, involving careful interpretation of the data and systematic coding and categorization of the responses. Overall, the report presents a comprehensive picture of the views and opinions of the participants, shedding light on their attitudes towards a particular subject and providing insights into their experiences and perspectives. The followings are the findings:

Project Quality Management Practices: The interview responses revealed several aspects related to project quality management practices:

- * Formal quality management systems, such as ISO 9000, are not widely practiced within the organization.

- * The philosophy of Total Quality Management (TQM) has not been adopted.
- * The specific quality management tools and techniques commonly applied were not specified.

Communication and Standardization: Effective communication and standardization play a crucial role in project quality management:

- * Top management does not effectively communicate the importance of meeting customer requirements to subordinates.
- * There is a lack of standardized guidelines for quality management.
- * Top management does not take the lead in setting quality policies, potentially hindering the establishment of a quality-focused culture.

Management Reviews and Involvement: Management reviews and active involvement in quality management are essential for project success:

- * Top management does not conduct management reviews specifically focused on project quality.
- * The interviewee did not provide information about their involvement in the project design process or specific quality management processes, suggesting a potential gap in engagement.

Problems with Project Quality Management Implementation: The interview responses highlighted the following challenges associated with implementing project quality management:

- * Attitude change is needed, starting from the managers who hold a significant role in quality management. Overcoming resistance and fostering a quality-driven mind-set is crucial.

Resource Allocation Recommendations: Efficient resource allocation is vital for effective project quality management:

- * Increased allocation of financial resources is recommended to support quality management initiatives.
- * The interviewee suggested increasing human resources, particularly qualified engineers, with better compensation, to enhance the organization's quality capabilities.

Success Factors for Project Quality Implementation: To ensure successful project quality implementation and management, the following factors were identified:

- * Skilful manpower with the necessary expertise is crucial for maintaining quality standards.
- * Emphasis should be placed on quality control measures for every material utilized in the project.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1. Summary of findings

A total of 28/31 participants currently working Gift Real Estate Addis Ababa were participated in research project which gave response rate of (90.3%). The mean age for the overall population was found to be 31.25 years with ± 4.51 standard deviations (SD) years. And the mean age is comparable for male and female. Majority of participants are male 22 (78.6%), and female 06 (21.4%). The mean years of experience for the overall population were found to be 7.18 years with ± 2.09 standard deviations (SD) years. About 21 (75%) of the respondents had bachelor degree, while the rest 07(25%) had masters degrees.

Quality planning

The results of the survey indicate that quality planning in project quality management needs to contain at least 17 important components listed in the table 3 above. All respondents agreed that the quality planning contains those listed with a minimum mean agreement level of with 3.50 ± 4.51 standard deviations (SD) and a maximum mean agreement level of 4.46 ± 0.693 standard deviations (SD). These results suggest that there is a general consensus among the respondents that a comprehensive quality planning is essential in project quality management. However, when it comes to the specific component of whether quality planning should contain lists of contract documents and drawings, the respondents neither agreed nor disagreed with a mean agreement level of 3.43 ± 1.03 . This indicates that there is some variability in the perceptions of the respondents regarding this component. Overall, the results suggest that quality planning is viewed as an important aspect of project quality management, and that there is generally a high level of agreement among the respondents regarding the essential components of quality planning.

Quality Assurance

The results of the survey indicate that quality assurance in project quality management needs to contain at least four important components listed in the table 4 above. All respondents agreed that the quality assurance contains those listed with a minimum mean agreement level of with 3.61 ± 0.629 standard deviations (SD) and a maximum mean agreement level of 4.36 ± 0.621 standard deviations (SD). These results suggest that there is a general consensus among the respondents that a comprehensive quality assurance is essential in project quality

management. Overall, the results suggest that quality assurance is viewed as an important aspect of project quality management, and that there is generally a high level of agreement among the respondents regarding the essential components of quality assurance.

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Quality Management Implementation Problems /challenges

The result revealed that 17 of the commonly known problems were prevalent, and respondents agreed to their existence all respondents agreed that the with a minimum mean agreement level of with 3.64 ± 0.989 standard deviations (SD) and a maximum mean agreement level of 4.57 ± 0.836 standard deviations (SD). Two of the commonly known problems were neither agreed nor disagreed among the respondents. These two problems

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Quality Management Tools and Techniques organizations Applied

The results of the survey indicate that all respondents agreed with a minimum mean agreement level of with 3.57 ± 0.836 standard deviations (SD) and a maximum mean agreement level of 4.11 ± 0.315 standard deviations (SD) that Trend analysis, Statistical sampling, Inspection, Quality audits, Flowcharting and Benchmarking are used in the organization for quality management process. Inspection, Pareto diagrams and Benefit/ cost analysis are neither agreed nor disagreed among respondents that those mentioned are used as a tool for quality management.

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Project Quality Management Practices: The interview responses revealed several aspects related to project quality management practices:

- ✳ Formal quality management systems, such as ISO 9000, are not widely practiced within the organization.
- ✳ The philosophy of Total Quality Management (TQM) has not been adopted.
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- * Top management does not conduct management reviews specifically focused on project quality.
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Problems with Project Quality Management Implementation: The interview responses highlighted the following challenges associated with implementing project quality management:

- * Attitude change is needed, starting from the managers who hold a significant role in quality management. Overcoming resistance and fostering a quality-driven mind-set is crucial.

Resource Allocation Recommendations: Efficient resource allocation is vital for effective project quality management:

- * Increased allocation of financial resources is recommended to support quality management initiatives.
- * The interviewee suggested increasing human resources, particularly qualified engineers, with better compensation, to enhance the organization's quality capabilities.

Success Factors for Project Quality Implementation: To ensure successful project quality implementation and management, the following factors were identified:

- * Skilful manpower with the necessary expertise is crucial for maintaining quality standards.
- * Emphasis should be placed on quality control measures for every material utilized in the project.

5.2. Conclusion

The project study has good response rate of 90.3%. The mean age for the overall population was found to be 31.25 years with ± 4.51 standard deviations (SD) years. And comparable for male and female. Majority of participants are male 22 (78.6%), and female 06 (21.4%). The mean years of experience for the overall population were found to be 7.18 years with ± 2.09 standard deviations (SD) years. About 21 (75%) of the respondents had bachelor degree, while the rest 07(25%) had masters degrees.

Quality planning

These results suggest that there is a general consensus among the respondents that a comprehensive quality planning is essential in project quality management. However, when it comes to the specific component of whether quality planning should contain lists of contract documents and drawings, the respondents neither agreed nor disagreed. Overall, the results suggest that quality planning is viewed as an important aspect of project quality management, and that there is generally a high level of agreement among the respondents regarding the essential components of quality planning.

Quality Assurance

These results suggest that there is a general consensus among the respondents that a comprehensive quality assurance is essential in project quality management. Overall, the results suggest that quality assurance is viewed as an important aspect of project quality management, and that there is generally a high level of agreement among the respondents regarding the essential components of quality assurance.

Quality Control

These results suggest that there is a general consensus among the respondents that a comprehensive quality control is essential in project quality management. Overall, the results suggest that quality control is viewed as an important aspect of project quality management, and that there is generally a high level of agreement among the respondents regarding the essential components of quality control.

Top Management Commitment to Quality Management

These results suggest that there is a general consensus among the respondents that a Top Management Commitment to Quality Management is essential in project quality management. Overall, the results suggest that Top Management Commitment to Quality

Management is viewed as an important aspect of project quality management, and that there is generally a high level of agreement among the respondents regarding the essential components of Top Management Commitment to Quality Management.

Quality Management Implementation Problems /challenges

The result revealed that 17 of the commonly known problems were prevalent, and respondents agreed to their existence. Two of the commonly known problems were neither agreed nor disagreed among the respondents. These two problems were problems with the right way and employee turnover. This indecisiveness may be a clear indication that these two problems are not as prevalent as the others. Surprisingly, only one of the commonly known problems was disagreed upon by the respondents. This problem was problems with raw materials shortages due to inflation, which is not a major problem in Gift real estate.

Quality Management Tools and Techniques organizations Applied

The results of the survey indicate that all respondents agreed that Trend analysis; Statistical sampling, Inspection, Quality audits, Flowcharting and Benchmarking are used in the organization for quality management process. Inspection, Pareto diagrams and Benefit/ cost analysis are neither agreed nor disagreed among respondents that those mentioned are used as a tool for quality management.

Interview Questions analysis

Overall, the report presents a comprehensive picture of the views and opinions of the participants, shedding light on their attitudes towards a particular subject and providing insights into their experiences and perspectives. The followings are the findings:

Project Quality Management Practices: The interview responses revealed several aspects related to project quality management practices: Formal quality management systems, such as ISO 9000, are not widely practiced within the organization; the philosophy of Total Quality Management (TQM) has not been adopted, the specific quality management tools and techniques commonly applied were not specified.

Communication and Standardization: Effective communication and standardization play a crucial role in project quality management: Top management does not effectively communicate the importance of meeting customer requirements to subordinates, there is a lack of standardized guidelines for quality management, top management does not take the

lead in setting quality policies, potentially hindering the establishment of a quality-focused culture.

Management Reviews and Involvement: Management reviews and active involvement in quality management are essential for project success: Top management does not conduct management reviews specifically focused on project quality, the interviewee did not provide information about their involvement in the project design process or specific quality management processes, suggesting a potential gap in engagement.

Problems with Project Quality Management Implementation: The interview responses highlighted the following challenges associated with implementing project quality management: Attitude change is needed, starting from the managers who hold a significant role in quality management. Overcoming resistance and fostering a quality-driven mind-set is crucial.

Resource Allocation Recommendations: Efficient resource allocation is vital for effective project quality management: Increased allocation of financial resources is recommended to support quality management initiatives; the interviewee suggested increasing human resources, particularly qualified engineers, with better compensation, to enhance the organization's quality capabilities.

Success Factors for Project Quality Implementation: To ensure successful project quality implementation and management, the following factors were identified: Skilful manpower with the necessary expertise is crucial for maintaining quality standards, Emphasis should be placed on quality control measures for every material utilized in the project.

5.3. Recommendations

For Gift Real Estate Addis Ababa management

The study shows that there are several challenges in project quality management within the organization. The management should conduct regular assessments of project quality management practices to identify gaps and make improvements. Senior management should also ensure that adequate resources are allocated to project quality management initiatives, and continuous training and development programs are provided to staff to improve their skills.

For employees of Gift Real Estate Addis Ababa

The study highlights the importance of employees' roles in ensuring the quality of project management processes. Therefore, the employees must adhere to standard procedures and protocols established by management to contribute to the success of projects. Also, the employees should take an active role in professional development opportunities to acquire up-to-date project management skills.

For other real estate companies

The study provides insight into challenges and practices of project quality management, which is applicable to other companies in the real estate sector. Other companies can use the study findings as a reference point to examine their own project management processes, identify areas of improvement, and implement best practices.

For academic institutions

Academic institutions can use the study on the Assessment of Practices and Challenges of Project Quality Management: The Case of Gift Real Estate Addis Ababa as an educational tool to teach students about crucial project management concepts and the application of it for real-world business scenarios.

5.4. Directions for Future research

Future research should focus on the following areas:

- * Further investigation of the problems that received mixed responses to gain a deeper understanding of the underlying factors and develop targeted strategies for improvement.
- * Conducting a comparative analysis of quality management practices across different organizations to identify best practices and benchmarks for quality performance.
- * Exploring the impact of implementing specific quality management tools and techniques on overall project success and customer satisfaction.

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ANNEXES

Annex I: Informed Consent form

Research Title: Assessment of Practices and Challenges of Project Quality Management: The Case of Gift Real Estate Addis Ababa

Principal Investigator (PI): Feven Solomon Negash (BA.)

Part I: Information Sheet

1. Introduction

The objective of the study is to determine Practices and Challenges of Project Quality Management: The Case of Gift Real Estate Addis Ababa. This study will be helpful to improve Project Quality Management. The interview takes between 10-20 minutes to complete.

2. Description

You have been asked to participate in a research study, which will assess Practices and Challenges of Project Quality Management: The Case of Gift Real Estate Addis Ababa

3. Aim of the study

The information you provide will not only contribute to the success of the study, but will also contribute significantly to getting the right information to improve Project Quality Management.

4. Procedure

This study will involve self-administered questionnaire to study the Assessment of Practices and Challenges of Project Quality Management: The Case of Gift Real Estate Addis Ababa. If you are willing to participate in the study, you have to understand before you are asked the questions. If there is anything unclear, you can ask. For the study, you are expected to answer the questions voluntarily. All the information you give will be kept private

5. Participant selection

We are inviting all clients who fulfil the inclusion criteria to participate in the research Assessment of Practices and Challenges of Project Quality Management: The Case of Gift Real Estate Addis Ababa

6. Voluntary Participation

Your participation in this research is entirely voluntary. It is your choice whether to participate or not. You may change your mind later and stop participating even if you agreed earlier.

7. Risks and Benefits

There is no any risk in participating in the research. If you participate in the study, you may not get direct benefit, but you will have an opportunity to contribute for the science of quality management

8. Rights

You do not have to take part in this research if you do not wish to do so and refusing to participate will not affect you in any way. You will still have all the benefits that you would otherwise. You may stop participating in the research at any time that you wish without losing any of your rights.

9. Confidentiality

The information collected from this research project will be kept confidential and all records and other information obtained will be kept strictly confidential and your health information will not be used without permission. All data collection tools will be identified by number or otherwise coded to protect any information that could be used to identify your child.

10. Number of Participants

Total of 31 participants who fulfils the inclusion criteria will be the participants of the study.

Feven Solomon Negash: +251928351499

Annex II: English version of data collection instrument.

Dear respondent

Hello, I am **Feven Solomon Negash**, and I am conducting a research on "**Practices and Challenges of Project Quality Management: The Case of Gift Real Estate Addis Ababa.**" This research is being carried out as part of my Master's degree in Project Management. Your honest and sincere responses are crucial to ensuring the accuracy and quality of the study's findings. I kindly request you to complete this questionnaire, and please be assured that all your responses will be treated with utmost confidentiality. Your participation in this endeavour is greatly appreciated, and I would like to express my sincere gratitude in advance

Part-I: General information						
Date of Data collection.....		Code.....				
101	Sex	1.Male 2.Female				
102	Age in years	-----				
103	Level of education	1.Below Diploma 2. Diploma 3.Bachelor Degree 4.Masters and above				
104	Work Division	1.Project Manager 2.Enginneer 3. Other -----				
105	Work experience	-----Years				
<p>Part II: This sub-section covers questions related to quality management process, tools and techniques, top management commitment, and problems encountered in Gift Real Estate Addis Ababa. The scale rating description: 1= strongly disagree, 2= disagree, 3= neutral, 4= agree, 5= strongly agree</p>						
Quality planning: Does your quality plan contain the following?		1	2	3	4	5
201	Brief description of the project					
202	List of contract documents and drawings					
203	Project quality objectives.					
204	Site organization chart, with named personnel if known					
205	Responsibilities and authorities of project staff					
206	Site layout plan.					
207	construction Programme and sub-programmes					
208	schedules of subcontractor nomination, material and equipment					
209	procurement, based on the construction Programme					
210	list(s) of materials and appliances used for the project, showing the verification requirement of each					
211	Inspection and test plans, or list thereof					
212	list of quality procedures and work instructions applicable to project by making reference to the company's					

	Quality Manual and Procedures					
213	list of project-specific procedures, work instructions and inspection					
214	checklists, or target dates for their provision					
215	list of quality records to be kept, including appropriate quality records from subcontractors					
216	frequency (or provisional dates if possible) of internal quality audits					
217	Frequency of updating the quality plan					
How important do you think the quality management plan is to your construction projects? <i>Very low... Low... moderate... high very... High...</i>						
<i>Quality Assurance: Do you consider the following factors in your quality assurance mechanism?</i>		1	2	3	4	5
218	Selects the appropriate quality management system requirements for each contract.					
219	Clearly specifies the quality management system requirements in tender and contract documents.					
220	Evaluates and selects subcontractors on their ability to satisfy specified requirements.					
221	Appropriate checking, measurement or testing of products and keeping proper records					
<i>Quality control: Do you consider the following factors in your quality control mechanism?</i>		1	2	3	4	5
222	Select what to control and set standards that provide the basis for decisions regarding possible corrective action					
223	Establish the measurement methods used, compare the actual results to the quality standards.					
224	Act to bring nonconforming processes and material back to the standard based on the information collected					
225	Monitor and standardize measuring devices, include detailed documentation for all processes					
<i>Top Management Commitment to Quality Management</i>		1	2	3	4	5
226	Communicate the importance of meeting customer requirements					
227	Setting quality policies.					
228	Conduct management reviews on project quality					

229	Seek to have more financial resources					
230	Seek to have more human resources.					
<i>Quality Management Implementation Problems /challenges</i>		1	2	3	4	5
231	Inadequate management support					
232	Unwillingness of project staff to accept the quality system					
233	Difficulties in understanding the quality system					
234	Problem with more paper works					
235	Problem with documentation					
236	Difficulties in measuring results					
237	Problems with contractors' performance					
238	Problems with consultants performance					
239	Ineffective communication					
240	Increase of cost					
241	Increase of time					
242	Inadequate information					
243	Inadequate technical expertise/skills					
244	Problem with Government bureaucracy					
245	Problem with raw materials shortage due to inflation					
246	Problem with Right of way					
247	Problem with scope change					
248	Lack of standardized quality management guidelines					
249	Employee turnover					
<i>Quality Management Tools and Techniques organizations Applied</i>		1	2	3	4	5
250	Benefit/ cost analysis					
251	Benchmarking					
252	Flowcharting					

253	Design of experiments					
254	Quality audits					
255	Inspection					
256	Control charts					
257	Pareto diagrams					
258	Statistical sampling					
259	Trend analysis					

Part III. Interview Questions

301	<p>How project quality management is been practiced? Based on</p> <p>a. Has formal quality management system (e.g., ISO 9000) been widely practiced? ----- ----- ----- -----</p> <p>b. Is the philosophy of TQM adopted? ----- -----</p> <p>c. What are the quality management tools and techniques commonly applied?----- ----- -----</p>
302	<p>Does the top management ever communicate to the subordinate of the importance of meeting customer requirements? ----- -----</p>
303	<p>Is there quality management standardized guidelines? -----</p>
304	<p>Does the top management lead in setting quality policies? If yes, please mention the policy principles----- ----- -----</p>
305	<p>Does the top management conduct management reviews on project quality? ----- -----</p>
306	<p>Have you participated during project designing process? If yes, please mention which quality management processes that you involved----- ----- -----</p>
307	<p>What are the problems to implement project quality management in your</p>

	organization? ----- -----
308	As for quality management in your project is concerned, do you recommend the allocation for financial resources to be increased? -----
309	As for quality management in your project is concerned, do you recommend the allocation for human resources to be increased?----- ----- -----
310	What do you think must be fulfilled for successful project quality implementation and management in general?----- ----- -----

Annex IV: Assurance of principal investigator

I, Feven Solomon Negash, declare that the research project entitled “*Assessment of Practices and Challenges of Project Quality Management: The Case of Gift Real Estate Addis Ababa*” is my original work and has not been presented for a degree in this college or any other college and that all sources of materials used for the project have been duly acknowledged. The undersigned agree to accept all responsibilities for the scientific and ethical conduct of the research project. I will provide timely progress report to my advisor and seek the necessary Advice and approval from my primary advisors in the course of the research. I will communicate timely to my advisor all stakeholders involved in the study including any source of funding for this research.

Name of the student: **Feven Solomon Negash (BSC.)**

Signature: _____

Date: _____

Approval of the Advisor

Name of the primary advisor: **Abebaw Kassie (Ph.D.)**

Signature: _____

Date: _____