ST. MARY'S UNIVERSITY

SCHOOL OF GRADUATE STUDIES

MASTERS OF PROJECT MANAGEMENT

ASSESSING THE PROJECT MANAGEMENT PRACTICES IN BUILDING CONSTRUCTION PROJECTS: CASE STUDY ON SELECTED BUILDING CONSTRUCTION PROJECTS IN ADDIS ABABA

BY:

MAHDER ENGDAWORK HABTE

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ADDIS ABABA, ETHIOPIA

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A THESIS SUBMITTED TO ST. MARY'S UNIVERSITY, SCHOOL OF GRADUATE STUDIES IN INPARTIAL FULFILLMENT OF REQUIREMENTS FOR DEGREE OF MASTERS OF ART IN PROJECT MANAGEMENT

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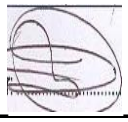
DEJENE MAMO (PHD)	
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DECLARATION

Candidate's Declaration

I declare that this thesis entitled: that "assessing the project management practices in building construction projects: case study on selected building construction projects in Addis Ababa" is my original work and study. I have produced it independently except of the guidance and Suggestion of my Research Advisor. This report has not been submitted earlier either to this university or to any other University/Institution for the fulfillment of the requirement of a course of study and that all sources of materials used for the thesis has been duly acknowledged.

Declared By:

Name: - MAHDER ENGIDAWORK HABTE

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ST. MARY'S UNIVERSITY, ADDIS ABABA

ENDORSEMENT

This thesis has been submitted to St. Mary University, school graduate studies for examination with my approval as a university advisor.

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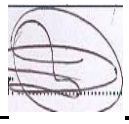
DEJENE MAMO (PHD)		**7/ 6 / 2024**

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Lastly, I extend my heartfelt acknowledge to all those provided moral and technical support during in preparation of this thesis.

List of Acrimony

GDP	Gross Domestic Product
IPMA	International Project Management Association
PMP	Project Management Practice
PMI	Project Management Institute
PMBOK	Project Management Body of Knowledge
PM	Project Management
SPSS	Statical Package for Social Science

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ABSTRACT

The goal of this research is to carry out "Assessment of project management practice in building construction projects" in Addis Ababa of select project. The study describes time, cost, and quality management on the practice indices of building construction projects on selected project site. Project management in construction performs to establish commitment and responsibility towards protecting the project from delay and scheduling, cost overruns, and related problems. In project management quality, time and cost are the main factors for the success of the project. For this study qualitative approach were used, and the structured questionnaire was distributed to the project managers, clients, contractors, engineers and support stuffs. The results of the research perform compressive analysis of data and evaluate the results in frequency, percentage and also ranking determined in various assessment of mean and standard deviation the project management practice found good and manageable, currently the projects are moderately defined, documented and executed. the project was completed within the planned timeframe, there were issues with meeting milestones and deliverables on schedule, and the project experienced some delays. overall cost performance was satisfactory, with the project generally within the allocated budget. project met the specified quality standards and requirements, with deliverables largely free from defects or rework. Currently the building construction face different challenges as survey data indicates some are manage and need continuous improvement. As survey indicates challenges like lack of PM tannings, inflated aspiration and turnover of skilled employees are resulted. Based on the findings, recommendations were forwarded to all concerned groups.

Key words; project, project management, project management practice Assessment

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

A project is a temporary endeavor undertaken to create a unique product, service or result. It has a definite beginning and end. (Dereje Bitew 2019). A project is a one-time task that depends on how well of the three constrains like by time, cost, and quality are become balanced. Thus, project managers try to maximize the project quality with time and budget.

Project management takes a key role in product development projects since it coordinates the required decisions regarding project goals, planning, and team (Thomas & Mullaly, 2007). This study that sheds light on the assessing the project management and research the practice in building contraction project to behavioral approaches and project specifications that are significantly related to project success (Rockart, 1979). (Swink et al, 2006). for example, asses that project management experience and the definition of clear goals are associated with a higher degree of project efficiency. (Scott-Young & Samson, 2008) also find that clear goals are positively related to the good practical of a project's quality. show that project manager continuity and incentives can be associated with higher schedule adherence and that team characteristics, for example, the team's problem-solving potency, are related to lower costs. Project management initiatives aim to increase a project's efficiency by moving the project closer to its frontier without altering the given characteristics.

Thus, initial basic project management approaches are likely to have a more substantial marginal effect than more advanced approaches (Zwikael & Gilchrist, 2022). For example, strategic planning practices such as scope and staffing management, initially contribute to a clear structure of the project with a high impact on project profitability (Zwikael & Gilchrist, 2022; Zwikael & Sadeh, 2007).

projects are vital for any construction organization's success because they are the key source of income (Kerzner, 2002). As more organizations see the benefits of project management in construction to their bottom line, project management competency improvement has been perceived as highly important by contemporary organizations (Demir and Kocabaş, 2010).

The construction industry plays an important role in the economy, contributing significantly to the national GDP, capital formation and employment (Cheng et al.,2021). Recent studies by (Zewdu & Aregaw, 2015) indicated that the GDP contribution of the Ethiopian construction industry has been raised to 5.6% and approaches to the sub-Saharan average (6%). For the effective completion of building projects, construction professionals have traditionally focused on time, cost, and quality considerations, also known as the iron triangle of project management (Olsen 1971; Tabish and Jha 2018). These three indicators are commonly presented as the traditional performance measures and have been widely used to assess projects practice (Atkinson 1999; Santoso and Soeng 2016).

'A construction project is considered as successful when it is completed in time, without cost overruns, and within the specified quality parameters' (Sinesilassie et al. 2019). The significance of contractors and project managers has been extensively recognized in project-based industry sectors, particularly in the building construction industry (Adeleke et al., 2019; Papke-Shields et al., 2010). Construction work is described as civil engineering jobs and all kinds of new buildings such as hospitals, schools, homes, hotels, factories, and others (Wells, 2000).

Project management practices are crucial for successful construction projects, encompassing aspects like time, cost and quality. They prevent cost overrun issues through goal setting, feasibility studies, and realistic schedules. (Govindaras, B.; Wern et al 2023). Assessment and cost-control measures ensure staying within the budget (Lin, L.; Xu et al 2022). In conclusion, project management is critical to provide a structured approach for planning, controlling, and executing, leading to successful project delivery.

The study was done in Addis Ababa, Capital and largest city of Ethiopia. It lies on a plateau in the country's geographic center at an altitude of about 8,000 ft (2,450 m). The city was founded as the capital in 1887 because of the unsatisfactory location of the former capital, Entoto. Addis Ababa was the capital of Italian East Africa 1935–41. It has become the national center for higher education, banking and insurance, and trade. Several international organizations have their headquarters there, including the Organization of African Unity.

Addis Ababa, situated in the grassland biome, is located at an altitude of 7,546 feet (2,300 meters). The city can be found at coordinates 9°1'48"N 38°44'24"E, nestled at the base of Mount Entoto. It stretches from approximately 2,326 meters (7,631 feet) above sea level, near Bole

International Airport in the southern outskirts, to over 3,000 meters (9,800 feet) in the northern Entoto Mountains.

Now Decades later, the Ministry of Construction indicates that the construction sector has a 9.5 percent share from Ethiopia ‘s total Gross Domestic Product (GDP) in 2016. The construction sector has made an immense contribution to urban development whilst benefiting low-income citizens by providing cost-effective and modern houses. The sector is also the second-largest employing industry through creating jobs for over 1.8 million citizens thereby alleviating urban poverty.

1.2 Statement of the Problems

Project management practice (PMP) in construction building requires identifying the beneficiaries and their demands in the project construction life cycle Robert Eadie. al (2013). The most fundamental mission of project management in construction determining how project management works is to establish commitment and responsibility toward the schedule, preventing project delays and related costs Davis, K (2023). Project division into smaller components and finally activities facilitate its management and control the practice of project construction, ultimately preventing project delays but increasing the total cost Vanhoucke, M et al (2019). In the project management literature quality, cost, and time are the main factors of successful project practice Castro, M.S et al (2013). Based on the Project Management body of knowledge the project management process includes initiating, planning, executing, monitoring and controlling, and closing, and scope management includes scope, quality, cost, and time objectives.

Budling construction project perform majority of their activities in project environments. However, most of the firms are not prepared enough to handle their Project Management processes professionally Addis A. (2014). This might be because of the lack of awareness for Project management concepts. Another reason could be inadequate training of architects in project management both at undergraduate level and after graduation Addis A. (2014). On the other hand, building construction design projects are becoming more complex and nowadays clients are increasingly demanding more professional approach on project management practice from construction firms.

These issues are causing the negative impact on the development of country economic growth and prosperity Shah, (2016). The study contributes to assess the project management practices and enhancing the efficiency over building construction projects.

1.3 Basic Research questions

This research was tried to answer the following questions

- What is the current project management practices undertaken on the building construction project?
- What are the challenges for building construction project in that alter during project work?
- How does the time, cost, and quality management describe project management practice in building construction projects?

1.4 Objective of the study

1.4.1. General objective of the study

The general objective of the study was deal on assessing the project management practice in building construction projects in Addis Ababa of select project. The study describes the impact of time, cost and quality practice indices of building construction projects in Addis Ababa.

1.4.2 Specific objectives

1. To examine the current project management practices in building construction projects undertaken on the selected site.
2. To understand the challenges that affect the project management practice during building construction project phase.
3. To describe time, cost, and quality management on the practice indices of building construction projects on selected project site.

1.5 Definition of Terms

Project: Set of different tasks that executed with in fixed start and end date to produce unique product or service.

Project management: is practice of applying skills, knowledge, tools and techniques, methods and experience to achieve the desire objective of the project.

Building construction: is process of constructing buildings.

Challenges: The obstacles, difficulties, or issues faced during building construction phase. (Folmer & Lock, 2018).

1.6 Significance of study

The contribution of this study was considered important in providing insight into the various project management practices needed and give feedback and help building construction organizations to apply the recommendations. The recommendations and insights derived from this study can help companies make informed decisions and facilitate successful project management initiatives.

The study can encourage using a well-designed project management practice to achieve building construction organization's objectives. Helps firm's principals and project management practitioners to design the project management functions at firm's level in order to maximize their management practice towards achieving their objectives.

This research paper can be useful for researchers who would like to know about project management function and practice issues for future research. Besides the study could serve as a reference to similar government and regional private firms who want to benefit from the study as a whole.

1.7 Scope of Study

The scope of the study is assessing the whole project management practice in order to reduce the effect of poor project management practice in Ethiopia's building construction industry that directly affect the cost, time, and quality to the desirable outcome. Suppose the cause of low-level management practice can be established and a solution identified. In that case, poor PMP problems can be eliminated or significantly minimized, increasing client satisfaction. Enables the contractor and the consultant to be honest and confidential to the work that they conducted, which signify a vital role in the construction industry as a whole.

1.8 Limitation of the Study

Any research project like any other project endeavor could not be without shortcomings. Hence the researcher faced some limitations in the course of the research project. Project management at professional level in Ethiopia is recent phenomenon and nearly none of the professionals at

project organization are project management graduates to date hence not have theoretical project management knowledge and discipline. As the result the professionals at Addis Ababa building Construction project lower level of understanding for responding the questionnaires' as they level to each component. As indicated in above respective point in the case of lacking project knowledge areas the respondents careless as they respond to questionaries and accuracy to the leveling limitation for the study.

1.9 Organization of the Research Report

The overall structure of this thesis covers with five chapters. The first chapter provide background information on the study, a statement of the problem, objective of the study, its scope, and its limits, while the second chapter examines the literature review in relation to the themes. Chapter three explains the research methodology such research design, research approach, population and sampling technique, data collection instruments. Chapter four embraces the results and discussion of the study and presents the finding background of information in empirical. Finally, chapter five provides with the summery, conclusion and recommendation of the study. All the reference sources consulted for the study is cited in the final chapter.

CHAPTER TWO

REVIEW OF RELATED LETIRATURE

In this chapter, a comprehensive review of the literature is provided, encompassing theoretical and empirical advancements made by many academic frameworks related to assessment of project management practice on building construction projects. It involves the definition of project and project management practice has been discussed briefly. Important of well design project management in building construction project.

2.1 Theoretical Literature Review

2.1.1 Project Management Practice

This project management practice plays the vital role for the success compilation of construction projects that manages and prevents issues like cost overruns, realistic schedule, quality assuring and risk management. The PMBOK guide defines practice in project as "a set of interrelated actions and activities performed to achieve a specified set of products, results, or services. Good processes are based on sound principles and proven practices that is extremely important for ensuring a project's success. These processes can help minimize confusion and uncertainty among the project manager and the project stakeholders. The primary purpose of the PMBOK is to identify and describe the project management practices that are generally accepted that the knowledge and practices described are - 47 - applicable to most projects most of the time and that there is widespread consensus about their value and usefulness. The ten knowledge areas covered by the PMBOK will be discussed in more detail.

2.1.2 Project Management Knowledge Area

Project management knowledge areas are the key aspects for project management that overseen by the Project managers to plan the track, time management and successful project deliver with help of project teams. They need to manage with project life cycle phases like initiation, planning, execution, monitoring and controlling finally close out of project. As definition and identification of PMBOK 47 project management techniques, grouped in ten specific knowledge areas.

2.1.2.1 Project Integration Management

PMI (2013) defines Project Integration Management as “the processes and activities to identify, define, combine, unify, and coordinate the various processes and project management activities

within the Project Management Process Groups". It an operational procedure for the project manager to compute the objectives and needed alternative of the stakeholder's expectation. The processes required to ensure that the various elements of the project are properly coordinate.

2.1.2.2 Project Scope Management

Project managers used to manage the expectations of the stakeholders and clients which is one of the most challenging tasks. PMI (2013) defines Project Scope Management as "the processes required to ensure that the project includes all the work required, and only the work required, to complete the project successfully". Managing the scope of the project will help to control factors of the project to address elements that might change during the project life cycle which are Constantly changing requirements, Pivoting the project direction, realizing that the final outcome isn't what was expected, going over the discussed budget and falling behind the project deadlines.

2.1.2.3 Project Time Management

PMI (2013) defines Project Time Management as "the processes required to manage the timely completion of the project". The planning process provides estimation on how long does the project it will take to complete and the effort or time required to complete the project. The Control component is part of the Monitoring and Control process, which includes comparing time estimates to real time and managing time and cost variances (Atkinson et al., 2006).

2.1.2.4 Project Cost Management

The Major Project Cost Management Processes are Plan, Estimate, Determine Budget and Control of Costs. The PMI (2013) defines Project Cost Management as "the processes involved in planning, estimating, budgeting, financing, funding, managing, and controlling costs so that the project can be completed within the approved budget". Mostly the cost of projects is associated with the cost of resource that are used to complete the project so it is necessary to consider the impact of decisions in cost of project product.

2.1.2.5 Project Quality Management

Project quality management is process of defining the quality standard for project outcome and assuring quality as if they are meeting the standards. PMI (2013) defines Project Quality Management as the processes and activities of the performing organization that determine quality policies, objectives, and responsibilities so that the project will satisfy the needs for which it was

undertaken. A good quality management has to conduct with the following three processes: Quality planning process, Quality assurance process and Quality control process.

2.1.2.6 Project Human Resource Management

In project activities are done with help of different teams they are assigned with different roles and responsibilities for completing the project. They have different professional, skill and knowledge in the progress of the project. In such case they are assigned for different role and responsibilities. PMI (2013) defines Project Human Resource Management as "the processes that organize, manage, and lead the project team". project human resource management have a process of organizing, managing and teamwork.

2.1.2.7 Project Communication Management

PMI (2013) defines Project Communications Management as "the processes that are required to ensure timely and appropriate planning, collection, creation, distribution, storage, retrieval, management, control, monitoring, and the ultimate disposition of project information". And also effective communication creates a bridge between diverse stakeholders who may have different cultural and organizational backgrounds, different levels of expertise, and different perspectives and interests, which impact or have an influence upon the project execution or outcome.

2.1.2.8 Project Risk Management

PMI (2013) defines Project Risk Management as "the processes of conducting risk management planning, identification, analysis, response planning, and controlling risk on a project". As the PMI implies the major Project Risk Management Processes are: Plan Risk Management, Identify Risks Perform Qualitative Risk Analysis, Perform Quantitative Risk Analysis, Plan Risks Responses and Control Risks. In such case risk management is the formal process of identifying, measuring and disclosing potential risks it should be seen as planning ahead for possible events (K. Srinivas 2019).

2.1.2.9 Project Procurement Management

PMI (2013) defines Project Procurement Management as "the processes necessary to purchase or acquire products, services, or results needed from outside the project team". Organizations can be buyers or sellers of products, services or project results. According to the management organization, procurement management planning, procurement management, procurement management and procurement closure are the main processes of project management.

2.1.2.10 Project Stakeholder Management

Stakeholders are individuals, groups or organizations affected by the results of a business or project. Project stakeholder management includes stakeholder identification, planning, management and control.

With a definition of PMI (2013) Project Stakeholder Management is "the processes required to identify the people, groups, or organizations that could impact or be impacted by the project, to analyze stakeholder expectations and their impact on the project, and to develop appropriate management strategies for effectively engaging stakeholders in project decisions and execution".

2.1.3 Project Management Practice in Construction Project

To cope with an ever-increasing population, pressure on land, and growing economic activity, construction projects are in increasing demand and activities are booming in many countries (Zhang, X et al 2014). To implement these projects successfully and to meet the functional aim of the projects within their service time, an efficient project management practice needs to be adopted from the planning stage to the compilation stage of project. The Effective project management practices are vital for successful construction projects and there are major key practices include as well-defined objectives, scope, and deliverables, as well as effective communication with stakeholders (Lin, L alt 2018). In project management the best practice is a general term that includes: guidelines and international standard in both of the standards and guidelines are looking to improve project management (Liviu et al., 2010). "Project Management Body of Knowledge (PMBOK) published by the Project Management Institute (PMI) represents the knowledge and practice that is generally accepted and unique or nearly unique to the field of project management". As definition of (Steyn, H., et al 2016) managements defined as planning, organizing, leading and control, with the scope being that of the time, cost and quality parameters of a temporary endeavor. such the successfully leading of well design projects are the most notable being the additional skillset of both design and construction management (Lam,E 2008).This means success used in the research study of (Radujkovic et al 2017) included the components of cost, schedule, quality, stakeholder satisfaction, benefits to owning organization and long-term impacts, whilst mention was made to terms such as risk, procurement management, communication and integration of disciplines, management of human resources and scope of the project.

The study conducted by (N A Haron et al in 2017) on the PM practice and its contribution towards project success. Any agreement has not been reached, even the topic has discussed for an extended period. The study identified the top five factors that influence the project success to include customer satisfaction, effective planning and controlling, financial attributes, realistic cost and time estimation, and competency of the project team.

2.2 Empirical literature review

A project is a temporary endeavor undertaken to create a unique product, service or result (PMI, 2004). it is time bounded, according to the Advance Project Management Institute (PMI, 2008). Project has its own well define objective, scope and definite activity. Projects can also have greater social, economic and environmental impacts than the project itself (PMBOK 5th edition). according to International Project Management Association (IPMA) defines a project as a time and cost related activity to achieve a set of outputs that meet quality standards and needs. All kind of projects are in order to response to give solution for a problem and the desire need as well.

Association of Project Managers defines Project management as it is the process by which projects are defined, planned, monitored, controlled and delivered such that the agreed benefits are realized. Projects are unique, transient endeavors undertaken to achieve a desired outcome. Projects bring about change and project management is recognized as the most efficient way of managing such change. The benefit of this project management in any Businesses is to achieve specific results with limited resources in a critical time frame.

A construction project is an activity related to the construction, modification, alteration, equipping, commissioning, renovation, repair and maintenance, renovation, demolition, decommissioning or demolition of a structure. Construction means any project paid by the Council for the construction, replacement or reconstruction of a public works, buildings, public works, roads, parking lots, bridges, garages and not fully or partially funded by federal or state funds or parks, or any portion thereof, belonging to the city within its present or future present boundaries. Within the construction industry, there is a continuing problem of definition of the role of the project manager who are considered a new breed of construction professional arising from increased complexity and the specialization of projects. (DK Ahadzie, 2007).

2.4 Research Gap Analysis

Several studies have been conducted in different regions that the project management practice has an effect to have the project success for the building construction projects. Applying PM practice has become important issues in many developed countries due to its successful application in various industries and its proven effectiveness and flexibility in attaining project goals and objectives (N A Haron et al, 2017).

The study conducted in Malaysia construction industry have identified the top five factors that influence the project success to include customer satisfaction, effective planning and controlling, financial attributes, realistic cost and time estimation, and competency of the project team. To address these issues, for proper application of project management practice the researchers have recommended to apply PM tools and techniques especially in small-scale firms and range adequate PM training or courses conducted in higher education institutions. But the study only focused on the extent of use of the most common PM practice that used for project implementation in this country.

Similarly, the study conducted as comprehensive review on project management practices in construction projects and their roles in achieving sustainability tells us the effective project management practices are vital for successful construction projects. The study recommended to explores existing knowledge regarding practical aspects in construction projects, including training, deployment, standardization, and implications by Utilizing key tools like scheduling, risk strategizing, quantitative analysis, and earned value management.

The research gap identified for my thesis titled "Assessing the project management practices in building construction projects in Addis Ababa city, revolves around several key aspects, including a comprehensive assessment on the present practice of project management, identifying the key factors that affect PM practice and the influence of time, cost and quality management on project elements.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter presents the research procedure and methodology used to carry out the information and data from research population collected using field sources. That includes discussion of research methodology used in the study that implemented to enhance the validity and reliability of the studies are also explained in data. The main use of this study is to encourage using a well-designed project management practice to achieve building construction objectives. More specifically it discusses the research design, the population of the study, sample and sampling techniques, data collection methods as well as data analysis and data presentation methods used.

3.2 Research Design and Approach

A research design is the 'procedures for collecting, analyzing, interpreting and reporting data in research studies' (Creswell & Plano Clark 2007, p.58). It provides the structure to a study and guides to collect the relevant data. The research design process involves a series of interconnected decisions that need to be made (Sileyew 2019). The appropriate selection of research design is crucial for obtaining evidence that can effectively answer the initial research question for the maximum exploration of the study's objective which is encouraging well-designed project management practice for building construction in Addis Ababa.

Therefore, the pertinent research design is descriptive research design that utilizes quantitative measures of attitudes or opinions of participants. The purpose of a descriptive study is to provide a picture of a situation, person or event or show how things are related to each other and as it naturally occurs (Blumberg, Cooper and Schindler, 2005). The research method involved the use of a questionnaire to collect quantitative data. After collecting the data then analyzing and findings are reported. This methodology enables the study to describe and validate the extent to which the factors identified through a comprehensive literature analysis contribute to the project management practice of building construction projects in Addis Ababa.

3.3 Population, Sample Size and Sampling Technique

3.3.1 Target Population

The population in this study was the organizations participants that involved in building construction projects in the Addis Ababa, including project managers, clients, contractors, engineers and consultants. The total number of populations from all sites was 165 in number.

3.3.2 Sample Size and Sampling Technique

By considering the constraints of time and budget it is difficult to conduct direct survey of entire population thus the study used non probability sampling to identify representative sampling for the data collection. Thus, this work is limited to individuals who possessed valuable insights and experiences related to the research topic. These groups comprised project managers, contractors, Consultants, Engineers and clients involved in three different site of building construction project in Addis Ababa.

For more accurate and concrete of the conclusion the study takes more sample size. the study involves three different building sites and different parties evolve in each project, which are the project manager, contractor, client, Engineer and the consultant. so, it is necessary to select the respondents form each party. So here on the study 110 sample are chosen from all parties involved in the selected projects with the following allocation to each party.

Table 3. 1 Sample Selection

No	Parties involved	Project site 1	Project site 2	Project site 3	No of sample from each site
1	Project manager	5	5	5	15
2	Contractor	6	6	5	17
3	Client	10	10	10	30
4	Consultant	6	6	6	18
5	Engineer	10	10	10	30
			Tot. no of sample	=	110

Source: (own survey,2024)

Regarding to this, of 110 sample in all selected sites become representative sample by method of computing sample size.in such case 62 of total population were considered by population number of project managers, contractors and clients. The consultant and engineers are considered as about 48 in all sites are the appropriate respondents of the study.

Formula used to compute sample size:

$$n = \frac{N}{1+N(e)1/2}$$ (proposed by Pagoso,et al.,1978)

Where n = sample size

N= population size

e = margin of error between 3% and 5%

$$n = \frac{165}{1+165(0.055)1/2} = \frac{165}{1.499125} = 110$$

3.5 Data Type and Collection Instrument

The study used both primary and secondary data sources to paint a complete picture of project management practice assessment in building construction project in Addis Ababa. Primary sources are obtained through survey questionnaires. This was obtained through self-administered questionnaires from respondents. The questionnaires designed and provided to the selected sample of those distinct parties such as project managers, contractors, consultants, engineers and clients involved in the Addis Ababa building construction project assessing their opinion or attitude on the practice of project management.

While secondary sources are examined by looking at various project progress reports and other relevant papers. Information from a literature analysis on practice of construction project was used as the secondary data in this study. The purpose of literature reviews was to improve comprehension of the theory behind the research problem. Books, articles, internet, journals, documents, and other people's research papers are some examples of the sources for literature reviews. Questions in the instrument were structured such that they address various aspects of the study variables. Both primary and secondary data were present in the data.

Thus, the study involved the preparation of questionaries and distribute them to selected samples of involved parties that includes contractors, owners, consultants and clients. These questionnaires designed to gather information and insights on the practices that contribute to the

project management on construction projects. For the compressive understanding of the study data were collected directly from the participants on the project.

A structured questionnaire was developed for the purpose of assessing the project management practice with participants perception. The developed questionaries were regarding to the project management practice in construction projects with different constrain area of project management that included open-ended and close-ended questions to gather comprehensive information. In order to ensure inclusiveness, respondents were given the opportunity to include and rate variables that may have been overlooked by the researcher and also related to the Addis Ababa building construction project. The variables included in the questionnaire were derived from the studies mentioned in the literature review and were designed to align with the objectives of the study, aiming to assess the project management practice of building construction projects.

Study area	Primary data	Secondary data	Location	Remark
In Selected building site of building construction Projects in Addis Ababa involved Client, consultants, engineers and contractors.	Self-administrated questionaries	various project progress reports and other relevant papers. Includes Books, articles, internet, journals, documents, and other people's research papers	Addis Ababa	

Table 3. 2 primary and secondary data of the study

3.7 Instrument Validity and Reliability

There are several diverse methods of evaluating the reliability of the Likert scale. In this study, the methods hired were Cronbach's reliability test. Cronbach's alpha is the most normally used procedure to estimate reliability. Before the result obtained from the Questionnaire survey received was analyzed, a Cronbach's alpha analysis was carried out to ascertain the reliability of each question. This reliability test measures the internal consistency of the questions using the Likert scale points. To examine the reliability of each factor, the Cronbach's alpha coefficient was tested on each group of factors to view if there were integrated. The value of Cronbach's alpha should have to range between 0 to 1. The lower values represent lower internal consistency and the larger value represents higher internal consistency. The criteria introduced by (Nunally

and Bernstein, 1994) for the interpretations of this coefficient were considered to evaluate the result of the analysis. $C\alpha>0.8$ = Excellent; $0.7<C\alpha<0.8$ = Good; $0.5<C\alpha<0.7$ = Satisfactory and $C\alpha<0.5$=Bad

Table 4. 1 Result Summery of Cronbach's Alpha Test

PM factors	Cronbach's Alpha	Result of analysis	Number of questions
Integration management	0.781	Good	5
Scope management	0.765	Good	5
Time management	0.723	Good	4
Cost management	0.782	Good	4
Quality management	0.772	Good	3
Human resource management	0.721	Good	5
Communication management	0.706	Satisfactory	5
Risk management	0.734	Good	5
Procurement plan	0.771	Good	4
Stakeholder management	0.758	Good	4

Source (own survey,2024)

3.8 Method of Data Analysis

The data that collected from the survey were analyzed by using the Likert scale ranging which is five scale range from 1 (Strongly Disagree) to 5 (Strongly Agree). For this study qualitative method were used to analyses the findings researcher utilized the Statistical Package for Social Sciences (SPSS 20) software to perform a comprehensive analysis of the data and evaluate the results in frequency, percentage, mean, and standard deviation. The findings of the close-end questionnaires were presented through tables, figures and descriptive statistics. Such to provide clear representation of the result both SPSS 20 and Excel were used for this analysis, ensuring a thorough examination of the collected data.

3.8 Ethical Consideration

The study ensured the privacy and confidentiality of the information provided by the respondents. The questionnaires schedules did not require respondents to disclose their names. Participation in the study was voluntary, and no respondent was coerced or forced to take part. The researcher-maintained honesty throughout the study by avoiding any distortions or manipulations of the data. Conclusions drawn from the study were solely based on the gathered data, and the analysis and interpretation were limited to the information provided by the data themselves.

CHAPTER FOUR

RESULT AND DISCATION

4.1. Introduction

This chapter of the study examines the data processing, presentation, and interpretation of the data gathered through primary data (questionary) and reviewing secondary source of data to assess the project management practice in building construction projects: in the case study of building construction with selected different site. In addition to this it also addresses and analyze the research questions that are being answered and analyses was done using statical package for social science (SPSS 25.0). The main purpose of the study was to assess the project management practice in building construction with case study of building construction project.

The research was conducted only on three site of building construction projects, in order to get correct and relevant information. In light of this, questionnaires were distributed to 110 selected respondents from all selected site, and out of these, 93 filled and submitted properly, in which the first site from 40 selected respondent 34, second site from 40 selected respondent 35 and the third site from 30 selected respondent 24 are submitted properly totally 93 selected respondents filled and submitted back properly. Therefore, the response rate of the study is 84.5%.

The chapter also includes the results of the questionnaires, which were analyzed by using the SPSS software are presented.

4.2 Respondents Demographic Characteristics

Table 4.2 and 4.3 illustrates that respondents were asked about their gender and Age in such case analysis was done by using frequencies and percentages. That indicates 57 or 61% of the respondents were male while female respondents make up the remaining 36 or 39% of respondents. this indicates that majority of the respondents were male and also the age of respondents classified into four groups: less than 30, 30-40,41-50 and above 50. The percentages of respondents in each age group are as follows: 10% are less than 30, 66% for the 31-40 group, 24% for the 41-50 group and 0% for above 50 group. These proportions are based on a total of 93 respondents, as shown in the table below.

Table 4. 2 Gender of Respondent

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	57	61.3	61.3	61.3
	Female	36	38.7	38.7	100.0
	Total	93	100.0	100.0	

Source: (own survey, 2024)

Table 4. 3 Age of Respondent

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	below 30	9	9.7	9.7	9.7
	30-40	61	65.6	65.6	75.3
	40-50	23	24.7	24.7	100.0
	Total	93	100.0	100.0	

Source: (own servey,2024)

Table 4.4 shows respondents' academic qualification. The respondents were from different level of educations. Out of the total respondents, 8(8.6%) have diploma, 73(78.5%) have first degree and 12(12.9%) have master's degree. Overall, out of 93 total respondents 12(12.9%) have minimum of Master's degree level as shown below.

Table 4. 4 Qualification of Respondent

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Diploma	8	8.6	8.6	8.6
	first degree	73	78.5	78.5	87.1
	masters and above	12	12.9	12.9	100.0
	Total	93	100.0	100.0	

Source (own survey,2024)

Table 4.5 and figure 4.1 shows respondent current occupation with the building construction project. The data was analyzed using frequencies and percentages. Project manager accounted for 9 percent of respondents, office Engineers accounted for 45 percent of respondents, site engineer accounted for 28 percent of respondents, quality management accounted for 4 percent of respondents and support staff accounted for 14 percent of respondents.

Table 4. 5 Current Occupation of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	project manager	8	8.6	8.6	8.6
	office engineer	42	45.2	45.2	53.8
	site engineer	26	28.0	28.0	81.7
	quality manager	4	4.3	4.3	86.0
	support staff	13	14.0	14.0	100.0
	Total	93	100.0	100.0	

Source (own survey, 2024)

As shown in the table 4.6 and figure 4.2 below the respondents were asked about their project work service time in the building construction project and analysis was done using frequencies and percentages. The majority of the respondents from all the site 12.9% of respondents had zero to five years of experience, 48.4% had six to ten years of experience, 31.2% had eleven to fifteen years of experience and the remaining 7.5% of respondents had above fifteen years of experience. This clearly demonstrates that the majority of the respondents were over the age of five year that implies the respondents have sufficient experience to adequately reply to the study's topic.

Table 4. 6 Service Year of Respondents in the Organization

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-5	12	12.9	12.9	12.9
	6-10	45	48.4	48.4	61.3

	11-15	29	31.2	31.2	92.5
	above 15	7	7.5	7.5	100.0
	Total	93	100.0	100.0	

Source: (own survey,2024)

As can be seen from the Table 4.7 and figure 4.3 below, the respondents have different level of Project Management training. Out of the total respondents, 44(47%) had a Project Management training in one way or another and 49(53%) did not take any training in project management. This study clearly showed that 53% did not take any training project management. That indicates the organization is working with academically qualified project managers and other related education background. They do have engagement without come of their daily basis of project execution with no deep understanding of project management.

Table 4. 7 Level of training the Respondents Receive Related to PM

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bachelor	12	12.9	12.9	12.9
	short term	32	34.4	34.4	47.3
	no training	49	52.7	52.7	100.0
	Total	93	100.0	100.0	

Source: (own survey,2024)

4.3 Assessment of PMP in Building Construction Project

Table 4. 8 PMP in Building construction project

PMP	N	Maximum	Minimum	Mean	St. deviation
Project management practice	93	5	3.09	4.280	0.3695

Source: (own survey,2024)

According to the data analyzed out ten knowledge areas and challenges that alter during building construction project work the above table illustrates that project management practice of construction project overall mean score 4.48 and the stander deviation of 0.369 which means the project management practice in the project is well and manageable. As the survey data shows the building construction project runs with define document and create proper formworks and also

provide teams with necessary tools for effective project outcome and have proper integration with customers and suppliers. In order to meet project objective, the project provides descriptions of the process and essential deliverables, projects are delivered on appropriate time, all participants know exactly what they need to do, make agreement for change of project in progress and risks are identified early and mitigate them to control smoothness the project work.

4.4 Assessment of project management knowledge areas practice in building construction

4.4.1 The Integration management in Building Construction Project

The first part of questionnaire had five items which leaded to identify the assessment of project integration management in building construction 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 The Integration management of Building Construction Project

No	Description	Frequency & Percentage	5 (SA)	4 (A)	3 (N)	2 (D)	1 (SD)	Std. Deviation	Mean
1.	Does the organization allow team to have knowledge about project integration management?	Frequency	49	41	3	-	-	0.563	4.49
		Percentage	52.7	44.1	3.2	-	-		
2.	Is there any process involves defining, documenting and coordinating various project management activities?	Frequency	36	53	4	-	-	0.561	4.34
		Percentage	38.7	57	4.3	-	-		
3.	Is there any creating of proper formwork for overseeing important stake holder requirements?	Frequency	32	50	11	-	-	0.644	4.22
		Percentage	34.4	53.8	11.8	-	-		
4.	Is there any supporting system and initiative	Frequency	32	57	4	-	-	0.587	4.30

	from management in your organization to provide teams with necessary tools to assist them in training process?	Percentage	34.4	61.3	4.3	-	-		
5.	Is there any integration between customers and supplier in to overall workflows and create system to distribute information between clients, vendors and project teams?	Frequency	30	58	4	1	-	0.587	4.25
		Percentage	32.3	62.4	4.3	1.1	-		
Average mean								4.324	

Source: (own survey,2024)

The survey results show the current adequate knowledge of project integration management is implemented has mean value of 4.49 and standard deviation of o.563.these are derived from percentage of respondent who strongly agree (52.7%), agree (44.1%) and neutrally agreed (3.2%). The result ensures that participants have adequate knowledge about importance of integration management for project success.

According to the data gathered 38.7% of respondents strongly agreed,57% agreed and the romaine 4.3% of respondents neutrally agreed with the organization flows with activity of defining, documenting and coordinating its various building construction projects and creates proper formwork to have requirements on important stakeholders. then, the mean value of 4.43 and standard deviation of 0.561 were generate which indicates the projects have well define documents and the firm has effective coordination of managing projects.

The organization is supportive to its staff by providing well necessary tools on having of giving training to use tools that helps for safety of the employee and also some other cost efficiency managements has mean value of 4.3 and standard deviation of 0. 587.With 34.4% of respondent strongly agreed, 61.3% are agreed and 4.3 are neutrally agreed on the statement such indicates there is satisfactory providence of necessary tools for the training process.

The result showed that 32.3% of respondents strongly agreed,62.4% agreed,4.3% neutrally agreed and the remain 1% disagreed on the factor of integration between customer and supplier in overall work is good and the organization creates system of giving information between all the clients, vendors and teams as well. The mean value of 4.25 and standard deviation of 0.587 demonstrates for strong integration between customers and suppliers and having effective communicating system.

The total mean score of project integration management is 4.324 with Std. deviation of 0.375 which indicates the project runs efficiently and meet the pre-defined project objectives but not fully.

4.4.2 The scope management in building construction project

The second part of questionnaire had five items which leaded to identify the assessment of project scope management in building construction with the case of selected building construction project. Here again 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 The Scope Management of Building Construction Project

No	Description	Frequency & Percentage	5 (SA)	4 (A)	3 (N)	2 (D)	1 (SD)	Std. Deviation	Mean
1.	organization give awareness about the importance of project scope management	Frequency	36	49	6	2	-	0.681	4.279
		Percentage	38.7	52.7	6.5	2.2	-		
2.	organization give description of all project process and essential deliverables in order to meet project objectives?	Frequency	31	57	5	-	-	0.558	4.279
		Percentage	33.3	61.3	5.4	-	-		
3.	construction resource management including the data related to assign	Frequency	37	51	5	-	-	0.580	4.344
		Percentage	39.8	54.8	5.4	-	-		

	people who will perform the tasks in your firm?								
4.	agreements up on special protocols between the manager, client and team workers?	Frequency	24	60	7	1	1	0.679	4.129
		Percentage	25.8	64.5	7.5	1.1	1.1		
5.	meetings with project teams to have better understanding on how long the particular task usually take to generate more accurate timeline and budget?	Frequency	28	59	5	-	1	0.640	4.215
		Percentage	30.1	63.4	45.4	-	1.1		
							Average mean	4.249	

Source: (own survey, 2024)

The mean value and standard deviation for the organization give awareness about the importance of project scope are 4.279 and 0.681 respectively. This determines from proportion of respondents who strongly agreed 38.7%, agreed 52.7%, neutrally agreed 6.5% and the remain 2.2% disagreed. The median demonstrates each of team members in the project work has better knowledge on what they are doing and what outcome will expect from them. With similar they have better knowledge on each process and essential deliverables that helps them to meet the desirable objective of the project in which respondents gives 61.3% of majority agreed on it so its satisfactory.

The survey result shows that 39.8% of respondents strongly agreed,54.8% agreed and 5.4% are neutrally agreed on the firm gives description of all project process and essential deliverables in order to meet the project objectives. The mean value of 4.279 and standard deviation of 0.558 were resulted. This means the project scope management, which providing essential descriptions about the project process was sufficiently specified.

The construction resource management have great factor on assigning qualified people to the project on time who can perform the task properly so here respondents give 39.8% strongly agreed,54.8% agreed and 5.4 neutrally agreed on the organization have construction resource

management including data related on assigning the right people to the right time with mean value of 4.344 and standard deviation of 0.58 which indicates positive result.

The survey result shows respondents of 25.8% strongly agreed,64.5% agree,7.5% neutrally agreed, 1% disagreed and the remain 1% also strongly agreed on when changes are mandatory on project work before its ending managers and special protocols like clients and other team members have agreement on it. The standard deviation and mean values are resulted 0.679 and 4.129 respectively that demonstrates for the project has effective change management.

The organization have consistent meetings with all the project teams for their better understanding of how long does the project will usually generate of accurate time and budget this survey result shown that respondents of 30.1% are strongly agreed,63.4% are agreed,45.4 are neutrally agreed and the romaine 1.1% are strongly disagreed. The result also indicates mean of 4.215 and standard deviation of 0.640 that shows for project has plan for how long does a particular task usually take to generate for the accuracy of budget and time.

The total mean score of project scope management is 4.249 with Std. deviation of 0.376 which indicates the project has clearly define scope and objective but not fully.

4.4.3 The Time management in building construction project

The third part of questionnaire had four items which leaded to identify the assessment of project time management in building construction with the case of selected building construction project. Thus, 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 The Time management of building construction project

No	Description	Frequency & Percentage	5 (SA)	4 (A)	3 (N)	2 (D)	1 (SD)	Std. Deviation	Mean
1.	Do you establish effective plan, proper tracking time, prioritizing	Frequency	32	58	2	-	1	0.618	4.29
		Percentage	34.4	62.4	2.2	-	1.1		

	tasks and communicating transparently?								
2.	Does construction project in your firm ensure that projects are completed on time and budget?	Frequency	35	52	5	1	-	0.621	4.30
		Percentage	37.6	55.9	5.4	1.1	-		
3.	Does your firm plan and set clear expectations, team working to complete task efficiently?	Frequency	36	51	6	-	-	0.592	4.32
		Percentage	38.7	54.8	6.5	-	-		
4.	Does your firm ensure that resources are used efficiently, reduce waste and improve quality of project outcome?	Frequency	32	56	4	1	-	0.596	4.27
		Percentage	34.4	60.2	4.3	1.1	-		
Average mean								4.298	

Source: (own survey,2024)

The survey result indicates that the project work in organization have effective plan of tracking time and prioritizing tasks with transparent communication has mean value of 4.29 and standard deviation of 0.618 in which 34.4%of respondents were strongly agreed,62.4% ware agree,2.2% were neutrally agreed and 1.1% were strongly disagreed. According to the mean value indicates projects has effective establishment of time management, prioritizing tasks and transparent communication.

According to the survey data the building construction projects ensures for their completion on time and budget respondents of 37.6% were strongly agreed ,55.9% were agreed,5.4were neutrally agreed and 1.1% were disagreed. then the mean and standard deviation are valued 4.30 and 0.621 respectively which indicates projects were completed as their estimated time and budget.

The firm have plane and set of clear expectation, team work that helps to complete every tasks efficiently this is also the result of respondents for 38.7% strongly agreed,54.8% agree and 6.5% were neutrally agreed. The survey also indicates mean value of 4.32 and standard deviation of 0.592 which implies for the organization is in good status of managing time with expected budget.

As result showed on 34.4% of respondents strongly agreed.60.2% were agreed, 4.3% were neutrally agreed and the remain 1.1% disagree. The mean value of 4.27 and standard deviation of 0.596 shows that ensuring resources and using them effectively to minimize wastage of materials and working on the quality of project outcome is ensured by the building construction firm.

The total mean score of project time management is 4.298 with Std. deviation of 0.369 which indicates the time lines are examined and developed for the completion of project but not fully.

4.4.4 The cost management in building construction project

The fourth part of questionnaire had four items which leaded to identify the assessment of project cost management in building construction with the case of selected building construction project. Thus, 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. 12 The Cost Management of Building construction Project

No	Description	Frequency & Percentage	5 (SA)	4 (A)	3 (N)	2 (D)	1 (SD)	Std. Deviation	Mean
1.	Is there a cost manager that reviews the project scope to figure out	Frequency	39	49	4	1	-	0.619	4.354
		Percentage	41.9	52.7	4.3	1.1	-		

	what resource the project will require?								
2.	After listing out the require resource does your firm estimate what will cost to produce them?	Frequency	33	56	3	-	1	0.635	4.290
		Percentage	35.5	60.2	3.2	-	1.1		
3.	Is there any Process of recording and accounting cost and when problem occurs making adjustments and altering stakeholders?	Frequency	34	54	4	1	-	0.604	4.301
		Percentage	36.6	58.1	4.3	1.1	-		
4.	Is your firm focus on value base pricing rather than the cost of project itself?	Frequency	36	51	5	-	1	0.672	4.301
		Percentage	38.7	54.8	5.4	-	1.1		
							Average mean	4.311	

Source: (own survey,2024)

As a result of respondent shows 41.9% strongly agreed,52.7% were agreed,4.3% were neutrally agreed and 1.1% disagreed on there is defined cost manager that reviews the project scope and fulfill any requirement of resources that the project is require. The mean and standard deviation value were 4.35 and 0.619 respectively. The result indicates for there is presence of cost manager to review project scope and figures or list out required resource for the project.

After listing those requirements that has to fulfilled the organization estimates for the how much cost would need to produce become clearly define as shown result of 35.5% of respondents strongly agreed, 60.2% ware agree,3.2 were neutrally agreed and remain 1.1% strongly

disagreed. The mean and deviation value are 4.29 and 0.635 respectively that demonstrates for there are cost estimations of required resources as if they are produce or source from outside.

The mean and standard deviation of process of recording and accounting cost and also if any problem occurred activities like making adjust and altering to stakeholders are operated were resulted 4.30 and 0.604 respectively. The percentage were determined by the proportion of respondents who strongly agreed were 36.6%, 58.1% were agreed, 4.3% were neutrally agreed and 1.1% were disagreed. Such the result showed us for there are recorded and accounted problems to adjust and alter to stakeholder.

In addition to this as respondent ranked about 38.7% strongly agreed,54.8% were agreed,5.4% neutrally agreed and 1.1% strongly disagreed on the organization uses value base pricing method in which the price set is determined by the client's willingness to pay. The survey result also values for mean and standard deviation 4.30 and 0.672 that demonstrates for projects are focusing on customers when they determine the price and most in case the price is equal or higher than cost base pricing.so that is well incorrigible strategy to apply on unique and high-quality outcome for the building construction project.

The total mean score of project cost management is 4.311 with Std. deviation of 0.422 which indicates the project has implement cost control measurement to ensure the project stays with budget but not fully.

4.4.5 The quality management in building construction project

The fives part of questionnaire had three items which leaded to identify the assessment of project quality management in building construction with the case of selected building construction project. Thus, 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. 13 The Quality management of building construction project

No	Description	Frequency & Percentage	5 (SA)	4 (A)	3 (N)	2 (D)	1 (SD)	Std. Deviation	Mean
1.	The firm identifies the quality requirement and how to manage the project as its standard?	Frequency	30	55	8	-	-	0.597	4.236
		Percentage	32.3	59.1	8.6	-	-		

2.	Is your firm having quality controlling department with employees they have specialize in quality management?	Frequency	27	59	6	-	1	0.647	4.193
		Percentage	29	63.4	6.5	-	1.1		
3.	Does your firm implement for the quality assurance?	Frequency	27	58	6	2	-	0.641	4.182
		Percentage	29	62.4	6.5	2.2	-		
Average mean								4.204	

Source: (own survey,2024)

In most of project work owners and consultants typically want materials used in supervised projects to meet specifications and agreements, their project must be implemented in accordance with the required and agreed-upon quality.in such case the respondents scale of having the firm to identifies the quality requirement and to manage the project as its standard is of 32.3% were strongly agreed, 59.1% were agreed and remain 8.6% were neutrally agreed. The mean indicates 4.23 and standard deviation of 0.597 were results that demonstrates for satisfactory to identify projects quality standards.

And also, the result showed on the above table respondents of 29% strongly agreed, 63.4% were agreed,6.5% were neutrally agreed and 1.1% were strongly disagreed on the organization have quality controlling department with employees they have specialize in quality management. The mean value of 4.19 and standard deviation of 0.647 indicate us the project effective quality control management for better outcome and project management practice.

For the guaranty of building construction project work executed and meet predetermined criteria effective quality assurance has to implemented for such case the result showed respondents of 29% strongly agreed ,62.4% of the respondents agreed,6.5% of respondents neutrally agreed and remain 2.2% disagreed on there is implementation of quality assurance on the projects. The survey result also puts 4.18 mean and 0.641 standard deviation valves which is demonstrates for strong the quality consideration.

The total mean score of project quality management is 4.204 with Std. deviation of 0.414 which indicates the construction project aligns with the desire standard and client’s expectation but not fully.

4.4.6 The Human Resource management in building construction project

The sixth part of questionnaire had five items which leaded to identify the assessment of project human resource management in building construction with the case of selected building construction project. Thus, 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. 14 The Human Resource Management of Building Construction Project

No	Description	Frequency & Percentage	5 (SA)	4 (A)	3 (N)	2 (D)	1 (SD)	Std. Deviation	Mean
1.	Does your organization give you awareness about the human resource management?	Frequency	30	58	5	-	-	0.554	4.26
		Percentage							
2.	Are their right people are assigned to the right task with the necessary skill and experience?	Frequency	28	60	4	1	-	0.578	4.23
		Percentage	30.1	64.5	4.3	1.1	-		
3.	What is your remark on organizing, acquiring, motivating and proper managing of films resource?	Frequency	23	61	8	-	1	0.646	4.129
		Percentage	24.7	65.6	8.6	-	1.1		
4.	Does your organization identify the training needed and devise team building strategies?	Frequency	33	54	5	-	1	0.614	4.279
		Percentage	35.5	58.1	5.5	-	1.1		
5.	Did you belief on your organization that it has ability to compromise teams with members who complement each other and work with united goal in mind?	Frequency	31	55	6	2	-	0.661	4.225
		Percentage	33.3	58.1	6.5	2.2	-		

Average mean	4.228

Source: (own survey, 2024)

The survey results indicate the firm gives awareness about human resource management with respondent of 32.3% strongly agreed, 62.4 % agreed and 5.4 were neutrally agreed. With mean value of 4.268 and standard deviation of 0.554. In Which the result showed as for participants had awareness about human resource management.

The data provides for activity allocating the right people to the right time are assigned to the right task with the necessary skill and experience respondents of 30.1% strongly agreed, 64.5% of were agreed,4.3% were neutrally agreed and remain 1.1% disagreed. The mean and standard deviation also scored for 4.236 and 0.578 respectively that illustrates for effective human resource allocation.

The survey data results for respondents of 24.7% were strongly agreed,65.6% of the respondents were agreed,8.6 were neutrally agreed and 1.1% were strongly disagreed on the organization experienced on organizing, acquiring, motivating and proper managing of films resource. The result shows for mean and standard deviation were 4.129 and 0.646 respectively.

And also identify the training needed and devise team building strategies which is respondents of 35.3% were strongly agreed,58.1% of them were agree,5.4% were neutrally agreed and rest 1.1% were strongly dis agreed. The result showed for mean of 4.279and standard deviation of 0.614 demonstrates for project had effective team building strategy.

Respondents' belief on organization that it has ability to compromise teams with members who complement each other and work with united goal in mind result of agreed respondent of 33.3% were strongly agreed,58.1%were agreed, 6.5% were neutrally agreed and rest 2.2% were disagreed. As mean value of 4.225 and standard deviation of 0.661 showed the result Suggest to projects had effective human resource management in order to meet project objective.

The total mean score of project human resource management is 4.228 with Std. deviation of 0.371 which indicates the construction project is organized, cooperative and supportive to employees but not fully.

4.4.7 The communication management in building construction project

The seventh part of questionnaire had five items which leaded to identify the assessment of project communication management in building construction with the case of selected building construction project. Thus, 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. 15 The Communication Management of Building Construction Project

No	Description	Frequency & Percentage	5 (SA)	4 (A)	3 (N)	2 (D)	1 (SD)	Std. Deviation	Mean
1.	Is there any establishment of formal and clear chain of command for communication in your firm?	Frequency	34	49	9	1	-	0.670	4.247
		Percentage	36.6	52.7	9.7	1.1	-		
2.	Is there planed strategy to address information needed?	Frequency	32	52	7	2	-	0.677	4.225
		Percentage	34.4	55.9	7.5	2.2	-		
3.	Does your organization encourage you to have two-way communication?	Frequency	34	49	8	1	1	0.739	4.225
		Percentage	36.6	52.7	8.6	1.1	1.1		
4.	Does the construction manager allow the best access to information for all of you and teams as well?	Frequency	31	57	3	1	1	0.670	4.247
		Percentage	33.3	61.3	3.2	1.1	1.1		
5.	Does your organization have defined system of collecting and distributing project information?	Frequency	32	54	6	1	-	0.623	4.258
		Percentage	34.4	58.1	6.5	1.1	-		
Average mean								4.240	

Source: (own survey, 2024)

The mean value and standard deviation for projects establishment of formal and clear chain of command for communication in the building construction are 4.247 and 0.670 respectively. The percentages were determined by the survey respondents who strongly agreed 36.6%, agreed

52.7%, neutrally agreed 9.7 and the remain 1.1% were disagreed. The mean value indicates that there is clear establishment of communication in the project.

The data provided for the project information is addressed with planed strategy were determined the mean value of 4.225 and standard deviation of 0.677.the survey result in percentage indicates 34.4% of respondents strongly agreed, 55.9% agreed,7.5 neutrally agreed and 2.2% were disagreed. The mean value indicates there is planed strategy for building construction to address information.

The effective way of interpersonal interaction between team member in the project as respondents result has 4.247 mean value and 0.67 standard deviation. These are calculated based on percentage of respondent who strongly agreed were 36.6%, agreed were 52.7%, neutrally agreed were 8.6%,1.1% were disagreed and remain 1.1% were strongly disagreed. In which the result implies the building construction encourages for two-way communication.

The construction manager allows the best access to information for all of the teams participate in the project as the survey result showed 33.3% of respondents strongly agreed, 61.3% agreed,3.2 neutrally agreed, 1.1% disagreed and the rest 1.1% strongly disagreed. The mean and standard deviation values are 4.247 and 0.67 respectively. The result demonstrates for the project has effective communication management systems.

For the information provided projects has defined system that the building construction project collecting and distributing project information which the result showed 34.4% of respondents strongly agreed, 58.1% were agreed,6.5% were neutrally agreed and the rest 1.1% were disagreed. The mean and standard deviation were resulted 4.258 and 0.623 respectively. The survey result implies for the project has well define system for distribute and collect information.

The total mean score of project communication management is 4.240 with Std. deviation of 0.396 which indicates the construction project ensure that all relevant information and progress update are communicated but not fully.

4.4.8 The risk management in building construction project

The eighth part of questionnaire had five items which leaded to identify the assessment of project risk management in building construction with the case of selected building construction project. Thus, 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. 16 The Risk Management of Building Construction Project

No	Description	Frequency & Percentage	5 (SA)	4 (A)	3 (N)	2 (D)	1 (SD)	Std. Deviation	Mean
1.	Does your organization face different risk from different vectors with every project?	Frequency	32	54	7	-	-	0.592	4.268
		Percentage	34.4	58.1	7.5	-	-		
2.	Does your organization identify those risks and allow you to focus on real risks?	Frequency	39	48	4	2	-	0.664	4.333
		Percentage	41.9	51.9	4.3	2.2	-		
3.	Is there any action to risk analysis and give detailed through on what situation could arise, their impact and what need to be done to prevent problem?	Frequency	37	48	5	2	1	0.753	4.268
		Percentage	39.8	51.6	5.4	2.2	1.1		
4.	Does your organization have consistency to update the risk response and planed strategy?	Frequency	34	54	5	-	-	0.568	4.215
		Percentage	36.6	58.1	5.4	-	-		
5.	Does your organization have contingency plans for its time and budget reserved for potential risk impact?	Frequency	26	62	4	1	-	0.568	4.215
		Percentage	28	66.7	4.3	1.1	-		
Average mean								4.279	

Source: (own survey, 2024)

The survey responses suggest that the organization face different risk from different vectors with every project risk, with mean value of 4.268 and standard deviation of 0.592.the result in percentage shows for 34.4% of respondents are strongly agreed, 58.1% respondents agreed and

the rest 7.5% of respondents neutrally agreed. The result indicates for risk is expecting variables on every project work.

The identification, assessment, and response strategies were effective has mean value of 4.333 and standard deviation of 0. 664.with 41.9% of respondents strongly agreed,51.6% respondents agreed,4.3% neutrally agreed and 2.2 % were disagreed. As result demonstrates for risks were properly managed and focus on real risk or prioritizing them.

The mean value and standard deviation for projects action on risk analysis and give detailed through the situation could rise, their impacts to prevent problems are 4.268 and 0. 753.these percentage were determined by respondents who strongly agreed were 39.8%,51.6 were agreed,5.4 were neutrally agreed,2.2% were disagreed and 1.1% were strongly disagreed. Such the result illustrates for effective risk analysis and prevention of problems are applied.

However, the consistency to update the risk response and planed strategy in construction project is also moderately effective as shown the result of 36.6% of respondents were strongly agreed,58.1% of respondents agreed and 5.4 were neutrally agreed. The mean value and standard deviation are 4.311 and 0.570 respectively which means project has effective risk management practices.

In such case survey result shows for 28% of respondents strongly agreed,66.7% of respondents agreed,4.3% of respondents neutrally agreed and 1.1% were disagreed on the organization have contingency plans for its time and budget reserved for potential risk impact. The mean and standard deviation has 4.215 and 0.568 respectively in which the result demonstrates to implement regular risk reviews, update the risk register, and ensure risk mitigation actions are effective and up-to-date which is suggested to continue effectively.

The total mean score of project risk management is 4.279 with Std. deviation of 0.399 which indicates the construction project has prevent the potential problems that affect the overall project objective but not fully.

4.4.9 The procurement management in building construction project

The nineth part of questionnaire had four items which leaded to identify the assessment of project procurement management in building construction with the case of selected building construction project. Thus, 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. 17 The Procurement Management of Building Construction Project

No	Description	Frequency & Percentage	5 (SA)	4 (A)	3 (N)	2 (D)	1 (SD)	Std. Deviation	Mean
1.	Does your organization plan for procure good and materials needed for the construction project?	Frequency	30	57	5	1	-	0.601	4.247
		Percentage	32.3	61.3	5.4	1.1	-		
2.	Is there any activity taken like clearly communicate project need and specification to all stakeholders?	Frequency	31	54	5	2	1	0.730	4.204
		Percentage	33.3	58.1	5.4	2.2	1.1		
3.	Is your firm engaging with design professionals, contractor and suppliers early in the process to gather input and ensure alignment?	Frequency	31	58	4	-	-	0.543	4.290
		Percentage	33.3	62.4	4.3	-	-		
4.	Does your firm has organized contract management process?	Frequency	35	52	5	1	-	4.301	0.621
		Percentage	37.6	55.9	5.4	1.1	-		
Average mean								4.260	

Source: (own survey, 2024)

According to the data gathered, 32.2% of respondents strongly agreed,61.3% of respondents agreed, 5.4% were neutrally agreed and 1.1% disagreed on organization have plan for procure good and materials needed for the construction project. The result also has mean value of 4.247 and standard deviation of 0.601.the mean indicate as the project plan for procure materials.

According to the data gathered, 33.3% of respondents strongly agreed,58.1% of respondents agreed, 5.4% of respondents neutrally agreed,2.2% of respondents disagreed and the rest strongly disagreed on the firm provide clear communication on project need and specification to all

stakeholders. Then the mean value and standard deviation are 4.204 and 0.730 which implies for the building construction projects has effective procurement management system, on having clear communication to provide projects need and specifications.

Effectively manage on Project procurement plan with engaging design professionals, contractor and suppliers early in the process to gather input and ensure alignment as result indicated about 33.3% of respondents strongly agreed,62.4% of respondent agreed and rest neutrally agreed. The mean and standard values are 4.29 and 0.543.

Then also the survey result indicates 37.6% of respondents strongly agreed, 55.9% of respondent agreed,5.4% neutrally agreed and rest disagree on firm has organized contract management process. The mean and standard deviation are 4.301 and 0.621 which implies the firm has moderately organized for contract management process.

The total mean score of project procurement management is 4.260 with Std. deviation of 0.353 which indicates the construction project ensure that the necessary resources are obtained in timely and cost-effective manner but not fully.

4.4.10 The stakeholder management in building construction project

The tenth part of questionnaire had four items which leaded to identify the assessment of project stakeholder management in building construction with the case of selected building construction project. Thus, 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. 18 The Stakeholder Management of Building Construction Project

No	**Description**	**Frequency & Percentage**	**5 (SA)**	**4 (A)**	**3 (N)**	**2 (D)**	**1 (SD)**	**Std. Deviation**	**Mean**
1.	Is creating proper stakeholder management plan is a common practice in your organization?	Frequency	34	52	7	-	-	0.60	4.290
		Percentage	36.6	55.9	7.5	-	-		

2.	Does your firm give awareness about stakeholder management and its importance?	Frequency	38	54	1	-	-	0.513	4.397
		Percentage	40.9	58.1	1.1	-	-		
3.	Does your firm develop strategy to properly manage every stakeholder expectation?	Frequency	31	61	1	-	-	0.492	4.322
		Percentage	33.3	65.6	1.1	-	-		
4.	Does the strategy help the organization to control stakeholder engagement?	Frequency	34	55	4	-	-	0.554	4.322
		Percentage	36.6	59.1	4.3	-	-		
Average mean								4.249	

Source: (own survey, 2024)

As result indicates 36.6% of respondents strongly agreed,55.9 % of respondents agree and the rest neutrally agreed on creating proper stakeholder management plan is a common practice in the organization. The mean and standard deviation value are 4.290 and 0.60 respectively which indicate for there is proper stakeholder management in the project. According to the survey result mean value of 4.397 and standard deviation of 0.513 are resulted for the building construction project give awareness about stakeholder management and its importance for the participants. These values are based on proportional percentage of respondents who strongly agreed were 40.9%, agree were 58.1% and the rest neutrally agreed.

As survey result shows for the firm has effective strategy development that helps to properly manage every stakeholder expectation with respondents strongly agreed were 33.3%, agreed were 65.6% of respondents and remain neutrally agreed. The mean and standard deviation are calculated 4.322 and 0.492 respectively. These demonstrates for the firm has developed strategy to manage stakeholders.

Such this strategy helps the project to control stakeholder engagement this is result of 36.6% strongly agreed, 59.1% of respondents agreed and remain neutrally agreed. The mean and standard deviation are 4.322 and 0.554 respectively which implies for the strategy to control stakeholders are effectively helpful.

The total mean score of project stakeholder management is 4.249 with Std. deviation of 0.376 which indicates the construction project involves managing and maintaining the relationship between all participants in the project but not fully.

4.5 Challenges and Gaps of PMP on Building Construction

The eleventh part of questionnaire had four items which leaded to identify the challenges and gaps of project management practice in building construction with the case of selected building construction project. Thus, 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. 19 Challenge of Project Management Practice on Building Construction

No	Description	Frequency & Percentage	5 (SA)	4 (A)	3 (N)	2 (D)	1 (SD)	Std. Deviation	Mean
1.	How do you rate your organizations establishment on clear chain of communication and having of open communication method?	Frequency	31	59	3	-	-	0.527	4.301
		Percentage	33.3	63.4	3.2	-	-		
2.	Since cost overrun can happen due to different reasons, how is your level of understanding	Frequency	42	50	1	-	-	0.520	4.440
		Percentage	45.2	53.8	1.1	-	-		

	on construction project has met its initial cost estimation?								
3.	How do you rate the organization effort to overcome disputes and delays on having efficient team work with project stakeholders with clear goal?	Frequency	42	50	1	-	-	0.506	4.301
		Percentage	45.2	53.8	1.1	-	-		
4.	How do you rate organizations activity on identifying, assessing and determine how to avoid risk of project?	Frequency	36	54	3	-	-	4.354	0.544
		Percentage	38.7	58.1	3.2	-	-		
Average mean								4.349	

Source: (own survey, 2024)

As result showed 33.3% of respondents strongly agreed, 63.4% respondents agreed and remain neutrally agreed on there is very good establishment of having clear chain of communication and having of open communication method. This results for mean value of 4.301 and standard deviation of 0.527.

The other result illustrates respondents of 45.2% strongly agreed, 53.8% agree and rest neutrally agreed on the level of understanding on construction project has met its initial cost estimation. These also has mean and standard deviation of 4.440 and 0.520 respectively which demonstrates for the project has efficient cost management system.

According to the survey result mean value and standard deviation are 4.301 and 0.506 respectively on firms overcoming disputes and delays efficient team work with project stakeholders with clear goal. The result was proportional to percentages of respondents, who strongly agreed were 45.2% agreed were 53.8% and rest were neutrally agreed. In which suggested to continue improvement in which it suggested to improve its effort.

The other result of respondents showed that 38.7% of respondents strongly agreed, 58.1% agree and the rest neutrally agreed on organizations activity on identifying, assessing and determine how to avoid risk of project. These also has mean value of 4.354 and standard deviation of 0.544 which demonstrates for the project has effective risk management systems.

The total mean score for the main challenge of project management practice on building construction is 4.349 with Std. deviation of 0.278 which indicates those factors are considered as some significant challenge factors but not fully.

4.6 The Challenges and Gap of the PMP of building construction project

In addition to the above challenges based on the information from open end questionary the following factors are pointed.

- Lack of consistent training regarding with project management
- Inflated aspiration
- Design discrepancies
- Payment delay for manpower
- Turnover of experienced and skilled employees

Hence, the organization face some of challenges and overcome them effectively and technically as implicated from the respondent's agreement scale, those challenges are creating clear chain of communication, met the initial cost estimation, overcome disputes and delays of project and activity on identifying, assessing and determine how to avoid risk of project. But, respondentias try to point out what are the challenges the organization face.

- lack of project management trainings in which that have greatest effect on enhancing project success and increase productivity. Providing trainings helps to use efficient techniques and tools that streamline the process of the project.

- Inflated aspiration or unrealistic expectation and disabling requests are morale and productivity killer. These challenges happen with some clients making unreasonable requests to accelerate schedule or to limit the budget allotment.
- Design discrepancies
- Payment delay for manpower
- The lack of organization commitment, inadequate wage and less providing of training and development opportunities runs to turnover employees which are well experienced and skill.

Therefore the research try to see the gaps that in between the previous studies conducted that Applying PM practice has become important issues in many developed countries due to its successful application in various industries and its proven effectiveness and flexibility in attaining project goals and objectives (N A Haron et al, 2017).and other study from Malesia construction industry conducted for proper application of project management practice the researchers have recommended to apply PM tools and techniques especially in small-scale firms and range adequate PM training or courses conducted in higher education institutions. And the study conducted as comprehensive review on project management practices in construction projects and their roles in achieving sustainability tells us the effective project management practices are vital for successful construction projects. The study recommended to explores existing knowledge regarding practical aspects in construction projects, including training, deployment, standardization, and implications by Utilizing key tools like scheduling, risk strategizing, quantitative analysis, and earned value management. But here in the research for the effective project management practice initially need to plan for consistent training regarding with project management. Planning to consistent training program for employees help the project to become smooth, productive and successful project outcome. While planning, the firm gives advance for when to train, how much to train, the time, cost and the effort also consider. This is because most of graduate or undergraduate employees have less awareness about what they are doing which affects the project management practice of building construction. The cost and time that tanning will take is not more that the less quality and wastages that the project lose.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

Introduction

This section presents summary of findings with brief conclusions and recommendations. The project work was an objective to assess the project management practices in building construction projects: case study on selected building construction projects in Addis Ababa. The result obtained through assessment of project management knowledge area to identify the gap and based on this, the chapter presents the conclusion and recommendations that comprise further actions, which the study proposes for improving the project management practice of building construction.

5.1 Summary of major findings

This study assesses the project management practice in building construction: case study on selected building construction project in Addis Ababa. The study has conducted questionaries and some other document reviews. The objective of the study is to asses current project management practice in building construction project and understanding the challenges alter during the project management practice.

- Analysis of the data were done based on project management knowledge areas and results were stated as follow. Average mean score of project integration management (4.344); project scope management (4.249);project time management (4.298);project cost management (4.311); project quality management (4.204);project human resource management (4.228); project communication management (4.240); project risk management (4.279);project procurement management(4.260) and project stakeholder management (4.249).the ten knowledge areas were between range of 4.2 – 4.3 implies for well practicing of project management. But in some results had to improve in stakeholder management, communication management, human resource management and quality management in compare to the other six project management knowledge areas.
- Analysis of data about project management practice of building construction were derived based on understanding the challenges in building project. Those challenges analyzed were communication challenge, cost overrun, disputes and delay and also risk

management challenges in which result have average mean score of (4.349). the average mean score supports the building construction project is in success.

- Analysis of data about describing the time, cost and quality management practice on the building construction project indicates for average mean score of 4.298,4.311 and 4.204 which indicates for there is high level of managing time cost and quality on selected site of building construction.

5.2 Conclusion

In line with the objective of the study the data collected was analyzed and interpreted. Hence the study aims to assess the project management practice and describing challenges encountered through project management on selected building site of construction project. In which both primary and secondary were collected in the research.

Therefore, the result of study according to the findings comparatively there is existence of good project management practice. In the study out of ten knowledge areas to some extend significantly identified those are integration, scope, time, cost, quality, communication, human resource, procurement, risk and stakeholder management.

According to the finding results suggested that building construction project had a generally satisfactory performance and well done but not fully controlled or eliminated, with some areas for improvement. And also, the study describes and understands the challenges that influence the building construction project. In the other hand there are factors that challenge building construction project those are, lack of consistent trainings regarding with project management, inflated aspiration, design discrepancies, payment delay for manpower and turnover of skilled and experienced employee. Hence the firm should give high priority and treat for these factors to finish the project successfully.

The research describes time, cost and quality management practice indices of building construction with result of findings there is effective plan to complete project on time, budget and with good quality controlling and assuring activities to meet the desirable project quality standard. The project demonstrated manageable time, cost and quality management practices. Better knowledge on each process and essential deliverables that helps them to meet the desirable objective of the project.

5.3 Recommendation

Based on the findings obtained from study, the study makes the following recommendations:
Improve project management practice by implementing consistent approach of project implementation to execution by installing project management office and department to control each and every stapes in the process. The building construction project address good in project management practice but here also need to improve for the future design of the building project.

Plan for implementation of project management training and development programs on construction project. that helps to ensure all participants know their responsibility and what outcome is expected from them, technically it helps the construction projects are completed on time and within budget. That also helps for the prevention of employee's turnover they will sustain for better opportunity and upgrading their skills.

Strengthen the project's integration, scope, communication, risk and procurement management processes, including enhancing change control procedures, configuration management, and cross-functional collaboration. The building construction organization has to employee the required staff to manage projects quality, time and cost and to enhance their project management practice.

According to findings there are challenges of design discrepancies which happens if there is no change management in the project. For most case in building construction poor project management leads to costly rework and changes to project objective. In such case the firm has to produce well define change management system.

Most of in building construction work the payment of manpower will not paid on the time. This has to be given bigger attention. Motivating and keeping employee's moral has bigger effect on the project outcome.

For the challenges of unrealistic expectation of participants in building construction the project face to miss delivery dates, poor project performance, cost overrun and some other negative impacts that affect the project management practice. In order to overcome the study recommends

for setting out careful planning on available resources, capacity of the teams, desire outcome and providing effective communication with team to avoid further confusions and aware them about the project progress.

In general, the study recommends for the proper and successful management of project the building construction has to improve and provide useful framework covering off all aspect of project management practice. The project management has to implement the process with strong implementation of knowledge areas, techniques and methods to the project task in order to achieve the project goal.

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Appendix

SAINT MARY'S UNIVERSITY

SCHOOL OF GRADUATE STUDIES

MASTER OF PROJECT MANAGEMENT PROGRAM

Questionnaire

Dear Respondents, - I would like to express my sincere appreciation for your generous time and prompt responses.

Objective of the questionary

I am student researcher at St. Mary's university currently pursuing my MA in project management. I am designing questionaries in order to collect relevant information. These questionaries are conducting to collect primary data to assess the project management practices in building construction projects: case study on selected Ayat real estate building construction projects in Addis Ababa.

The research study is conducted for academic purpose. your participation in this research study is volunteer and the response will require 20-25 min of your time. The individual survey information will remain confidential and there is no need to write your name. In all cases where answer options are available, please tick (√) in the appropriate box. Please also answer all the questions to enhance the objectivity of the research. If you have any questions regarding to the research study you may contact me thorough the address below.

Thank you in advance for taking part in this endeavor.

Kind Regards

Mahder Engdawork

E-mail: Mahderengidawork@gmail.com

Tel: 0945766325

Part One: General information of respondent

1.Gender

- Male
- Fimale

2.Age

- Below 30
- 30-40
- 40-50
- Above 50

3. Academic qualification

- Diploma
- First Degree
- Masters and above

4. Your Current Occupation / Job Category

- Project manager
- Office Engineer
- Site Engineer
- Quality Manager
- Support Staff
- Other _____

5.Your Service Year in the Organization

- 0 -5 year
- 6-10 year
- 11-15 year
- Above 15 year

6. Level of Training You Have Received Related to Project Management

- Bachelor
- Certificate
- short term
- No training

7. Category of Your Organization

- Contractor
- Consultant
- Client
- Community

Part Two: Practice of Project Management Questions

General direction: Please answer all the questions based on your working knowledge and experience of project management that you are participating in the organization project you are working. That would help the research to enhance its objectivity of your knowledge of project management practice on the construction project. please respond by using tick mark (√) in provided table.

For each statement choose one of five options ranging as follow:

5= Strongly Agree 4= Agree 3= Neutral 2= Disagree 1= Strongly disagree

No	Key project management knowledge areas	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
		5	4	3	2	1
1	Project Integration Management					
1.1	Does the organization allow team to have knowledge about project integration management?					
1.2	Is there any process involves defining, documenting and coordinating various project management activities?					
1.3	Is there any creating of proper formwork for overseeing important stake holder requirements?					
1.4	Is there any supporting system and initiative from management in your organization to provide teams with necessary tools to assist them in training process?					
1.5	Is there any integration between customers and supplier in to overall workflows and create system to distribute information between clients, vendors and project teams?					
2	Project Scope Management					
2.1	Does your organization give awareness about the importance of project scope management?					
2.2	Does your organization give description of all project process and essential deliverables in order to					

	meet project objectives?					
2.3	Is there any construction resource management including the data related to assign people who will perform the tasks in your firm?					
2.4	In most of project works managers often have to make some change before the project endings, is their agreements up on special protocols between the manager, client and team workers?					
2.5	Does your organization have meetings with project teams to have better understanding on how long the particular task usually take to generate more accurate timeline and budget?					
3	Project Time Management					
3.1	Do you establish effective plan, proper tracking time, prioritizing tasks and communicating transparently?					
3.2	Does construction project in your firm ensure that projects are completed on time and budget?					
3.3	Does your firm plan and set clear expectations, team working to complete task efficiently?					
3.4	Does your firm ensure that resources are used efficiently, reduce waste and improve quality of project					

	outcome?					
4	Project Cost Management					
4.1	Is there a cost manager that reviews the project scope to figure out what resource the project will require?					
4.2	After listing out the require resource does your firm estimate what will cost to produce them?					
4.3	Is there any Process of recording and accounting cost and when problem occurs making adjustments and altering stakeholders?					
4.4	Is your firm focus on value base pricing rather than the cost of project itself?					
5	Project quality management					
5.1	The firm identifies the quality requirement and how to manage the project as its standard?					
5.2	Is your firm having quality controlling department with employees they have specialize in quality management?					
5.3	Does your firm implement for the quality assurance?					
6	Project Human Resource Management					
6.1	Does your organization give you awareness about the human resource management?					

6.2	Are their right people are assigned to the right task with the necessary skill and experience?					
6.3	What is your remark on organizing, acquiring, motivating and proper managing of films resource?					
6.4	Does your organization identify the training needed and devise team building strategies?					
6.5	Did you belief on your organization that it has ability to compromise teams with members who complement each other and work with united goal in mind?					
7	Project Communication Management					
7.1	Is there any establishment of formal and clear chain of command for communication in your firm?					
7.2	Is there planed strategy to address information needed?					
7.3	Does your organization encourage you to have two-way communication?					
7.4	Does the construction manager allow the best access to information for all of you and teams as well?					
7.5	Does your organization have defined system of collecting and distributing project information?					
8	Project Risk Management					

8.1	Does your organization face different risk from different vectors with every project?					
8.2	Does your organization identify those risks and allow you to focus on real risks?					
8.3	Is there any action to risk analysis and give detailed through on what situation could arise, their impact and what need to be done to prevent problem?					
8.4	Does your organization have consistency to update the risk response and planed strategy?					
8.5	Does your organization have contingency plans for its time and budget reserved for potential risk impact?					
9	Project procurement plan					
9.1	Does your organization plan for procure good and materials needed for the construction project?					
9.2	Is there any activity taken like clearly communicate project need and specification to all stakeholders?					
9.3	Is your firm engaging with design professionals, contractor and suppliers early in the process to gather input and ensure alignment?					
9.4	Does your firm has organized contract management process?					

10	Project Stakeholder Management					
10.1	Is creating proper stakeholder management plan is a common practice in your organization?					
10.2	Does your firm give awareness about stakeholder management and its importance?					
10.3	Does your firm develop strategy to properly manage every stakeholder expectation?					
10.4	Does the strategy help the organization to control stakeholder engagement?					

Part three: Main Project Management Challenges

No	Main project management challenges	Strongly agree	agree	Neutral	Disagree	Strongly disagree
		5	4	3	2	1
1	How do you rate your organizations establishment on clear chain of communication and having of open communication method?					
2	Since cost overrun can happen due to different reasons, how is your level of understanding on construction project has met its initial cost estimation?					
3	How do you rate the organization effort to overcome disputes and delays on having efficient team work with project stakeholders with clear goal?					

4	How do you rate organizations activity on identifying, assessing and determine how to avoid risk of project?					

Part four: If you have any additional comments and ideas regarding challenges of the project management practice on building construction projects please write here

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Thank you!