ADDIS ABABA UNIVERSITY

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An Assessment of Project Management Practice and Performance in the Case of Construction Projects in Sebeta Town

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A Research Project submitted to Addis Ababa University School of Commerce Department of Project Management in partial fulfillment of Master of Arts degree in Project Management

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Addis Ababa, Ethiopia

Approval Sheet

An Assessment of Project Management Practice and Performance in the Case of Construction Projects in Sebeta Town

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(GSD/3152/10)

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Declaration

I, Daniel Zewdie, declare that the study entitled **"An Assessment of Project Management Practice and Performance in the Case of Construction Projects in Sebeta Town"** is the result of my own effort and study that all sources of materials used for the study have been acknowledged. I have conducted the study independently with the guidance and comments of the research advisor. This study has not been submitted for any degree in any university. It is conducted for the partial fulfillment of the Master of Art Degree in Project Management.

Daniel Zewdie

Date _____

Signature _____

This is to certify that Daniel Zewdie has conducted this project work entitled "An Assessment of Project Management Practice and Performance in the Case of Construction Projects in Sebeta Town" under my supervision

This project work is original and suitable for the submission in partial fulfillment of the requirement for the award of Master of Arts Degree in Project Management.

Mengistu B. (PhD)

Date _____

Signature _____

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Acronyms/Abbreviations

PMI	Project Management Institute
SD	Standard Deviation
PM	Project Management
PMBOK	Project Management Body of Knowledge
VIF	Variance Inflation Factor

ABSTRACT

Project management is the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements. The escalating resource constraints faced by organizations require the implementation of project management methods that will maximize the proportion of successful projects. Therefore this study is aimed to assess the project management practice and performance in the case of construction projects in Sebeta town from the perspectives of four project life cycles. To achieve its objectives, the study uses a descriptive and explanatory research design and primary data were used. A questionnaire was a mechanism used to collect data from 31 project staffs. The data was analyzed by obtaining the means and standard deviations. As a result, the findings revealed a moderate level of project planning, execution, and closing practice. The correlation analysis was employed mainly to assess if there is significant degree of association between the project management practices and project performance. The result indicates that all project management practices have positive relationship with project performance. Using multiple linear regressions, the explanatory variables were checked whether they are significantly explaining the dependent variable (performance) or not and also to check whether independent variables have positive or negative relationship with the dependent variable(project performance). The result indicates that project closure and initiation have positive and significant relationship with project performance while project planning has significant negative relationship. Project execution has insignificant negative relationship with project performance. From the findings, the study concludes that there is an inefficiency of project management practices followed within construction projects, and these practices could be graded as moderate with respect to best practices. Finally though the project was not completed with the planned budget and schedule, it was good in achieving the expected quality, objective and goal. Based on this the study proposes: Sebeta project office should develop a culture of developing appropriate risk plans and risk response controls, to prevent unexpected risks and failures, it should also develop a strong culture of lessons learned documentation at every project performed by the organization, Short term project management methodologies should be given to project office staffs.

Key words: **Construction project, Project Management practice, Project performance**

CHAPTER ONE

1.1 Background of the study

The demand for infrastructure in Ethiopia is high, because of fast economic growth. Massive construction projects such as hydroelectric powers, roads, housings, ports, industry parks, bridges and social infrastructures (such as schools and hospitals) are widely undertaking activities in Ethiopia. (Belete 2017). Thus, the construction industry is a major sector of the economy of the country. Ethiopia's construction sector is one of the most robust in Africa. Conditions are ripe for a surge in building across the country. The updating and building of new infrastructure links, residential developments and so on is of considerable interest to the Ethiopian Government. Indeed, development of these areas features heavily in the nation's Second Growth and Transformation Plan (GTP II) (Falcioni 2017).

Project management institute (PMI) define project as "It's a short-term endeavor to develop a one-of-a-kind product, service, or outcome". The International Organization for Standardization defines a project as a "unique process, consisting of a set of coordinated and controlled activities with start and finish dates, undertaken to achieve an objective conforming to specific requirements, including time, cost, and resource constraints," according to the International Organization for Standardization (2003). A project should have a clear beginning and finish date (time), a budget (cost), a well-defined scope—or magnitude—of work to be completed, and specified performance requirements that must be satisfied. (Heagney 2011).

Project management is the application of knowledge, skills, tools, and procedures to project activities in order to achieve project requirements. Project management is performed by utilizing and integrating the proper project management techniques of initiating, planning, executing, controlling and monitoring and closing. Project management enables a company to complete projects quickly and effectively (PMBOK, 2004:2017). Construction project management necessitates an understanding of both modern project management and the design and construction process. Construction projects have a defined set of goals and constraints, such as a completion date, cost, and quality. In order to meet the expected results there should be tools and techniques that accelerate successfulness of the project.

To improve the socio-economic condition of the community a great amount of money were allocated for projects like: transportation, infrastructure, construction, software and manufacturing. Regardless of several types of project it plays a critical and important role for the development and economy of any developing countries, its performance is still remains generally poor. Project Management Factor has a positive and significant influence on project performance outcome (Ivatury and Tekalign 2020). According to PMI, following project management practices and strategies decreased risks, lowered costs, and increased success rates, all of which were critical to surviving the economic downturn. PM tools and techniques should be applied gradually especially in small-scale firms. The drastic use should be avoided so as not to lead to a disruptive change in their business (Haron 2017).

The construction project management idea first appeared in construction literature in the mid-1970s, and it is now regarded as one of the most important strategies for avoiding time and expense overruns in construction projects. Construction project management enables construction parties to plan, coordinate, and control all project operations in a systematic and structured manner, ensuring that projects are completed on schedule and on budget (Walker, 2007). This may lead to the client's requirements being met in terms of a financially and quality-wise realistic project (Muhammad 2013).

The industrial revolution marked the beginning of what is referred to today as the modern organization in early 50s. This is the era in which the economic activity was in full swing in many western countries, with engineering and construction project making a major impact on the environment. This rapid growth demanded a tool and technique which is capable of organizing and managing projects at various locations (Abbasi and Al-Mharmah, 2000). During this era, network analysis and planning techniques, like Program Evaluation and Review Technique (PERT) and Critical Path Method (CPM) formed the focus of development in project management.

The 21st century project environment is characterized and driven by increase complexity, uncertainty, and multiple stakeholders competing for the project goals and objectives. The project management practices which are ostensibly influence by the theoretical approaches and models developed by different academics, practitioners and professional institutions are challenged. A significant issue observed from project management in the 21st century is that the

nature of project has transform because of the large scale, uncertainty, and huge cost, several stakeholders' involvement in project and increase interests in project benefits (Alotaibi & Mafimisebi, 2016).

According to Nwachukwu and Nzotta (2010), poor performance of construction projects is retrogressive in most developing economies and could be traced to the poor utilization of project management best practices, project performance measures and critical success factors which constitute the multivariate that influences construction projects. This by extension includes a poor understanding of the relationships that exist among these multivariate which may not appear obvious. Also, Chen et al. (2012) pointed out that most of these variables are interconnected and influence each other making it imperative for the dynamics of these relationships to be understood for effective management, allocation of resources and control.

In order to appropriately determine project success, some set of criteria or principles are essential to act as standards guiding or regulating project success. These standards are referred to as project success criteria or project performance measures. According to Atkinson (1999), the most conventional standard for determining project success is the 'iron triangle' which determines project success in terms of cost, time and quality performance. This framework of criteria has proved to be limited in that it does not focus on a wide range of project stakeholders (Shahu et al., 2012). It gives only a measurement of the result of the project deliverable which relates to project efficiency. Another approach to determining project success is measuring success with respect to cost per unit, speed of construction and delivery, growth of schedule and cost, and other measures of quality (Konchar and Sanvido, 1999).

The definition of project management can varies among different people. People frequently misunderstand the issue because they have ongoing projects within their firm and believe that project management is being used to handle these activities (Eden 2018). According to Kerzner (2009), participating in project activities does not always imply that project management is practiced in the organization. Sebeta town is one of the urban centers in Oromia special zone surrounding Finfinne (Addis Ababa) situated at about 24 km on the south western direction of the capital city of Ethiopia along Addis Ababa-Jimma road. The town is one the towns which is rapidly growing currently. There are a lot of construction projects in the towns which are financed by the city administration. This paper assessed how those projects are managed in the

light of project management process starting from initiation to their closure mentioned above in PMBoK.

1.2 Problem statement

The long-term survival of any organization is to a certain extent dependent on management's ability to develop and implement corporate strategies in harmony with its ever-changing environments. Furthermore, it is stated that the strategic alignment between an organization and its environment is usually effected through projects such as investments, new products, internal re-organization, and etcetera. The escalating resource constraints faced by organizations require the implementation of project management methods that will maximize the proportion of successful projects. In an increasingly competitive and volatile environment, projects are of growing strategic importance to the survival of any organization (Smith, 2002). 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. Due to its nature with high risk and consuming many resources, construction industry requires better application and utilization of efficient and effective PM practice (Haron 2017).

The construction industry plays a vital role in developing countries which are highly dependent on the growth and development of physical infrastructures. In Ethiopian case, some known projects have been either delayed, have had cost overruns, poor in quality, poor user satisfaction or did not meet the initial objectives (Nega, 2008). According to Tekalign (2014), 79.1 % of the construction project fails to meet its objectives in Ethiopia and if completed it is with an average cost overrun of more than 26.2%. We must know that, Project failures have significant effect from economic as well as political points of view**.** If the project takes longer time, it requires additional resources. This affects the budget of other projects and in general, it affects the economy of the country and results in dissatisfaction of the society at large. This means, Projects are required to be completed within the time frame, budgeted cost and required quality so that to achieve its objective and satisfy stakeholders and users as well. Many of the projects in Ethiopia are failing due to poor planning and problems in the planning phase (Bethel 2019).

Cost, time, and quality are primary measures of a project's success. This is true, especially for public projects in developing countries, because public construction projects in these countries are executed with limited financial resources However, the history of the construction industry is full of projects that were completed with significant schedule delay *(Nega, 2008).* This section of the research states about the motivations (deriving force) to study the selected area.

There is a more considerable dispute about PM practice and its contribution towards project success. Any agreement has not been reached, even the topic has discussed for an extended period. Most of studies also focus on PM practices which indicate only the degree of applicability of PM practices. This paper additionally studies the degree of the association between PM practice and Project performance. The initiation for the study of this research is largely due to researcher's personal observation that low performance of construction projects in sebeta in terms of completion time. For instance the preliminary data obtained from city administration project office sebeta referral hospital construction started fourteen years ago which is expected to completed in two years period is currently also under construction. Based on the above facts the researcher tries to assess if the project management practices are implemented in construction projects in sebeta town in order to deliver public projects to respective stakeholders within the stated time, budget and quality. The researcher believes that this study was an input to Sebeta project office and many other similar organizations in the country in identifying their strength and weakness regarding the management of projects.

Basic Research Question

Based on the above statement of the problem, the study is attempt to address the following questions:

Main Research question

- What is the current project management practice in construction projects of Sebeta Project office?

  Specific Research Question

  1. To what extent the project initiation practiced in construction project?
  2. To what extent the project planning practiced in construction project?
  3. To what extent the project executions practiced in construction project?
  4. To what extent the project closure practiced in construction project?

5. What is the effect of project management practice on performance?

1.3 Objective of the study

The main objective of the study is to assess the project management practice and performance in the case of construction projects in sebeta town.

.The specific objectives are;

Below are the specific objectives of this study;

- ✓ To investigate the project initiation practice of construction project.
- ✓ To investigate the project planning practice of construction project.
- ✓ To investigate the project execution practice of construction project.
- ✓ To investigate the project closure practice construction project.
- ✓ To investigate the effect project management practice on performance

1.4 Significance of the study

Sebeta city administration had been implementing a huge construction projects in order to meet the demand of the need of different development projects. It expected that launching and implementing such a huge construction projects lead us to deal with highly complex and challenging project issues which may demand advanced knowledge, skills and experiences of project management and ability to provide scientific and contextually proved solutions for problems in each phase. As this study is mainly focusing on assessing the practices made in implementing construction project in each phase, it provides crucial information about the

strong and weak sides of the practices in each phase against the scientifically recommended implementation practices. The study had a great significance to Sebeta city administration project office and to overall the construction Industry in Ethiopia. The result of the study had significant effect on successful implementation of project management practices in construction sector in the future.

1.5 Scope of the study

Due to reasons such as cost, time and others constraint the scope the research was limited to assess the project management practice and performance in the case of construction projects in sebeta town. Sebeta city administration has nine functional offices under its structure. But this

study focuses only on the project office. There are a lot of projects undertaken in Sebeta city administration. Only those construction projects located in Sebeta town are considered for this research work. The study was only focus on the project life cycle management. The data for this study was gathered through questionnaire survey.

1.6 Limitations of the studies.

One of the basic characteristics of project is its uniqueness. This indicates every project has its own unique future that might not be generalized to other similar projects that activities under taken and solutions given to problems of this specific projects. Thus, the study is limited on assessing PM practices and their effect on performance only in Sebeta construction projects which might not be generalized to other projects.

1.7 Organization of the Study

The study is organized into five chapters. Chapter one encompasses the introductory part which covers the background, statement of the problem, research questions, research objectives, significance of the study, scope and limitations of the study. Chapter two presents review of related literature which is related to the research title. Chapter three deal with the research design and methodology. Chapter four contains the analysis of the data gathered by means of data collection methods and instruments indicated in the methodology part. The last chapter discusses about summary, conclusion and recommendation.

CHAPTER TWO

2. LITERATURE REVIEW

This chapter presents the related literatures on the study so as to have an insight in to the research topic and briefly expose the readers to some of the major areas of the subject matter under consideration. The chapter is presented under the following sections.

2.1 Theoretical Literature Review

2.1.1 Project Definition

In the research literature, the term project is defined in a variety of ways. This is demonstrated below:

According to PMI (2017), a project is a temporary initiative undertaken to produce a one-of-a-unique product, service, or outcome. Temporary means that the project has a definite ending point; Temporary does not necessarily mean a project has a short duration. The term "unique" refers to a product or service that stands out from other similar products or services in some way.

The International Organization for Standardization defines a project as a "unique process, consisting of a set of coordinated and controlled activities with start and finish dates, undertaken to achieve an objective conforming to specific requirements, including time, cost, and resource constraints," according to the International Organization for Standardization (2003).

Project has been termed as a human endeavor and may legitimately be regarded by its stakeholders as a project when it encompasses a unique scope of work that is constrained by cost and time, the purpose of which is to create or modify a product or service so as a means of achieving positive change characterized by quantitative and qualitative goals (Cooke-Davies, 2001, p.20).

A project is defined as a "value creation endeavor based on specifications, executed within a given or agreed-upon timeline and under constraints, including resources and external situations" (Ohara, 2005, p.15). A project is a business case that demonstrates a unique set of deliverables, with a finite life-span, by using identified resources with identified roles, and illustrating the benefits and threats of the venture (Bradley, 2002).

2.1.2. Project Management

Project management is a type of management discipline that focuses on managing projects. The application of knowledge, skills, tools, and procedures to project activities in order to achieve project requirements is known as project management. Project management is performed by utilizing and integrating the proper project management processes (initiating, planning, executing, monitoring and controlling, and closing) identified for the project. Project management enables a company to complete projects quickly and effectively (PMI, 2017).

2.1.3 Project Management Process

Project management is the process of directing a group of capable people through the planning and implementation of a series of interconnected activities that must be completed on a particular date and within a set budget. Coordinating all these activities require a process must be listed, evaluated, its risks assessed and contingency plans developed. It also requires a close monitoring of the budget, scope and schedule to deliver the project objectives under the expected quality. Each one of these elements needs to be managed in a systematic manner with the development of plans to identify the roles and resources needed. The project management process is scoping, planning, launching, monitoring & controlling and closing (Wysocki, 2014). According to the Project Management Body of Knowledge, the five foundations (processes) of project management are initiating, planning, executing, controlling, and closing.

2.1.4 Project Management Process Groups

As mentioned in PMI 2017, A Project Management Process Group is a logical collection of project management procedures that work together to achieve certain project goals. Project phases have no bearing on Process Groups. The following five Project Management Process Groups are used to categorize project management processes:

Initiating Process Group: - Those processes for defining a new project or a new phase of a current project, as well as receiving authorization to begin the project or phase.

Planning Process Group:- Those processes for determining the project's scope, refining the objectives, and determining the plan of action to fulfill the goals for which the project was created.

Executing Process Group:- Those procedures used to execute the tasks outlined in the project management plan in order to meet the project's objectives.

Monitoring and Controlling Process Group:- Those processes that are required to track, review, and regulate the project's progress and performance; identify any areas where adjustments to the plan are required; and implement those changes.

Closing Process Group: - Processes that are used to formally finish or close a project, phase, or contract.

2.1.5 Project Management Knowledge Areas

In addition to Process Groups, processes are also categorized by Knowledge Areas. A Knowledge Area is a specified area of project management that is described in terms of its component processes, practices, inputs, outputs, tools, and techniques and is defined by its knowledge requirements. Although the Knowledge Areas are related, they are defined individually from the standpoint of project management. The ten Knowledge Areas identified in PMBOK 2017, guide are used in most projects most of the time. The ten Knowledge Areas described in this guide are:

- **Project Integration Management:** Identifies, defines, combines, unifies, and coordinates the numerous processes and project management activities within the Project Management Process Groups through processes and activities.
- **Project Scope Management:-**Contains the processes that ensure the project includes all of the work that is required to accomplish the project successfully, and only the work that is required.
- **Project Schedule Management:-**.Includes the processes needed to ensure that the project is completed on time.
- **Project Cost Management**:- Planning, estimating, budgeting, financing, funding, managing, and controlling expenses are all part of project cost management..
- **Project Quality Management:-**Includes the processes for implementing the organization's quality policy into project and product quality requirements planning, management, and control in order to meet stakeholders' expectations.
- **Project Resource Management:** Describes the procedures for identifying, acquiring, and managing the resources required to complete a project successfully.

- **Project Communications Management:** Describes the procedures that must be followed to guarantee that project information is collected, created, distributed, stored, retrieved, managed, controlled, monitored, and finally disposed of in a timely and suitable manner.
- **Project Risk Management:-**Includes the planning, identification, analysis, response planning, response implementation, and risk monitoring activities for risk management on a project.
- **Project Procurement Management:** Describes the procedures for purchasing or obtaining products, services, or results from sources outside than the project team.
- **Project Stakeholder Management:-** Identifying the people, groups, or organizations that could impact or be impacted by the project, analyzing stakeholder expectations and their impact on the project, and developing appropriate management strategies for effectively engaging stakeholders in project decisions and execution are all part of project stakeholder management.

The guide also provides a matrix that maps project management process onto five project management process groups. The PMBOK has become a de facto international standard for project management knowledge (Crawford and Pollack, 2008). However, it is also acknowledged that it has been developed predominantly for a North American audience (Murithi and Crawford, 2003).

Table 2.1 project management process group and knowledge areas

Knowledge Areas	Project Management Process Groups				
	Initiating Process Group	Planning Process Group	Executing Process Group	Monitoring and Controlling Process Group	Closing Process Group
4. Project Integration Management	4.1 Develop Project Charter	4.2 Develop Project Management Plan	4.3 Direct and Manage Project Work 4.4 Manage Project Knowledge	4.5 Monitor and Control Project Work 4.6 Perform Integrated Change Control	4.7 Close Project or Phase
5. Project Scope Management		5.1 Plan Scope Management 5.2 Collect Requirements 5.3 Define Scope 5.4 Create WBS		5.5 Validate Scope 5.6 Control Scope	
6. Project Schedule Management		6.1 Plan Schedule Management 6.2 Define Activities 6.3 Sequence Activities 6.4 Estimate Activity Durations 6.5 Develop Schedule		6.6 Control Schedule	
7. Project Cost Management		7.1 Plan Cost Management 7.2 Estimate Costs 7.3 Determine Budget		7.4 Control Costs	
8. Project Quality Management		8.1 Plan Quality Management	8.2 Manage Quality	8.3 Control Quality	
9. Project Resource Management		9.1 Plan Resource Management 9.2 Estimate Activity Resources	9.3 Acquire Resources 9.4 Develop Team 9.5 Manage Team	9.6 Control Resources	
10. Project Communications Management		10.1 Plan Communications Management	10.2 Manage Communications	10.3 Monitor Communications	
11. Project Risk Management		11.1 Plan Risk Management 11.2 Identify Risks 11.3 Perform Qualitative Risk Analysis 11.4 Perform Quantitative Risk Analysis 11.5 Plan Risk Responses	11.6 Implement Risk Responses	11.7 Monitor Risks	
12. Project Procurement Management		12.1 Plan Procurement Management	12.2 Conduct Procurements	12.3 Control Procurements	
13. Project Stakeholder Management	13.1 Identify Stakeholders	13.2 Plan Stakeholder Engagement	13.3 Manage Stakeholder Engagement	13.4 Monitor Stakeholder Engagement	

Adopted from PMI 2017

2.1.6 Why are Construction Projects Unique?

According to construction extension of PMBOK guide, Construction projects inherently contain a high degree of risk in their projections of cost and time as each is unique. Buildings may be prototypical, but when constructed on different sites, each project presents its own challenges to accurate cost, time projections, and control. Construction projects in the industrial sector will quite often require intricate interface with technology licensors that demand construction techniques be varied to suit the nuances of their technology transfer. This can contribute to unique subcontracting arrangements, extensions to schedule, and increases in capital cost.

Construction projects must address the geography and conditions of the project site and the relation of the project to the environment. Construction projects often result in one-off products rather than mass-produced products. While there is generally no opportunity to produce a prototype, a construction project may sometimes be phased to provide an opportunity to refine the project design in the initial phase PMBOK (2007).

Construction projects produce deliverables, such as: a facility that will make or house the means to make a product or provide service facilities such as dams, highways, parks, institutions, entire developments (for example, high rises and educational, military housing, or airports), or infrastructures that deliver water, electricity, telecommunications, or wastewater disposal. Other examples are schools, medical centers, and hospitals PMBOK (2007).

According to construction extension of PMBOK guide, construction projects often are required to have, by regulations, a team of hired specialists and construction disciplines involved on the project. In today's world, construction projects involve many stakeholders with varying project expectations such as public taxpayers, regulatory agencies, governments, and environmental or community groups, which many other types of projects do not include.

Construction projects often require large amounts of materials and physical tools to move or modify those materials.

2.1.7 The Project Lifecycle

From inception to finish, a project goes through a number of phases called a project life cycle. A project phase is a group of logically related project activities that culminate in the delivery of one or more deliverables. Sequential, iterative, or overlapping phases are possible. The titles,

numbers, and lengths of the project phases are decided by the management and control requirements of the organization(s) involved in the project, as well as the project's nature and application area. Phases have a start and end date, as well as a control point (sometimes referred to as a phase review, phase gate, control gate, or other similar term). At the control point, the project charter and business documents are reexamined based on the current environment. At that time, the project's performance is compared to the project management plan to determine if the project should be changed, terminated, or continue as planned (PMI 2017).

Due to the unique nature of deliverables and transitory operations, a project must bring together and engage stakeholders from many businesses, each with its own organizational structure and culture. Due to novel activities, transitory organizations, and stakeholders with varied goals, cultural, and professional backgrounds, a project is more risky than day-to-day operations.

The start and end dates of a project are set in stone. The acquired resources will rise as the project progresses. If faults are not discovered early in the project process, the losses will be amplified. Controlling the project life cycle is a required and effective method of project risk management.

Time and resource restrictions are present in all undertakings. A typical project's life cycle consists of several stages, including initiating, planning, executing, and closing. A project manager can appropriately manage a project if they have a thorough understanding of the project life cycle (DING , 2016). Because of the unique nature of projects, it is ineffective to manage them just on the basis of individual experience. Project management is, to some extent, risk management. Potential issues will emerge and deteriorate if we rush into the next project phase without completing the previous phase properly. An increase in efficiency in one project phase does not always imply that the project will be more efficient and reliable overall. It is not uncommon for projects to be pushed into the execution phase without sufficient decision-making, planning, and initiating. Reworks, cost overruns, and delays have all resulted as a result of this. We must address a frequent psychological misunderstanding of overall efficiency in order to manage project risks according to the project life cycle.

A project is a social system. It's tough to construct boundaries based on preset functions because of the relationships between project activities. In terms of demand and accompanying obligations, project stakeholders are dependent on one another. This is especially true in projects

focused on innovation, because project stakeholders rely on one another. The degree of collaboration amongst stakeholders has a significant impact on the project's success (or failure). Senior executives should be able to conceive in terms of systems in order to efficiently manage projects.

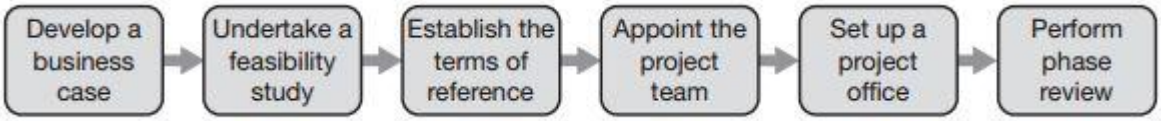
Large projects are usually broken down into phases, and the organization of those phases is discipline specific and usually follows some kind of methodology. Later in this book, other sorts of IT approach are discussed. Each project phase has a beginning and an end, and each phase includes the five process groups. In some techniques, deliverables from one phase are normally inputs to the following phase; however, some methodologies may include phase overlap. There may be some overlap in project phases for various sectors and approaches. Depending on the methodology used and the contracting arrangement used, there may be some project phase overlap in IT (Brandon , 2006).

The specific elements of the organization, industry, development approach, or technology used can all have an impact on the project life cycle. While every project has a beginning and a finish, the particular deliverables and work that is done varies greatly from project to project. Regardless of the exact activity performed, the life cycle offers the basic structure for project management.

According to (Westland, 2006), the project life cycle consists of four phases: Project Initiation, project planning, project execution & project closure.

2.1.8 Project initiation

The first phase of a project is the initiation phase. During this phase a business problem or opportunity is identified and a business case providing various solution options is defined. Next, a feasibility study is conducted to investigate whether each option addresses the business problem and a final recommended solution is then put forward. Once the recommended solution is approved, a project is initiated to deliver the approved solution. Terms of reference are completed outlining the objectives, scope and structure of the new project and a project manager is appointed. The project manager begins recruiting a project team and establishes a project office environment. Approval is then sought to move into the detailed planning phase. The activities undertaken during the initiation phase:



Source: Westland, 2006

- **Develop a business case**

The trigger to initiating a project is identifying a business problem or opportunity to be addressed. A business case is created to define the problem or opportunity in detail and identify a preferred solution for implementation. The business case includes: a detailed description of the problem or opportunity, a list of the alternative solutions available, an analysis of the business benefits, costs, risks and issues, a description of the preferred solution and a summarized plan for implementation. The business case is then approved by an identified project sponsor, and the required funding is allocated to proceed with a feasibility study.

- **Undertake a feasibility study**

At any stage during or after the creation of a business case, a formal feasibility study may be commissioned. The purpose of a feasibility study is to assess the likelihood of each alternative solution option achieving the benefits outlined in the business case. The feasibility study will also investigate whether the forecast costs are reasonable, the solution is achievable, the risks are acceptable and the identified issues are avoidable.

- **Establish the terms of reference**

After the business case and feasibility study have been approved, a new project is formed. At this point, terms of reference are created. The terms of reference define the vision, objectives, scope and deliverables for the new project. They also describe the organization structure, activities, resources and funding required to undertake the project. Any risks, issues, planning assumptions and constraints are also identified.

- **Appoint the project team**

The project teams are now ready to be appointed. Although a project manager may be appointed at any stage during the life of the project, the manager will ideally be appointed prior to recruiting the project team. The project manager creates a detailed job description for each role

in the project team, and recruits people into each role based on their relevant skills and experience.

- **Set up a project office**

The project office is the physical environment within which the team is based. Although it is usual to have one central project office, it is possible to have a virtual project office with project team members located around the world. A project office environment should include:

- Equipment, such as office furniture, computer equipment, stationery and materials;
- Communications infrastructure, such as telephones, computer network, e-mail, Internet access, file storage, database storage and backup facilities;
- Documentation, such as a project methodology, standards, processes, forms and registers;
- Tools, such as accounting, project planning and risk modeling software.

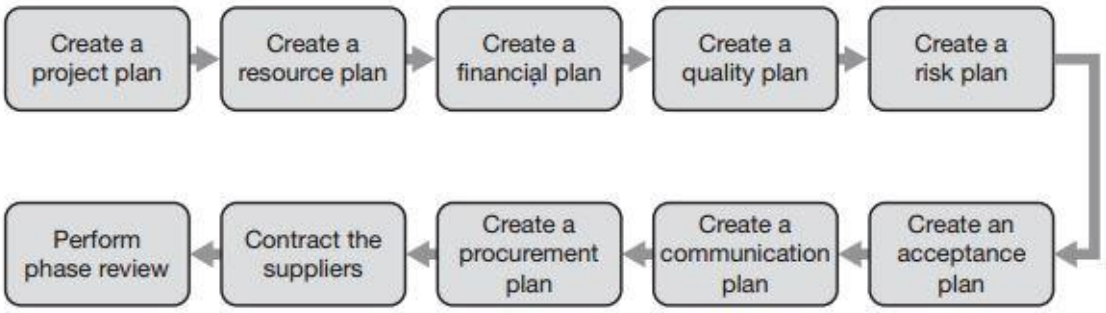
- **Perform a phase review**

At the end of the initiation phase, a phase review is performed. This is basically a checkpoint to ensure that the project has achieved its objectives as planned.

2.1.9 Project planning

Once the scope of the project has been defined in the terms of reference, the project enters the detailed planning phase to guide the team, as well as, keep them on time and on budget. A well written project plan gives guidance for obtaining resources, acquiring financing and procuring required materials. The project plan gives the team direction for producing quality outputs, handling risks, creating acceptance, communicating benefits to stakeholders &managing suppliers. The project plan also prepares team for the obstacles they might encounter over the course of the project, & helps them understand the cost, scope & timeframe of the project.

By now, the project costs and benefits have been documented, the objectives and scope have been defined, the project team has been appointed and a formal project office environment established. It is now time to undertake detailed planning to ensure that the activities performed during the execution phase of the project are properly sequenced, resourced, executed and controlled. The following activities undertaken during planning phase:



Source: Westland, 2006

- **Create a project plan**

The first step in the project planning phase is to document the project plan. A 'work breakdown structure' (WBS) is identified which includes a hierarchical set of phases, activities and tasks to be undertaken to complete the project. After the WBS has been agreed, an assessment of the level of effort required to undertake each activity and task is made. The activities and tasks are then sequenced, resources are allocated and a detailed project schedule is formed. This project plan is the key tool used by the project manager to assess the progress of the project throughout the project life cycle.

- **Create a resource plan**

Immediately after the project plan is formed, the level of resource required to undertake each of the activities and tasks listed within the project plan will need to be allocated. Although generic resource may have already been allocated in the project plan, a detailed resource plan is required to identify the:

- Type of resource required, such as labour, equipment and materials;
- Quantity of each type of resource required;
- Roles, responsibilities and skill-sets of all human resource required;
- Specifications of all equipment resource required;
- Items and quantities of material resource required.

A schedule is assembled for each type of resource so that the project manager can review the resource allocation at each stage in the project.

- **Create a financial plan**

A financial plan is created to identify the total quantity of money required to undertake each phase in the project (in other words, the budget). The total cost of labour, equipment and materials is calculated and an expense schedule is defined which enables the project manager to measure the forecast spend versus the actual spend throughout the project. Detailed financial planning is an extremely important activity within the project, as the customer will expect the final solution to have been delivered within the allocated budget.

- **Create a quality plan**

Meeting the quality expectations of the customer can be a challenging task. To ensure that the quality expectations are clearly defined and can reasonably be achieved, a quality plan is documented. The quality plan: defines the term ‘quality’ for the project, lists clear and unambiguous quality targets for each deliverable. Each quality target provides a set of criteria and standards to be achieved to meet the expectations of the customer, provides a plan of activities to assure the customer that the quality targets will be met (in other words, a quality assurance plan), identifies the techniques used to control the actual quality level of each deliverable as it is built (in other words, a quality control plan).

Not only is it important to review the quality of the deliverables produced by the project, it is also important to review the quality of the management processes which produced them. A quality plan will summarize each of the management processes undertaken during the project, including time, cost, quality, change, risk, issue, procurement, acceptance and communications management.

- **Create a risk plan**

The next step is to document all foreseeable project risks within a risk plan. This plan also identifies the actions required to prevent each risk from occurring, as well as reduce the impact of the risk should it eventuate. Developing a clear risk plan is an important activity within the planning phase, as it is necessary to mitigate all critical project risks prior to entering the execution phase of the project.

- **Create an acceptance plan**

To deliver the project successfully, you will need to gain full acceptance from the customer that the deliverables produced by the project meet or exceed requirements. An acceptance plan is created to help achieve this, by clarifying the completion criteria for each deliverable and providing a schedule of acceptance reviews. These reviews provide the customer with the opportunity to assess each deliverable and provide formal acceptance that it meets the requirements as originally stated.

- **Create a communications plan**

Prior to the execution phase, it is also necessary to identify how each of the stakeholders will be kept informed of the progress of the project. The communications plan identifies the types of information to be distributed to stakeholders, the methods of distributing the information, the frequency of distribution, and responsibilities of each person in the project team for distributing the information.

- **Create a procurement plan**

The last planning activity within the planning phase is to identify the elements of the project to be acquired from external suppliers. The procurement plan provides a detailed description of the products (that is, goods and services) to be acquired from suppliers, the justification for acquiring each product externally as opposed to from within the business, and the schedule for product delivery. It also describes the process for the selection of a preferred supplier (the tender process), and the ordering and delivery of the products (the procurement process).

- **Contract the suppliers**

Although external suppliers may be appointed at any stage of the project, it is usual to appoint suppliers after the project plans have been documented but prior to the execution phase of the project. Only at this point will the project manager have a clear idea of the role of suppliers and the expectations for their delivery. A formal tender process is undertaken to identify a short-list of capable suppliers and select a preferred supplier to initiate contractual discussions with. The tender process involves creating a statement of work, a request for information and request for proposal document to obtain sufficient information from each potential supplier and select the

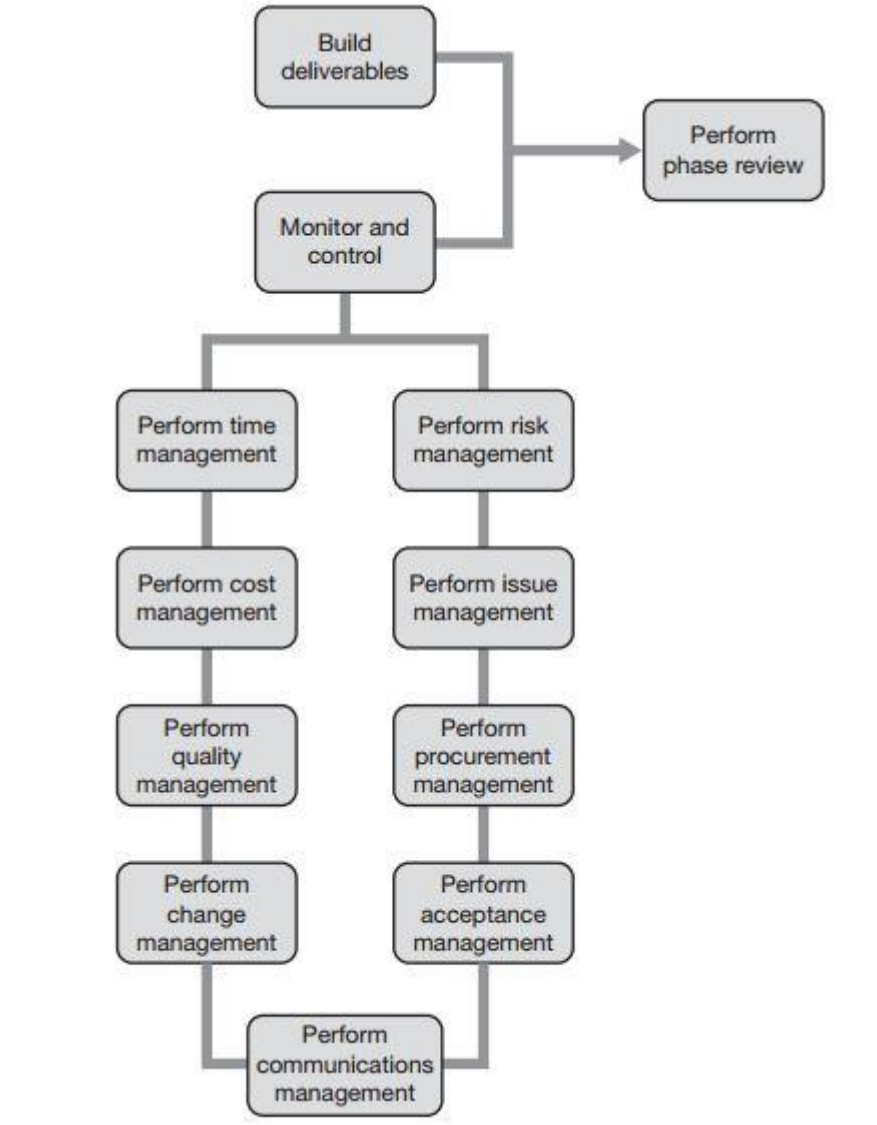
preferred supplier. Once a preferred supplier has been chosen, a contract is agreed between the project team and the supplier for the delivery of the requisite products.

- **Perform a phase review**

At the end of the planning phase, a phase review is performed. This is a checkpoint to ensure that the project has achieved its objectives as planned. At this point the project will have been planned in detail and is ready to be executed.

2.1.10 Project execution

The execution phase is typically the longest phase of the project in terms of duration. It is the phase within which the deliverables are physically constructed and presented to the customer for acceptance. To ensure that the customer's requirements are met, the project manager monitors and controls the activities, resources and expenditure required to build each deliverable. A number of management processes are undertaken to ensure that the project proceeds as planned. The activities undertaken under execution are shown below.



Source: Westland, 2006

- **Build the deliverables**

This phase involves physically constructing each deliverable for acceptance by the customer. The activities undertaken to construct each deliverable will vary depending on the type of project being undertaken. Activities may be undertaken in a 'waterfall' fashion, where each activity is completed in sequence until the final deliverable is produced, or an 'iterative' fashion, where iterations of each deliverable are constructed until the deliverable meets the requirements of the customer. Regardless of the method used to construct each deliverable, careful monitoring and

control processes should be employed to ensure that the quality of the final deliverable meets the acceptance criteria set by the customer (Westland, 2006).

- **Monitor and control**

According to (Westland, 2006), while the project team is physically producing each deliverable, the project manager implements a series of management processes to monitor and control the activities being undertaken by the project team. An overview of each management process follows:

- **Time Management**

Time management is the process of recording and controlling time spent by staff on the project. As time is a scarce resource within projects, each team member should record time spent undertaking project activities on a timesheet form. This will enable the project manager to control the amount of time spent undertaking each activity within the project. A timesheet register is also completed, providing a summary of the time spent on the project in total so that the project plan can always be kept fully up to date(Westland, 2006).

Cost management

Cost management is the process by which costs/expenses incurred on the project are formally identified, approved and paid. Expense forms are completed for each set of related project expenses such as labour, equipment and materials costs. Expense forms are approved by the project manager and recorded within an expense register for auditing purposes (Westland, 2006).

Quality management

Quality is defined as the extent to which the final deliverable conforms to the customer requirements. Quality management is the process by which quality is assured and controlled for the project, using quality assurance and quality control techniques. Quality reviews are undertaken frequently and the results recorded on a quality review form (Westland, 2006).

Change management

Change management is the process by which changes to the project scope, deliverables, timescales or resources are formally requested, evaluated and approved prior to implementation. A core aspect of the project manager's role is to manage change within the project. This is

achieved by understanding the business and system drivers requiring the change, identifying the costs and benefits of adopting the change, and formulating a structured plan for implementing the change. To formally request a change to the project, a change form is completed. The status of all active change forms should be recorded within a change register (Westland, 2006).

Risk management

Risk management is the process by which risks to the project are formally identified, quantified and managed. A project risk may be identified at any stage of the project by completing a risk form and recording the relevant risk details within the risk register (Westland, 2006).

Issue management

Issue management is the method by which issues currently affecting the ability of the project to produce the required deliverable are formally managed. After an issue form has been completed and the details logged in the issue register, each issue is evaluated by the project manager and a set of actions undertaken to resolve the issue identified (Westland, 2006).

Procurement management

Procurement management is the process of sourcing products from an external supplier. Purchase orders are used to purchase products from suppliers, and a procurement register is maintained to track each purchase request through to its completion (Westland, 2006).

Acceptance management

Acceptance management is the process of gaining customer acceptance for deliverables produced by the project. Acceptance forms are used to enable project staff to request acceptance for a deliverable, once complete. Each acceptance form identifies the acceptance criteria, review methods and results of the acceptance reviews undertaken (Westland, 2006).

Communications management

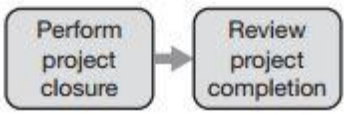
Communications management is the process by which formal communications messages are identified, created, reviewed and communicated within a project. The most common method of communicating the status of the project is via a project status report. Each communications message released is captured in a communications register (Westland, 2006).

Perform a phase review

At the end of the execution phase, a phase review is performed. This is a checkpoint to ensure that the project has achieved its objectives as planned (Westland, 2006).

2.1.11 Project closure

Following the acceptance of all project deliverables by the customer, the project will have met its objectives and be ready for closure. Project closure is the last phase in the project life cycle, and must be conducted formally so that the business benefits delivered by the project are fully realized by the customer. The activities outlined in Figure below are undertaken



Source: Westland, 2006

Project closure report

First, it is important to ensure that project closure criteria have been fully satisfied and that there are no outstanding items remaining. Then, release plan should be identify for project deliverables, documentation, supplier contracts and resources. Finally, it is needed to initiate a communication plan to inform all project stakeholders that the project has not been closed. Each of these activities and many more are described in this project closure report.

Post -Implementation Review

Following the closing of any project, it is important to always review its overall success by undertaking a post implementation review. This review helps to determine whether the project delivered the business benefits, met the customer's requirements and remained within scope & budget. It will also help determine whether the project conformed to the management processes identified, such as change management & quality management.

2.2 Empirical Literature Review

This section contains reviewed literature that was relevant to this study. (Biniam 2018) conducted study entitled "project success criteria and success factor in the case of projects financed by Development Bank of Ethiopia". The study reveals top 10 project success factors in the context of projects financed by Development Bank of Ethiopia; (1) Project Scope Planning (2) Project Scope Definition (3) Assignment of Appropriate Project Manager (4) Resource Availability (5) Writing Scope Statement with Deliverables (6) Communication between Project Manager and the Organization (7) Analyze Identified Risks (8) Planning and Establishing Processes, Leadership, Membership and Identity (9) Identify Project Risks and (10) Resource Capability.

Gebregziabher (2019) in his paper entitled "Project Management Practices of Ethiopian Electric Power Corporation In The Case Of Universal Electricity Access Program" states that teamwork is an integral component of project management; therefore, the ability to manage people is an essential skill for project managers. When it comes to project success, project or program managers carry a great deal of the responsibility, but success is also dependent on the performance of others who are in key project roles (e.g., project team members, project sponsors, customers and stakeholders). The study suggests that, well developed people management skills are fundamental to a high project management maturity level.

Frezer (2018) in his findings strongly sustain that there is a need to reinforce and develop the project management practices and knowledge in Commercial Bank of Ethiopia program management office. Particularly , project managers and project performers are not performing project tasks of identification, planning and execution as per the best practices and standards. Thus, to identify, plan, execute and close a project a consistence high level of commitment and dedication is needed among all the stakeholders.

Merima (2019) assess IT Project Management Practices in Commercial Bank of Ethiopia using the ten project management knowledge areas defined by PMBOK. Primary data collection was done by semi structured interview and close ended questionnaire from employees involved

in project work selected in census survey and as to secondary data CBE's policies and procedures were reviewed. She also employed descriptive research design and quantitative approach. Number, percentages and mean were used to analyze the data obtained. Her findings

of the study showed that, the challenges of the projects are both internal and external. Of the internal challenges, the projects time, cost and quality gap ranks the first; and from the external challenges of the project environment took the first place. On the other hand the study show that factors defined from PMBOK are practice by most of the PMO employees/respondents except that in time and human resource management which in turn displays there is a gap in practicing Project management.

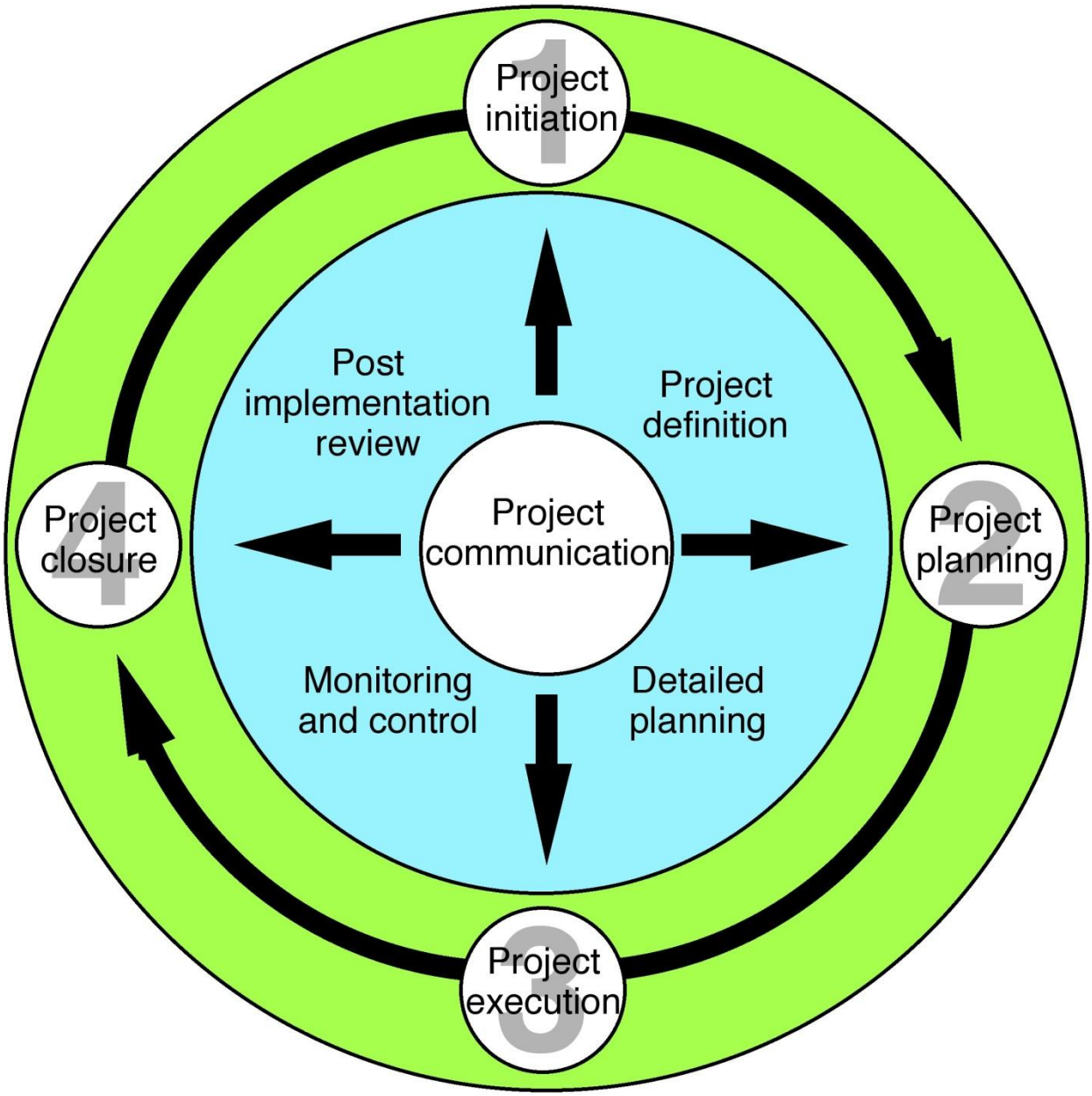
Yonas (2018) conducted paper entitled the "assessment of project management practice and process maturity level of the Ethiopian resident charities" using standard questionnaires for project managers, the model uses levels 1-5 in increasing order. Level 1 is the lowest project performance of the organization without following a structured approach to implementing projects while level 5 is the highest performance by the organization with continuous improvement. In his assessment his findings indicate that the overall assessment of all project management process group is 2.28 with little variations among the process groups The findings of the study also revealed that the overall practice on maturity of project management knowledge areas is found to be 2.15. the study recommended that improvement efforts should be taken to improve the current level of project management practice of all the project management process group as well as all the PMBOK areas.

(Tigest 2017) in her study "Assessment on Project Management Practices: a case study on Japanese Social Development Trust Fund Grant Project" explained and suggested that some project management knowledge areas i.e. Project scope, time, quality, cost, risk and integration management were not effectively practiced in the project. Correspondingly, project stakeholders, human resource, communication and procurement management were practiced traditionally even though formal procedures were not followed as a standard for project management which is due to no professional project management person was assigned in the project. Thus, this study suggested for the project to implement project management knowledge areas by following formal procedures based on the processes under each knowledge areas.

2.3 Conceptual Framework

Since the entire project knowledge areas can be incorporated under the five project management process group the author was utilizes this model to assess the project management practice and measure project management performance. The researcher used the four project lifecycles

adopted by Westland (2006) to develop the questionnaire which also incorporate the monitoring and control part under the execution phase.



Source: Westland 2006.

Figure 2.1: Project Lifecycle

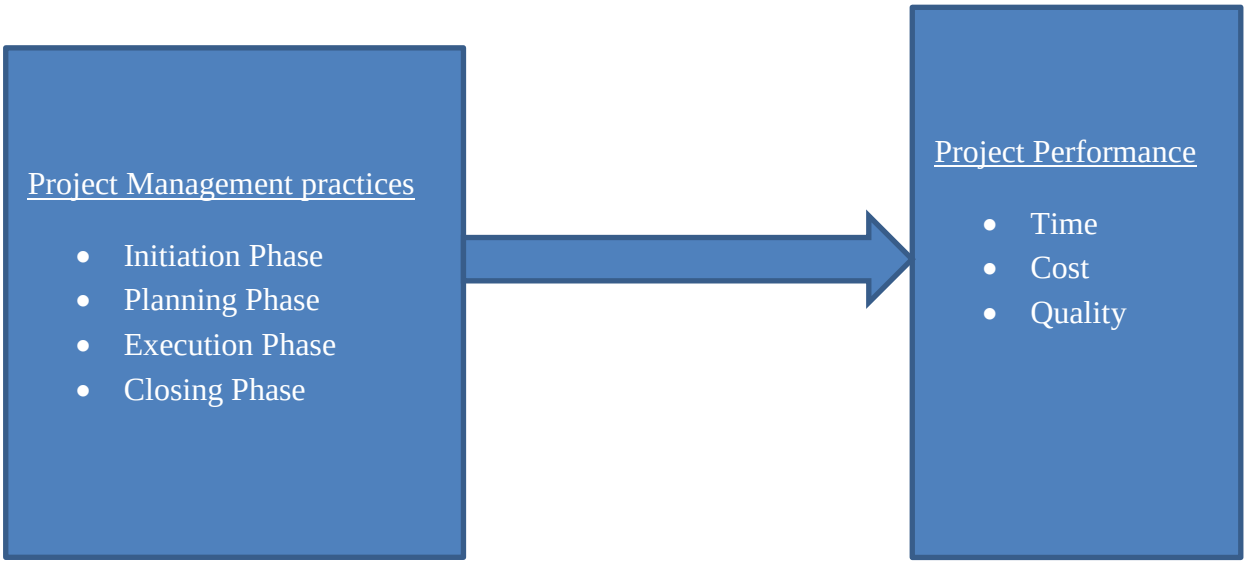


Figure 2.2: Conceptual Framework of the study

Source: developed by the Author based on literature review

CHAPTER THREE

3. RESEARCH METHODOLOGY

This chapter aims to provide an overview of the methodological approaches and research design selected to assess the project management processes and practices followed in construction projects of Sebeta town. The chapter describes the research approach that was applied, research design, population, the sample selection and the data collection methods

3.1 Research Approach

Research approaches are plans and procedures for research that span the steps from broad assumptions to detailed methods of data collection, analysis, and interpretation (Creswell, 2014). According to Mark, et al., (2009) there are two general ways of approaching a research problem, namely the deductive and inductive approaches. The deductive approach is based on the logical way of thinking and the conclusion drown from the theory. Thus, the deductive approach means that the research starts from already existing theories and model, from which propositions are developed and subsequently tested through empirical studies. The inductive approach means the research starts from empirical studies and these studies are subsequently related to existing theories.

According to Creswell (2014) there are three research approaches: (a) qualitative, (b) quantitative, and (c) mixed methods. Unquestionably, the three approaches are not as discrete as they first appear. Qualitative and quantitative approaches should not be viewed as rigid, distinct categories, polar opposites, or dichotomies. Instead, they represent different ends on a continuum. A study tends to be more qualitative than quantitative or vice versa. Mixed methods research resides in the middle of this continuum because it incorporates elements of both qualitative and quantitative approaches (Creswell, 2014).

Based on the above description, the researcher used mixed research approaches. Additionally, the researcher used deductive approach, by referring different literatures, theories and models, which helped the researcher to develop conceptual framework and research questions. For the analysis of the practices of project management, the researcher used

structured questioners and analyzed the data quantitatively. Therefore, the researcher used both qualitative and quantitative data (mixed) research approach.

3.2 Research Design

The research design used in this study was an explanatory research design. Descriptive analysis is the process of transforming raw data into information that can be used to explain a group of factors in a scenario in a way that is easy to grasp and analyze. As a result, the descriptive study approach was utilized to examine demographic data, an accurate profile of respondents, and some points on structured questionnaires. Correlations and multiple linear regressions were utilized in the explanatory section to analyze the relationship or associations between the practices (independent) variables and project performance (dependent) variable.

3.3 Target population

Castillo (2009) defines target population as, referring to the entire group of individuals or objects to which researchers are interested in generalizing the conclusions. For this research, the target populations were professionals who participate in construction projects that are implemented under sebeta city administration construction project office. To get information regarding the project management practices and performance in this sector project coordinator, project manager, project team members and support staffs who participate in the construction projects are considered as target population. There are forty nine employees in the construction project office of sebeta.

3.4 Sampling and Sampling techniques

Among the most important element of the research, the sample size is the one which addresses the characteristics of the whole file series with confidence (Kothari, 2004). For the purpose of this study, the researcher used census survey for the project employees as they are few in number, including all the project coordinator, project manager, project members and support staffs. According to (Parker, 2011), in a census survey every participant has an opportunity to participate which reduces the concern on accuracy. Therefore, the study conducted all the 49 respondents from the employees involved in project office. The questionnaires were distributed to all of them.

3.5 Types and Sources of Data

Both primary and secondary data was used in relation to the topic under discussion. Data can be gathered from both primary and secondary sources. According to Hollensen (2007) primary data can be defined as "information that is collected first -hand, generated by original research tailor-made to answer specific current research questions". And secondary data can be defined as "information that has already been collected for other purposes and thus is readily available".

3.6 Data Collection Instrument

The main instruments that was used for collecting data is closed ended questionnaires. In this study, the quantitative data was obtained through closed ended questionnaires The items of the questionnaire were mainly developed based on the research objectives and research questions. The research questionnaire is adopted from different research and related literature review.

3.7 Validity and Reliability of the Data Collection Instrument

Reliability refers to the consistency or dependability of a measurement technique, and it is concerned with the consistency or stability of the score obtained from a measure or assessment over time and across settings or conditions. If the measurement is reliable, then there is less chance that the obtained score is due to random factors and measurement error (Geoffrey M., David D. & David F. 2005).

Cronbach's alpha is a measure for the internal consistencies of the items that together cover the specific factor. It measures internal consistency of items to the concept (Raigama R. 2010).

Hence, before administering the questionnaire on the sample selected, it was tested and checked on a pilot scale for its reliability and the value of Cronbach's α (alpha) were be calculated.

3.8 Research Ethics

All ethical issues under ethical considerations in research work were respected. In this project work preparation, the ethical confidential documentation were implemented & taken in to account during the overall process. All the documents that were used during the preparation of this project work were only used for the accomplishment of this paper. The data was collected

with the full permission of the participants and confidentially without disclosing the respondents' identity. Moreover, there is no personal interest and the project worker were act professionally.

3.9 Data analysis methods

Quantitative data analysis technique was used in this study. The quantitative technique of analyzing the data was employed for data gathered through closed ended questions to assess the PM practices and its performance and the relationship between performance and PM practices of construction project of the town. Data collected through questionnaire from the survey was analyzed using descriptive statistical techniques. A good mathematical analysis method was needed to arrange the large body of data in a systematic, fast and reliable way. Particularly Means, frequencies and standard deviations are used. After the data were collected from primary and secondary sources, it was appropriately checked and edited by the researcher. Then the edited data was coded and manually entered into computer.

Finally, the data were analyzed by using SPSS software as descriptive and explanatory. The descriptive part was discussed and analyzed by employing graphs, tables, frequencies, means, standard deviation to assess the PM practices and its performance of Sebeta town construction projects.

In addition to this the explanatory part of the study was discussed using correlations and multiple linear regressions. The correlation analyses were employed mainly to assess if there is significant degree of association between the project management practices and project performance.

Using multiple linear regressions, the explanatory variables were checked whether they are significantly explaining the dependent variable (performance) or not and also to check whether independent variables have positive or negative relationship with the dependent variable(project performance). The model is expressed as below.

$$\mathbf{Y= \beta 0 + \beta 1 x1+ \beta 2 x2 + \beta 3 x3+\beta 4 x4 + \varepsilon}$$

Where

Y= project performance

X1=Project Initiation Phase

X2=Project Planning Phase

X3=Project Execution Phase

X4=Project Closure

β0= Constant term (intercept)

β1 – β4 are regression coefficients

ε= error term

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1. Introduction

This chapter deals with the data analysis and interpretations of the information collected from Sebeta construction project office. The analysis was done by collecting data by issuing questionnaires to project managers, team leaders and project team members who have more than two years of experience in the construction project and who have completed one or more projects in the office. Questionnaires were distributed to 49 employees among 49 employees of the office who participated in one or more completed projects. The questionnaire is developed from Eden (2018) and Mdhen (2019).

4.2 Reliability Test and Analysis

Reliability relates to the *consistency* of a measure. A participant completing an instrument meant to measure motivation should have approximately the same responses each time the test is completed. Although it is not possible to give an exact calculation of reliability, an estimate of reliability can be achieved through different measures (Twycross 2015). Cronbach's α is the most commonly used test to determine the internal consistency of an instrument. In this test, the average of all correlations in every combination of split-halves is determined. Instruments with questions that have more than two responses were used in this test. The Cronbach's α result is a number between 0 and 1. An acceptable reliability score is one that is 0.7 and higher. Accordingly Cronbach's alpha for project management life cycle and performance variable: Initiation, Planning, Execution, Closure & performance is found to be more than 0.7 therefore it is statistically acceptable. The Cronbach's alpha value for all variable suggest that the data collected through questionnaires is reliable and can be used for further statistical analysis.

Table 4.1 Reliability Statistics

	Cronbach's alpha Coefficient	**Number of Items**
Project initiation	**0.71**	**9**
Project planning	**0.85**	**15**
Project execution	**0.86**	**12**
Project closure	**0.7**	**3**
Project performance	**0.77**	**5**
Overall average reliability	**0.78**	**44**

Source: own computation from survey data

4.3. Questionnaire Response rate

As shown in Table 4.2 out of the total 49 questionnaires administered to selected relevant staff members of Sebeta construction project office, 31 were filled and returned. The remaining questionnaires are not collected due to some staffs are regularly out of the office administer project site.

According to Mugenda & Mugenda (2003) the statistically significant response rate for analysis should be at least 50%. Therefore the reliability of this research is significantly high for its response rate of the questionnaires is 84%.

Table 4.2: **Response Rate of respondents**

Status	No. of Questionnaires	Response Rate (%)
Completed and Returned	31	63.27
Not Completed and Not Returned	18	34.73
Total	49	100%

Source: own computation from survey data

4.4 Demographic information of the respondents

This Section summarizes the Sex of respondent, age of respondent, work experience (service years) in the office, experience on construction projects, educational level and respondents position (Level) in the organization. The main focus of this section is to show the proportion female and male respondents, their work experience in the project office, their experience on construction projects, educational level of employees in the project etc. Based on this, we will see all the demographic characteristics of the respondents one by one as below.

Table 4.3 Demographic information of the respondents

Respondent by Gender		
Characteristics	**Frequency**	**Percent**
Male	**22**	**77.4**
Female	**7**	**22.6**
Total	**31**	**100 %**
Educational level of Respondents		
Characteristics	**Frequency**	**Percent**
Diploma	**2**	**6.5**
BA/BSc	**21**	**67.7**
Masters	**8**	**25.8**
Others	**0**	**0**
Total	**31**	**100%**
Job level in the office		
Characteristics	**Frequency**	**Percent**
Manager	**1**	**3.2**
Team Leader	**7**	**22.6**
Team Member	**20**	**64.5**
Other	**3**	**9.7**
Total	**31**	**100%**
Work experience		
Characteristics	**Frequency**	**Percent**
3-5 years	**15**	**48.4**

5-10 years	**11**	**35.5**
11-15 years	**5**	**16.1**
More than 15 years	**0**	**0**
Total	**31**	**100%**
Age of Respondents		
Characteristics	**Frequency**	**Percent**
20-24 years	**3**	**9.7**
25-35	**24**	**77.4**
36-45	**4**	**12.9**
More than 45 years	**0**	**0**
Total	**31**	**100%**

Source: own computation from survey data

4.4.1. Gender of the respondents.

As we can see from Table 4.3 above, 77.4 percent of the respondents were male and 22.6 percent were female respondents. This may imply that the gender proportion of employees in the project is not balanced.

4.4.2 Educational level of Respondents

As we can see from table 4.3 above, respondents were asked to show their highest level of education achieved and indicated majority (67.7%) of them have first degree. 25.8% of the respondents in the project have masters degree and 6.5 % of the project staffs have diploma. This indicates majority of the project staffs have first degree and above level of education. And this might imply that majority of our respondents are appropriate and capable of understanding the questionnaires.

4.4.3 Job level in the office

As depicted in table 4.3 the current job position of the respondents shows that the majority (64.5%) of the respondents were member of the project team followed by 22.6% team leader of the project. The remaining 9.7% are other supporting staff and manager which is 3.2% of the respondents.

4.4.4 Work experience

As we can see from the above table, the experience of the respondents in relation to construction project is depicted. Based on this 48.4% of the employees have experience of 3-5 years, 35.5% of the respondents have 5-10 years of experience and the remaining 16.1 have an experience of 11-15 years of experience. This may imply that majority of the respondents have adequate experience in project life cycle.

4.4.5 Age of the Respondents

The respondents in construction project were also asked to indicate their age interval and as indicated in Table 4.2 above, 12.9% of the respondents are in the interval of 36-45 years old which is the second largest age group. Majority of the respondents are in the age group of 25-35 years of age which accounts 77.4% from the total respondents. The remaining are age interval which is 20-24 years old accounts 9.7% of the respondents. From this we can conclude that largest proportion of employees in construction project is young people.

4.5 Discussion of Results

The study sought to assess the practices of project management and performance in sebeta construction project office. The responses were placed on the five Likert scale where 1 = strongly disagree 2=disagree 3=neutral 4=agree 5 =strongly agree. One statistical approach for determining equivalence between groups is to use simple analyses of means and standard deviations for the variables of interest for each group in the study (Marczyk, et al., 2005). The mean indicates to what extent the sample group averagely agrees or does not agree with the different statement. The lower the mean, the more the respondents disagree with the statement. The higher the mean, the more the respondents agree with the statement. On the other hand, standard deviation shows the variability of an observed response from a single sample. As cited in Eden (2018) the mean values were presented in tables, together with standard deviation of values for each dimension. Mean values have been interpreted by adopting the criteria suggested by Landell (1977) &MohdNajib (1994), for Likert type scale ranging from 1 to 5, the interpretation of mean values should be like: from 1.00 to 2.33 means Low; mean values from 2.34 to 3.64 means Moderate and from 3.68 to 5.00 means High.

4.5.1 Results and Discussion on Project Identification

Table 4.4 Mean and Standard deviation of Project Identification

Project Initiation Phase	**Mean**	**SD**
Feasibility study was undertaken for the project	2.97	0.875
Environmental impact assessment and Sustainability were studied	2.58	1.025
Project risks were studied	2.45	0.850
Operation and maintenance of the project were studied on short and long term	3.13	0.846
All project requirement were Studied	2.94	1.181
"Project Charter" was prepared which describes scope, objectives, time, budget, and risks	3.10	0.944
Project Team was appointed from the Beginning	3.65	0.709
In your opinion, were all necessary equipment, communication, infrastructure, documentation and tools were included in Project Office Environment? (project office set up)	2.61	0.919
Appropriate environmental impact assessment was conducted after project is identified.	2.71	0.973
TOTAL / AVERAGE	**2.9**	**0.925**

Source: own computation from survey data

The Initiating Phase of the project is where it all starts (McBride 2016). And the first step for any project and any project manager experienced is to figure out what the objective of the project is. Table 4.4: shows that the total score of project initiation phase achieved a mean of (2.9) which indicates a Moderate level of project initiation phase. As we can see from the result the project office should implement the tools mentioned above under project initiation phase. The Project risks with the lowest mean value (2.45) were poorly practiced in the project office. The results also indicate that there is a poor practice of project office setup. Respondents were also asked to put their level of agreement on the statement Environmental impact assessment and sustainability study with mean value of 2.58 which indicate that most of the staffs do not believe that environmental impact assessment and sustainability study were undertaken. Relative to other project initiation tools, "Project Charter" was prepared which describes scope, objectives, time, budget, and risks, Operation and maintenance of the project were studied on short and long term and Project Team was appointed from the Beginning with mean value of 3.10,

3.13 and 3.65 respectively are more practiced than others. From this we can say that at the initiation phase most of the basic activities that are required to be performed were undertaken moderately in construction projects in Sebeta except environmental impact assessment and project risks were not properly identified at this phase.

4.5.2 Results and Discussion on Project Planning

In this sub section respondents were requested to express their level of agreement on how the planning activities were practiced in construction projects. The result of their response is depicted in the table below. The result of the survey indicates that the overall score of the planning phase achieved a mean of (2.94) which indicates moderate level of planning practice. Based on the table shown below respondents were asked whether there were preparation of detailed plan that describe how to implement the project in the planning phase of construction project. The majority of the respondents were staying neutral to this question which revealed mean value of (3.06). This shows significant number of project staffs are agree or being neutral to the statement. The most important part of the planning phase is the development of the work breakdown structure and it is essential to develop a complete and well organized WBS (Brandon, 2006). The WBS is the basis for all project planning and later performance monitoring. As WBS is the basis not only for planning but also to monitor performance of our project against our plan at later stage, it is considered in this study as the basic component of planning and respondents were asked whether work breakdown structure was developed in the planning stage of the project. Creating WBS and estimating the resource required and duration for each activity are important tools for project planning. Both results revealed a mean of (3.42) and (3.13) respectively which indicates a moderate level of practice. The other issue raised to staffs by the researcher is whether possible risks and its mitigation strategy were identified at the planning stage in the project and it revealed mean values of (2.61) which indicate moderate level of practice. As explained in Reedy, (2016), each project has its own risk, whether the result of technical aspects or the result of procedures and the project execution sequence. Therefore, the risk should be managed by identifying it first, setting priorities, and then finding a solution according to the type of event, its likelihood of occurring, and its potential impact on the project. It should also be followed by a periodic follow-up phase precisely with the assurance of the distribution of responsibilities and authorities for each item that will have a high impact on the project. Safety plan is vital in construction projects not only

focus on preventing accidents but also lay out responses to safety incidents. In this regard project staffs agreed that the moderate level of safety plan is practiced which revealed a mean value of (2.39). this may show that, significant number of project staffs either disagree with the idea or they are not sure with it, improvements are required in this regard because the issue of safety is very critical for construction projects..

Table 4.5: Mean and Standard deviation of Project Planning

Project Planning Phase	Mean	SD
There were preparation of detailed plan that describe how to implement the project	3.06	0.854
WBS (work breakdown structure) was identified	3.42	0.848
Expected duration (timeframe), resource (materials, people & equipment) requirement and costs for each activity were determined prior to project start	3.13	0.991
Interrelationship between the project activities were clearly presented and defined	2.71	1.071
Detailed project schedule was determined	3.26	0.930
Prepared financial plan that indicates the required fund, source & the time the fund is required	3.32	0.871
Change management plan is prepared	2.61	0.761
Quality targets were determined	2.9	0.746
Quality plan was developed to monitor the quality of the outputs and to identify actions that will be used to achieve the required quality	3.1	0.944
Procurement of goods & services needed for project were properly planned	2.94	1.031
Risks were identified & developed mitigation strategy	2.61	0.919
Listed the criteria to be met to gain customer acceptance	2.84	0.735
Performed Project Communication requirement analysis & Preparing a plan/strategy to address identified communication needs	2.9	0.790
Developed a system for collecting and distributing project information	2.87	0.957
Safety plan is developed to reduce incidental accident during project implementation	2.39	0.803
AVERAGE	**2.94**	**0.88**

Source: own computation from survey data

The respondents were asked to respond whether project schedule and financial plan is prepared by the concerned body. The mean values were 3.26 and 3.32 which indicates most of the respondents respectively agreed with the idea.

4.5.3 Results and Discussion on Project Execution

Table 4.6: Mean and Standard deviation of Project Execution

Project Execution Phase	Mean	SD
Activities carried out by the project team were controlled and managed effectively	2.84	0.898
Costs were managed so it does not exceed the allocated budget for the project	2.55	0.768
There were effective management of project time.	2.61	0.955
Bidding processes were managed effectively	2.87	0.922
There were mechanisms used to monitor quality during the implementation (Quality Assurance)	2.77	0.762
Standards were set for the delivery of project outputs	3.23	0.845
Risks were managed effectively	2.32	1.045
Accurate & complete Progress reports were prepared and providing them to relevant stakeholders on time.	2.81	1.14
There were effective and proper management of changes that arise during the implementation of the project.	3.00	0.966
The problems and issues that arise during project implementation were managed effectively	2.84	1.068
There was a clear communication channel between all the stakeholders	2.39	0.715
There is mechanism to monitor safety during implementation (Safety Assurance)	2.58	0.992
AVERAGE	**2.73**	**0.91**

Source: own computation from survey data

In order to assist the execution of projects, project monitoring and control methodologies have been developed and its overall purpose is to understand the evolution of the project and measure its progress. This permits to undertake actions to correct the trajectory of the project when it deviates from the plan (Marle & Vidal, 2016). As we can see from table 4.6 above, respondents were asked to express their level of agreement on statements indicated in the table which were presumed to indicate key activities to be performed in execution phase of a project. The result of the survey indicates that overall score of execution phase achieved a mean of (2.73) which indicates moderate level of execution practice.

the respondents were asked whether activities carried out by the project team were controlled and managed effectively and the problems and issues that arise during project implementation were managed effectively. Based on this they were responded that 2.84 mean value believe that is practiced effectively. As we can observe from table 4.5 above the mean of cost management, risk management and communication channel between stakeholders indicate low practice relative to other execution tools mentioned. Risk management usage and monitoring safety in the implementation stage of the project was directly related to planning of project risk and safety plan which implies that poor project planning leads to poor project implementation. Management of cost and time also indicates the mean value of 2.55 and 2.61 respectively which implies moderate level of practice.

4.5.4 Results and Discussion on Project Closure

Table 4.7: Mean and Standard deviation of Project Closure

Project Closure	**Mean**	**SD**
The project was evaluated after the closure	3.06	0.929
Lessons learned from the project were Disseminated	2.71	0.938
All Documentation for the project were documented after the project finished	3.65	1.018
AVERAGE	**3.14**	**0.96**

Source: own computation from survey data

As explained in Kuster et.al (2015), Brandon (2006) and others, all projects come to an end and even the abandoned ones involve close-off work. In Other words Projects may come to successful completion and end normally (perhaps within time and budget constraints) or they may be terminated abnormally due to different reasons. When the project is completed, either normally or abnormally, some key activities should be performed and Table 4.6 below contains some presumed key activities to be performed at the closing phase of a project. Respondents were requested to express their level of agreement regarding these activities. Table 4.7: shows that the total score of the project closure achieved a mean of (3.14) and a standard deviation of (0.96) which indicates a moderate level of closure phase. The final step in the project cycle management is to review the project completion. A post implementation review is undertaken to formally review the project and identify any lessons learnt. As can be

seen from the table, almost all the criteria of closure are moderate and high, especially, lessons learned from the project is low compared to other closure criteria which indicate that other project failures or successes are not providing input to the preceding projects. But according to DING (2016), as the documentation of project success or failure, a lessons learned summary report presents an important channel to generate enterprise knowledge through projects. This documentation provides historical data and useful references for the budget and schedule planning of future projects to be undertaken by the enterprise. This may imply that failure to properly document lessons learned will have its own negative consequence for success of future projects that will be initiated by the organization.

Post implementation review is conducted after completing a project. Its purpose is to evaluate whether project objectives were met, to determine how effectively the project was run, to learn lesson for the future and ensure that the organization gets the greatest possible benefit from the project.

4.5.5 Results and Discussion on Project Performance

This sub section is mainly intended to assess the success level of construction projects measured in terms the below listed performance parameters in table 4.8.

Table 4.8 Mean and Standard deviation of Project Performance

Construction Projects performance	**Mean**	**SD**
The intended objectives of construction project were successfully achieved	2.74	1.064
Construction project was completed at its expected completion time.	2.16	0.860
Construction project was completed within planned budget	2.19	1.046
All the quality standards expected by project office(owner) from the project were successfully delivered	3.13	1.056
All construction projects was completed in a way that can contribute to its designed goal	2.77	1.146
AVERAGE	**2.62**	**1.034**

Source: own computation from survey data

In regard to whether objectives of construction were successfully achieved or not, the respondents agreement level indicate the mean score value of 2.74. This implies that project objectives were not achieved at all. The next issues raised for construction project staffs were

whether construction project was completed at its expected completion time which leads to time overrun. In this regard majority of the respondents are not agreed with the statements (2.16). This implies that projects were not completed at planned completion time.

Majority of the respondents either disagreed or remain neutral with the statement "Construction project was completed within planned budget" with mean value of 2.19. From this result we can conclude that projects were not completed within their planned budget which in turn leads to cost overrun. In relation to meeting the project quality standards score the mean value of 3.13. Which indicate majority of the respondents remains neutral. The level of agreement of the respondents whether construction projects was completed in a way that can contribute to its designed goal sore the mean value of 2.77.

From each of the above project phase average mean value the researcher derive the table below and as depicted in the table below we can conclude the overall project management practices have the mean value of 2.93 which is moderate level of practice.

Table 4.9: Overall project management practices mean and standard deviation

PM practices	**Mean**	**SD**
Project initiation	**2.9**	**0.925**
Project planning	**2.94**	**0.88**
Project execution	**2.73**	**0.91**
Project closure	**3.14**	**0.96**
Overall PM practices	**2.93**	**0.92**

Source: own computation from survey data

4.6 Relationship between Variables

In order to check the relationship between variables, the bivariate Pearson Correlation was used. The bivariate Pearson Correlation produces a sample correlation coefficient, *r*, which measures the strength and direction of linear relationships between pairs of continuous variables. By extension, the Pearson Correlation evaluates whether there is statistical evidence for a linear

relationship among the same pairs of variables in the population, represented by a population correlation coefficient. As Cohen, J. (1988) the strength can be assessed by these general guidelines

- .1 < | *r* | < .3 ... small / weak correlation
- .3 < | *r* | < .5 ... medium / moderate correlation
- .5 < | *r* | ..... large / strong correlation

Table 4.10: Correlation between variables.

Correlations

	PROJECT INITIATION	PROJECT PLANNING	PROJECT EXECUTION	PROJECT CLOSURE	PROJECT PERFORMANCE
PROJECT INITIATION	1				
PROJECT PLANNING	0.770**	1			
PROJECT EXECUTION	0.680**	0.736**	1		
PROJECT CLOSURE	0.557**	0.625**	0.641**	1	
PROJECT PERFORMANCE	0.425*	0.297	0.308	0.412*	1

Source: own computation from survey data

As depicted in the table above the relationship between project initiation and project planning is positive and strongly correlated. This indicates that two variables are moving in the same direction. In the same fashion the relationship between project initiation and project execution shows strong correlation which greater than the cut-off point of moderate correlation(0.5). The coefficient of correlation (r) between project initiation and project closure had the value which indicates strongly correlated and positively related. On the other the coefficient of correlation between project performance and project initiation indicate that they are positively related but have medium/moderate level of correlation

When we see the degree of association between project planning and execution, the result on the table above shows that both have strong correlation and positive relationship with correlation coefficient of (0.73). At the same time the association between project planning and project closure is tested through bivariate Pearson correlation and the value of the coefficient r is 0.635 which is greater than the 0.5 and this may imply the positive and strong relationship. On the other hand the degree of association between project planning and project performance is tested and the result shows that both variables are positively related but weakly correlated.

In the similar way the correlation coefficient project execution and project closure is 0.64 which is strongly correlated and have positively related. Again when we assess the relationship between project execution and project performance the correlation coefficient is (0.31) which may imply they are moderately correlated and have positive relationship. Finally as we have seen on the above table the coefficient of project performance and project closure is 0.41 which is positively related but moderately correlated. From this we can conclude that all project management practices have positive relationship.

4.7 Regression Analysis

The study attempted to examine the impact of each project management practice on project performance in this part. All the project cycles were considered as independent variables and project performance as dependent variable. Before going to regression analysis we have to check multicollinearity test. This is primarily used to determine whether the explanatory variables are linearly connected to one another. Because if explanatory variables are substantially connected with one another, they are referring to the same object and should not be regarded independent. Generally, **a variance inflation factor (VIF) above 4 or tolerance below 0.25 indicates that multicollinearity might exist**, and further investigation is required. When VIF is higher than 10 or tolerance is lower than 0.1, there is significant multicollinearity that needs to be corrected. As a result, the model was put to the test to check if it was free of this issue, as seen in the table below and free from this problem.

Table 4.11: Multicollinearity test Result

Variables		
	Tolerance	**VIF**
Initiation	0.378	2.647
Planning	0.309	3.241
Execution	0.384	2.605
Closure	0.535	1.870

Source: own computation from survey data

The purpose of the multiple linear regression component of this study is to see if the hypothesized explanatory variables have a significant impact on the dependent variable. And the result of the regression is depicted in the table below.

Table 4.12: Multiple linear regression results

Variables	Coefficients	Standard error
Constant	1.654	6.898
Initiation	0.62	0.393
Planning	-0.183	0.264
Executing	-0.039	0.259
Closing	0.950	0.671
R squared	0.244	
Adjusted R square	0.128	

Dependent Variable: PPERFORMANCE

Source: own computation from survey data

From the table above coefficient of initiation, planning and closing are significant at level of 5%. The executing phase is significant at level of 1%. The regression result shows that project from management practices depicted in the table above, project closure is significantly and highly explaining construction project performance with coefficient of 0.95. Closure practice is the most

crucial element (practice) that is highly and considerably explaining construction project performance from all practices, according to the regression results. This could indicate that if the execution practice of a construction project is increased by one, the project's performance will increase by 0.95, providing all other parameters remain constant.

Following execution practice, the next component that has a significant impact on construction project success is initiation. The following are some of the practices used during the initiation phase: study the feasibility, environmental impact assessment, preparing project charter which describes scope, objectives, time, budget and risk can be used as a guide for completing the following phases. The coefficient of initiation is 0.62. This might mean that project performance will improve by 0.62 units as practices in the initiation phase are correctly implemented and rise by one unit while other parameters stay unchanged. As a result, we can conclude that paying close attention to each initiation practice and enhancing their effectiveness and efficiency will substantially contribute to the successful achievement of project goals and objectives, as well as the completion of the project on time and within budget.

Contrary to the above project phases, in regression results as can be seen from the table above planning has the lowest negative sign coefficient of all the components and explains the project performance significantly. This may necessitate more investigation.

The coefficient of project execution also indicates the negative sign and is not significantly explaining the project performance. Further investigation may need to assess this.

CHAPTER FIVE

SUMMERY, CONCLUSION AND RECOMMENDATIONS

In this chapter I will summarize the findings, conclusions and provide recommendation regarding the construction projects in Sebeta town. This chapter restates the research problem and provides an overview of the methodology used for the study. Discussion of the major findings that were obtained out of the research, and provision of recommendations and suggestions for further research related to project management practices in similar industries.

5.1. Summary

The aim of this study to assess the project management practice and performance in the case of construction projects in Sebeta town. Based on the survey result regarding the assessment of project management practices of project initiation, planning, execution and closure phase, as well as project performance the major findings are:

The average score of Project initiation phase achieved a mean of (2.9) which indicates a moderate level of initiation practice. The finding also indicates that there is poor practice of project risk study.

The total score of the planning phase achieved a mean of (2.94) which indicates a moderate level of planning practice. However, the findings also revealed that there are low practices of change, risk and safety management plan.

The project execution phase also has moderate scored on the mean but lowest among the four project life cycle/phases. The result of the survey indicates that the overall score of execution phase achieved a mean of (2.73) which indicates a moderate level of execution practice. It scored very low in project risk management and in setting clear communication channel with stakeholders. The rest of the activities are also moderate by their mean value. This indicates that project execution is also not properly handled in the office.

The total average score of the project closure achieved a mean of (3.14) which indicates moderate level of closure practice but highest among the four project phases. This shows that project closure was recognized and more practiced. On the hand finding also indicates lesson learned from most of the projects are not documented and disseminated as a result it couldn't be used for future projects.

Finally, from the above findings the researcher concludes that the overall project management practices have the mean value of 2.93 which is moderate level of practice.

The degree of association between project initiation, project planning, project execution, project closure and project performance were tested using Pearson correlation (2-tailed). All of the variables were positively related but have different level of association. Project management cycles/phases variables: project initiation, planning, execution and closure have strong and positive correlation to each other and this implies as one of the project management practices are properly practiced the performance level the others increase. The relationship between

Correlation analysis was used to determine the degree of association between project management practices and project performance. The result shows that, project initiation, execution and closure have positive relationship and moderate level of correlation with construction project performance. Project planning have positive but weakly correlated to project performance. As a result, we can deduce that all of the project phase practices and project performance have positive relationship. .

Multiple linear regression components were employed to see if the hypothesized explanatory variables have a significant impact on the dependent variable. The result indicate that project closure and project initiation have positive significant effect on project performance. On the other hand project planning has negative significant effect on project performance. Lastly regression result indicates that the coefficient of project execution is negative and insignificantly explaining project performance.

5.2 Conclusion

As discussed in detail in the literature part of this study, effective project management

increases the chance of successfully completing projects within time, cost and quality constraints. Project management also helps to achieve other project constraints such as customer satisfaction, and providing the business value of the project. Based on the results of this study and according to the five-point scale, “Likert scale”, Project cycle management in this study achieved a moderate level. The findings strongly sustain that there is a need to reinforce and develop the project management practices of construction projects in Sebeta city administration.

5.3 Recommendation

The researcher suggested the following points based on the findings stated above..

- Project risk which is rarely practiced should be studied, planned and managed carefully in order to avoid, reduce and mitigate unexpected problems that the project may face. Those actors in the construction projects should aware of project risk that encounter at the implementation/execution stage by giving emphasis starting from initiation stage.
- During project initiation feasibility study, environmental impact assessment and operational maintenance of the project should be studied carefully in order to meet the intended project objectives. Office setup which encloses all necessary equipment, communication, infrastructure, documentation and tools should be included in project office environment. All project requirement also studied carefully since it's necessary for planning of procurement. A project charter, which is very vital, should be used as main practice as it describe the scope, objective, time, budget, and risks of the project. It should be adopted and practiced by the appointed project team.
- Precise project planning is a fundamental project success practice, and project managers should plan and re-plan on a regular basis. Since many projects are dynamic in nature construction project plans should be reviewed regularly. Safety plan should be given an emphasis because construction workers are exposed to incidental accidents. It is necessary to develop and implement a stronger emphasis on project time and expense control. In order to prepare project plan, the planning process needs to be improved in terms of distinguishing project activities and routine tasks that include WBS, financial plan, project schedule, scope change management plan, quality management plan, risk management plan and other knowledge areas required for managing the projects.
- Lessons learned from past projects should be distributed and documented, and post-evaluation should be applied.
- One of the most essential measures that decision makers and project managers must consider is the adoption of a well-defined project management methodology. So emphasis should be given to project management knowledge areas. Short term project management methodologies should be given to project office staffs.

REFERENCE

Abbasi, G. Y.& Al-Mharmah, H. (2000).Project management practice by the public sector in a developing country.International Journal of Project Management, 18, 105109.

Alotaibi, Bandar, Mafimisebi, Oluwasoye (2016) - Project Management Practice: Redefining Theoretical Challenges in the 21st Century. Journal of Economics and Sustainable Development

Belete Boter (2017). *A study of Delay in Construction Projects: Case Study of Modjo Dry Port Construction Project. MA Thesis Addis Ababa University, Ethiopia*

Bethel Shewafera,(2019). An Assessment Of Project Implementation Practices Of Commercial Bank Of Ethiopia Head Quarter Construction MA Thesis, St. Mary's University

Biniam Alem,(2018). Project Success Criteria and Success Factor in The Case Of Projects Financed By Development Bank Of Ethiopia. MA Thesis, Addis Ababa University. Addis Ababa, Ethiopia

Cohen, J. (1988). Statistical power analysis for the behavioral sciences (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates.

Cooke-Davies, T. J. (2001).Towards Improved Project Management Practice: Uncovering the evidence for effective practices through empirical research. PhD Thesis, Leeds Metropolitan University, Leeds

Creswell, W.(2003).Research Design: Qualitative, Quantitative and Mixed Approaches.2nd ed. Sage publication, California.

Dan Brandon, PhD, PMP (2006): project management for modern information systems. Christian Brothers University, USA

Duncan Cartlidge, 2015*Construction project manager's pocket guide published by Routledge 2 Park Square, Milton Park, Abingdon, Oxon OX14 4RN*

E. Chandran, (2004). *Research Method: A Quantitative Approach with Illustration from Christian Ministries, Published by Daystar University*

Fetene Nega (2008. Causes and Effects of Cost Overrun on Public Building Construction Projects in Ethiopia. MA Thesis, Addis Ababa University. Addis Ababa, Ethiopia

Franck Marle, Ludovic-Alexandre Vidal(2016):Managing Complex, High Risk Projects. A Guide to Basic and Advanced Project Management. Springer-Verlag London 2016

Freezer Fetena .(2018). Assessing the Life Cycle of Projects in Commercial Bank of

Ethiopia Program Management Office. MA Thesis, Addis Ababa University. Addis Ababa, Ethiopia

Gebregziabher Hailu, (2019). Project Management Practices Of Ethiopian Electric Power Corporation In The Case Of Universal Electricity Access Program (UEAP).MA Thesis, Addis Ababa University. Addis Ababa, Ethiopia

Geoffrey M., David D. & David F. (2005). *Essentials of Research Design and Methodology:john wiley & sons inc*

Heagney, Joseph (2011).Fundamentals of project management / Joseph Heagney.—4th ed.p. cm.

Heale R, Twycross A(2015) Validity and reliability in quantitative studies Evidence-Based Nursing ***18:****66-67.*

Hollensen, S. (2007).Global Marketing: A decision oriented approach. 4th ed. s.l.:Prentice Hall.

ISO 10006 *standard (International Organization for Standardization, 2003).https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwjyhcCGlbTtAhWJiFwKHcJ3C4UQFjADegQICBAC&url=http%3A%2F%2Fwww.qal-iran.ir%2FWebsiteImages%2Fiso%2F15.PDF&usg=AOvVaw1qYd-P3UWyjYKBi_mNwcji*

Ivatury and Tekalign, (2020) *Critical Variables Influencing Project Performance in Real Estate Building Construction Sectors in Ethiopia, East Africa. International Journal on Emerging Technologies*

Joan, Joseph Castillo (2009). Systematic Sampling. Experiment Resources, cited by Freezer (2018)

Kerzner, H. (2009). *Project management: A systems approach to planning, scheduling, and controlling.10th ed.*

Ju¨rg Kuster, Eugen Huber ,Robert Lippmann ,Alphons Schmid ,Emil Schneider ,Urs Witschi

Roger Wu¨st (2015): Project Management Handbook, Springer-Verlag Berlin Heidelberg 2015

Konchar, M., Sanvido(1999):Comparison of U.S. Project Delivery Systems. J. Constr. Eng. Manage. 124 (6), 435–444

Medhin Haftom (2019 Assessment of project management practices and challenges: The case of Telecom expansion project (TEP) in Ethiotelecom. MA Thesis, Addis Ababa University. Addis Ababa, Ethiopia)

Melanie McBride (2016):Project management basics . How to manage your project with checklists. ISBN-13 (pbk): 978-1-4842-2085-6

Merima Nasser (2019). Assessment of IT Project Management Practice in Commercial Bank of Ethiopia. MA Thesis, Addis Ababa University. Addis Ababa, Ethiopia

Mohamed A.EL.Reedy (2016):Project Management in the Oil and Gas Industry.Scrivener Publishing 100 Cummings Center, Suite 541J Beverly, MA 01915-6106

Muhammad Sajid Saeed , (2013). *The role of project management practices in avoiding time and cost overruns, Munich, GRIN Verlag, https://www.grin.com/document/317978*

Ohara, S. (2005).Project and Program Management for Enterprise Innovation.PMAJ.

Parker, S. (2011). Sampling versus Census. A comparative Analysis.TNS Employee Insights.

Project Management Institute (2004), A Guide to Project Management Body of Knowledge: PMBOK Guide (3rd Edition),

PMI (2017); A Guide to the Project Management Body of Knowledge,(PMBOK-Guide) 6thed

Ricardo Falcioni(2017) Construction Industry: Transforming a nation a market insights report by *ITE BUILD & INTERIORS*

R. Atkinson (1999):Project management: cost, time and quality, two best guesses and a phenomenon, it's time to accept other success criteria

Int. J. Project Manage., 17 (6) (1999), pp. 337-342

Ronggui DING (2016): Key Project Management Based on Effective Project Thinking. China Electric Power Press and Springer-Verlag Berlin Heidelberg 2016. ISBN 978-3-662-47730-4

Shahu, R., Pundir, A.K., Ganapathy, L(2012): An empirical study on flexibility: a critical success factor of construction projects. Global J. Flexible Syst. Manage.

Tekalign L., (2014). The role of project planning on project performance in Ethiopia: MA Thesis, Addis Ababa University. Addis Ababa, Ethiopia

Walker, A. (2007). *Project Management in Construction-fifth edition. Hong Kong: Blackwell Publishing Ltd*

Wysocki, R. K. (2014). 'Effective project management: traditional, agile, extreme'. John Wiley & Sons.

Y.Q. Chen, Y.B. Zhang, J.Y. Liu, P. Mo (2012), Interrelationships among critical success factors of construction projects based on the structural equation mode. pp. 24

Yonas Tesfaye, (2018). Assessment of project management practice of Ethiopian resident charities in Addis Ababa. MA Thesis, Addis Ababa University. Addis Ababa, Ethiopia

Appendix A

Dear respondents,

My name is Daniel Zewdie, I wish to seek your assistance, as a participant, with this project work, which is being conducted as a partial fulfillment for my master's degree in project management at Addis Ababa university, school of commerce. I am presently preparing a research paper on the title "**An Assessment of Project Management Practices and Performance in the Case of Construction Projects in Sebeta Town**". Hence, I kindly request you to spend some part of your valuable time to fill this questionnaire related to construction projects that undertaken under Sebeta project office. The collected data will be statistically analyzed, and a conclusion will be finalized. Your participation in this survey is voluntary. The information you provide will be used only for the purpose of the study and will be kept strictly confidential. Please don't mention your name. Your assistance and cooperation will be highly appreciated.

Thank you!

Contact me via:

Tell +251-912209734 or

Mail: - danielzewudie@cbe.com.et

SECTION ONE: Questions related to the respondent's experience.

Please respond the following questions either by ticking the appropriate box or by writing your answer in the space provided.

1- Sex: Male □ Female □
2- Your Education: Diploma □ BA/BSc □ Masters □ Other _____
3- - Job Title: Manager□ Team leader□ Team member□ Other_____
4- - Years of Experience: 3-5 years□ 5-10 years□ 11-15 years□ more 15 years□
5- - Age: 20-24 years□ 25-35 years□ 36-45 years □ more than 45 years□

SECTION TWO: Issues Related with the study area

The following statements relate to project management practices. Tick appropriately according to the level of agreement on the specified practices:

1 = strongly disagree 2=disagree 3=neutral 4=agree 5 =strongly agree

STATEMENTS	RATING				
Project Initiation Phase	1	2	3	4	5
Feasibility study was undertaken for the project					
Environmental impact assessment and Sustainability were studied					
Project risks were studied					
Operation and maintenance of the project were studied on short and long term					
All project requirement were Studied					
"Project Charter" was prepared which describes scope, objectives, time, budget, and risks					
Project Team was appointed from the Beginning					
In your opinion, were all necessary equipment, communication, infrastructure, documentation and tools were included in Project Office Environment? (project office set up)					
Appropriate environmental impact assessment was conducted after project is identified.					

Project Planning Phase	1	2	3	4	5
There were preparation of detailed plan that describe how to implement the project					
WBS (work breakdown structure) was identified					
Expected duration (timeframe), resource (materials, people & equipment) requirement and costs for each activity were determined prior to project start					

Interrelationship between the project activities were clearly presented and defined					
Detailed project schedule was determined					
Prepared financial plan that indicates the required fund, source & the time the fund is required					
Change management plan is prepared					
Quality targets were determined					
Quality plan was developed to monitor the quality of the outputs and to identify actions that will be used to achieve the required quality					
Procurement of goods & services needed for project were properly planned					
Risks were identified & developed mitigation strategy					
Listed the criteria to be met to gain customer acceptance					
Performed Project Communication requirement analysis & Preparing a plan/strategy to address identified communication needs					
Developed a system for collecting and distributing project information					
Safety plan is developed to reduce incidental accident during project implementation					

Project Execution Phase	1	2	3	4	5
Activities carried out by the project team were controlled and managed effectively					
Costs were managed so it does not exceed the allocated budget for the project					
There were effective management of project time.					
Bidding processes were managed effectively					

There were mechanisms used to monitor quality during the implementation (Quality Assurance)					
Standards were set for the delivery of project outputs					
Risks were managed effectively					
Accurate & complete Progress reports were prepared and providing them to relevant stakeholders on time.					
There were effective and proper management of changes that arise during the implementation of the project.					
The problems and issues that arise during project implementation were managed effectively					
There was a clear communication channel between all the stakeholders					
There is mechanism to monitor safety during implementation (Safety Assurance)					
Project Closure	**1**	**2**	**3**	**4**	**5**
The project was evaluated after the closure					
Lessons learned from the project were Disseminated					
All Documentation for the project were documented after the project finished					

STATEMENTS	RATING				
Construction Projects performance	1	2	3	4	5
The intended objectives of construction project were successfully achieved					
Construction project was completed at its expected completion time.					
Construction project was completed within planned budget					
All the quality standards expected by project office(owner) from the project were successfully delivered					
All construction projects was completed in a way that can contribute to its designed goal					

Appendix B

Frequencies

Statistics

sex of respondents

N	Valid	31
	Missing	0

sex of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	24	77.4	77.4	77.4
	Female	7	22.6	22.6	100.0
	Total	31	100.0	100.0	

education level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Diploma	2	6.5	6.5	6.5
	BA/BSc	21	67.7	67.7	74.2
	Masters	8	25.8	25.8	100.0
	Total	31	100.0	100.0	

job title

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Manager	1	3.2	3.2	3.2
	Team Leader	7	22.6	22.6	25.8
	Team Member	20	64.5	64.5	90.3
	Other	3	9.7	9.7	100.0
	Total	31	100.0	100.0	

year of experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3-5 years	15	48.4	48.4	48.4
	5-10 years	11	35.5	35.5	83.9
	11-15 years	5	16.1	16.1	100.0
	Total	31	100.0	100.0	

age of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20-24 years	3	9.7	9.7	9.7
	25-35 years	24	77.4	77.4	87.1
	36-45 years	4	12.9	12.9	100.0
	Total	31	100.0	100.0	

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Feasibility study was undertaken for the project	31	1	4	2.97	.875
Environmental impact assessment and Sustainability were studied	31	1	4	2.58	1.025
Project risks were studied	31	1	4	2.45	.850
Operation and maintenance of the project were studied on short and long term	31	1	4	3.13	.846
All project requirement were Studied	31	1	5	2.94	1.181

"Project Charter" was prepared which describes scope, objectives, time, budget, and risks	31	1	4	3.10	.944
Project Team was appointed from the Beginning	31	2	5	3.65	.709
In your opinion, were all necessary equipment, communication, infrastructure, documentation and tools were included in Project Office Environment? (project office set up)	31	1	4	2.61	.919
Appropriate environmental impact assessment was conducted after project is identified.	31	1	5	2.71	.973
Valid N (listwise)	31				

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
There were preparation of detailed plan that describe how to implement the project	31	1	4	3.06	.854
WBS (work breakdown structure) was identified	31	1	4	3.42	.848
Expected duration (timeframe), resource (materials, people & equipment) requirement and costs for each activity were determined prior to project start	31	1	5	3.13	.991

Interrelationship between the project activities were clearly presented and defined	31	1	5	2.71	1.071
Detailed project schedule was determined	31	2	5	3.26	.930
Prepared financial plan that indicates the required fund, source & the time the fund is required	31	1	5	3.32	.871
Change management plan is prepared	31	2	4	2.61	.761
Quality targets were determined	31	1	4	2.90	.746
Quality plan was developed to monitor the quality of the outputs and to identify actions that will be used to achieve the required quality	31	1	5	3.10	.944
Procurement of goods & services needed for project were properly planned	31	1	5	2.94	1.031

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Risks were identified & developed mitigation strategy	31	1	4	2.61	.919
Listed the criteria to be met to gain customer acceptance	31	2	4	2.84	.735
Performed Project Communication requirement analysis & Preparing a plan/strategy to address identified communication needs	31	1	4	2.90	.790

Developed a system for collecting and distributing project information	31	1	5	2.87	.957
Safety plan is developed to reduce incidental accident during project implementation	31	1	4	2.39	.803
Valid N (listwise)	31				

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Activities carried out by the project team were controlled and managed effectively	31	1	5	2.84	.898
Costs were managed so it does not exceed the allocated budget for the project	31	1	4	2.55	.768
There were effective management of project time.	31	1	5	2.61	.955
Bidding processes were managed effectively	31	1	4	2.87	.922
There were mechanisms used to monitor quality during the implementation (Quality Assurance)	31	1	4	2.77	.762
Standards were set for the delivery of project outputs	31	1	5	3.23	.845
Risks were managed effectively	31	1	5	2.32	1.045

Accurate & complete Progress reports were prepared and providing them to relevant stakeholders on time.	31	1	5	2.81	1.014
There were effective and proper management of changes that arise during the implementation of the project.	31	2	5	3.00	.966
The problems and issues that arise during project implementation were managed effectively	31	1	5	2.84	1.068

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
There was a clear communication channel between all the stakeholders	31	1	4	2.39	.715
There is mechanism to monitor safety during implementation (Safety Assurance)	31	1	5	2.58	.992
Valid N (listwise)	31				

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
The project was evaluated after the closure	31	1	4	3.06	.929
Lessons learned from the project were Disseminated	31	1	5	2.71	.938
All Documentation for the project were documented after the project finished	31	1	5	3.65	1.018
Valid N (listwise)	31				

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
The intended objectives of construction project were successfully achieved	31	1	5	2.74	1.064
Construction project was completed at its expected completion time.	31	1	4	2.16	.860
Construction project was completed within planned budget	31	1	5	2.19	1.046
All the quality standards expected by project office(owner) from the project were successfully delivered	31	1	5	3.13	1.056
All construction projects was completed in a way that can contribute to its designed goal	31	1	5	2.77	1.146
Valid N (listwise)	31				

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.494[a]	.244	.128	6.122

a. Predictors: (Constant), PCLOSURE, PROJECTINITIATION, PEXECUTION, PPLANNING

-a. Dependent Variable: PPERFORMANCE

b. Predictors: (Constant), PCLOSURE, PROJECTINITIATION, PEXECUTION, PPLANNING

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.651	6.898		-.239	.813
	PROJECTINITIATION	.612	.393	.432	1.559	.131
	PPLANNING	-.183	.264	-.212	-.691	.496
	PEXECUTION	-.039	.259	-.041	-.150	.882
	PCLOSURE	.950	.671	.330	1.415	.169

a. Dependent Variable: PPERFORMANCE

Correlations

		PROJECTINITIATION	PPLANNING	PEXECUTION
PROJECTINITIATION	Pearson Correlation	1	.770**	.680**
	Sig. (2-tailed)		.000	.000
	N	31	31	31
PPLANNING	Pearson Correlation	.770**	1	.736**
	Sig. (2-tailed)	.000		.000
	N	31	31	31
PEXECUTION	Pearson Correlation	.680**	.736**	1
	Sig. (2-tailed)	.000	.000	
	N	31	31	31
PCLOSURE	Pearson Correlation	.557**	.625**	.641**
	Sig. (2-tailed)	.001	.000	.000
	N	31	31	31
PPERFORMANCE	Pearson Correlation	.425*	.297	.308
	Sig. (2-tailed)	.017	.105	.091
	N	31	31	31

Correlations

		PCLOSURE	PPERFORMANCE
PROJECTINITIATION	Pearson Correlation	.557	.425**
	Sig. (2-tailed)	.001	.017
	N	31	31
PPLANNING	Pearson Correlation	.625**	.297
	Sig. (2-tailed)	.000	.105
	N	31	31
PEXECUTION	Pearson Correlation	.641**	.308**
	Sig. (2-tailed)	.000	.091
	N	31	31
PCLOSURE	Pearson Correlation	1**	.412**
	Sig. (2-tailed)		.021
	N	31	31
PPERFORMANCE	Pearson Correlation	.412*	1
	Sig. (2-tailed)	.021	
	N	31	31