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THE EFFECT OF PROJECT MANAGEMENT PRACTICES ON PROJECT PERFORMANCE: IN THE CASE OF ETHIOPIAN ELECTRIC POWER GILGEL GIBE-III PROJECT

BY

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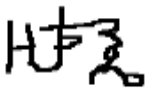
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DECLARATION

I, the undersigned, declare that the work contained in the body to this research project is my own original work and has not been submitted for any award. All information from other published and unpublished sources is properly cited and authenticated in accordance with relevant scholarly practice.

Signature Date

Tekilew Zewdu July, /2023



Certification

This is to certify that Tekilew Zewdu carried out under my supervision of research project "The effect of Project Management practices on project Performance: In the case of Ethiopian Electric Power Gilgel Gibe-III Project". The work is original and eligible to be submitted, meeting the requirements for obtaining a Master's degree in Project Management.

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The undersigned certify that they have read and hereby recommend to Addis Ababa University, Business and economic college, school of commerce to accept the research project submitted by Tekilew Zewdu entitled the effect of project management practice on project performance: In the case of Ethiopian Electric power Gilgel gibe-III project in partial fulfillment of the requirements for the award of a Master's Degree in project Management.

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LIST OF ACRONYMS

CAT	Communication Accommodation Theory
CCPM	Critical Chain Project Management
CFA	Confirmatory factor analysis
GERD	Great Ethiopian Renaissance Dam
KPIs	Key performance indicators
EEP	Ethiopian Electric Power
MoFED	Ministry of Finance and Economic Development
M&E	Monitoring &Evaluation
PMBOK	Project Management Body of Knowledge
PMI	Project Management Institute
PMO	Project Management Office
PRINCE2	Projects IN Controlled Environments
RII	Relative Significance Index
RBV	Resource-Based View Theory
SEM	Structural equation modeling
SPSS	Statistical Package for Social Sciences
TOC	Theory of Constraints

ABSTRACT

The purpose of this study is to examine the effect of project management practices on project performance. In addition, the study covers the assessment of practices of project planning, project implementation, project monitoring and evaluation, documentation review, communication in the project, stakeholder engagement, continuous improvement, information impact process and End of Level Meetings of the project management of Ethiopia Electric power Gilgel Gibe-III Project. The study used descriptive and explanatory methods and follows a combination of quantitative and qualitative research methods. A questionnaire was distributed to 44 employees of Ethiopian Electric Power Company's work on the Gibe-III project and three senior project personnel working in the study were interviewed. Regression and descriptive statistics were used for the analysis and findings show that descriptive statistics revealed that the mean values for project management practices dimensions namely project planning, project implementation, project monitoring and evaluation, project communication, stakeholders' involvement, developing effective procedural documentation*, continuous improvement and end-of-stage meetings is* 2.75, 2.83, 2.82, 2.92, 3.27, 2.94, 2.50, and 3.80 *respectively. This indicates that respondents were neutral on the seven dimensions of project management practices. In this study, the coefficient of determination (r square value) is 0.818 implying that 81.8 % of the variance in project performance is explained by the eight dimensions of project management practices. Furthermore, the result of linear regression analysis revealed that project planning* (B= 0.194*,* Sig. = 0.029), project implementation (B=0.138, Sig. = 0.000), Project monitoring and evaluation (B= 0.120*,* Sig. = 0.016), Stakeholder Involvement (B=0.113/ p<0.05), Continuous improvement (B=0.264/ p<0.01), End-of-phase review meetings (B=0.278/ p<0.01) *have caused statistically significant positive effect on project performance. On the contrary,* Project communication *B=0.037, p>0.05* and developing effective procedural documentation *B=0.008/ p>0.05 has caused a statistically insignificant effect on project performance. Finally, the researcher recommends that Ethiopian Electric power should train the project staffs on project plan, project implementation, project monitoring and evaluation,* Continuous improvement and End-of-phase review meetings.

Keywords**: **stakeholder involvement, continuous improvement,** **developing effective procedural documentation

CHAPTER ONE

1. INTRODUCTION

This chapter discusses the subject of the research. It includes research background, problem definitions (Statement of the problems), research objectives, research questions, research hypothesis, scope of the study, significance of the study and organizations of the paper.

1.1. Background of the study

A project is a temporary endeavor undertaken to create a unique product or service. This means that an identified and unique purpose, product or service is somewhat different from other products or services of a similar nature (Ali, 2010). A project is a short-term project to create a specific product or service with an end goal. This means that the execution of the project is based on the goals of the organization. Projects are implemented in different ways and vary in size, scope and affordability. Every organization wants to finish the job in the shortest time, at the lowest cost, but with the best quality. In this case, effective project management is the only way to achieve these goals because they allow better management of all the resources needed to influence actions (Mkutano, 2018). A project workflow is a set of processes that includes the process of completing the tasks defined in the project management plan to meet project specifications. This group of processes deals with the coordination and execution of business activities as part of the coordination of people and resources and project management (PMI, 2008). Project implementation is complex and often requires simultaneous attention to multiple people, budgets, and variables. Therefore, it is the responsibility of the organization's project manager to manage all the elements necessary for the success of the project. Also, projects are run in a dynamic environment, so identifying key factors for project success help focus on key areas and set priorities for different projects (Tamene, 2017).

Project management is one of the oldest activities of man, requiring the ideas of builders, architects, masons and engineers as proof of action, complete with pyramids, ancient cities, monuments and the Great Wall of China. Executing these tasks creates a greater need to plan, create and manage resources in the execution of each project (Mavuti, 2019). Project management began as a discipline based on managing the time, cost, and content of major projects during World

War II and was developed by engineering-based industries in the 1950s, 1960s and 1970s (Muhonja, 2011).

Before the 1950s, project management hadn't started using tools and techniques to solve complex projects. The US Navy has contributed greatly to the planning and development of modern project management systems and technology concepts. Some projects have contributed significantly to the advancement of modern project management techniques. In the 1960s, major projects such as the manned moon landing helped develop and use technology to manage major projects. Due to advances in technology, project management software was developed in the 1970s. In the 1980s only personal computers were used and then small companies started using computers for project management. Important project management tools such as PRINCE2 and CCPM were introduced in the 1990s. In the 2000s, the project management level was given. Also, project management methods, tools and techniques are now essential in many organizations and industries. With the challenges of globalization, dwindling resources and increasing population, project management has become more important (Tom Seymour, 2014).

The knowledge and importance of project management are increasing for organizations. Such a practice means that more and more projects need budget, time, etc. It is the field of knowledge management, whose importance has increased due to being forced to comply with the work. It increases efficiency and productivity when we use the best project management correctly. Project management has become a major change for many organizations; They facilitate the development of projects to better manage resources in their use, time, cost, and adverse constraints. Project management methods have been used since ancient times. However, no documentation of the system or process emerged until the mid-1950s, when new ideas emerged that created the tools of modern management. Since then, the modern concept of project management has gained great respect and wide acceptance in the private and public sectors of developing countries (Mavuti, 2019).

Project Plans are made through project management practices that many project managers do every day. Special project plans to be completed at the end of the project are determined. Time, cost, and quality targets are important goals and objectives for almost any project that measures performance; most discussed the details of completing the project (Mensah, 2007). Project management involves many things, including how to plan, organize, monitor and manage

the activities involved in a project and the collaboration of all employees to achieve it, including time targets, budgets and performance metrics (Mkutano, 2018).

Project management is performed by the company to enable it to complete the work or projects effectively and efficiently. There are many factors that determine the project and project management. User participation, management support, appropriate planning and support, realistic expectations, competent staff, clear vision and goals, capacity management, group problem management, monitoring and evaluation of success, project and risk management, etc. According to the Relative Significance Index (RII), resource support, project monitoring and evaluation, team management, and risk management are identified as key management that determines the construction of the project. Resource planning includes identifying financial, human, material, and technological resources and developing them to complete the project. Contractors need financial assistance to purchase equipment and machinery. Monitoring and evaluation of infrastructure projects is considered an important aspect of project management. It helps to monitor the progress of infrastructure projects. It also provides regular reports on the implementation of the project in terms of deliverables, project duration, and results. Project evaluation is defined as the objective evaluation of the design, implementation, and results of an ongoing or completed project (Ochenge, 2018).

Ethiopia has the second largest hydropower potential in Africa, with only 10% developed to date but nonetheless covering 90% of the nation ‘s electricity demand. Currently, the installed capacity is about 4,330 MW of hydro, but more than 6,600 MW are under construction. By 2020, about 14,000 MW could be in operation. Besides hydro, also geothermal energy and wind are going to be intensively developed.

Gibe III Hydroelectric Power Station is located in the Gibe-Omo River Basin, in the middle of the Omo River, about 450 kilometers south of Addis Ababa. Gibe III is a 1,870-megawatt facility containing a 240-meter reservoir forming a reservoir with an area of at least 200 square kilometers, water tanks of 11.75 billion cubic meters, underground and sloping embankments, and underground electricity. Station with 10 generator sets and switchyard. According to the African Development Bank (2018), Gibe III is one of the projects initiated by the EEP, financed partly by a loan from the Chinese government and partly by its own capital (85%).

1.2. Statement of the problem

Physically in Ethiopian Electric Power Gilgel Gibe-III project different problems were seen. Some of the problems were Changes to the scope of the work many times; The uncertainty and modification in the composition of the financing package; Contract Amendment more than 3 times; Change in time, cost, and quality of the project frequently; The estimated cost to accomplish the project were for an amount of 1,396,262,043.00 Euro with a time period of 1,812 days. But the projects were accomplished with an actual cost of l,470,000,000.00 Euro with a time period of 2,177 days.

Project management is one of the most important aspects of people and materials management and is important to an organization if it is evaluated to complete the work to do well and to do well. Knowledge and theoretical concepts of project management tools, practices, and processes continue to expand. However, the practical application of project management knowledge to practice is rarely explored in this field, especially in the context of government agency projects. Most importantly, there is no specific evidence in the country on how managers use project management tools and methods, especially project management practices, and how this affects the performance of the project. Based on this, many authors suggest that more research is needed, particularly on project management practices, tools and methods (DENBEL, 2018).

In order to adapt to the hydropower-oriented electricity development of the country, large-scale electricity generation projects have been implemented through the establishment of hydropower projects. The Gibe-III, Great Ethiopian Renaissance Dam (GERD), Genale Dawa3 and Koysha hydroelectric projects are projects carried out by the EEP. Therefore, the country still suffers from electricity shortages due to slow operation. The constant change of electricity also affects the development of the country as it affects the production and distribution of goods, exposes people to additional costs such as other energy consumption, external health costs, economic losses, and reduction of domestic products. Create more currency to get more fuel for diesel generators. Previous work in the EEP requires an evaluation of the company's work. Assefa (2017) examines the application of project management principles, tools and techniques in the ICT sector and Belay (2019) also examines the impact of project management practice on project success: Ethiopian Commercial Bank Hailu (2018) review case Key factors for success: World Vision Ethiopia case. Most of the research on project management in Ethiopia is on foundation construction.

Assefa (2017) examines the application of project management principles, tools, and techniques in the ICT sector, Belay (2019) also examines the impact of project management practice on project success: Ethiopian Commercial Bank, Hailu (2018) reviews case Key Factors for success: World Vision Ethiopia case. Lemma (2012), Mohammed, (2008), Assefa (2017), Project planning and performance, Teshome (2018), Monitoring and Evaluation, Asrat (2018), Project Implementation and Project Performance, (Harvey, 2005) End of phase review meeting with project performance were discussed.

This study aims to fill gaps in studies large government agencies project in Ethiopia; Projects to which peoples, government, and all stakeholder gives attention; Includes many project management practices; Measure performance in all time, cost, and quality.

Additionally, the impact of project management practices on the performance of large government agencies project in Ethiopia has not been explored.

Therefore, this study aims to explore the effect of project management practices on the project performance in the case of Ethiopian Electric Power Gilgel Gibe-III project.

1.3. Objective of the study

1.3.1. General Objective of the study

The general objective of the study was to study the effects of project management practices on project performance.

1.3.2. Specific Objective of the study

More specifically the study address:

- To test the effect of project planning on project performance.
- To examine the effect of Project implementation on project performance.
- To examine the effect of Project monitoring and evaluation on project performance.
- To test the effect of project communication on project

performance.

- To examine the effect of stakeholder involvement on project performance.
- To examine the effect of developing effective procedural documentation on project performance.
- To examine the effect of continuous improvement on project performance.
- To test the effect of end of Phase review meeting on project performance.

1.4. Research Questions

1. What is the effect of project planning on project performance?
2. To what extent does project implementation affect project performance?
3. What is the effect of Project monitoring and evaluation on project performance?
4. What is the effect of project communication on project performance?
5. To what extent does stakeholder involvement affect project performance?
6. What is the effect of developing effective procedural documentation on project performance?
7. To what extent does continuous improvement affect project performance?
8. To what extent does end of Phase review meeting affect project performance

1.5. Hypothesis of the Study

H1: Project Planning has a positive relationship and statistically significant effect on the performance.

H2: Project implementation has a positive relationship and statistically significant effect on project performance

H3: Project Monitoring and evaluation has a positive relationship and statistically significant effect on project performance

H4: Project communication has a positive relationship and statistically significant effect on the performance.

H5: Stakeholder involvement has a positive relationship and statistically significant effect on project performance.

H6: developing effective procedural documentation has a positive relationship and statistically significant effect on project performance.

H7: Continuous improvement has a positive relationship and statistically significant effect on project performance

H8: End-of-phase review meetings have a positive relationship and statistically significant effect on project performance

1.6. Scope of the Study

Many factors can affect project performance. This study focuses on the effect of cooperation in some project management. The performance of a project is measured by the achievement of time, quality and cost targets; Does not include other performance metrics used to measure performance. This work is specific to the Ethiopia Power Gibe-III project.

The scope of the study can be discussed in terms of the issue under investigation (conceptual scope), geographical area, methodological aspects, and unit of analysis.

- **Conceptual scope:** conceptually, this study is delimited to examine the effect of project management practices on project performance in the case of Ethiopian Electric power Gilgel Gibe-III project. Thus, this study were conducted in the hydroelectric power construction project.
- **Geographical scope:** geographically, this study is delimited to Ethiopian Electric power and Gilgel Gibe-III project which is located in Addis Ababa and SNNP region, Ethiopia.
- **Methodological scope:** Pertinent data were gathered using structured questionnaire and interview. Hence, the study applied mixed research approach and descriptive plus explanatory research design in order to meet the research objectives.
- **Unit of analysis:** In order to meet the research objectives data were gathered from Project wokers of Ethiopian Electric power. Thus, individual was the unit of analysis in this study.

1.7. Significance of the Study

This study deals the relationship between project management practices and project performance in the Ethiopian Electric power Gilgel Gibe-III project. This study adds to the existing knowledge and data to characterize the Gilgel Gibe-3 project and provides evidence of the impact of project management practices on the effective project that can be used as a basis for researchers and practitioners in the Ethiopian project company's. Ethiopian Electric power workers and management enter and prioritize how they use the tools and methods relevant to the operation of the project. Also, given the important social and economic role of these projects and the complexity of their management, project managers can work harder to develop knowledge and practices that lead to improved performance. The results of this study are expected to form the basis for further research on this subject by other relevant researchers. In addition, organizations involved in project studies in the country can improve the quality, time, cost of projects through quality of project management by taking this research as a reference.

1.8. Operational Definitions

- **Project Performance** - activities included perspective including keeping to project budgets and deadlines, profits, time saved, meeting or improving the required quantity and quality of product/service, and improving work processes (Georgios, 2013).
- **Project:** is a temporary endeavor undertaken to create a unique product or service" (PMI 2017 PMBOK guide).
- **Project Management:** project management is the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements (PMI, 2017)
- **Time -** Provide a suite of KPIs that facilitate measures of time performance improvement on a project-by-project basis, either within a single company or within a market sector. (Georgios, 2013)
- **Cost -** Provide a suite of KPIs that facilitate measures of cost performance improvement on a project-by-project basis, either within a single company or within a market sector (Georgios, 2013).
- **Quality** - Provide a suite of KPIs that can be used to measure quality improvements from the start of a project by measuring the number of 'quality issues (Georgios, 2013).
- **Excellence** in project management is defined as a continuous stream of successfully managed projects (Haron, 2017)

1.9. Organization of the Study

The researchers divided all these studies into five parts. The first part is an introduction of research report. This provides the background of the study, the statement of the problem, the research questions, the objectives, the hypothesis of the study, the implications of the study, and the research. The second part is the literature review. It discusses scientific thinking and presents the previous successful case of project management and the work of other authors. The third part is research design and methodology. In this section, the design, sample design, data collection process, and analysis that used in this study are discussed. Chapter four presents the findings and discussions of the research. Finally, the summary, conclusions, and recommendations are presented in chapter five.

CHAPTER TWO

2. REVIEW OF RELATED LITERATURE

2.1. Concept and Definition

2.1.1. Project management

Project management has a long history repeated in the miracle of people. Project management is defined as a collection of tools and techniques used to control the use of different resources to complete a specific, complex, one-off, cost-effective project and adverse constraints. Each task requires a unique mix of tools and techniques to fit the task environment and the task lifecycle (from concept to execution). Project management means planning, organizing, monitoring, and controlling all aspects of a project and the support of all stakeholders to achieve safety objectives and agreed time, cost, and performance. Project management is the name given to the use of knowledge, skills, tools, and techniques for activities aimed at meeting requirements. Project management is achieved through the implementation and integration of the initiation, planning, execution, monitoring, and closing management process. Project management is also said to be the ability of professionals to deliver products that meticulously complete a project by forming high-performance teams to ensure they have the most effective qualification and control methods and techniques and to create the most effective and best good way. The method is simple and effective (Ali, 2010).

Project management is the method of day-to-day operations, management and control, and decision-making of the project from its inception to its closing. Project management has become more and more important and all managers are involved in managing one or more projects. In addition, the importance of activities in organizations draws more attention. Project management knowledge can be useful for overall project performance and front-end analysis to ensure proper project management, control, and delivery. This approach helps maximize project performance (cost, time, scope, and quality) while minimizing project risk. Choose the right project management tool to streamline project completion and ensure ongoing project management (Hyttinen, 2017).

According to the Department of Labor, project management often includes coordination, managing people, and change. In general, "managing a project includes: determining what needs to be done; setting clear and achievable goals; assessing the quality, potential, time and cost needs of the competition; adapting specifications, plans, and procedures to the concerns and expectations of the various stakeholders". According to the PMBOK Project Management Guidelines, a project creates results such as a product, potentially a service, and results or information that can be part of another project or the final project itself. Project management is the application of knowledge, skills, tools, and techniques to activities to meet requirements. Project management is done through a process that includes five process groups. These are Initiation, Planning, Execution, Monitoring and Control, and Closing (Tamene, 2017).

While Turner (1996) has suggested that project management can be defined as the art and science of bringing a vision to life, Atkinson (1999) has suggested that project management can only be an evolving phenomenon that remains uncertain and uncertain. This change can see its benefits. In the early days, project management was only concerned with the implementation of a project at that time. However, many organizations today are embracing the concept of project management. This is mainly because of the approach to managing projects. It is a method that produces consistent results in executing new ventures and is a powerful business tool that can transform an organization's potential. Project management can also be used across the organization to increase individual and collaborative productivity. This can be done by creating a set of guidelines that establish best practices in managing projects (Ali, 2010).

2.1.2. Project performance

Different researchers have different definitions of what is good. Goldrat (1984) said that a project is considered complete if it is completed on time, within budget, and according to design. Nicolus (1998) saw project success as the aim of the project, and the project was considered successful as long as it met the project's objectives. Kezner (2007) states that a project is considered successful when it reaches the targets, at a specified time and cost, at a certain performance level, and when it is good and beneficial to use the capital layer allocation. Pinto and Slevin (1998) define project

performance as scheduling within budget and satisfying customers in terms of time, cost, quality, and safety.

Burke (2009) offers a more modern understanding of efficiency as a definition of the project's completion within the allocated time, within budget, performance or requirement of specification, and completion of the project, including receipt by the customer or end user. Low or minimal, approval of change without affecting the organization's business processes is important and does not change the culture of the company. The most important part of the performance is achieved by avoiding projects that are not within their budget, that are not within the specified timeframe for approval, design, and operation, and that do not meet the required standards for quality, performance, and conformity. Complete, safety and environmental protection (Flanagan and Norman 2003). Efficiency enables the business to maximize efficiency in achieving the project's objectives, reduce the risk and occurrence of uncertain events, and seize the opportunity when dangerous situations occur (Burke, 2008).

2.1.3. Project management practices

Project management is the work done by the project manager to ensure the success of the project. It includes initiating, planning, executing, monitoring, and managing communications to ensure project success. Project management helps organize and manage resources so they can deliver all the work needed to complete a project on schedule, time, and cost. The World Bank report (2007) shows that world leaders and governments recognize the importance of project management in achieving management goals. It is well known that management skills can help to understand the use of skills, tools, and techniques required for business activities that are important in achieving desired results. Heldman (2002)., community involvement and user involvement need resources, and appropriate research from some stakeholders is required for the project. Management practices in working groups such as business planning, project implementation, communication management, auditing, and evaluation are considered internal, while others that are used outside the organization, such as environmental workers and policy, but affect the performance of the project are considered External. Management (Grisham, 2006).

Best Project management practices are a process that has been proven through implementation and tested use specific and measurable benefits and long –term values in terms of increased project

performance outcome like decreased project cost, increased project performance like decreased project cost, increased employee productivity, improved client experience and increased number of new projects. (Muhonja, 2011). “PM practices vary significantly from one type of project to another.” (Payne and Turner, 1999) Different tools, techniques, and approaches are applied to different types of projects even within the same organization to adopt PM methods to the specific needs of each project" (Crawford, 2003) .

2.1.3.1. Project communication

Project Communication is the process used to ensure that necessary information is distributed to the right people at the right time. The main processes of communication management are communication planning, information distribution, reporting activities and managing stakeholders.

2.1.3.2. Stakeholder involvement

Organizational procedures relate to those who are affected by, or may be affected by, the implementation of an organization's decisions. Stakeholders can be inside or outside the organization. In many projects, the general public becomes a stakeholder throughout the project. Collaboration with partners must be supported by the importance of relationships in which everyone knows their role and communication between them is open and inclusive. Participants' contributions to a successful project include support from leadership and the use of an organizational structure to support the project.

2.1.3.3 Capacity planning

Planning can describe the work that can be done; explains the products to be produced and how these activities will be completed and managed. It defines all important tasks, estimates the time, resources and costs required, and provides a framework for management and control. It has a planning process to help complete and close the project phase. Plans completed at this stage will help the organization manage time, cost, quality, risk and related issues

2.1.3.4 Developing effective procedural documentation

Documents such as vision, mission, guidelines, procedures and reports should be made available to stakeholders to develop knowledge and process and ensure consistency for subsequent projects.

2.1.3.5 Managing multiple projects proficiently

Personal work, management, and integration in the business require a clear understanding of resources, cost, performance, human resources, communication, risk, and procurement. It has become more common for organizations and project managers to deal with multiple projects at once, called multi-project management. As a result, the management required for a project can be broken down into several tasks, creating a whole new set of problems with everything from one person to another to the entire organization. Elonen & Artto (2003) found some issues with running multiple tasks at once. Therefore, effective management of various projects must be done to overcome these challenges.

2.1.3.6 Monitoring and Evaluation

Monitoring and evaluation (M&E) are the periodic review of interventions, including policies, programs, and projects. Its purpose is to increase the effectiveness of in the design, creation, and implementation of policies, projects, and activities, and to increase the transparency and accountability of organizations using technology that impacts participants/business people, donors, and campaigners. Now, with mighty force. Emphasize the need to achieve (significant) results and demonstrate performance.

2.1.3.7 Continuous improvement

Continuous improvement requires an organization to understand the processes that influence the achievement of its goals. Evaluate the efficiency and efficiency of the process. Change processes based on real knowledge and experience. To continue development successfully, the following principles must be adhered to: Enduring leadership must be ensured in terms of commitment, commitment, and support. Organizations must clearly understand all objectives of the improved path. A continuous improvement plan should be an integral part of an organization's business plan. Results should be value-based, improvement testing should be set with specific and measurable improvement goals and objectives, simple procedures and strategies should be used, and

development should be knowledge- and evidence-based. And the belief that you can (and should) question the status quo can be changed.

2.1.3.8 End-of-phase review meetings

Closing may occur at the end of the project as planned or may end sooner if the need or reason for the project no longer exists. Business information should be sent to the person who will be responsible for delivering the desired results in the long term. Towards the end of the project, the project manager evaluates the project against the initial project data and reports to the SRO/project board so that it can close the project, perhaps at a closing meeting. So, at the end of the project phase, is there a meeting to discuss whether the work has been completed (as measured by PID) and then whether the changes have been approved? Have all delivery plans been developed, well managed, accepted, and communicated to staff and maintenance personnel? Is information about the defect given to the people who will use/operate/carry the shipment? Does the organization need to take responsibility for ongoing work, training, and maintenance of outputs? Are service providers notified that the project is about to end? Are all transfer requests forwarded to the appropriate "owner"? Have all risks that could affect results been communicated to the appropriate "owner" in the organization? Is there information about errors in product delivery for personnel and maintenance? Is there a post-completion review to measure the success of the results after the project (conditions of use, time, and responsibility should be defined)? Are learning materials documented and made available to organizations? Are project management documents submitted/saved for future reference?

2.1.4. Project Management Practice in Ethiopia

A large budget is spent on infrastructure in Ethiopia, including major infrastructure projects such as roads, housing, water conservation, and social engineering. infrastructure, which is about 33% of construction. (Ministry of Finance and Economic Development (MoFED), 2008). When looking at spending in other sectors, infrastructure is important because most social projects, such as schools and healthcare, involve essential equipment. Although there is a lot of money to be invested in infrastructure, the country's infrastructure is considered underdeveloped, even by sub-Saharan standards, because the culture of good project implementation and quality control is poor. The Ethiopian project did not deal with the planning process and the project implementation started

without a strategic plan. According to PMBOK (2004), the planning process is so important that projects without a plan often face delays and consequently increased costs. (Karlsson, 2011).

2.2. Theoretical Literature Review

2.2.1. Project Management Competency Theory

Research on the role of project managers has been a growing concern in the field with researchers and professional associations developing knowledge regarding project management competency. This theory was established by Mclelland and McBer in the 1980. The authors defined competency as characteristics of an individual that leads to attaining superior performance in a job or a situation. The project management competency development framework defines competency as a cluster of related skills, knowledge, attitudes, and other personal traits that influences the way an individual undertakes a given task. Competency correlates with project performance and can be improved by means of training and development of manpower. The theory explains the role of project management competencies, monitoring and evaluation of development projects and effects of group dynamics in the performance of infrastructure projects. Project manager competencies include influencing, communication, emotional, contextual, management, cognitive skills, professionalism, knowledge and experience, project management knowledge, and personal skills and attributes. The study further noted that highly skilled project managers can effectively apply different strategies to different projects to optimize project performance. The competencies of every team member should be assessed and included into a competency profile database which should be updated and reviewed frequently (Rezende & Blackwell, 2019).

2.2.2. Realistic Evaluation Theory

The realistic evaluation theory, First published by Pawson in 1997, it provides a -centered model for exploring what service delivery effects are, how they occur, and the importance of different factors as intervention outcomes (Pawson & Tilley, 2004). A realistic evaluation theory involves "what works for whom, what, and how." (Pawson and Tilley, 2004). The model allows evaluators to understand which aspects of an intervention make it effective or ineffective, and what elements are needed to replicate the intervention in other areas (Cohen, Manion, & Morison, 2008). The real test was to identify the conditions in context that led to positive effects, and thus to generate suggestions for how these could be done (FukudaParr, Lopes, & Malik, 2002). Theory can be very helpful in understanding how Project deliverables are generated during monitoring and evaluation. The theory is used to explain monitoring and evaluation variables (MKUTANO, 2018).

2.2.3. Resource Based View Theory (RBV)

Wernerfelt (1984) and Rumelt (1984) pioneered this theory. The theory says that there are strategic programs that give the organization an opportunity to create a competitive advantage over its competitors. This competitive advantage can help the organization gain a competitive advantage over other organizations. It is the project manager's responsibility to use the resources available in the project cycle. The project manager identifies and analyzes the company's resources, plans activities, assesses strengths and weaknesses, identifies opportunities for better use of resources, identifies fixed resources, estimates time and costs, evaluates cultural resources, and gets good results for rental building resources, and managing ability. to choose the strategy that is good in terms of sustainable development potential and that makes the best use of the company's resources and capabilities according to the outside world, to analyze the chance risks, and to identify the resources that need to be fulfilled. The theory is in the application of various services of the company to give the company a competitive advantage over other companies. It defines the role of productive and non-productive resources that enable companies to complete projects within budget, on time, and efficiently. RBV theory states that companies with adequate capital will have a competitive advantage over other companies and high-performing companies. He is aware that every project manager wants to improve the quality of his work (Ochenge, 2018)

2.2.4. Theory of Constraints (TOC)

The theory of constraints was developed by Goldratt (1984). Theory of constraints (TOC) is a management concept that focuses on weaknesses in the performance improvement chain. It is designed to help organizations consistently achieve their goals by identifying performance constraints. TOC includes the creation of services or products, delivery, logistics, distribution, project management, accounting and finance, research and development, sales and marketing, etc. can be used for It identifies four key constraints that hinder project performance. These; project scope, project cost, quality, and project completion time. The main thesis of the theory of constraints is that constraints have a negative effect on a company's performance. TOC is a way to identify constraints that prevent a project from being completed. Therefore, if companies can solve the problems in their systems and control the limitations, they can have continuous improvement management and thus more profit. In this case, the theory expresses the difference

between the variables and the effectiveness of the project. There should be as few restrictions as possible on all work to be done, otherwise, the quality and quantity of exported goods and services will decline. These limitations can include poor management, such as poor budgeting and overspending through corruption. This theory implies that project management should identify project constraints that may limit work and try to provide a direct way to resolve constraints. The theory also forces managers to be creative in finding strategies that enable companies to successfully implement their strategic plans in the presence of limited resources. Many of the constraints companies face are due to inadequate policies and supplies. The theory of constraints proposes the best possible results within the available constraints. It provides a framework for the tasks managers must perform when managing projects. The theory of constraints can be defined as terms, concepts, and indicators that focus on the logistical means that make business efficient (Zeynep Tuğçe Şimşit, 2014).

2.2.5. Social Information Processing Theory

This theory, proposed by Kylie (2013), explains how powerful communication can be created by a few people communicating online. The theory is that many people immediately overlook the effectiveness of online communication, but it is a powerful face-to-face communication medium. This type of communication is essential in an age where email communication is sometimes more common than face-to-face communication. Keeping this in mind, online communication is also important, and administrators need to be mindful of their words and how to properly deliver their message when offline. The theory shows how to improve communication between leaders and farmers. Management should be satisfied with the online communication system developed by as a project management system to facilitate access to global information to improve project work (SIMIYU, 2018).

2.2.6. Communication Accommodation Theory

Kylie (2013) proposed another theory of communication fit, which suggests that people adapt to the people they communicate with. Communication Strategy (CAT) is a comprehensive guide to personal and group communication. It tries to explain and predict why, when, and how people adjust their communication behaviors in social situations and what social consequences these

adjustments will have. A person should try to blend in with others while interacting by changing their speech patterns, body language, and gestures. It is the project manager's responsibility to communicate effectively with team members. However, the theory warns management to avoid extreme change, which can occur in four ways: extreme, emotional, dependent, and group change. The theory highlights the need to change the way of communication and use the appropriate method for a group or group to help gather all the information the group needs to function more effectively (Ochenge, 2018).

2.2.7. Management Theory of project Management

Nalianya (2018) reviewed the management process of project management and pointed out that management practices consist of three parts: strategic planning, practice, and management theory. Planning theory argues that when planning a project, there is control and focus over the effects or products of human activities. Basically, planning is an organizational activity used by managers as a tool to pool all the necessary resources (materials: people, materials, time, and project money) to work on the project. According to Ohara (2015), success theory states that success in management is related to assigning tasks to the workplace, which is also considered classical communication. But for it to be effective, classical communication theory must be complemented with speech/motor - the vices used for the operator to convey the work assigned to the office must be completed (Ohara, 2015).

Management theory includes two models: the themostat model and the experimental research model. The test model indicates that there is a process to be controlled in the production process, a performance test room, a performance standard, and a control room, while the technical test model of management focuses on exploring and working on different causes. causes, whereas in the case of deviation, it is not just changing the level of performance to achieve the predetermined goal. Therefore, project management involves measuring performance, identifying differences, and understanding their causes, effects, and the best way to resolve them. The learning process is a method that contractors can use to develop the project (Remmy., 2018).

Turn the plan into action and write in our thoughts the content of the three levels of management according to our thoughts; strategic planning, strategic planning, and strategic planning. These are all related to the independent variables in the study, business planning by management,

management processes such as M&E, and the implementation or completion of the project. The planning of agricultural projects should be done at the management level with the planning of resources such as people, equipment, time, and money. Execution of the project is important and is an important part of the project. This can be solved using theory. Finally, M&E is the manager of evaluating the performance of each project as it manages all business-related activities. In this research, these changes are related to management theory.

2.2.8. Stakeholder Theory

Samuel and Paul (2018) explain the stakeholder theory as it shows leadership in organizational management as a matter of organizational management and business ethics. The theory states that organizations should pay attention to human and group issues that can affect their activities when making decisions and achieving organizational goals (Sang, 2018). Ram (2005) pointed out that project management is the application of knowledge, skills, tools, and techniques to projects to meet or exceed the needs and expectations of project stakeholders. Stakeholder theory refers to organizations and their micro and macro environmental impacts and their impact on the functioning of organizations and posits that stakeholders come from within or outside the organization. Nalianya (2018) gave an example where many people were involved in a project such as customers, employees, suppliers, contractors, NGOs, government, and local communities. Stakeholder theory can be used to buy the community's trust in a project, stakeholder theory always provides the principles to identify, define and realize the benefits of the community as stakeholders. (Remmy., 2018).

2.2.8 **The Contingency Theory**

Organizational integration theory provides the basis for the study of organizational structure (Donaldson, 1995, 2001). "He argues that the design of the best organization is necessary for emergencies; the path about is considered important, the emotional, the emotional, the thinker, the clear structure of the structure of the scientific process " (S Cotter, 1992; p. 15). "Organizations are unique with different probability variables requiring different management methods; the approach challenges classical methods and models developed by management theorists such as Taylor and Fayol". Organizations use it as a resource when it comes to monitoring and evaluation. Managers can monitor and provide feedback using bottom-up or top-down strategies in a variety

of ways. In some organizations, monitoring, and evaluation can be done. In addition, organizations use different monitoring and analysis tools at different stages of the project lifecycle. Organizations are affected depending on their environment and what they do. What is important to the success of the organization in its planning is how it manages its relationship with key groups, which may include customers, employees, facility sales, communities, donors/funds, and other interests that may affect the achievement of relevant goals (MKUTANO, 2018).

2.2.9. The Cybernetics Theory

Proposed by Ross Ashby and Norbert Wiener in the 1960s, cybernetics deals with the mathematics of communication and control using control principles. Feedback can be good when the need is met or bad for immediate response or delayed. The instruction can also be used to determine the results of the communication sent or whether it has occurred. topics about how elements such as digital, mechanical, or biological control their behavior, how transmits, respond, and change information, or can change to accomplish important tasks. policies and improvements in company processes so that employees understand and deal with issues that affect them. Therefore, they need to know when to use a discussion or discussion because their main purpose is to interact with members. In addition, for any business that wants to get full performance from its employees in the use of cybernetics, it is useful to ensure that the feedback is qualified according to the attitude of the work, production, and better work. This theory describes different communication methods. (MKUTANO, 2018).

Hence all the theories discussed in the above supports the relationship between the individual project management practices with the project performance, the researcher uses or adopts all theories discussed in the above.

2.3. Empirical Literature Review

According to Cusworth and Franks (2003), project management usually determines the success or failure of most projects. They added that for any project to be completed, it is important to understand where project management fits in an organization. Morris (2004) agrees, because mismanagement often causes projects to be completed late or over budget, not completed as expected, cause serious stress to the organizations involved, or be removed before completion after

spending a lot of money. In addition, project management provides opportunities for project managers to improve their knowledge.

Kezner (2007) stated that a project is considered completed if it achieves the objectives of the project within the time and cost specified in the performance criteria while using the distribution of good and useful resources. Burke (2009) offers a more modern understanding of efficiency as a definition of the project's completion within the allocated time, within budget, performance or requirement of specification, and completion of the project, including receipt by the customer or end user. At least Reduce or Replace for mutual agreement without interruption Does not impact the organization's core business processes and does not change the organization's culture (Burke, 2008).

Samuel and Paul (2018) examine the role of project management on performance in Kenyan NGOs. This study aims to find out the impact of communication, planning, stakeholder engagement, monitoring, and evaluation on CSO performance. This research is guided by the theory of constraints, contingency theory, and organization theory. In this study, descriptive research design was used. The target audience of this study is 201 NGOs operating in Nairobi District. Stratified and simple random sampling was used to select 50 % of the target population, 100 NGOs in Nairobi County. Raw data were used in the research. This study collects raw data through the use of questionnaires. After confirming that all data collection was complete, quantitative data were analyzed using descriptive and inferential analysis. Findings showed that project performance improved due to the use of good project management techniques such as communication, planning, collaboration with stakeholders, and monitoring and evaluation of projects. This study concluded that communication in the project can affect the outcome, so establishing a clear and controlled communication model should remain in the process of team leaders and management before each project begins. The study concludes that planning, stakeholder engagement, and monitoring and evaluation are effective and have a positive impact on project performance. Research shows that organizations need to develop and promote effective communication throughout the organization. Raise awareness of the need for planning, monitoring, and implementation at all levels by stakeholders and the wider community. The study also recommends that stakeholders participate in all pre-implementation and kick-off meetings and that their ideas be planned and implemented. However, this study did not identify the cause (MKUTANO, 2018).

Eric and Patrick (2014) review current research, ideas, and concepts in project management and business management and provide a framework for establishing treatment and current practice. Combining the existing literature on project/program management, governance, and knowledge management, this document describes four key elements to improve project performance and thereby create value for the organization. The four elements are Portfolio Management, Project Sponsorship, Project Management Office (PMO), and Project and Program Support. (Eric G. Too, Patrick Weaver, 2014)The purpose of the framework described in the paper was to provide guidance to organizations in the development of effective project governance to optimize the management of projects. But no quantitative data was included.

Mohamed (2013) examines the impact of project management on organizational performance - the case of Afghan NGOs. In his research, cost, time, and quality are considered the most important objectives in any project, and all these factors need to be taken into account for the analysis of the act of completing all projects. The questionnaire was adapted from previous studies and distributed to employees working at different levels of NGOs. A total of 260 questionnaires were distributed to senior, middle, and lower-level employees of project NGOs working in Afghanistan. A total of 260 questionnaires were distributed to the participants and 210 of the 230 returned questionnaires were retained for data analysis. The survey is also used to determine the extent to which management () affects the performance of the organization and to measure the uptime, cost, and quality of organizations, thereby improving the performance of the organization. Assessing the impact of management practices on organizational performance Data analysis using factor analysis (CFA) and structural equation modeling (SEM) Use SPSS 20 and AMOS version 23 and Smart PLS to identify the relationship between project management and organization. performance, even if it takes a few things (ASLAMI, 2013).

2.3.1. Project Planning and Project Performance

Lemma (2012) shows that the success of a project often depends on the quality of the project. With a good plan, the probability of completing a project is high. A research paper by Garg and Yadav (2014) states that project planning and management are one of the most important elements for the success of any project. Planning is essential for any project that uses its tools and methods. As demonstrated in a research paper by researchers Morardet et al. (2005) identified poor planning

and implementation as one of the main reasons for the failure of agricultural irrigation and water management activities. Thus, according to the literature review, a project plan is a collection of specific plans created by each experience. Additionally, having a well-developed strategy is crucial to the success of any project. Mohammed (2008) reviewed and analyzed the planning work of Project 14, Project 13, Kilinto, and the headquarters of Addis Ababa real estate and his analysis showed that the research organization's overall project planning practices were poor, but the level of A staff was good. the existence of the project plan. On the other hand, the most commonly used tools for planning work breakdowns, Gantt charts and project management documents are useful, although they are not exactly what they should be (MOHAMMED, 2008). Whittaker (1999) stated that poor planning, especially poor management, and poor planning, is one of the causes of project failure. Operational planning contributes to bridging project uncertainty and project completion (Aladwani, 2002). Incorrect planning is the most important factor in the failure of the project (Nguyen M., 2003). In this research, the relationship between the planning process and different aspects of project success was examined. Aladwani (2002) also reported the relationship between planning and project performance. Dvir, Raz, and Shenhar (2003) also examined the relationship between project planning and project success. Their results showed a positive correlation between job readiness and overall success. Although many factors affecting the result have been taken into account in previous studies, planning is considered an important factor in the success of the project. Better planning early in the project lifecycle has a positive impact at the end of the project. (Wang and Gibson 2008). Findings from the present study show that job readiness is positively associated with job success (Shahzad Naeem B. K., 2018). The study of Novo, Landis, and Haley (2017), its role in project and project management was examined. This study was conducted to explore the skills and leadership abilities of the project manager and how they contributed to the success of the project. The results of the study show that the planning process has a direct impact on the ability of the project manager. Likewise, the leadership skills of the project manager are closely related to the success of the project. This study by Buba and Tanko (2017) examines the impact of operational planning on the performance of construction projects. A total of 43 questionnaires were distributed to 3 main groups of participants, including quantters, builders, and architects working as project managers in Nigeria. The manager's ability to execute directly has proven to be the best leadership style to facilitate the best performance of the project and at the same time promote the relationship between the righteous. Yang, Huang, and Wu (2011) examined the relationship

between project planning and project success. This study uses questions to measure the project manager's leadership style, and project success in terms of scope, budget, quality, and customer satisfaction. The findings show that better project management can improve the relationship between team members. Research also shows that team spirit has an impact on the project (Mkutano, 2018).

2.3.2. Project Implementation and Project Performance

Assefa (2017) examined project management techniques and the use of tools and techniques in the ICT sector. Their results show that the group's management process was successful overall, but interviewees identified some shortcomings, including collaboration and limitation of collaboration without Participant registration, and management institutions not at all ready, the project is a well-managed gap budget change in Management. The main change, acquisition and development of the working group is to communicate and disseminate relevant information to stakeholders to meet and solve the needs of stakeholders (ASSEFA, 2008). Actions are used by leaders to bring about change in the organization by creating an environment in which change can survive and take hold. Implementation is the process of implementing changes in an organization by the manager. It is generally accepted that managers are key participants in the process and the application aims to implement new or modern changes. Operational strategies have evolved to plan, coordinate and manage the complex and diverse activities of daily business and commerce. All work together to create ideas and new business (KIRAGU, 2015).

2.3.3. Project Monitoring and Evaluation and Project Performance

Teshome (2018) examines project monitoring and evaluation practices in NGO projects in Ethiopia: the status of selected NGOs in Addis Ababa. Their findings show that the monitoring and evaluation of the examined NGOs are affected by the lack of resources allocated for monitoring and evaluation, the lack of adequate monitoring and evaluation, and the lack of participation of stakeholders in monitoring and evaluation, especially the lack of participation of beneficiaries, lack of information. selective reporting of studies, monitoring, and evaluation of results. The main function of monitoring and evaluation practices is accountability and transparency for donors. In general, his work amended Decree No. 2487, recommending that adequate funds and resources be allocated. 621/2009 and indicate cooperation (Teshome, 2018). Many believe that M&E planning

is necessary to create a successful M&E project. This is when many stakeholders work together to promote their particular concerns and needs, as well as deliberately opposing interests. Participants clearly define monitoring objectives and identify information or activities that require monitoring, collaboration, responsibility and methods of data collection and media coverage. Early design, development and authorization of strategies and operational results during the planning phase contribute to strong monitoring and evaluation. Service providers often view monitoring and evaluation as complex; donors make or enforce commitments that are not related to service interruption. Project partners and employees often fail to value the time spent on monitoring and evaluation planning and are often reluctant to devote time to planning. This leads to resource allocation for M&E in project design and development (White, 2013). Ultimately, this affects how M&E is implemented throughout the project lifecycle. It does not allow sufficient time and is sometimes used after the event, so monitoring and evaluation practices can be considered irrelevant. Good monitoring and evaluation practices mean collecting the right data and understanding how to apply it to ongoing processes. This means: regular review of participation; reviewing assumptions based on new information gathered; update the transfer process; ensuring broad cooperation and dialogue while implementing and monitoring activities; Adjust activities according to your needs. Ricafort (1996) pointed out that this process should be studied carefully. The information needed in M&E and the use of feedback strategies are also important for M&A implementation. The value of positive feedback, which is an essential part of the M&E study, cannot be overemphasized. Organizations need to develop feedback strategies () to share information with different stakeholders to build their knowledge and learning and opinions .There is general consensus on the shortcomings of the current feedback platform (Mebrahtu, 2002). Feedback is generally considered an afterthought when the movement of forward data is more calculated or planned and may be affected by latency or is not contagious, with little effort for low transmission. The main problem with at this stage is the ownership and use of data. Traditionally, the document has often left its original location and moved to another location to meet the document needs as well as requests from funding agencies, government agencies, and other outside organizations. These prevent indigenous participants from gaining knowledge and creating and creating their own experiences (Estrella, 2000).Knowledge must be shared with , who work tirelessly to create knowledge for them to enjoy and use. Monitoring and Evaluation is particularly important for sustainability as it allows for regular review of program quality

(Espinosa, 2000). M&E should be done with the participation of beneficiaries and time should be given to evaluate progress. Assessments should be used as a management tool to identify weaknesses and develop actions to address them. Finally, they direct projects towards sustainable development goals (Plastow & Pantuliano, 2001). According to Vernooy (1999), the direct participation of local people and organizations in monitoring and evaluating their development is a step towards self-help and goal achievement. However, many support organizations have not established a monitoring system with a mission to enhance the capacity of partners and local residents to intervene, identify and do; improve accountability to partners, beneficiaries, regulators and donors (Chamoun, 2006). Findings include appropriate planning of quality care, databases, performance indicators and results, school visits, stakeholder meetings, documentation of work activities, regular training, etc. showing that it requires effective procedures involving actions. The most important thing for good monitoring and analysis is choosing what to monitor, record and analyze and who to include. The factors that determine what will be monitored and measured are the importance of processes, budgets, effectiveness, direction, and sustainability (Monterey, 2012. Other studies Researcher, Tadesse (2016) Challenges of Government Organizations Working on HIV/AIDS in Ababa: A Perspective The study, which evaluated management practices and problems, revealed that the programs did not have monitoring and evaluation systems. Research by Sisay (2017), Yohannes (2017), Mutyaba (2013), and Peter (2017) to evaluate the factors that determine the effectiveness of M&E and their impact on the work done (Teshome, 2018).

2.3.4. Project communication and project performance

Asrat (2018) examines the role of management communication in the development of the construction industry: the case of Modcon Engineering PLC. His research has shown that the planning and implementation of project communication and the use of tools and technology play an important role in improving the performance of the construction industry. His research also shows that poor communication leads to project delays, project cost overruns, and project abandonment. Project communication has also been shown to have an impact on the work of professionals in the construction industry. The use of the development of communication management is the advice of his research.(Asrat, 2018). Nyandika and Ngugi (2014) found that

the effectiveness of the project depends on communication, feasibility studies, training and meetings (Remmy., 2018).

According to Nyende (2011), communication and management are also important aspects of project management. Poor project management of product information also affects performance. Naqvi and Aziz (2011) examined the impact of communication between partners on project performance. A random sample of 70 technology projects was selected from 24 software companies. Affare (2012) made an assessment of management communication for construction in Ghana. A study by Afroze and Khan (2017) explores the impact of effective communication and business complexity on international construction work. The impact of communication and project complexity on project performance is measured with an analytical approach. Questions were sent to 60 international organizations working on these projects. Studies show that these practices are effective and have a positive impact on project performance; The complexity of the project has the least effect on the relationship between communication and performance.

2.3.5. The stakeholder involvement and project performance

Hassan (2010) has shown that there is a positive relationship between stakeholder engagement and business performance, a positive relationship between stakeholder engagement and work engagement, and a strong relationship between stakeholder engagement and performance. Regarding, climate justice project is similar to poverty performance project , ethical climate project is similar to project commitment, project commitment is positively related to overall performance 444. Findings show a positive relationship between stakeholder engagement and project effectiveness. Poverty reduction projects indicated that if team members were willing to work overtime to complete missing tasks and saw the task as the center of their lives, this should improve quality. Goods and services offered by the project This study also shows a positive relationship between participants' engagement and commitment, meaning that if participants focus on the work they are doing on the project and generally work harder, they will have an opinion about the project. and therefore, true to the purpose of the project. As companies excel at project management, the benefits of doing more with less time and resources become apparent. Companies are no longer fake, they are working hard to develop a resource planning model to understand how much new work can be done within current constraints. The approach outlined in this diagram

applies to both project-oriented and non-project-oriented organizations. The "Planning Scope" line represents the scope of resource planning. The combination of this line and the Manpower Needs line gives us an indication of capacity compared to the available workforce. This process is viable if completed early to provide training time for future workforce shortages. (Dkerzner., 2009). Njogu (2016) reported that stakeholder engagement in project monitoring has an impact on vehicle emission control project performance, project analysis affects vehicle emission control project performance, those involved in business planning affect those involved in the project budget, and determines roles and responsibilities. staff, use of capital layers, and interventions to maintain allowance are usually work-related. Adan (2012) found that the role of the project manager and government officials in the implementation of the project led to better performance (NJOGU, 2016).

2.3.6. Effective procedural documentation and project performance

A good information system will speed up the management process, facilitate support from all levels of management, and improve the communication process. The type of knowledge program chosen depends on whether we need formal or informal management, but it should demonstrate how task-oriented activities are conducted and communicated in various settings. Project management policies, procedures, standards, and procedures may provide some of these tools to define methods and standards for collecting, processing, and communicating relevant information about the project in a defined, structured manner (Meredith & Mantel, 2010). But the project is planned and followed. It involves more than knowledge production. They require the cooperation of the entire working group, including the support center, subcontractors, and senior management, which promotes unity. Information systems help to provide guidance and consistency, promote efficient but limited knowledge, communicate information clearly and effectively, establish information standards, group collaboration, provide a basis for analysis, make data available for future use, etc. helps (Harold, 2009).

2.3.7. Managing of multiple projects

Mikael and Alexander (2013) reported that different projects were affected as many projects presented new challenges and the planning phase proved to be the most important phase because many projects allow the project manager to keep track of other projects, their progress, and team

availability. Good communication between teams and gradually removing expectations from work as much as possible. People with good multitasking skills are best confused with people who are good at working alone because it's not difficult for people to share work. Special attention should also be paid to work assignments because participation in many projects can cause a lot of stress for the project manager and other members. Project managers don't have a lot of project management skills, which can affect the planning stages and team building of many projects, let alone providing the necessary details and shared resources of urgent work. Finally, task selection is of particular concern in the accelerated process because inconsistencies in the data indicate that more research is needed to demonstrate its impact on the course of many projects. For example, traditional and agile methods can be compared for more important points and possibilities in selecting different job tasks (Hedberg & Höglander, 2013).

There are several factors that support managing multiple projects. First, the cost of managing a full-time employee on every project can be very high. The size and risk of each project determine whether to work full-time or part-time. Allocating full-time employees to jobs that don't require it is very costly to manage. In the early days of project management, it was considered good practice to over-manage projects as we knew very little about risk management. If the main function of the project is to be effective, it must be used correctly to ensure employees' trust in the system. Managing multiple projects is nearly impossible if sponsors/clients are allowed to change constantly. When using multi-project management, it's important to understand that most changes need to be made through development projects rather than permanent changes. Project management processes range from strict rules and procedures to more informal guidelines and checklists (Grisham, 2006).

2.3.8. End-of-phase review meetings project performance

End-of-stage review meetings now have a different meaning. First, managers are not afraid to eliminate projects, especially when goals change, goals are not met, or resources are available for other projects that will be successful. Leaders now spend more time assessing future risks than focusing on past successes. As managers are now more business-focused than technology, managers need to inform about business risks, reassess the cost-benefit ratio, and make any business decisions that may affect the end goal. Simply put, final-level meetings now focus more on business decisions than processes (Harvey, 2005).

2.3.9. Continuous improvement

Continuous improvement means the improvement of the business itself, which affects the strategy of the whole company. In fact, it is a revolutionary discipline that includes methods and principles. It can be called thought. The business rationale used determines the depth of this thought. When determining the depth of the change, business people often need to know what the purpose of the change is and how their organization will benefit from the change. The need for change arises when the organization realizes that the business needs to be more profitable or that it needs to cut costs. Performance improvement will begin, for example, when the organization begins to sense changes from customers, and owners, or when the financial curve does not look good enough. Shareholders have the power to signal the board of directors and then the entire organization can create needs and requirements to improve the company's business, which are voluntary reasons where managers are forced to initiate changes to increase productivity. yield. reduce costs for better results. But sometimes these signs affect the entire organization or just some departments within it. In some cases, reengineering can tap into processes or tasks, resulting in greater efficiency and cost control. These signals may be based on some external changes such as differences in customers or consumables or delivery issues. Organizations need to improve their business processes based on these indicators and respond better to these changes. Basically, companies obviously get a good job in business when they can respond quickly enough to all the needs of the business. This background leads to discussions about productivity, productivity, and performance. These three questions have a strong connection with the business itself. Efficiency and profitability are business indicators, for example, an increase in productivity and profit margins shows the profitability of the company, business, or production.

2.4. Conceptual framework

In the study, the conceptual framework captures project management practices and their effect on performance of Gibe 3 project. From the different review of theoretical, and empirical literature the researcher presents how Independent variables which include: Project planning, project implementation, project monitoring, and evaluation and project communication, stakeholder involvement**,** developing effective procedural documentation , Continuous improvement and End-of-phase review meetings are related to a dependent variable project performance.

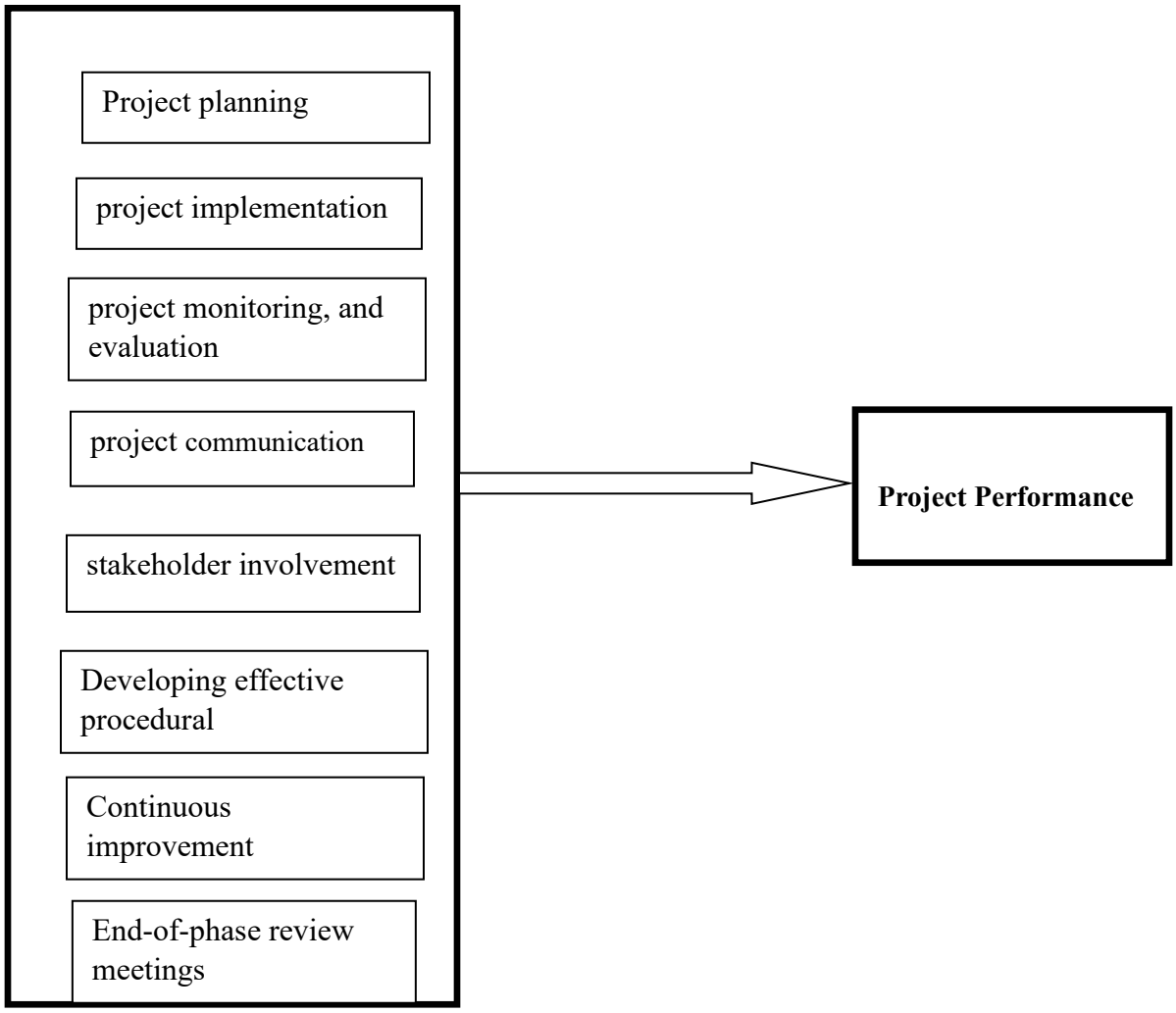


Figure 1:Conceptual Framework

Source: - Researcher compilation adapted from authors, 2023

CHAPTER THREE

3. METHOD OF THE STUDY

3.1. Introduction

This section attempts to explain the process used by to meet its research objectives. Thus, methods refer to research design, study approach, model design, model specification, data types, collection methods, tools, materials, analysis techniques, reliability and validity of tools, and ethical considerations were discussed.

3.2. Research design

This research includes descriptive and explanatory research design. In general, research studies can be descriptive, exploratory, or explanatory. Descriptive research is appropriate when asked, and the purpose of the research is not to establish a relationship. More descriptive studies include the evaluation of behavior, theories, populations, events, and methods. Explanatory research is used to examine the relationship between variables (Creswell, 2009). Exploratory research is used when the subject is a new and unexplored research topic. According to this research, descriptive research was always work as research that uses data collected to analyze the performance of the selected company (Ethiopian Electricity Power) and Explanatory research designed to test the hypothesis and see the relationship between the project management practices and project performance. Therefore, descriptive and explanatory research designs were used in this study.

3.3. Research approach

In fact, this research uses a combination of quantitative and qualitative research. According to Creswell (2014), combined use provides a more comprehensive understanding of the research question and interprets or structures research findings by triangulating different data sources and sources. Quantitative research is an objective measure of a problem that seeks facts and tries to establish relationships through statistical tools. Creswell (2014) defined quantitative research as testing objective hypotheses by examining the relationship between variables. These variables are usually measurable, so statistical programs can be used to analyze the data. Qualitative research is the "subjective" assessment of a problem (called personality, different, things, or problems) in the

form of a feeling, opinion, opinion, or behavior. Kothari (2004) pointed out that qualitative research is about events that occur in the natural environment. This allows researchers to create detailed information about individuals or organizations. Therefore, this research used both quantitative and qualitative research.

3.3.1. Population of the study and sampling technique

The target population for this report included project managers, senior project managers, , consultants, employee representatives, and other support personnel responsible for planning, engineering, supply chain, implementation, management, and service. on the ground. All processes have been successfully completed and the target audience is expected to be 50 people. In terms of research methods, there are two types probabilistic sampling techniques and nonprobability sampling techniques. It is a sampling method that does not have a basis for estimating the probability of each item in the population included in the sample, such as non-probability sampling, opinion sampling, purposive sampling, and sampling. In this type of sampling, the sample is chosen deliberately by the researcher. As a non-probable sample, the organization of the survey aims to select from the large size to be the model or representative of the whole, according to the size they choose from the large size to form the sample of the units in the world (Creswell, 2009). Because this study did not consider a random sample, the target population was chosen by decision only. Therefore, the target population for this study was chosen as a non-probabilistic selection method of decision selection which is census sampling. The decision-making(judgmental) process is better to gather detailed and reliable information from sources with information and/or direct knowledge of the research topic.

3.4. Sampling Determination

According to the information obtained from the sources of the Ethiopian Electricity Authority (EEP), there are currently 50 employees. The incumbents list includes 44 people directly involved in the project. According to Kothari (2004), it can be assumed that in such questions, when all items are covered, there is no chance of remaining and achieving the most accurate results. Even the small amount of bias in these studies is greater than in many other studies. In addition, there is no way to check for lack or extent other than re-examination or review using samples. However,

this type of research takes a lot of time, money and effort. Therefore, when the content of the question is broad, this approach may be difficult to adopt due to the resources involved (Kothri, 2004). Since the total target population is relatively smaller there is no wastage of time, energy and cost if population as a whole is considered, so there is no need to consider sample. Thus, the researcher take all 44 target populations for the study.

3.5. Data source

The study used both primary and secondary sources. Primary data collection instruments would use in this study would questionnaire and interview, whereas, among secondary method of data collection instrument various documents, and reports would be reviewed.

3.5.1. Primary Data sources

In order to achieve the research objectives, pertinent primary or first-hand data were be gathered using different tools such as questionnaire and interview.

3.5.2. Secondary Data Sources

The study also based on secondary data collected from different sources such as books, journal articles, conference proceedings, masters or doctoral theses, company reports, etc.

3.6. Data Collection Instruments

3.6.1. Questionnaire

Questionnaires were the main way of collecting data in this study. Questionnaires from different researchers were used and researchers were developing a project management perspective and review of related documents. The questionnaire, consisting of scales and closed-ended questions, was created using a five-point Likert model. The survey consists of two parts. The first part of the survey focused on the demographics of the respondents; The second part contained questions that focus on the participation of the participants and highlight the main points of the research objectives. The questionnaire uses simple and easy-to-answer questions that describe a need or behavior. Prepare an appropriate questionnaire as a way to collect raw data from a large number of respondents in a limited time. The process is used to gather qualitative and quantitative

information from project managers and experts directly or indirectly involved in the project. A study was conducted with a selected sample of Ethiopian electrical workers.

The reliability of the data was tested as 0.783 Before starting to collect the original data which is a pilot study were performed with 15 respondents, the interviewer also consulted some experts. This questionnaire has been revised based on expert opinions.

Table 3-1 Questionnaire characteristics

Variables	No of items/statement	Name of the scholar/s who developed the scale, year)
Project Communication	6	Nguyen et al. (2004), White and Fortune (2006), Chan et al. (2001)
project monitoring, and evaluation	5	Chanet al. (2001), Chuaet al. (1999), Yeo, (2002)
Stakeholder involvement	4	Pinto & Slevin (1987, 1989), Kerzner, (1992, 2001, 2003)
Project Planning	6	Chanet al. (2001), Pinto & Slevin (1987, 1989),
End-of-phase review meetings	4	
Continuous improvement	5	Chanet al. (2001)
Project Implementation	5	Khang, D. B., & Moe, T. L. (2008)
Project Performance	7	Enshassi, et al. (2009), Enshassi, et al. (2009) T akim, and Akintoye, (2002), rom (Chou and Yang, 2012) and (PMI, 2017)

3.6.2. Interview

In-depth interviews would have been selected as a method, given the selected group and small number of individuals needed to provide information and insights on the subject. A semi-structured

interview checklist was be used to collect the qualitative data. In line with this, three heads of the project were interviewed from the selected EEP.

3.6.3. Document Review

In this study, the project documents of the selected EEP in Ethiopia were reviewed. On that, project description, project execution report, monitoring and evaluation reports including end year review documents were checked.

This is the method of collecting secondary data; it has advantages because the researcher is able to collect as much data as possible without limitation. The major sources of secondary data in this study included published books, journals, Papers and articles. Internet is another source where varieties of current materials obtained which explains a lot about Project management in Construction projects.

3.7. Model Specification

Regression is the determination of the relationship between two or more variables (Kothari 2004). This regression analysis is used to understand how well the independent variables explain the variance of the variables. In this study, research hypotheses were tested using regression analysis because this method was found to be the most appropriate and more reliable than the correlation model. It differs from the model because of the complexity of the model and the information contained in it. and Technology. Regression was performed on properties specific to eight control variables (independent variable) and project performance (dependent variable). The regression model is as follows.

$$Y=a+b_1X_1+b_2X_2+b_3X_3+b_4X_4+b_5X_5+b_6X_6+ b_7X_7 + b_8X_8+E$$

In the above equation,

Y	Project performance
X1	Project Planning
X2	Project implementation
X3	Project monitoring and evaluation
X4	Project communication
X5	Stakeholder involvement
X6	Effective procedural documentation

X7	Continuous improvement
X8	End-of-phase review meetings
E	Error

3.7.1. Dependent variable

The dependent variable is the variable that is the effect, the result or outcome of other independent variables (Neumann, 2007). In this study the dependent variable is the Project performance as explained below.

3.3.1.1 Project performance(Y)

Passionate about the goal of maximizing revenue, time, cost, quality, customer satisfaction and new products/services. Project performance review focuses on evaluating project quality in context, identifying key opportunities for improvement, and operational and organizational management. It shows how to deploy them to give attendees the confidence to manage and deliver their work without wasting it. Therefore, this study uses the following indicators to measure performance: budget compliance, target achievement, product quantity and product quality.

3.7.2. Independent Variables

According to (Neumann, 2007), the independent variables are the cause variables or the one that identifies forces or conditions that acts on something else In this study, the eight independent variables are Project planning, project implementation, project monitoring and evaluation, Project communication, Stakeholder involvement, developing effective procedural documentation, Continuous improvement and End-of-phase review meetings as explained below. These independent variables are measured with frequency /percent of respondents.

Table 3-2: Variables characteristics

Variables	Nature	Operationalization	Indicators	Hypothesized direction
Project performance	Dependent	Ability to perform the project at the lowest cost, best quality and based its intended timeline.	Time, Cost and Quality	None
Project communication	Independent	Communication methods used to range from verbal communication, extension, and application Modern technology	Communication channels, use of mobile phones, local libraries and use of improved gadgets like Computers	Positive
Stakeholder involvement	Independent	Each stakeholder contributes for organization as expected	Effective use of organization's infrastructure to support the project. Happy stakeholders	Positive
Project implementation	Independent	Scheduling all activities Starting with identifying goals, activity sequencing, resource estimation, risks as related to a particular project Balancing demand and supply	Goals Setting and time allocated - Workable Budget -scheduling of activities -Risks estimation	Positive
Developing Effective procedural documentation	Independent	Use guidelines and working procedures of various documents of the organization	Communicate easily Minimize conflict and confusion in the project implementation.	Positive
Project planning	Independent	Plan tasks, Schedule each project, clarification of goal, plan and role in the different projects	Effectively planning to run projects with intended output/result.	Positive
Monitoring and evaluation	Independent	Supervising performance of Projects and giving feedback for the purpose of improving the project	Attendance of field visits, - Reporting on project performance basing on activities -Control measures employed against loses and risks	Positive
Continuous improvement	Independent	Devising system and process for better result	Minimize required time and cost, maximize quality	Positive

End-of-phase review meetings	Independent	Evaluate the outcome of the project, ensure that any lessons learned are shared with stakeholders	Information about any errors in the deliverables been communicated	Positive

3.8. Data analysis

Survey data were analyzed through descriptive and statistical analysis using SPSS software version 26 (Social Science Statistical software). Descriptive statistics (frequency distribution, percentage, minimum, maximum, mean, and standard deviation) help researchers analyze the impact of project management on performance. SPSS was used in the analysis of the data obtained from the main sources. This research mainly focuses on descriptive statistics (mean, standard, and variance) and inferential statistics analysis (description and regression).

3.9. Reliability of instrument

This study used Cronbach's alpha to measure the consistency of variables in the research instrument. Cronbach's alpha is the reliability coefficient used to measure the consistency of the scale. According to Zikmund Etla (2010), the scale with alpha coefficient between 0.6 and 0.7 shows moderate reliability. Evaluate the reliability of the construct using Cronbach's alpha coefficient. Ideally, the Cronbach alpha value of the scale should be higher than 0.7 (Pallant, 2005). All Cronbach alpha were above 0.7.

Table 3-3: Reliability analysis for each dimentions

No	Dimensions (Variables)	Cronbach Alpha	No of items
1	Project Planning	0.721	6
2	Project implementation	0.771	5
3	project monitoring, and evaluation	0.853	4
4	Project Communication	0.845	6
5	stakeholder involvement	0.711	4
6	Developing Effective Procedural Documentation	0.742	5
7	Continuous improvement	0.75	4
8	End-of-phase review meetings	0.812	4
9	Project Performance	0.702	7

Source: Survey analysis result, 2023

3.10. Validity of Instrument

Research deals with the problems of data, methods and findings. The validity of the research considered as the sample questionnaire and the sample interview developed and analyzed with test data to produce valid and comparable answers. Validity is the degree to which the difference with the instrument measures the actual difference between the items measured. The content and validity of the research model were checked to ensure the quality of the research design. Establishing the validity of the performance criteria determined for the concept in the study (John, 2007).Data were reviewed and checked to ensure that the measurement is relevant to the study. Expert opinions were also included.

3.11. Ethical Consideration

Research ethics refers to the types of agreements researchers make with research participants. Ethical considerations play an important role in all research and it is important for all researchers to know and understand ethical considerations for their research. Therefore, researchers were collect information from participants with their consent. The purpose of the research were clear and understandable to all participants. All communication with the relevant organizations were made with their consent and not affect or harm their privacy and health at home.

The names of the people interviewed were be kept confidential. In this study, informed consent was obtained from each participant/laboratory prior to data collection. Researchers are committed to protecting the rights of interviewees to ensure that no interviewee's identity remains confidential in the study or subsequent reports, interviewees were selected to participate without coercion, and all interviewees were informed of the reasons and objectives of the research; and received approval from the management of selected organizations prior to embarking on this research.

CHAPTER FOUR

4. DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1. Introduction

This chapter presents the data analysis, the research findings or results, and based on the results the researcher gives discussion on the findings and also gives interpretation of the results. In order to present findings and discussions about project management practices of Ethiopian Electric Power in Gibe III projects; the researcher used different form of tables, qualitative and quantitative analysis were done. The results of the study are discussed by triangulating the different source results; questionnaire results and document review results. The data analysis intends to accomplish the objectives of the study and answer the research questions.

The total number of questionnaires distributed to the purposively selected employees of Ethiopian Electric Power (project managers, project members, administrative staffs) in order to collect data. The data collected from the respondents are presented and analyzed in this chapter. This section of the study deals with the statistical testing of hypothesis and interpretation of the result using SPSS version 26.

4.2. Response rate

As stated in the previous chapters of this paper, questionnaire was designed and distributed to a total of 44 employees of Ethiopian Electric Power Gibe-III projects worker. Accordingly, 42 questionnaires were appropriately filled and returned which gives 95.45% return rate. A total of 42 employee respondents' responses were collected successfully and used for analysis.

4.3. General Information (Demographic data) of the Respondents

The first part of the questionnaire consists of items about the demographic information of the respondents. It covers the personal data of respondents, such as gender, academic level, year of service and current position in the Ethiopian Electric Power. The following tables depicted for each demographic characteristic of the respondents.

Table 4-1: General information of the respondents

		Freq	Perc %
Gender	Male	27	64.3%
	Female	15	35.7%
Age of the respondents	Less than 25	4	9.5%
	25-35	13	31.0%
	35-45	12	28.6%
	Above 45	13	31.0%
Level of Education	Diploma	0	0.0%
	Bachelor Degree	12	28.6%
	Master's Degree	30	71.4%
	Ph.D.	0	0.0%
Marital Status	Single	17	40.5%
	Married	25	59.5%
	Widowed	0	0.0%
	Divorced	0	0.0%
Work experience in Ethiopian Electric Power in years	1-5 years	3	7.1%
	6-10 years	9	21.4%
	11-15 years	19	45.2%
	Above 15 years	11	26.2%
Position in the company	Project Officer	32	76.2%
	Project Head	4	9.5%
	Project Manager	1	2.4%
	Program Manager	1	2.4%
	Administrative staff	4	9.5%
Education Types	Project Management	8	19.0%
	Business Related	18	42.9%
	Engineering Related	16	38.1%

Source: Survey Analysis result, 2023

4.3.1. **Gender of Respondents**

The demographic data for gender shows that out of the 42 respondents there were 27 males and 15 females. The figure below shows the male respondents formed majority of the target population

with a percentage of 64.3 %, while female respondents were representing 35.7%. This implies the higher number of the respondents were males.

4.3.2. Age of the respondents

The table above shows 13(31%) of the respondents were between 25-35 years old, 12(28.6%) were 35-45 years old, 10(22.73%) were 25-30 years old , 4(9.5%) were below 25 and 13(31%) above 46 years old. This implies the majority of the respondents were in the range of above 46 years old.

4.3.3. Level of Education of the respondents

As from the table above 12(28.6%) of the respondents were bachelor's degree holders. The remaining 30(71.4%) of the respondents were masters' holders. This implies that majority of Ethiopian Electric power employees were Master degree holders.

4.3.4. Marital Status of the respondents

The marital status of the respondents indicates that from the total 41 respondents 25(59.5%) of the respondents were married and the remaining 17(40.5%) of the respondents were single. The majority of the respondents were married and this implies that the majority of Ethiopian Electric power Gibe III employees were married.

4.3.5. Work Experience of Respondents in EEP

3(7.1%) of the respondents worked below 5 years in Ethiopian Electric power, 9(21.4%) of the employees worked between 6-10 years and 19(45.2%) of the respondents worked between 11-15 years and the remaining 11(26.2%) respondents worked above 15 years in Ethiopian Electric power. The majority of the respondents worked for a long period of time. This implies that Ethiopian Electric employees in Gibe-III project were experienced in the company.

4.3.1. Position of the respondents

According to table above, 1(2.4%) were project manager, 1(2.4%) program manager, 4(9.5%) were project heads, and 32(76.2%) of the respondents were project officers. This indicates that the majority of the respondents were project officers.

4.3.2. Education Types of the respondents

The majority of the respondent's education were business related field which covers 18(42.9%) from the total, the other 8(19%) were project management and 16(38.1%) of the respondents were educated in engineering related field.

4.4. Descriptive Statistics

The data collected in this section are analyzed using various data analysis tools such as mean, standard deviation, frequency and percentage. Descriptive statistics for each variable were measured on a 5-point Likert scale ("1" "strongly disagree" and "5" "strongly agree"). According to Zaidaton and Bagheri (2009), a total score (M) between 4.21-5.00 is considered Good Agreement (SA) if the respondent scores between 3 and 3.41-4.20 indicates that they agree (A), the mean score of the respondents between 2.61-3.40 is considered neutral (N), and the mean score of the respondents is 1.81-2.A score of 1-1.80 indicates that they do not agree. Therefore, the detailed analysis is as follows:

Table 4-2: Descriptive analysis result for each variables

No	Independent Variable	Aggregate Mean	Interpretation
1	Project Planning	2.75	Neutral
2	Project Implementation	2.83	Neutral
3	Project Monitoring and Evaluation	2.82	Neutral
4	Project Communication	2.92	Neutral
5	Stakeholder Involvement	3.27	Neutral
6	developing effective procedural documentation	2.94	Neutral
7	Continuous Improvement	2.58	Neutral
8	End-of-phase review meetings	3.80	Agree
9	Project Performance	2.75	Neutral

Source: Survey analysis result, 2023

4.4.1. Project planning of Ethiopian Electric power in Gibe-III project

Table 4-3: Project planning practices of EEP

	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree			
	Freq	Perc %	Freq	Perc %	Freq	Perc %	Freq	Perc %	Freq	Perc %	Mean	SD
The company plans human resource needed before the project implementation started	12	28.6%	14	33.3 %	13	31.0 %	2	4.8%	1	2.4%	2.1905	.99359
The budget needed for the project were planed clearly through detail analysis	4	9.5%	8	19.0 %	16	38.1 %	9	21.4 %	5	11.9 %	3.0714	1.13466
Time needed to finish the project were planned by including experienced experts through detail analysis	2	4.8%	21	50.0 %	14	33.3 %	4	9.5%	1	2.4%	2.5476	.83235
Each phase of the project phase planed including responsible stakeholders and project officers	2	4.8%	7	16.7 %	20	47.6 %	9	21.4 %	4	9.5%	3.1429	.97709
The project quality planed with experts which have good engineering experience	4	9.5%	10	23.8 %	17	40.5 %	10	23.8 %	1	2.4%	2.8571	.97709
Requirements of all project resource, material, human resources and IT	2	4.8%	16	38.1 %	16	38.1 %	8	19.0 %	0	0.0%	2.7143	.83478

related were identified												

Source: Survey result, 2023

The above table assess the project planning status of Ethiopian Electric power in Gibe-III project. Different statements were requested to the respondents and the respondents rate their agreement levels on each idea. The first statement which respondents asked were the company plans human resource needed before the project implementation started. This statement was strongly disagreed by 12(28.6%) of the respondents, disagreed by 14(33.3%) of the respondents, neutral by 13(31%) of the respondents. The remaining 2(4.8%) of the respondents agree and 1(2.4%) of the respondents strongly agree about the statement The company plans human resource needed before the project implementation started. The majority of the respondents disagree about the response the company plans human resource needed before the project implementation started. The standard deviation for this response was 0.99 which is slightly above zero which indicates the response was dispersed. The mean of the response was 2.19. This indicates that the respondents disagreed by the statement The company plans human resource needed before the project implementation started. This all implies that Ethiopian Electric power in Gibe-III project did not plans human resource needed before the project implementation started.

The second statement which respondents requested to rate their agreement levels on the idea of the budget needed for the project were planed clearly through detail analysis. This statement was strongly disagreed by 4(9.5%) of the respondents, disagreed by 8(19%) of the respondents, neutral by 16(38.1%) of the respondents, agreed by 9(21.4%) of the respondents and the remaining 5(11.9%) of the respondents strongly agreed about the idea The budget needed for the project were planed clearly through detail analysis. This indicates that the majority of the respondents disagreed by the statement The budget needed for the project were planed clearly through detail analysis. The mean of the response was 3.07 which indicates that the respondents disagreed by the response and the standard deviation 1.13 indicates the respond dispersed. This implies that Ethiopian Electric power in Gibe-III project budget needed for the project did not plane clearly through detail analysis.

The response time needed to finish the project were planned by including experienced experts through detail analysis were strongly disagreed by 2(4.8%) of the respondents, disagreed by

21(50%) of the respondents, neutral by 14(33.3%) of the respondents, agreed by 4(9.5%) of the respondents and the remaining 1(2.4%) of the respondents strongly agreed by the respondents. The majority of the respondents disagreed the response Time needed to finish the project were planned by including experienced experts through detail analysis. The mean for the statement was 2.5476 which indicates that the respondents disagreed about the idea. The mean for the response was 2.55 and standard deviation 0.83. The standard deviation indicates the response were dispersed and the mean indicates that the respondents disagreed about the statement. This implies that at Ethiopian Electric power Gibe-III project time needed to finish the project did not plan by including experienced experts through detail analysis.

Each phase of the project phase planed including responsible stakeholders and project officers' response were strongly disagreed by 2(4.8%) of the respondents, disagreed by 7(16.7%) of the respondents, neutral by 20(47.6%) of the respondents, agreed by 9(21.4%) of the respondents, and strongly agreed by 4(9.5%) of the respondents. This indicates that the majority of the respondents agreed by the statement Each phase of the project phase planed including responsible stakeholders and project officers. The response had a mean of 3.14 and standard deviation of 0.977 which mean the respondents neutral about the statement. This indicates that the respondents not agree about Each phase of the project phase planed including responsible stakeholders and project officers. This indicates that there were some gaps in Ethiopian Electric power in Gibe-III project of Each phase of the project phase planed including responsible stakeholders and project officers.

The other statements which respondents asked were to rate their agreement on the statement of the project quality planed with experts which have good engineering experience. This response was strongly disagreed by 4(9.5%) of the respondents, disagreed by 10(23.8%) of the respondents, neutral by 17(40.5%) of the respondents and the remaining 10(23.8%) of the respondents agree and 1(2.4%) of the respondents strongly agreed by the response The project quality planed with experts which have good engineering experience. The majority of the respondents disagreed about the response. The mean of the response was 2.86 and standard deviation of 0.98. This indicates that the response was dispersed and the respondents disagree about the idea. This implies that at Ethiopian Electric power of Gibe-III project the project quality did not plan with experts which have good engineering experience.

The last questions which respondents requested to rate their agreement levels were on the statement Requirements of all project resource, material, human resources and IT related were

identified. This response was strongly disagreed by 2(4.8%) of the respondents, disagreed by 16(38.1%) of the respondents, neutral by 16(38.1%) of the respondents. The remaining 8(19%) of the respondents agreed by the response. This indicates that the majority of the respondents agreed by the response. The mean of the response was 2.71 which indicates that the respondents disagreed by the response and this implies that Ethiopian Electric Power of Gibe-III project Requirements of all project resource, material, human resources and IT related did not identified.

The overall mean about the project planning practice of Ethiopia Electric power of Gibe-III project was 2.75 which indicates that the project planning activities of Ethiopian Electric power of Gibe-III project were week.

4.4.2. Project implementation of Ethiopian Electric power in Gibe-III project

Table 4-4: Project implementation practices of EEP

	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree			
	Freq	Perc %	Freq	Perc %	Freq	Perc %	Freq	Perc %	Freq	Perc %	Mean	SD
The Gibe-III project started as planed time	7	16.7 %	8	19.0 %	15	35.7 %	9	21.4 %	3	7.1%	2.8333	1.16696
Meetings were performed on the scheduled, weekly, monthly as planed	6	14.3 %	20	47.6 %	5	11.9 %	9	21.4 %	2	4.8%	2.5476	1.13056
The members in different department cooperate to implement the project as scheduled	7	16.7 %	7	16.7 %	22	52.4 %	1	2.4%	5	11.9 %	2.7619	1.14358
There was a consistent flow in all stakeholders	3	7.1%	10	23.8 %	16	38.1 %	12	28.6 %	1	2.4%	2.9524	.96151

involved on Gibe-III project												
There is good responsiveness from the top management to provide the required information	0	0.0%	16	38.1 %	16	38.1 %	2	4.8%	8	19.0 %	3.047 6	1.103 26

Source: Survey analysis result, 2023

The above tables presented the result of the project implementation of Ethiopian Electric power in Gibe-III project. The first questions which respondents were requested to respond were The Gibe-III project started as planed time. This response was strongly disagreed by 7(16.7%) of the respondents, disagreed by 8(19%) of the respondents, neutral by 5(11.9%) of the respondents, agreed by 9(21.4%) of the respondents and strongly agreed by 3(7.1%) of the respondents. The majority of the respondents disagreed by the statement. The mean of the response was 2.83 and SD of 1.16. This indicates that the response was dispersed and the respondents disagreed by the statement The Gibe-III project started as planed time. This implies that the Gibe-III project did not started as planed time.

The second questions which respondents requested to rate their agreement levels were on the idea of Meetings were performed on the scheduled, weekly, monthly as planned. This response was strongly disagreed by 6(14.3%) of the respondents, disagreed by 20(47.6%) of the respondents, neutral by 5(11.9%) of the respondents, agreed by 9(21.4%) of the respondents and strongly agreed by 2(4.8%) of the respondents. The response was disagreed by the majority of the respondents. The mean of the response Meetings was performed on the scheduled, weekly, monthly as planed were 2.55 which mean respondents disagree about the statement. This implies that at Ethiopia Electric power of Gibe-III project Meetings were not performed on the scheduled, weekly, monthly as planned.

The response the members in different department cooperate to implement the project as scheduled was strongly disagreed by 7(16.7%) of the respondents, disagreed by 7(16.7%) of the respondents, neutral by 22(52.4%) of the respondents, agreed by 1(2.4%) of the respondents, and strongly

agreed by 5(11.9%) of the respondents. This indicates that the majority of the respondents disagree about the statement. The mean of the response was 2.76 indicates that the respondents disagreed about the statement. This implies that at Ethiopian Electric power of Gibe-III project the members in different department cooperate to implement the project as scheduled.

The response There was a consistent flow in all stakeholders involved on Gibe-III project was strongly disagreed by 3(7.1%) of the respondents, disagreed by 10(23.8%) of the respondents, neutral by 16(38.1%) of the respondents, and agreed by 12(28.6%) of the respondents and the remaining 1(2.4%) of the respondents strongly agreed by the response. The majority of the respondents disagreed by the response. The mean of the response was 2.95 and standard deviation of 0.95. The response was dispersed and the respondents disagreed by the response. This implies that at Ethiopian Electric power of Gibe-III project There was not a consistent flow in all stakeholders involved on Gibe-III project.

The last questions about the project implementation were there is good responsiveness from the top management to provide the required information. This response was disagreed by 16(38.1%) of the respondents, neutral by 16(38.1%) of the respondents, agreed by 2(4.8%) of the respondents and the remaining 8(19%) of the respondents strongly agreed by the respondents. This indicates that the majority of the respondents disagreed about the statement. The mean of the response was 3.05 which indicates the respondents was neutral about the idea. This indicates that there is a gap in Ethiopian Electric power of Gibe-III project of responsiveness from the top management to provide the required information.

The overall mean about the project implementation practices of Ethiopian Electric power of Gibe-III project was 2.83 which indicates that the project implementation practice of Ethiopian Electric project of Gibe-III project was not enough.

4.4.3. Project Monitoring and evaluation of Ethiopian Electric power in Gibe-III project

Table 4-5: Project Monitoring and Evaluation of EEP

	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree			
	Freq	Perc %	Freq	Perc %	Freq	Perc %	Freq	Perc %	Freq	Perc %	Mean	SD
Task data are collected and analyzed in relation to the planned regularly.	7	16.7 %	18	42.9 %	4	9.5%	13	31.0 %	0	0.0%	2.5476	1.10878
A clearly documented monitoring and evaluation system exists that guide project implementation.	5	11.9 %	9	21.4 %	22	52.4 %	1	2.4%	5	11.9 %	2.8095	1.08736
Ethiopian Electric Power reported the project monitoring and evaluation activities timely for government	6	14.3 %	9	21.4 %	6	14.3 %	21	50.0 %	0	0.0%	3.0000	1.14764
In Gibe-III projects results of evaluation were used regularly to make adjustments to the project	4	9.5%	9	21.4 %	21	50.0 %	2	4.8%	6	14.3 %	2.9286	1.11296

Source: Survey analysis result, 2023

In the above table respondents were asked to rate their agreement on the idea of project monitoring and evaluation in case of Ethiopian Electric power of Gibe-III project. The first statement was Task data are collected and analyzed in relation to the planned regularly. This response was strongly disagreed by 7(16.7%) of the respondents, disagreed by 18(42.9%) of the respondents, neutral by 4(9.5%) of the respondents, agreed by 13(31%) of the respondents. The majority of the respondents disagreed by the statement. The mean of the statement was 2.55 and SD of 1.11. This indicates

respondents disagreed by the response. This implies that at Ethiopia Electric power of Gibe-III project task data are not collected and analyzed in relation to the planned regularly.

The response A clearly documented monitoring and evaluation system exists that guide project implementation were disagreed by the majority of the respondents. The mean of the statement A clearly documented monitoring and evaluation system exists that guide project implementation were 2.81 which indicates that the respondents disagreed by the response. This implies that at Ethiopian Electric power of Gibe-III project A clearly documented monitoring and evaluation system not exists that guide project implementation.

The response Ethiopian Electric Power reported the project monitoring and evaluation activities timely for government was strongly disagreed by 6(14.3%) of the respondents, disagreed by 9(21.4%) of the respondents, neutral by 6(14.3%) and the remaining 21(50%) of the respondents agree about the statement Ethiopian Electric Power reported the project monitoring and evaluation activities timely for government. The mean of the response was 3.00 and SD was 1.15. This indicates that the respondents become neutral about the statement. This implies that there is a gap in Ethiopian Electric power of Gibe-III project.

The last questions about project monitoring and evaluation were about In Gibe-III projects results of evaluation were used regularly to make adjustments to the project. This response was strongly disagreed by 4(9.5%) of the respondents, disagreed by 9(21.4%) of the respondents, neutral by 21(50%) of the respondents, agreed by 2(4.8%) of the respondents and strongly agreed by 6(14.3%) of the respondents. The majority of the respondents disagreed by the statement In Gibe-III projects results of evaluation were used regularly to make adjustments to the project. The mean of the response was 2.93 and SD of the response was 1.12. This indicates the response were dispersed and the respondents disagreed by the response. This implies that at Ethiopian Electric power of Gibe-III project In Gibe-III projects results of evaluation did not used regularly to make adjustments to the project.

The overall mean about the project monitoring and evaluation practices of Ethiopian Electric power of Gibe-III project was 2.82 which indicates that the project monitoring and evaluation practice of Ethiopian Electric project of Gibe-III project was not enough.

4.4.4. Project Communication of Ethiopian Electric power in Gibe-III project

Table 4-6: Project Communication practices of EEP

	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree			
	Freq	Perc %	Freq	Perc %	Freq	Perc %	Freq	Perc %	Freq	Perc %	Mean	SD
Project practitioner in Ethiopian Electric power understands explicitly the content of communication	1	2.4%	16	38.1 %	11	26.2 %	14	33.3 %	0	0.0%	2.9048	.90553
Project practitioner maintains effective formal lines of communication in the Gibe-III project	8	19.0 %	5	11.9 %	7	16.7 %	10	23.8 %	12	28.6 %	3.3095	1.48961
Gibe-III Project practitioner in Ethiopian Electric power maintains effective informal lines of communication involved in the project	2	4.8%	10	23.8 %	15	35.7 %	14	33.3 %	1	2.4%	3.0476	.93580
Project practitioner in Ethiopian Electric power uses appropriate information sources to solve the project works	5	11.9 %	21	50.0 %	10	23.8 %	6	14.3 %	0	0.0%	2.4048	.88509
Project practitioner in Ethiopian Electric power aligns the information in an	4	9.5%	8	19.0 %	20	47.6 %	6	14.3 %	4	9.5%	2.9524	1.05812

appropriate situation to the audience in Gibe-III project												
Project practitioner constantly seeks opportunities to communicate the project status and directions	1	2.4%	15	35.7 %	13	31.0 %	12	28.6 %	1	2.4%	2.928 6	.9211 0

Source: Survey analysis result, 2023

In the above table statements, which can measure the communication of the project were requested to the respondents to rate their agreement. The first statement which respondents requested were about Project practitioner in Ethiopian Electric power understands explicitly the content of communication. This response was strongly disagreed by 1(2.4%) of the respondents, disagreed by 16(38.1%) of the respondents, neutral by 11(26.2%) of the respondents, agreed by 14(33.3%) of the respondents. The majority of the respondents disagreed by the idea. The mean and SD of the response was 2.9 and 0.91 respectively. This indicates that the respondents disagreed by the statement. This implies that at Ethiopian Electric power of Gibe-III project, Project practitioner in Ethiopian Electric power did not understands explicitly the content of communication.

The statement Project practitioner maintains effective formal lines of communication in the Gibe-III project were agreed by the majority f the respondents. The mean of the statements Project practitioner maintains effective formal lines of communication in the Gibe-III project were 3.30. This indicates that the respondents become neutral about the statement Project practitioner maintains effective formal lines of communication in the Gibe-III project. This implies that in Ethiopian Electric power Project practitioner maintains effective formal lines of communication in the Gibe-III project.

The majority of the respondents were neutral about the statement Gibe-III Project practitioner in Ethiopian Electric power maintains effective informal lines of communication involved in the project. The mean of the response Gibe-III Project practitioner in Ethiopian Electric power maintains effective informal lines of communication involved in the project was 3.03. This indicates that the respondent become neutral about the statement Gibe-III Project practitioner in

Ethiopian Electric power maintains effective informal lines of communication involved in the project.

The response Project practitioner in Ethiopian Electric power uses appropriate information sources to solve the project works were strongly disagreed by 5(11.9%) of the respondents, disagreed by 21(50%) of the respondents, neutral by 10(23.8%) of the respondents, agreed by 6(14.3%) of the respondents. This indicates the majority of the respondents disagreed by the statement v Project practitioner in Ethiopian Electric power uses appropriate information sources to solve the project works. The mean of the response about Project practitioner in Ethiopian Electric power uses appropriate information sources to solve the project works was 0.89 which indicates the respondents disagreed by the statement and the response was dispersed. This implies that at Ethiopian Electric power of Gibe-III project, Project practitioner in Ethiopian Electric power did not use appropriate information sources to solve the project works.

The statement Project practitioner in Ethiopian Electric power aligns the information in an appropriate situation to the audience in Gibe-III project were disagreed by the majority of the respondents. This indicates that at Ethiopian Electric power of Gibe-III project, Project practitioner in Ethiopian Electric power did not aligns the information in an appropriate situation to the audience in Gibe-III project.

The majority of the respondents disagreed by the statement Project practitioner constantly seeks opportunities to communicate the project status and directions and the mean of this response was 2.93. This indicates that at Ethiopian Electric power of Gibe-III Project practitioner did not constantly seek opportunities to communicate the project status and directions

The overall mean about the project communication practices of Ethiopian Electric power of Gibe-III project was 2.92 which indicates that the project communication practice of Ethiopian Electric project of Gibe-III project was not enough.

4.4.5. Stakeholder involvement of Ethiopian Electric power in Gibe-III project

Table 4-7: Stakeholder involvement of EEP

	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree			
	Freq	Perc %	Freq	Perc %	Freq	Perc %	Freq	Perc %	Freq	Perc %	Mean	SD

The key stakeholders were identified clearly and communicated regularly about the Gibe-III project progress	4	9.5%	5	11.9 %	18	42.9 %	14	33.3 %	1	2.4%	3.0714	.97262
Stakeholders were involved in the review and decision of the organization's mission and strategies	1	2.4%	10	23.8 %	12	28.6 %	15	35.7 %	4	9.5%	3.2619	1.01356
Project priorities and services are defined in collaboration with stakeholders	2	4.8%	9	21.4 %	10	23.8 %	12	28.6 %	9	21.4 %	3.4048	1.19060
In Gibe-III projects Ethiopian People, government and other stakeholders participated on idea and other supportive action	4	9.5%	6	14.3 %	13	31.0 %	10	23.8 %	9	21.4 %	3.3333	1.24287

Source: Survey analysis result, 2023

The above table indicate that the respondents were requested to rate their agreement levels on each idea. The first statement which respondents requested to rate their agreement levels were about the key stakeholders were identified clearly and communicated regularly about the Gibe-III project progress. This response was strongly disagreed by 4(9.5%) of the respondents, disagreed by 5(11.9%) of the respondents, neutral by 18(42.9%) of the respondents, agreed by 14(33.3%) of the respondents, and strongly agreed by 1(2.4%) of the respondents. This indicates that the respondents disagreed by the statement The key stakeholders were identified clearly and communicated regularly about the Gibe-III project progress. The mean of the response was 0.07 and SD of 0.97. This indicates that the respondent's response was dispersed and the respondents disagreed by the statement The key stakeholders were identified clearly and communicated

regularly about the Gibe-III project progress. This all implies that at Ethiopian Electric power of Gibe-III project the key stakeholders were not identified clearly and communicated regularly about the Gibe-III project progress.

The second idea raised was about Stakeholders were involved in the review and decision of the organization's mission and strategies. This response was agreed by the majority of the respondents and hence this implies that relatively Stakeholders were involved in the review and decision of the organization's mission and strategies.

The majority of the respondents agreed about the statement Project priorities and services are defined in collaboration with stakeholders. This implies that at Ethiopian Electric power of Gibe-III project, Project priorities and services are defined in collaboration with stakeholders.

The statement In Gibe-III projects Ethiopian People, government and other stakeholders participated on idea and other supportive action were the last questions which respondents requested to rate their agreement levels on stakeholder involvement. This response was strongly disagreed by 4(9.5%) of the respondents, disagreed by 6(14.3%) of the respondents, neutral by 13(31%) of the respondents, agreed by 10(23.8%) of the respondents, and strongly agreed by 9(21.4%) of the respondents. This indicates that the majority of the respondents agreed by the statement of In Gibe-III projects Ethiopian People, government and other stakeholders participated on idea and other supportive action. The mean of the response was 3.33 which indicates respondent become neutral about the statement.

The overall mean about the project stakeholder involvement practices of Ethiopian Electric power of Gibe-III project was 3.27 which indicates that the project stakeholder involvement practice of Ethiopian Electric project of Gibe-III project was relatively better.

4.4.6. Developing Effective Procedural Documentation of Ethiopian Electric power in Gibe-III project

Table 4-8: Developing Effective Procedural documentation of EEP

	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree			
	Freq	Perc %	Freq	Perc %	Freq	Perc %	Freq	Perc %	Freq	Perc %	Mean	SD

Learned experience were documented properly in Gibe-III projects	1	2.4%	20	47.6 %	11	26.2 %	10	23.8 %	0	0.0%	2.7143	.86351
After the end of each project phase proper documentation and reports were prepared	6	14.3 %	1	2.4%	24	57.1 %	5	11.9 %	6	14.3 %	3.0952	1.14358
The vision, mission, plan and guidelines, and other data were documented properly	0	0.0%	12	28.6 %	15	35.7 %	9	21.4 %	6	14.3 %	3.2143	1.02495
Effective procedural documentation provides guidelines and uniformity, enables the projects easily implemented	6	14.3 %	11	26.2 %	9	21.4 %	12	28.6 %	4	9.5%	2.9286	1.23748
Operational requirements and specifications were well defined and documented	6	14.3 %	6	14.3 %	23	54.8 %	7	16.7 %	0	0.0%	2.7381	.91223

Source: Survey analysis result, 2023

Respondents were asked about the developing effect procedural documentation. The first statement was about Learned experience were documented properly in Gibe-III projects. This response was strongly disagreed by 1(2.4%) of the respondents, disagreed by 20(47.6%) of the respondents, neutral by 11(26.2%) of the respondents, agreed by 10(23.8%) of the respondents. This indicates that the majority if the respondents disagreed by the response Learned experience were documented properly in Gibe-III projects. The mean of the response was 2.71 and SD of 0.87. This

indicates that the responses were dispersed and hence respondents disagreed by the statement. This implies that at Ethiopian Electric power of Gibe-III project Learned experience were documented properly in Gibe-III projects.

The majority of the respondents disagreed by the statement After the end of each project phase proper documentation and reports were prepared. The mean of the statement After the end of each project phase proper documentation and reports were prepared was 3.09 which indicates the respondents disagreed by the statement Learned experience were documented properly in Gibe-III projects. This implies that at Ethiopia Electric power Learned experience were not documented properly in Gibe-III project.

The mean of the response the vision, mission, plan and guidelines, and other data were documented properly was 3.21 which indicates that the respondents become neutral about the statement The vision, mission, plan and guidelines, and other data were documented properly.

The response Effective procedural documentation provides guidelines and uniformity, enables the projects easily implemented was strongly disagreed by 6(14.3%) of the respondents, disagreed by 11(26.2%) of the respondents, neutral by 9(21.4%) of the respondents, agreed by 12(28.6%) of the respondents and strongly agreed by 4(9.5%) of the respondents. The majority of the respondents disagreed by the statement Effective procedural documentation provides guidelines and uniformity, enables the projects easily implemented. The mean of the response was 2.93 which indicates that respondents become neutral about the idea. This indicates that at Ethiopian Electric power Effective procedural documentation did not provides guidelines and uniformity, enables the projects easily implemented.

The last statements raised for the respondents was about Operational requirements and specifications were well defined and documented. The majority of the respondents disagreed by the statement and hence this implies that at Ethiopian Electric power Gibe-III project Operational requirements and specifications were not well defined and documented.

The overall mean about the developing effective procedural documentation practices of Ethiopian Electric power of Gibe-III project was 2.94 which indicates that the developing effective procedural documentation of Ethiopian Electric project of Gibe-III project was weak.

4.4.7. Continuous improvement of Ethiopian Electric power in Gibe-III project

Table 4-9: Continuous improvement practices of EEP

	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree			
	Freq	Perc %	Freq	Perc %	Freq	Perc %	Freq	Perc %	Freq	Perc %	Mean	SD
I aware of all trainings, practices, techniques, methods, and tools used to conduct all continuous improvement activities in the workplace	18	42.9 %	13	31.0 %	11	26.2 %	0	0.0%	0	0.0%	1.8333	.82393
problem-solving techniques used with in continuous improvement system are useful, agile, dynamic and effective for achieving long term sustainable development and identifying routines that allow for better working habit	3	7.1%	20	47.6 %	12	28.6 %	7	16.7 %	0	0.0%	2.5476	.86115
Ethiopian Electric power is effective in recognizing the importance of continuous improvement	1	2.4%	6	14.3 %	26	61.9 %	8	19.0 %	1	2.4%	3.0476	.73093
The continuous improvement practices of EEP increases Gibe-III	3	7.1%	12	28.6 %	13	31.0 %	14	33.3 %	0	0.0%	2.9048	.95788

project productive and success												

Source: Survey analysis result, 2023

The above table indicates that the respondent's response about continuous improvement. The first statement was about I aware of all trainings, practices, techniques, methods, and tools used to conduct all continuous improvement activities in the workplace. This response was strongly disagreed by 18(42.(%) of the respondents, disagreed by 13(31%) of the respondents, neutral by 11(26.2%) of the respondents. The majority of the respondents disagreed by the response I aware of all trainings, practices, techniques, methods, and tools used to conduct all continuous improvement activities in the workplace. The mean of the response I aware of all trainings, practices, techniques, methods, and tools used to conduct all continuous improvement activities in the workplace was 1.83 and SD of 0.82. This indicates the respondents disagreed by the statemen I aware of all trainings, practices, techniques, methods, and tools used to conduct all continuous improvement activities in the workplace. This implies that Ethiopia Electric power of Gibe-III project employees did not aware of all trainings, practices, techniques, methods, and tools used to conduct all continuous improvement activities in the workplace.

The statement problem-solving techniques used with in continuous improvement system are useful, agile, dynamic and effective for achieving long term sustainable development and identifying routines that allow for better working habit was strongly disagreed by 3(7.1%) of the respondents, neutral by 20(47.6%) of the respondents, neutral by 12(28.6%) of the respondents, agreed by 7(16.7%) of the respondents. The mean of the response problem-solving techniques used with in continuous improvement system are useful, agile, dynamic and effective for achieving long term sustainable development and identifying routines that allow for better working habit was 2.55 which indicates respondents disagreed by the response problem-solving techniques used with in continuous improvement system are useful, agile, dynamic and effective for achieving long term sustainable development and identifying routines that allow for better working habit. This implies that at Ethiopia Electric power of Gibe-III project problem-solving techniques

used with in continuous improvement system are not useful, agile, dynamic and effective for achieving long term sustainable development and identifying routines that allow for better working habit

The mean of the response Ethiopian Electric power is effective in recognizing the importance of continuous improvement was 3.05 which indicates that the respondents disagreed by the statement. This implies that at Ethiopia Electric power of Gibe-III project Ethiopian Electric power is not effective in recognizing the importance of continuous improvement.

The majority of the respondents disagreed by the statement The continuous improvement practices of EEP increases Gibe-III project productive and success. This indicates that the continuous improvement practices of EEP increases Gibe-III project were not productive and success.

The overall mean about the continuous improvement practices of Ethiopian Electric power of Gibe-III project was 2.58 which indicates that the continuous improvement practice of Ethiopian Electric project of Gibe-III project was weak.

4.4.8. End of phase review meeting of Ethiopian Electric power in Gibe-III project

Table 4-10: End of Phase review meeting practices

	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree			
	Freq	Perc %	Freq	Perc %	Freq	Perc %	Freq	Perc %	Freq	Perc %	Mean	SD
At the end of all phase all project members discussed and learned from their mistakes	0	0.0%	6	14.3 %	7	16.7 %	19	45.2 %	10	23.8 %	3.7857	.97620
EEP evaluate the outcome of the project, measured against the Project planning document	0	0.0%	0	0.0%	13	31.0 %	11	26.2 %	18	42.9 %	4.1190	.86115

Unfinished deliverables had been communicated to those with operation and maintenance responsibilities	3	7.1%	7	16.7 %	7	16.7 %	12	28.6 %	13	31.0 %	3.5952	1.28897
Ethiopian Electric Power ensure that any lessons learned are shared with those who might benefit from them	0	0.0%	4	9.5%	13	31.0 %	17	40.5 %	8	19.0 %	3.6905	.89683

Source: Survey analysis result, 2023

The above table indicates that respondents were asked to rate their agreement levels on different statement. The first statement which respondents requested to rate their agreement levels was at the end of all phase all project members discussed and learned from their mistakes. This response was disagreed by 6(14.3%) of the respondents, neutral by 7(16.7%) of the respondents, agreed by 19(45.2%) of the respondents and strongly agreed by 10(23.8%) of the respondents. The majority of the respondents agree about the statement at the end of all phase all project members discussed and learned from their mistakes and the mean of the response 3.79 indicates that the respondents agreed about the statement. This implies that at Ethiopia Electric power at the end of all phase all project members discussed and learned from their mistakes.

The response EEP evaluate the outcome of the project, measured against the Project planning document had a mean of 4.12 which indicates that respondents agreed by the statement EEP evaluate the outcome of the project, measured against the Project planning document. This implies that EEP evaluate the outcome of the project, measured against the Project planning document.

The statement Unfinished deliverables had been communicated to those with operation and maintenance responsibilities were agreed by the majority of the respondents. This implies that

Unfinished deliverables had been communicated to those with operation and maintenance responsibilities.

The response Ethiopian Electric Power ensure that any lessons learned are shared with those who might benefit from them was disagreed by 4(9.5%) of the respondents, neutral by 13(31%) of the respondents, agreed by 17(40.5%) of the respondents. This indicates that the majority of the respondents agreed by the statement. The mean of the response Ethiopian Electric Power ensure that any lessons learned are shared with those who might benefit from them was 3.69 which indicates that respondents agreed by the statement Ethiopian Electric Power ensure that any lessons learned are shared with those who might benefit from them. This implies that at Ethiopian Electric power Gibe-III project Ethiopian Electric Power ensure that any lessons learned are shared with those who might benefit from them.

The overall mean about the end of phase review meeting practices of Ethiopian Electric power of Gibe-III project was 3.80 which indicates that the end of phase review meeting Ethiopian Electric project of Gibe-III project was good.

4.4.9. Project performance of Ethiopian Electric power in Gibe-III project

Table 4-11: Project Performance of EEP of Gibe-III project

	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree			
	Freq	Perc %	Freq	Perc %	Freq	Perc %	Freq	Perc %	Freq	Perc %	Mean	SD
Ethiopian Electric Project, Gibe-III project finished within the scheduled time	6	14.3 %	4	9.5%	8	19.0 %	17	40.5 %	7	16.7 %	3.3571	1.28446
Gibe-III project were finished within the planed budget	9	21.4 %	9	21.4 %	20	47.6 %	2	4.8%	2	4.8%	2.5000	1.04181
Gibe-III project quality were	8	19.0 %	19	45.2 %	10	23.8 %	4	9.5%	1	2.4%	2.3095	.97501

completed as planned												
Ethiopian Electric Project use resources including time and materials effectively	5	11.9 %	1	2.4%	25	59.5 %	11	26.2 %	0	0.0%	3.0000	.88345
Gibe-III project were accomplished with high quality and satisfies its stakeholders	4	9.5%	28	66.7 %	8	19.0 %	2	4.8%	0	0.0%	2.1905	.67130
Requirement performance were met in Gibe-III project	0	0.0%	5	11.9 %	30	71.4 %	6	14.3 %	1	2.4%	3.0714	.60052
Overall stakeholders' satisfaction were met in Gibe-III project	6	14.3 %	7	16.7 %	18	42.9 %	11	26.2 %	0	0.0%	2.8095	.99359

Source: Survey analysis result, 2023

The above tables were presented to measure the performance of Gibe-III project. Respondents were requested to rate their agreement levels on seven statement which can measure the performance of the respondents. The first statement which respondents requested were to rate their agreement levels on Ethiopian Electric Project, Gibe-III project finished within the scheduled time. This response was strongly disagreed by 6(14.3%) of the respondents, disagreed by 4(9.5%) of the respondents, neutral by 8(19%) of the respondents, agreed by 17(40.5%) of the respondents. The majority of the respondents disagreed by the statement Ethiopian Electric Project; Gibe-III project finished within the scheduled time.

The second statement which respondents requested was Gibe-III project were finished within the planed budget. This response was strongly disagreed by 9(21.4%) of the respondents, disagreed by 9(21.4%) of the respondents, neutral by 20(47.6%) of the respondents, agreed by 2(4.8%) of the respondents, strongly agreed by 2(4.8%) of the respondents. The majority of the majority of

the respondents disagreed by the statement Gibe-III project were finished within the planed budget. This implies that Gibe-III project were not finished within the planed budget.

The mean and SD of the response about Gibe-III project quality were completed as planned were 2.31 and 0.98. This indicates that respondents disagreed by the response. This implies that at Ethiopian Electric power Gibe-III project quality were not completed as planned.

The response Ethiopian Electric Project use resources including time and materials effectively were neutral by the respondents.

The response Gibe-III project were accomplished with high quality and satisfies its stakeholders were disagreed by the majority of the respondents. This implies that Gibe-III project were not accomplished with high quality and satisfies its stakeholders.

The mean of the response Requirement performance was met in Gibe-III project was 3.07 which mean the respondents becomes neutral about the statement Requirement performance were met in Gibe-III project. This implies that Requirement performance were not met in Gibe-III project.

The last statement which respondents requested to rate their agreement levels was on the idea Overall stakeholders' satisfaction were met in Gibe-III project. This response was strongly disagreed by 6(14.3%) of the respondents, disagreed by 7(16.7%) of the respondents, neutral by 18(42.9%) of the respondents, agreed by 11(26.2%) of the respondents. This indicates that the majority of the respondents disagreed by the response Overall stakeholders' satisfaction were met in Gibe-III project. The mean of the response was 2.81 and Standard deviation of 0.993. The SD indicates that the response was dispersed and mean indicates that respondents disagreed by the response. This implies that Overall stakeholders' satisfaction were not met in Gibe-III project.

The overall mean about the project performance of Ethiopian Electric power of Gibe-III project was 2.75 which indicates that the project performance of Ethiopian Electric project of Gibe-III project was not good.

4.5. Correlation Analysis

Correlation analysis was performed to examine this relationship. Pearson's product-moment correlation coefficient is a statistic that shows how much two variables are related to each other. The sign of the correlation coefficient (+ or -) indicates a relationship between -1.00 and +1.00.Variables can be positively or negatively related. Correlation shows that there is a direct relationship between the two variables. A negative correlation indicates a negative relationship between the two variables (Ruud et al. 2012).The table below clearly shows whether the relationship between the two variables is negative, low, moderate, significant or very strong.

Table 4-12:Correlation Coefficient

Correlation coefficient(r)	Strength of correlation
From 0.01 up to 0.09	Negligible association
From 0.10 up to 0.29	Low association
From 0.30 up to 0.49	Moderate association
From0.50 upto0.69	Substantial association
From 0.70 and above	Very strong association

Source: Joe W. Kotrlik, J. C. Atherton, A. Williams and M. KhataJabor.(2011)

Determining the degree of association between the selected independent variables (project planning, project implementation, project monitoring and evaluation, project communication, stakeholder involvement, developing effective procedural documentation, Continuous improvement, end of end of phase review meetings) and project performance is the main purpose of conducting an analysis using Pearson correlation. So, in this section the first eight hypotheses were tested based on the correlation result summarized in table below.

Table 4-13: Correlation analysis result

Correlations									
	Project Planning	Project imple	Project Monitoring	Project Communication	Stakeholder Involvement	Developing Effective	Continuous Improvement	End of Phase Review	Project Performance

			ment ation	and evalu ation			Proced ural Docum entatio n		Meeting s	
Project Planning	Pearson Correlati on	1	.723**	.244	.561**	-.006	.240	.475**	.029	.651**
	Sig. (2-tailed)		.000	.120	.000	.968	.126	.001	.856	.000
	N	42	42	42	42	42	42	42	42	42
Project impleme ntation	Pearson Correlati on	.723**	1	.478**	.757**	.210	.338*	.666**	.201	.779**
	Sig. (2-tailed)	.000		.001	.000	.182	.028	.000	.203	.000
	N	42	42	42	42	42	42	42	42	42
Project Monitorin g and evaluatio n	Pearson Correlati on	.244	.478**	1	.522**	.237	.109	.528**	.194	.592**
	Sig. (2-tailed)	.120	.001		.000	.131	.494	.000	.218	.000
	N	42	42	42	42	42	42	42	42	42
Project Communi cation	Pearson Correlati on	.561**	.757**	.522**	1	.261	.321*	.610**	.278	.666**
	Sig. (2-tailed)	.000	.000	.000		.095	.038	.000	.075	.000
	N	42	42	42	42	42	42	42	42	42
Stakehol der Involvem ent	Pearson Correlati on	-.006	.210	.237	.261	1	.167	.345*	.703**	.249
	Sig. (2-tailed)	.968	.182	.131	.095		.292	.025	.000	.112
	N	42	42	42	42	42	42	42	42	42
Developi ng Effective	Pearson Correlati on	.240	.338*	.109	.321*	.167	1	.147	.018	.189

Procedural Documentation	Sig. (2-tailed)	.126	.028	.494	.038	.292		.353	.908	.231
	N	42	42	42	42	42	42	42	42	42
Continuous Improvement	Pearson Correlation	.475**	.666**	.528**	.610**	.345*	.147	1	.220	.723**
	Sig. (2-tailed)	.001	.000	.000	.000	.025	.353		.161	.000
	N	42	42	42	42	42	42	42	42	42
End of Phase Review Meetings	Pearson Correlation	.029	.201	.194	.278	.703**	.018	.220	1	.397**
	Sig. (2-tailed)	.856	.203	.218	.075	.000	.908	.161		.009
	N	42	42	42	42	42	42	42	42	42
Project Performance	Pearson Correlation	.651**	.779**	.592**	.666**	.249	.189	.723**	.397**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.112	.231	.000	.009	
	N	42	42	42	42	42	42	42	42	42
**. Correlation is significant at the 0.01 level (2-tailed).										
*. Correlation is significant at the 0.05 level (2-tailed).										

Source: Survey analysis result, 2023

4.5.1. Correlation analysis between Project planning and project performance

Project Planning has a positive relationship and statistically significant with the performance of Ethiopian Electric power Gibe-III project.

In the above table Project planning ($r=0.651$, $p<0.01$) is positively correlated with project performance. This implies the presence of substantial relationship between project planning and project performance which is statistically significant. And change in project planning has a corresponding change on project performance.

4.5.2. Correlation analysis between Project implementation and project performance

Project implementation has a positive relationship and statistically significant with project performance

In the above table Project planning ($r=0.779$, $p<0.01$) is positively correlated with project performance. This implies the presence of very strong relationship between project implementation and project performance which is very strongly significant. And change in project implementation has a corresponding change on project performance.

4.5.3. Correlation analysis between Project Monitoring and evaluation and Project performance

Project Monitoring and evaluation has a positive relationship and statistically significant with project performance.

From the above table Project monitoring and evaluation ($r=0.592$, $p<0.01$) is positively correlated with project performance. This implies the presence of strong relationship between project monitoring and evaluation and project performance which is strongly significant. And change in project monitoring and evaluation has a corresponding change on project performance.

4.5.4. Correlation analysis between Project Communication and Project Performance

Project communication has a positive relationship and statistically significant change with the performance of Ethiopian Electric power Gibe-III project.

From the above table it can be seen that Project communication ($r=0.666$, $p<0.01$) is positively correlated with project performance. This implies the presence of strong relationship between project communication and project performance which is statistically significant. And change in project communication has a corresponding change on project performance.

4.5.5. Correlation analysis between Stakeholder involvement and Project Performance

Stakeholder involvement has a positive relationship and statistically significant change with project performance.

From the above table it can be seen that Project stakeholder involvement ($r=0.349$, $p<0.01$) is positively correlated with project performance. This implies the presence of moderate relationship between project stakeholder involvement and project performance which is statistically significant. And change in project stakeholder involvement has a corresponding change on project performance.

4.5.6. Correlation analysis between Developing Effective Procedural Documentation and project performance

Developing effective procedural documentation has a positive relationship and statistically significant change on project performance.

From the above table it can be seen that developing effective procedural documentation ($r=0.189$, $p<0.01$) is positively not correlated with project performance. This implies the presence of negligible relationship between developing not effective procedural documentation and project performance which is statistically significant. And change in developing effective procedural documentation has no a corresponding change on project performance.

4.5.7. Correlation analysis between Continuous improvement and project performance

Continuous improvement has a positive relationship and statistically significant with project performance

From the above table it can be seen that Project continuous improvement ($r=0.723$, $p<0.01$) is positively correlated with project performance. This implies the presence of strong relationship

between continuous improvement and project performance which is statistically significant. And change in continuous improvement has a corresponding change on project performance.

4.5.8. Correlation analysis between End of phase review meeting and project performance

End-of-phase review meetings have a positive relationship and statistically significant effect on project performance

From the above table it can be seen that End-of-phase review meetings ($r=0.397$, $p<0.01$) is positively correlated with project performance. This implies the presence of moderate relationship between End-of-phase review meetings and project performance which is statistically significant. And change in End-of-phase review meetings has a corresponding change on project performance.

4.6. Linear Regression Models

4.6.1. Multiple regression assumption tests

Various regression assumptions, including linearity, independence of error, covariance, normality, and collinearity, were identified as primary concerns in this study. This section provide details for each hypothesis, examine the consequences of the null hypothesis, and discuss how each hypothesis is tested and the results interpreted. Linear defines the variance of a variable as a function of the predictor (independent) variable (Darlington, 1968). Multiple regression can predict the relationship between success and independent change when the relationship is linear in nature. The potential for nonlinear relationships in the social sciences is high, so linear analysis should be studied (Osborne & Waters, 2002).The covariance assumption means that the error variance at each level of the variable is equal. This means that the researchers assumed that the errors were evenly distributed among the variables (Keith, 2006). This is what happens when the variance around the regression line is the same for all values of the prediction variable.

Collinearity (also called multicollinearity) refers to the assumption that the independent variables are uncorrelated (Darlington, 1968; Keith, 2006).

When collinearity is low, researchers can interpret the regression coefficients as the effects of independent variables on variables (Keith, 2006; Poole and O'Farrell, 1971). This means that we can trust the perspective of difference. Multicollinearity occurs when several independent

variables are related or when one independent variable is a nearly linear combination of other independent variables (Keith, 2006). Multiple regression assumes that the variable is normally distributed (Darlington, 1968; (Osborne & Waters, 2002)). This means that the error is normally distributed and the residual plot converge to a curve (Keith, 2006).This assumption is based on the shape of the normal distribution and provides researchers with information about the expected value (Keith, 2006). Estimates for new models can be made when the sample size is known (Keith, 2006).

4.6.1.1. Linearity *Test*

The linearity assumption deals about the relationship between independent and dependent variables should be linear. The linear regression equation is: $Y = \alpha + \beta x$. Where, Y is the dependent variable, x is the independent variable, β is the coefficient of independent variable, and α is constant. Linear equation can be evaluated by using a scatter plot.

The correlation Analysis show that project planning (r=0.651, Sig=0.000), project implementation (r=0.779, Sig=0.000), project monitoring and evaluation (r=0.592, Sig=0.000), project communication (r=0.666, Sig=0.000), stakeholder involvement (r=0.349, Sig=0.000), developing effective procedural documentation (r=0.189 , Sig=0.000), Continuous improvement (r=0.723, Sig=0.000), end of end of phase review meetings (r=0.397 , Sig=0.000). which indicate all are correlated at 0.01 significant level. The significant correlations indicate the linearity which indicates the linearity assumption is proved.

4.6.1.2. Normality tests

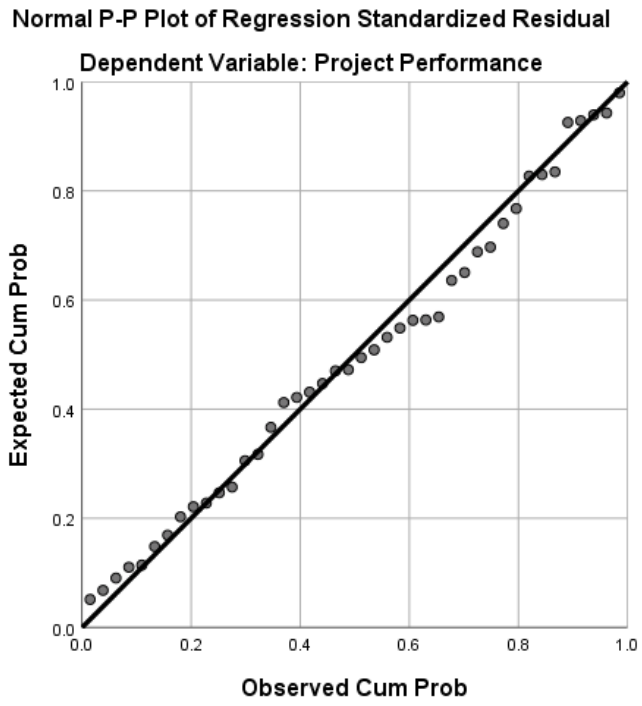


Figure 2: Normality test result

As it can be seen figure above the expected and observed cumulative probabilities, while not matching perfectly, are fairly similar. This suggests that the residuals are approximately normally distributed.

4.6.1.3. Multi collinearity Test

Multicollinearity exists when two or more of the explanatory variables are highly correlated. This is a problem as it can be hard to disentangle which of them best explains any shared variance with the outcome. It also suggests that the two variables may actually represent the same underlying factor. The simplest way to ascertain whether or not explanatory variables are highly correlated with each other is to examine a correlation matrix. A more precise approach is to use the collinearity statistics that SPSS can provide. The Variance inflation factor (VIF) and tolerance statistic can tell you whether or not a given explanatory variable has a strong relationship with the other explanatory variables.

Table 4-14: Multicollinearity test result

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Project Planning	.434	2.303
	Project implementation	.248	4.026
	Project Monitoring and evaluation	.631	1.584
	Project Communication	.361	2.767
	Stakeholder Involvement	.423	2.366
	Developing Effective Procedural Documentation	.801	1.248
	Continuous Improvement	.438	2.283
	End of Phase Review Meetings	.464	2.156

Source: Survey analysis result, 2023

Before running the model, existence of multi- Collinearity problem test was conducted to assess using Tolerance and VIF (Variance Inflation Factor) test. According to Pallant (2007), tolerance indicates to what extent the independent variables do not explain much of the variability of a specified independent variable and the value should not be small (more than 0.10) to indicate the absence of co-linearity. In addition to that, VIF, the inverse of tolerance value, should have a value of less than 10 to avoid any concerns of co-linearity (Pallant, 2007). Hence, the values in the table 4-10 indicate low co-linearity because all Tolerance values are above 0.1 and all VIF values are less than 10. Therefore, these tests reflect that the variables used in the study are free from multi co-linearity.

4.6.1.4. Homoscedasticity test

The residuals should do not vary systematically with the predicted values by plotting the residuals against the values predicted by the regression model. It can be looking for any evidence that residuals vary in a clear pattern.

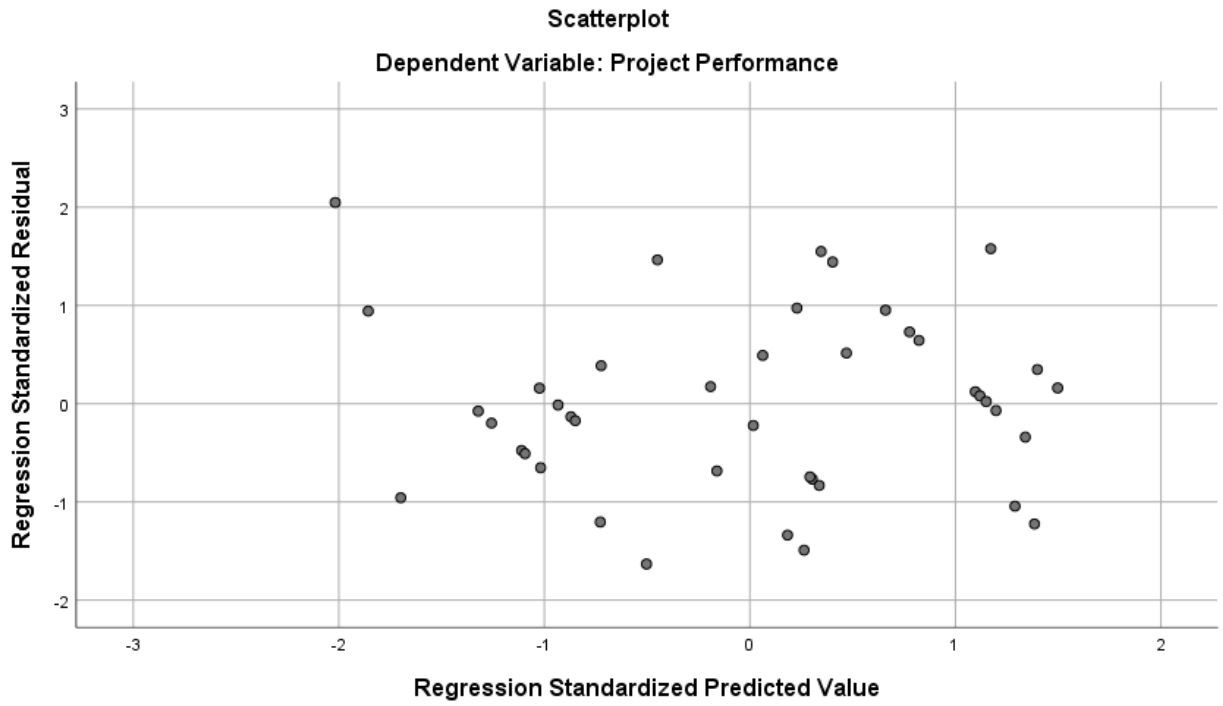


Figure 3: Scatter plot

Figure 3 show the data points seem fairly randomly distributed with a fairly even spread of residuals at all predicted values. Therefore, it can be assuming the Homoscedasticity test in this study is met. However, if then data points seem to funnel towards the negative end of the x-axis indicating that there is more variability in the residuals at higher predicted values than at lower predicted values. This is problematic as it suggests the model is more accurate when estimating lower values compared to higher values. In cases where the assumption of homoscedasticity is not met it may be possible to transform the outcome measure.

Multiple regression

Regression analysis is a systematic method that can be used to investigate the effect of one or more predictor variables on dependent variable. That is, it allows to make statements about how well one or more independent variables predict the value of a dependent variable. Specifically, this multiple regression was conducted in order to investigate the effect overall bundle of selected determinant factors on project performance.

The overall bundle of project management practices has positive relationship and statistically significant effect on project performance of Ethiopian Electric power Gibe-III project.

Table 4-15: Multiple regression result

Model Summary[b]										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.904[a]	.818	.774	.17867	.818	18.540	8	33	.000	1.792
a. Predictors: (Constant), End of Phase Review Meetings, Developing Effective Procedural Documentation, Project Monitoring and evaluation, Project Planning, Continuous Improvement, Stakeholder Involvement, Project Communication, Project implementation										
b. Dependent Variable: Project Performance										

Source: Survey analysis result, 2023

As shown in the above table the overall bundle of determinant factors of the eight independent variables such as project planning, project implementation, project monitoring and evaluation, project communication, stakeholder involvement, developing effective procedural documentation, Continuous improvement, end of end of phase review meetings explains 81.8% ($R^2 = 0.818$ of the dependent variables (project performance). This suggests that 81.8% of project performance level clearly depends on the independent variables while the remaining 18.2% is determined by other unaccounted factors in this study. Since as we show table 19 the result F= 18.54 which is greater than 1 and $P<0.01$ we can conclude that the combination of practices has positive effect on project performance which is statistically significant.

Table 4-16: Anova

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	4.735	8	.592	18.540	.000[b]
	Residual	1.053	33	.032		
	Total	5.788	41			
a. Dependent Variable: Project Performance						
b. Predictors: (Constant), End of Phase Review Meetings, Developing Effective Procedural Documentation, Project Monitoring and evaluation, Project Planning, Continuous Improvement, Stakeholder Involvement, Project Communication, Project implementation						

Source: Survey analysis result, 2023

Table 4-17: Multiple regression result, 2023

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.219	.308		.710	.482
	Project Planning	.194	.085	.257	2.277	.029
	Project implementation	.138	.074	.279	1.875	.000
	Project Monitoring and evaluation	.120	.047	.236	2.528	.016
	Project Communication	.037	.072	.063	.508	.615
	Stakeholder Involvement	.113	.052	.247	2.161	.038
	Developing Effective Procedural Documentation	.008	.047	.014	.164	.871
	Continuous Improvement	.264	.092	.322	2.869	.007
	End of Phase Review Meetings	.278	.074	.407	3.734	.001

Source: Survey analysis result,2023

From the above table it can easily be compared the contribution of each of the different variables by taking the beta value under the unstandardized coefficients.

Accordingly, End of phase review meeting (Beta=0.278, p=0.001) makes the contribution to dependent variable project performance which implies that a one-unit change in end of phase review meeting changes 0.278 in project performance.
The next variable continuous improvement (Beta= 0.264, P=0.007) makes the contribution to explaining the dependent variable in which the results revealed that, a one unit increase or positive change in " continuous improvement" would lead to a 0.264 unit increase in the project performance.

Project planning (B=0.194, p=0.029) makes the contribution to explaining the dependent variable in which the results revealed that, a one unit increase or positive change in " continuous improvement" would lead to a 0.194 unit increase in the project performance.

project implementation (B=0.138, p=0.000) makes the contribution to explaining the dependent variable in which the results revealed that, a one unit increase or positive change in " continuous improvement" would lead to a 0.138 unit increase in the project performance.

project monitoring and evaluation (B=0.120, p=0.016) affects project performance. This implies that the statistical variables have a correspondent's effect on the dependent variables project performance. The statistical significance indicates that continuous improvement, project implementation and end of phase review meeting p less than 0.001 and project planning, project monitoring and evaluation, and stakeholder involvement p less than 0.05 which is statistically significant to have effect on project performance.

On the other hand, project communication and developing effective procedural documentation have insignificant effect on project performance.

Table 4-18: Summary of hypothesis result

No	Hypothesis	Result	Decision
1	H1: Project Planning has a positive relationship and statistically significant effect on the project performance.	*r=0.779/p=0.000 B=0.138/ p<0.01*	Accepted
2	H2: Project implementation has a positive relationship and statistically significant effect on project performance	*r=0.779/p=0.000 B=0.138/ p<0.01*	Accepted
3	H3: Project Monitoring and evaluation has a positive relationship and statistically significant effect on project performance	*r=0.592/p=0.000 B=0.120/ p<0.05*	Accepted
4	H4: Project communication has a positive relationship and statistically significant effect on the project performance.	*r=0.666/p= 0.003 B=0.037/ p>0.05*	Not accepted
5	H5: Stakeholder involvement has a positive relationship and statistically significant effect on project performance.	*r=0.249/ p=0.112 B=0.113/ p<0.05*	Not accepted
6	H6: developing effective procedural documentation has a positive relationship and statistically significant effect on project performance.	*r=0.189/p=0.231 B=0.008/ p>0.05*	Not accepted
7	H7: Continuous improvement has a positive relationship and statistically significant effect on project performance	*r=0.723/p= 0.000 B=0.264/ p<0.01*	Accepted
8	H8: End-of-phase review meetings have a positive relationship and statistically significant effect on project performance	*r=0.397/p= 0.009 B=0.278/ p<0.01*	Accepted

4.1.1 Regression Mathematical Model (Estimation of Multiple Regression equation)

The equation of multiple regressions on this study is generally built on around two sets of variables, namely dependent variable (Project performance) and independent variables. The basic objective of using regression equation on this study is to make the researcher more effective at describing, understanding, predicting, and controlling the stated variables.

Mathematically, Yi = β1 + β2X2 + β3 X3+ β4 X4+ β5X5 + β6 X6+ β7 X7+ β8X8

Where Y is the dependent variable- Project performance X2, X3, X4, X5, X6,X7,X8 are the independent β1 is the intercept term- it gives the mean or average effect on Y of all the variables excluded from the equation, although its mechanical interpretation is the average value of Y when the stated independent variables are set equal to zero. β2, β3, β4, β5 , β6, β7, β8 refer to the coefficient of their respective independent variable which measures the change in the mean value of Y, per unit change in their respective independent variables.

Therefore, based on the result in the regression coefficient Table 4.16 and according to the above general mathematical equation, the estimated regression model of this study for Ethiopian Electric power is presented below.

$$PP = 0.219 + 0.194 * \text{PP} + 138 * \text{PI} + 0.120 * \text{PME} + 0.113 * \text{PSI} + 0.264 * \text{CI} + 0.278\text{PEPM}$$

4.7. Qualitative Results from the Interview

From the respondents the tasks of Ethiopian Electric power were to mentor and follow up of the projects progress from planning to end deliverables.

Communication plays a major role for good project performance of Ethiopian Electric Power , to perform the projects within the desired quality and standards .It helps to prepare effective plans and strategies ,increases transparency among key stakeholders of the project, contributes to the execution of the project if there is any revision of plan , increases ownership of key project stakeholders ,contributes to sustainability of the project if what works well and does not work well communicated to the key stakeholders , contributes to joint planning and decision making on the results of the project

Some interviewees argued even though Ethiopian Electric Power has better experience of communication to clarify project tasks and enables stakeholders to be wholly involved in the projects and has good project performance still the reason not to perform as the planned objectives and expectation were absence of greater communication with in all stakeholders especially among the government officials tends to be weak and needs improvement.

Most of the interviewees emphasized Project communication in Ethiopian Electric Power has ensured the project to be on the right track, improved quality of deliverables and enabled EEP and partners to meet the donor requirements and compliances and to perform with high quality in every phase of project life cycle.

Regarding this the Interviewee responded as:

The challenges of EEP were delay on fund approval and transfer, security challenges, challenges related to working with weak partners, lack of Keeping teams on the Same Page, unrealistic deadlines or not meeting donor deadlines, miscommunication between budget holders ,finance and implementing partner ,lack of risk management plan for the implementation and lack of accountability for the failure of some project, delaying of construction material , delay in receiving and transferring funds, procurement processes that are quite complicated that could have been simplified but still appropriate, and hence delays, limited capacity from partners, other external factors such as instability, and currently the pandemic that are unplanned for, poor competence of implementing partners, working with consultants , Project activities not going as planned, poor compliance, etc. are some of the challenges. These challenges were not fully solved (delay on fund approval and transfer), but EEP coped-up through developing accelerated planning and implementing projects in half-year time (often), building partners financial management capacity, supporting them, regularly communicating with partners to submit reports, accepting the weaknesses of partners and patience.

EEP establish different mechanisms to solve the challenge faced in the implementation of the project process some of them are maintain /establish calendar for most project this involves Every project includes a schedule and a team working for that project. Stay on top of the schedule and know what is coming up with calendar views.

The key success factors that are believed to be central to EEP project success are integrity ,good team spirit , best approach of the program manager to its subordinates, hardworking and

commitment, transparency, capacity of employees and IPs ,continuous follow-up and M&E, using resource/budget effectively.

In addition Clear communication channel , organizational capacity of partners, improved financial management capacity of partners, full compliance to donor requirements, proper planning for the project in terms of different perspective point of view like purchasing plan of the project materials, early engagement, or agreement with implementing partner improved grant management, delivering what promised, excelling in several areas, quality of the project (the design of which is currently weak), involvement of all staff in relevant decisions, results management, establishing and sustaining good relation with donors and other stakeholders were also key success factors for project success.

From the interview planning is the main factors of Gilgel Gibe-III project to become un success of the performance. The project was started without detail and pure study of responsible stakeholders. This case in the implementation stages many modifications in planning were performed. This were the major reason for the delaine, and cost overrun of the project. Which makes not become successful project.

4.8. Discussion of results

The findings of this study shows, End-of-phase review meetings (B=0.278/ $p<0.01$) makes the strongest unique contribution to explaining the dependent variable in which the results revealed that, a one unit increase or positive change in " End-of-phase review meetings " would lead to a 0.278 unit increase in project performance, followed by Continuous improvement B=0.264/ $p<0.01$), Project Planning (B=0.194/$p<0.05$), Project implementation (B=0.138/ $p<0.01$) and Project Monitoring and evaluation (B=0.120/ $p<0.05$). All the given above factors contribute statistically significant enough for project performance, among all predictor's End-of-phase review meetings (B=0.278/ $p<0.01$) have the strongest contribution. But Project communication (B=0.037/ $p>0.05$), developing effective procedural documentation (B=0.008/ $p>0.05$) have a statistically insignificant contribution (Sig>.05) for the prediction of the dependent variable (project performance).

Consistent studies that link with this studies are According to research, there is a positive correlation between independent variables with the dependent variables are: -

- Lemma (2012), Mohammed, (2008), Assefa (2017), links Project planning and project performance. Which mean project planning have significance effect on project performance and supports the research.
- Teshome (2018), Monitoring and Evaluation with project performance. Which mean in the study project monitoring and evaluation have significance effect on project performance. This also support the study.
- Asrat (2018), links Project Implementation and Project Performance. In the study project implementation has significance effect on project performance. This study also run conistencely with the study.
- (Harvey, 2005). End of phase review meeting with project performance. It means the study resulted end of phase revie meeting have a significance effect on project performance. The study support this study.

When we saw the theories discuses in the literature sections also support this study. From the nine theories discussed seven theories were aligned with this study.

CHAPTER FIVE

5. SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1. Introduction

This chapter focuses on the summary of findings, conclusions and recommendations resulting from the study. This is based on the findings that have been found from the research and discussed in the previous chapter. The chapter ends with appropriate recommendations aimed at fostering to improve Ethiopian Electric power projects.

5.2. Summary of Major Findings

Questionnaire were designed and distributed to a total of 44 employees of Ethiopian Electric Power Gibe-III projects worker. Accordingly, 42 questionnaires were appropriately filled and returned which gives 95.45% return rate. A total of 42 employee respondents' responses were collected successfully and used for analysis.

The data was analyzed using descriptive statistics, correlation and regression, and the major findings were presented and summarized as follows.

The overall mean about the project planning practice of Ethiopia Electric power of Gibe-III project was 2.75. project implementation with mean 2.83, project monitoring and evaluation with a mean of 2.82, project communication with a mean of 2.92, stakeholder involvement with a mean of 3.27, developing effective procedural documentation with a mean of 2.94, continuous improvement with 2.50, end of phase review meeting with a mean of 3.80 and project performance with a mean of 2.75. This indicates that respondents become neutral for the seven independent variables and the dependent variable. Respondents agree for end of phase review meeting at Ethiopian Electric Power.

Project planning has Pearson correlation coefficient **(r= 0.651, p<0.01**) which shows positive and significant relation with project performance as hypothesized. And the regression result (**B= 0.194, Sig. = 0.029**) can infer that project planning has positive and significant effect on project performance. On the other hand, project implementation has a correlation result **(r=0.138, p<0.01**) and regression result is **(B=0.138)** with (**Sig. = 0.000**) in which it can be conclude that project implementation has

positive and significant relationship and contribution to explaining the dependent variable of project performance, Project monitoring and evaluation has Pearson correlation coefficient **(r= 0.592, p=0.000**) which shows positive and significant relation with project performance as hypothesized. And the regression result (**B= 0.120, Sig. = 0.016**) can infer that project monitoring and evaluation has positive and significant effect on project performance., Project communication has Pearson correlation coefficient **(r= 0.666, p<0.01**) which shows positive and significant relation with project performance as hypothesized. And the regression result (**B= 0.037, Sig. = 0.615**) can infer that project communication has positive but insignificant effect on project performance. Stakeholder Involvement has Pearson correlation coefficient **(r=0.249/ p=0.112)** which show has no relationship with project performance and the regression results **(B=0.113/ p<0.05)** indicates has effects on project performance. The developing effective procedural documentation has a Pearson correlation results r=0.189/p=0.231 which is insignificance association and the regression result **(B=0.008/ p>0.05)** indicates that statistically insignificant effect on project performance. Continuous improvement has a Pearson correlation coefficient of **(r=0.723/p= 0.000)** and **(B=0.264/ p<0.01)** positive relationship and statistically significant effect on project performance. End-of-phase review meetings have a Pearson correlation **(r=0.397/p= 0.009)** and **(B=0.278/ p<0.01)** which is positive relationship and statistically significant effect on project performance.

5.3. Conclusion

The study aims to study the effect of project management practices on the project performance in the case of Ethiopian Electric power of Gibe-III project. Descriptive and explanatory research design were employed and a mixed approach of both quantitative and qualitative research approach were employed to answer the research questions. Questionnaire were designed and distributed to a total of 44 employees of Ethiopian Electric Power Gibe-III projects worker. Accordingly, 42 questionnaires were appropriately filled and returned which gives 95.45% return rate. A total of 42 employee respondents' responses were collected successfully and used for analysis.

The mean of the project planning (2.75), project implementation (2.83), project monitoring and evaluation (2.82), project communication (2.92), stakeholder involvement (3.27), developing effective procedural documentation (2.94), continuous improvement (2.50), end of phase review

meeting (3.80) and project performance (2.75). indicates that the respondents neutral about the practices which needs some increase to make in agree and make success.

The study findings have shown project planning, project implementation, project monitoring and evaluation, continuous improvement and end of phase meetings were project management practices that significantly affect project performances. But project communication, developing effective procedural documentation, and Stakeholder involvement have insignificant effect on project performance.

5.4. Recommendations

Finally, the researcher recommends that:

- The project management practices of project planning (2.75) are neutral levels and hence it has significant effect (**B= 0.194, Sig. = 0.029**) on project performance Ethiopian Electric Power should train project staffs about project planning.
- The project management practices of project implementation (2.83), is neutral levels and hence it has significant effect (**B=0.138/ p<0.01**) on project performance Ethiopian Electric Power should care project implementation through guide and support the project staffs.
- The project monitoring and evaluation (2.82), is neutral levels and hence it has significant effect with (**B=0.120/ p<0.05**) on project performance Ethiopian Electric Power should care project monitoring and evaluation through guide and support the project staffs.
- The project continuous improvement (2.50), is neutral levels and hence it has significant effect with (**B=0.264/ p<0.01**) on project performance Ethiopian Electric Power should train project staffs about project monitoring and evaluation and guide and support the project staffs.

5.5. Suggestions for Future Research

- The researcher recommends for future study hence Ehiopian Electric Power works in collaboration with other consultants it is recommended to study the factors for the failure of the projects in the consultant sides.

- It is also recommends that other researchers to study in detail of the project management practices taking one project management practices and the effects on the project performance.
- Other variables like teamwork is also project management practices and hence this and other variables effects is also suggests to future works.

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ADDIS ABABA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

SCHOOL OF COMMERCE

Dear, Respondent

I am a post graduate student of project management department in Addis Ababa University, school of commerce. As a partial fulfillment of my Master of Arts degree in project management, I am undertaking a research project on **the effect of project management practices on project performance: In the case of Ethiopian Electric Power Gibe III project.** You are one of the selected respondents which are invited to participate on this study. Your participation is voluntarily and I confirm that the information that you share me be kept confidential and only used for academic purpose. Please note that your genuine response support me and I kindly request to take few minutes to fill the questioners.

Thank you for your kind cooperation and dedicating your time.

Tekilew Zewdu

Email: tekzed21@yahoo.com

Ph No: +251-915975079

SECTION A: BACKGROUND INFORMATION OF RESPONDENTS

Mark (X) on your best choice on the box

A, Gender

1, Male ☐ 2, Female ☐

B, Age

1, 25 and below ☐ 2, 25-35 ☐ 3, 35-45 ☐ 4, Above 45 ☐

C, Education level

1, Diploma ☐ 2, Bachelor's degree ☐ 3, Master's degree ☐

4, PhD ☐ 5, Other state here _____

D, Marital Status

1, Single ☐ 2, Married ☐ 3, Widowed ☐ 4, Divorced ☐

E, Work experience in Ethiopian Electric Power in years

1, 1-5 years ☐ 2, 6-10 years ☐ 3, 11-15 years ☐ 4, Above 15 years ☐

F, Position in the workplace

1, Project officer ☐ 2, Project head ☐ 3, Project Manager ☐

4, Program Manager ☐ 3, Administrative staff ☐ 4, Other state here _____

G, Education Types

1, Project Management ☐ 2, Business related ☐

3, Engineering Related ☐ 4, Other state here _____

SECTION B: PROJECT RELATED QUSTIONS

Mark (X) on the appropriate place to indicate your level of agree on each of the questions per the rating scale below follows:

1= Strongly Disagree (SD) 2= Disagree (D) 3=Neutral(N) 4= Agree (A) 5=Strongly Agree (SA)

Nº	Questions	1 SD	2 D	3 N	4 A	5 SA
I	**Project Planning**					
1	The company plans human resource needed before the project implementation started					
2	The budget needed for the project were planed clearly through detail analysis					
3	Time needed to finish the project were planned by including experienced experts through detail analysis					
4	Each phase of the project phase planed including responsible stakeholders and project officers					
5	The project quality planed with experts which have good engineering experience					
6	Requirements of all project resource, material, human resources and IT related were identified					
II	**Project implementation**					
1	The Gibe-III project started as planed time					
2	Meetings were performed on the scheduled, weekly, monthly as planed					
3	The members in different department cooperate to implement the project as scheduled					
4	There was a consistent flow in all stakeholders involved on Gibe-III project					
5	There is good responsiveness from the top management to provide the required information					
III	**project monitoring, and evaluation**					
1	Task data are collected and analyzed in relation to the planned regularly.					

2	A clearly documented monitoring and evaluation system exists that guide project implementation.					
3	Ethiopian Electric Power reported the project monitoring and evaluation activities timely for government					
4	In Gibe-III projects results of evaluation were used regularly to make adjustments to the project					
IV	**Project Communication**					
1	Project practitioner in Ethiopian Electric power understands explicitly the content of communication					
2	Project practitioner maintains effective formal lines of communication in the Gibe-III project					
3	Gibe-III Project practitioner in Ethiopian Electric power maintains effective informal lines of communication involved in the project					
4	Project practitioner in Ethiopian Electric power uses appropriate information sources to solve the project works					
5	Project practitioner in Ethiopian Electric power aligns the information in an appropriate situation to the audience in Gibe-III project					
6	Project practitioner constantly seeks opportunities to communicate the project status and directions					
V	**stakeholder involvement**					
1	The key stakeholders were identified clearly and communicated regularly about the Gibe-III project progress					
2	Stakeholders were involved in the review and decision of the organization's mission and strategies					
3	Project priorities and services are defined in collaboration with stakeholders					

4	In Gibe-III projects Ethiopian People, government and other stakeholders participated on idea and other supportive action					
VI	**Developing Effective Procedural Documentation**					
1	Learned experience were documented properly in Gibe-III projects					
2	After the end of each project phase proper documentation and reports were prepared					
3	The vision, mission, plan and guidelines, and other data were documented properly					
4	Effective procedural documentation provides guidelines and uniformity, enables the projects easily implemented					
5	Operational requirements and specifications were well defined and documented					
VII	**Continuous improvement**					
1	I aware of all trainings, practices, techniques, methods, and tools used to conduct all continuous improvement activities in the workplace					
2	problem-solving techniques used with in continuous improvement system are useful, agile, dynamic and effective for achieving long term sustainable development and identifying routines that allow for better working habit					
3	Ethiopian Electric power is effective in recognizing the importance of continuous improvement					
4	The continuous improvement practices of EEP increases Gibe-III project productive and success					
VIII	**End-of-phase review meetings**					
1	At the end of all phase all project members discussed and learned from their mistakes					
2	EEP evaluate the outcome of the project, measured against the Project planning document					

3	Unfinished deliverables had been communicated to those with operation and maintenance responsibilities					
4	Ethiopian Electric Power ensure that any lessons learned are shared with those who might benefit from them					
IX	**Project Performance**					
1	Ethiopian Electric Project, Gibe-III project finished within the scheduled time					
2	Gibe-III project were finished within the planed budget					
3	Gibe-III project quality were completed as planned					
4	Ethiopian Electric Project use resources including time and materials effectively					
5	Gibe-III project were accomplished with high quality and satisfies its stakeholders					
6	Requirement performance were met in Gibe-III project					
7	Overall stakeholders' satisfaction were met in Gibe-III project					

Thank you.

Appendix-II: Interview Questions

1, What do you think about the effect of project management practices on project performance?

2, What are the major project management practices which mostly affect the Gibe-III project performance?

3, What were the reasons for the delay of Gibe-III project?

4, Why cost overrun occur in Gibe-III project? Could you tell the reasons in details?

5, Do you believe that the quality of Gibe-III project finished as planned? If no, why?

6, Do you believe that other than project management practices factors affect Gibe-III project? If yes what are those factors?

7, What were the major roles of Ethiopian Electric Power in Gibe-III project?

8, What were the challenges in Gibe-III projects?

Appendix: Informant Information

No	Informant code	Gender	Position
1	Informant 1	Male	Project team leader
2	Informant 2	Male	Project team leader
3	Informant 3	Male	Project team leader