ASSESSMENT OF THE EFFECT OF STAKEHOLDER MANAGEMENT ON PROJECT PERFORMANCE: THE CASE OF ROAD PROJECTS ADMINISTERED UNDER THE ETHIOPIAN ROADS ADMINISTRATION

ADDIS ABABA UNIVERSITY

SCHOOL OF COMMERCE

By

Biruhehiwot Zerihun

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THESIS SUBMITTED TO THE SCHOOL OF POST GRADUATE STUDIES, ADDIS ABABA UNIVERSITY, SCHOOL OF COMMERCE, DEPARTMENT OF PROJECT MANAGEMENT, GRADUATE PROGRAM UNIT, IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS IN PROJECT MANAGEMENT

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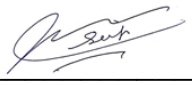
Dr. Seifu B.		Dec 26 2024
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DECLARATION

I, Biruhehiwot Zerihun, declare that this thesis " *ASSESSMENT OF THE EFFECT OF STAKEHOLDER MANAGEMENT ON PROJECT PERFORMANCE: THE CASE OF ROAD PROJECTS ADMINISTERED UNDER THE ETHIOPIAN ROADS ADMINISTRATION*", is my own work, produced in partial fulfilment of the requirement for the award of my Postgraduate Degree in Project Management from Addis Ababa University, School of Commerce with the cooperation and direction of my research supervisor, Dr. Fisseha A.. All sources have been acknowledged in the thesis, and it has not lead to the award of any degree or diploma program at this or any other school.

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CERTIFICATE

This is to certify that the thesis entitled : " ASSESSMENT OF THE EFFECT OF STAKEHOLDER MANAGEMENT ON PROJECT PERFORMANCE: THE CASE OF ROAD PROJECTS ADMINISTERED UNDER THE ETHIOPIAN ROADS ADMINISTRATION ", submitted in partial fulfilment of the requirements for the degree of Masters in Project Management, Addis Ababa University, School of Commerce is the record of original research carried out by Biruhehiwot Zerihun under my supervision and that it has not formed any part of the basis for the award of degree of any other university. The assistance and support given throughout the course of this study has been appropriately acknowledged. So, I recommend that it is accepted as satisfying the need of a thesis.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ACRONYMS

AACRA =Addis Ababa City Road Authority

ECWC =Ethiopian construction works corporation

ERA =Ethiopia Road Administration

IMS =Integrated Management System

OED =Operations Evaluation Department

PMBOK= Project Management Body of Knowledge

PMOs =Project Management Offices

SM=Stakeholder Management

VIF= Variance Inflation Factor

ABSTRACT

Identifying people, entities, or coalitions that the project might impact or be impacted by is the first stage in managing project stakeholders. Subsequently, the project's expectations and their consequences are examined, and appropriate methods of managing stakeholders are employed to guarantee their efficient involvement in project options and implementation. This study looked into how Ethiopian road project performance was affected by stakeholder management. This study used both explanatory and descriptive research methodologies to address four particular objectives: the impact of communication, mapping, engagement, and involvement among stakeholders on the success of road projects. The target population for this study was 177 individuals stratified based on the surveyed project employees, donors, utility providers, community and local administrations were a sample of 122 respondents were established by sample size determination. Accordingly, 101 questionnaires were collected and attained 83 % response rate. Data collected were then presented using tables and descriptive statics, correlation and multiple regression analysis were applied. SPSS V. 25 was used to analyse data. As a consequence, this study revealed that the influence of stakeholders mapping, communication, engagement and involvement on road project performance, was positive and significant by using explanatory research method. Hence, it concluded that stakeholders mapping, communication, engagement and involvement will enhance road project performance. Accordingly, this study recommends that this firm should improve its email, project management software, social media, and in-person meetings; organize its teams effectively; management and interpersonal skills should be improved; and it should share common understanding and taking part in the decision-making process.

Keywords: Stakeholders' Management, Road Project Performance

CHAPTER ONE

INTRODUCTION

This chapter includes the study's background and organization, problem statement, research questions, goal, definitions of important words, study significance, study scope, and research report organization.

1.1 Background of the Study

Stakeholders are described as "individuals, groups, or organizations who may affect, be affected by, or perceive themselves to be affected by a decision, activity, or outcome of a project" by Sintayehu et al. (2015). Project stakeholder management is the methodical identification, evaluation, and planning of actions to interact with and impact stakeholders (Waris et al., 2022). To effectively manage stakeholders on projects, project managers need to possess comprehensive skills in all aspects of stakeholder management. A company can achieve its strategic goals through good stakeholder management by understanding the external environment and the support of stakeholders (Gwaya et al., 2021).

Stakeholder management comprises four fundamental components that must be accomplished successfully for road building projects: mapping, analysis, risk management, and stakeholder identification (Adek, 2016). Since stakeholders have an impact on project performance, stakeholder management is crucial to the success of any road project (Matembo, 2016). A project manager needs to become well-versed in them since they are dynamic factors among the various stakeholders in the context of a road project (Seble, 2023). Road building projects are greatly impacted by the decisions and actions made by all stakeholders (Waris et al., 2022). Almost all projects work in an environment where the stakeholders' performance is mostly what determines whether or not tasks are completed (Adek, 2016). As said by Waris et al., (2022), parties involved in a road project could be from within the company or outside. The amount, control, attention, and inspiration of construction participants in a given road project varies over the course of the project life cycle (Abdurazak, 2023).

It is crucial to constantly take into account the opinions, drives, and degrees of interest of the many parties involved in the road project. Stakeholder evaluation, identification, mapping, analysis, and risk management has to be done at every stage of the road project's development (Adek, 2016; Mvutune, Manguuriu & Diang-a, 2017; Njogu, 2016). Matembo (2016) and Kinyondo and Villanger (2017) have reported a correlation between subpar stakeholder management and subpar road construction project performance in Tanzania. As per Ashenafi's (2020) report, the primary factors affecting the road construction projects' performance were risk management and stakeholder management. Matembo (2016) found that changes made by stakeholders to the work's scope had the greatest impact on delays and expense overruns.

In their analysis of the policy challenges to the performance of road infrastructure projects, Paul (2022) found that internal stakeholder management, specifically in terms of project communication and extra-project communication, has the positive and combined predictive potential of project stakeholder commitment. Insufficient stakeholder communication channels have produced incomplete information, which has caused stakeholders to be uncommitted to certain road projects, claim Gwaya et al. (2021). According to Abraham et al. (2021), Ethiopia's monitoring process for enhancing stakeholder management is currently deficient in adequate instruments and strategies for effective communication and interaction with stakeholders, as well as insufficient detail and consultation with experienced staff. Though Sintayehu et al., (2015) stated that the World Bank and African Development Bank donated projects had good follow-up and attention from financiers more than government financed projects. He continued to state that external stakeholders' needs/expectations were one of the main causes of project delays, claims, and design changes.

A potential remedy that is based on research should be offered in order to prevent or lessen the issues listed above. This is due to the fact that industrialized countries like Ethiopia have different project management systems than do developing countries (Biruk, 2023). Claims are dealt with in almost every area of the construction industry; the majority of them are hard to resolve and can delay the completion of projects, especially in Ethiopia. One of the problems is that some stakeholders don't contribute effectively and don't get their needs satisfied.

1.2 Statement of the Problem

Ethiopian road construction projects stand out for their poor or mediocre performance. Moreover, the World Bank's Operations Evaluation Department (OED) has rated Ethiopian projects as less completed than those of other East African countries (Mulugeta, 2024). Tanzania and Uganda received ratings of 59.5% and 70.1%, respectively, for the completion of public projects funded between 2018 and 2022, while Ethiopia received a total score of 49%. Over that period, Ghana, which is not in East Africa, was rated 64.7% (World Bank, 2023).

If the matter is not looked into and resolved, it will be difficult for the federal government and devolved governments to make capital development budgets and time appropriations for road building. The capacity of both governments to plan for upcoming economic projects may suffer as a result (Boston University 2022). According to clients, consultants, and contractors, only 22%, 30%, and 44% of road construction projects were completed on schedule, while the maximum time overrun was 78%, 70%, and 56% for the same parties. Sahlu (2021) investigated the causes of delays and disruptions in road construction projects in Ethiopia. According to Yalew and Changgang (2020), insufficient planning and scheduling, weather-related delays, bureaucracy, and delayed decision-making in the client organization are the main reasons of delays. Girma (2023) enumerated the primary obstacles to project implementation in Ethiopia as inadequate resources, contractor non-performance, and postponed payments. In most counties, there have been documented increases in building costs and schedules for road projects. It was also mentioned that the reason for the time and cost overruns was because of issues with stakeholder management.

While numerous studies have examined the performance of road projects, project stakeholder management has not gotten as much attention. Nonetheless, the focus of these inquiries was on skilled labor, communication, information technology, procurement procedures, and financial competency (Mutune et al., 2017; Ogombe, 2017). The practice of right-of-way stakeholder management in project planning and management was examined by Abraham et al. in 2021. Sintayehu et al. (2015) evaluated the impact analysis of stakeholders on the management of road development projects, focusing solely on the western region. Mulugeta (2024) evaluated the socio-economic effects and potential hazards of Ethiopian road construction. Lastly, Girma (2023) examined the factors influencing the performance of road construction projects using knowledge

gained from Semera PMO road construction projects. As per previous reports from the area, such as Sahlu (2021), a lot has been written about the mechanisms that lead to the success or failure of building projects, both experimentally and literarily. These studies also highlight issues of instability, unequal compensation, and 61 road projects. This demonstrates that despite this, there has been little to no research on the subject of "project stakeholder management on the performance of road construction projects."

This demonstrates how a gulf exists between the project implementers and the community as a result of their inadequate coordination with local authorities. According to Adek (2016), Seble (2023), and Joseph et al. (2016), certain researchers hold project implementers accountable for their refusal to address grievances raised by local authorities and community representatives. Conversely, those working on the project accuse the local government of controlling the width and route of the roadways. As is well known, ERA has a large number of road projects under construction nationwide, working with numerous contractors and consultants. Even though the majority of projects required study on stakeholder management, which also has an impact on contractors, the research topic was restricted to certain road projects. The current study intended to bridge this research gap by analyzing the impact of project stakeholder management on the performance of road construction projects in Ethiopia, with a focus on stakeholder mapping, involvement, engagement, and communication.

1.3 Research Questions

Assessing the effect of stakeholder management on road construction projects performance under the Ethiopian roads administration was an effort of answering the following research questions:

- What is the effect of ***stakeholder mapping*** on the performance of the road projects of Ethiopian Roads Administration?
- What is the effect of ***stakeholders' involvement*** on the performance of the road projects of Ethiopian Roads Administration?
- What effect does ***stakeholder communication*** have on the way Ethiopian Roads Administration's road projects operate?
- What is the effect of ***stakeholder participation/engagement*** on Ethiopian Roads Administration's road project performance?

1.4 Objective of the Study

The general and specific objectives of this research were the following.

1.4.1 General Objective of the Study

- To examine the effect of stakeholder management on the project performance of road projects in Ethiopian Roads Administration

1.4.2 Specific Objectives of the Study

- To investigate the effect of stakeholder mapping on the performance of the road projects of Ethiopian Roads Administration
- To identify the effect of stakeholder's involvement on the performance of the road projects of Ethiopian Roads Administration.
- To assess the effect of communication of stakeholders on the performance of the road projects of Ethiopian Roads Administration.
- To assess the effect of the engagement of the stakeholder on the performance of the road projects of Ethiopian Roads Administration.

1.5 Significance of the Study

The government would find the study to be of considerable practical value in improving the performance of government public road projects and carrying out effective project stakeholder management in the engineering profession. Stakeholders are essential to project planning, execution, and handover, so it's critical to identify all relevant stakeholders at every stage of the project life cycle and select the most effective management strategy. Then and only then will it be possible to implement a suitable plan for managing stakeholders and attain the required project performance.

Furthermore, this study can show how crucial it is to have a standard Stakeholder Management Procedure or guideline in order to achieve the project's required performance, as ERA lacks one due to a lack of attention to the topic. It will also be used as input when future guidelines are being

prepared. The research study can be used as a guide by other researchers who would like to conduct more research on the concept of project stakeholder management, its applications, and the reasons for and effects of project stakeholder management on project performance. For academics and students, the study's findings will be important and useful as a springboard for related research projects in the future.

1.6 Scope of the Study

The topic of this study is to assess the impact that Stakeholder Management will have on the performance of road projects in the Ethiopian Roads Administration. It will focus on understanding Stakeholder Management from four perspectives: *stakeholder mapping, involvement, engagement, and communication.* The geographical scope of the study is determined based on the distribution of the federal road projects administered under ERA. In general, ERA has road projects on five regions in the Country: Northern, Southern, Eastern, Western and Central. This study was generally conducted on the road projects found in all the five regions in the Country, but more emphasis was given to road projects in the Eastern Region. The study used Mixed (*Quantitative and Qualitative*) approach based on descriptive and Explanatory type research. The intended sample size consisted of only 122 people, most of whom were project managers, project engineers, individual experts, and other relevant entities. Questionnaire and Interview was used to collect the required data. The study was conducted over a period of 7 months from December 2023 up to June 2024.

1.7 Limitation of the Study

There were limitations such as unavailable data based on the newness of electronic government procurement in the country unwillingness to provide data used that affected this study and its data collections operations. For the most part, some sampled respondents were disheartened to provide data as they were unable to relate how the research would assist them directly or indirectly. The researcher however assured them that the findings of the research will be useful in the organization. Only when the researcher was able to identify and manage these limitations, respondents had been ultimately convinced through discussion about the aim of the study, its academic capabilities and

benefits from it. As well, the study used questionnaires which were voluntary and relied on data as provided by the respondents.

In order to reduce miscommunication and provide management with sufficient information on the research project, the researcher only addressed a small group of interested parties. Due to budgetary, logistical, and other limitations, the study did not examine the practices of computerized stakeholders profiles and their selection processes. Consequently, the study's ability to present a comprehensive image of the nation's bureaucratic government performance was limited.

1.8 Definitions of Key Terms

- **A Project** is a brief project that needs to be finished in a certain amount of time with the intention of achieving a certain objective by improving a special good, service, or result. (PMI, 2017).
- **Communication:** the need for constant communication that includes all parties and promotes mutual understanding (Seble, 2023).
- **Project Management:** according to PMBOK (2021) defines it as the application of knowledge, skills, tools, and techniques to project activities in order to fulfill project requirements.
- **Project Performance** budgetary scheduling and customer satisfaction in terms of schedule, cost, quality, and safety, project performance is defined by Warner (2019).
- **Stakeholder Engagement** is the process of incorporating any individuals, groups, or organizations that will be affected by the project's outcome into its planning and decision-making (Dagnachew, 2023).
- **Stakeholder Management**: this is the process of figuring out what, who, and how other individuals, groups, or organizations might be impacted by the project; examining the expectations of stakeholders and the impact they have on the project; and creating an improved management strategy (Warner, 2019).
- **Stakeholder Mapping**: Understanding the main stakeholders' identities, backgrounds, and motivations in relation to the company is crucial and can be achieved by mapping (Dagnachew, 2023).

- **Stakeholders Involvement** is important because it helps achieve the objective of completing the project on schedule, within budget, and with excellent outcomes (Paul, 2022).

1.9 Organization of the Study

There are five chapters in this research thesis project. The chapters include an introduction, a synopsis, recommendations, results and discussion, and a review of related literature. A basic overview of the study is given in the first chapter, which includes information on the study's background and organization, issue statement, research questions, and objectives. It also defines important words and discusses the study's significance, scope, and organization. The literature on stakeholder management and project performance is covered in Chapter 2. In addition to empirical research and theoretical frameworks and concepts, it discusses stakeholder mapping, involvement, engagement, and communication. Along with the conceptual framework and reasons for delays, it also discusses how these elements affect how well road projects function. The kind and design of the study, as well as the research technique, are explained in detail in Chapter 3. The study's methodology encompasses many techniques such as research method sampling, data gathering, and data analysis. Chapter 4 provides a detailed summary of the study's conclusions. Lastly, chapter five is divided into four sections: recommendations, study limitations, summary results, and conclusions.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter provides the readers with an explanation of the conceptual framework, empirical review, and theoretical backdrop of the topic being studied. In line with the goals of the study, this chapter discusses problems related to stakeholder mapping, involvement, engagement, and communication as well as how they affect the way road projects perform and the empirical review. Additionally, the conceptual foundation for the investigation is presented as this chapter comes to a close.

2.2 Theoretical Literature Review

2.2.1 Overview of Stakeholder Management

Stakeholder management encompasses the procedures required to identify the people, groups, or organizations that the project may affect or be affected by; evaluate expectations from stakeholders and how those expectations may impact the project; and develop appropriate management plans for involving stakeholders in project decisions and implementation (Abraham et al., 2021). In order to prevent project uncertainty, which results from concentrating just on common stakeholders, stakeholders should be approached. Speak with every stakeholder on the list instead. The stakeholder management process is integrated into the project from start to finish, together with other project management knowledge domains. The stakeholders' vested interests in the project as it moves forward, as well as their relationships and affiliations with other stakeholders might position them to be stronger (PMI, 2017). The project manager can act as a watchdog by taking proactive steps and persuading the parties involved in a way that best serves the project, even when the interests of the various stakeholders may coincide or differ. Stakeholder management, according to Abraham et al. (2021), can also be defined as the proactive steps the project team takes to lessen the negative influence of stakeholders and to provide opportunities that inspire them to support the goal of the project.

Stakeholders are significant individuals with an interest in the project's success. These are the individuals or groups of individuals that the outcomes of the ongoing projects may have an impact on or are predicted to have an impact on (PMI, 2017). A project's ability to identify mid-level stakeholders, their needs, and the creation of fruitful working relationships that support the identification, analysis, planning, and resolution of the work-based problem under investigation (i.e., the stakeholder engagement phase) depends on the concept of stakeholder management. Stakeholder management is an integrated and systemic method to solving connected management challenges (Paul, 2022).

While using a stakeholder management method, Paul's (2022) study only looks at mid-level management; top-level stakeholder management is not covered. This decision's justification is because project activities are not directly planned, carried out, or monitored by high-level stakeholder categories. On the other hand, mid-level stakeholders show up as the main players in the study and take an active role in knowledge production, action planning, implementation, and evaluation. Using the stakeholder management technique, it is easier to document the needs of the stakeholders, as well as their roles, responsibilities, and on-going initiatives inside the organization (Bosse and Coughlan, 2016).

In order to create a thorough stakeholder register and facilitate data collection, it was necessary to document these stakeholders (Abraham et al., 2021). According to Warner (2019), a process known as stakeholder involvement requires keeping stakeholders informed about every stage of the project and soliciting their input in order to improve project performance. Stakeholder engagement, the primary goal of stakeholder management, is to include all mid-level stakeholders in a way that improves the performance of construction projects (Warner, 2019). Many management literatures view stakeholder involvement as a crucial tactic for improving organizational operations. Stakeholder involvement is seen by many managers as a helpful tactic for foreseeing and addressing the multiple ethical dilemmas that stakeholders encounter when running their businesses (Adek, 2016).

In essence, stakeholder engagement will lead to a relationship that enables participants to make a contribution to the work they do (PMI, 2017). However, in order to effectively accomplish this, stakeholders must recognize the challenges that their relationships present and take action to

overcome those (Townsend et al., 2018). By doing this, new data will be generated and a foundation for trust-defusing and constructive creation within the organization will be established (Greenwood, 2007). It will also be advantageous to all parties involved, including the organization (Bosse and Coughlan, 2016). One may argue that when stakeholders work together, they foster an environment where it is feasible to develop morally aligned ideas, have a major impact, and ensure financial outcomes. These are only a few benefits of including and incorporating stakeholder interaction within the study, as will be demonstrated over its duration (Paul, 2022).

Warner (2019) provided a description of the methods and strategies employed by the stakeholder management framework, which are covered in this section. The four main sequential processes will be discussed in order to oversee and manage the requirements of stakeholders during the project's implementation. Finding the stakeholders in the first place is necessary for this. Following that, a shareholder registry will be established, listing each shareholder's exact position inside the firm (Paul, 2022). These stakeholders' expectations and concerns would be determined after a comprehensive study that classifies their needs, and continuing ties with them would be fostered during the planning and engagement phases. This is to guarantee that expectations of stakeholders are fulfilled. The implementation of a monitoring and evaluation methodology for stakeholder engagements will improve project performance, profitability, and client satisfaction on a regular basis (Warner, 2019).

2.2.2 Project Performance

Development projects are now executed in an integrated process known as concurrent engineering, in which all departments collaborate from the outset and jobs overlap. Sequential project execution is no longer the norm. Project management and established processes for product development can facilitate both development and progress, but there's a risk that they will impede innovation and exploratory work (Townsend et al., 2018). Success is linked to goal-oriented behaviors like effectiveness and efficiency. Efficiency is centered on maximizing output for a given level of input. While there are multiple definitions of efficacy, the most of them revolve around the outcome; that is, the degree to which a predetermined objective is achieved, the degree to which the actual outcome matches the intended outcome, or the extent to which customer requirements are met (Abraham et al., 2021).

It's possible to characterize efficiency as doing things correctly and effectiveness as doing the right thing. Any organization's management must prioritize effectiveness and efficiency, but project organizations prioritize these qualities beyond all else (Yalew & Changgang, 2020). Profitability, expenditures, and cycle time are examples of efficiency indicators. However, compared to efficiency measures, effectiveness metrics are less tangible and easier to comprehend. Additionally, it takes longer to determine them. Consequently, effectiveness becomes less important (Jugdev and Muller, 2005). In the context of development process performance, efficiency is the goal of doing what you are already doing better; however, when trying to improve process performance, the focus should be on doing the correct things and enhancing effectiveness (Boston University, 2022).

The phrase "project performance" describes the ability to fulfill client expectations for cost, quality, and safety while simultaneously adhering to schedules and financial restrictions. It offers an efficiency definition more in line with accepted practices today. Efficiency is defined as meeting performance or specification requirements, finishing the project on schedule, staying within budget, and ensuring that the customer or end user is satisfied (Yalew & Changgang, 2020). disrupt approval that is low or minimal, doesn't affect the organization's business processes, and doesn't disrupt the culture of the company is important (Warner, 2019). The most important strategy to guarantee performance is to steer clear of initiatives that overspend, take longer to approve, design, and operate, or don't meet quality, performance, and other standards. According to Abraham et al. (2021) efficiency allows a firm to reduce risk and the occurrence of unpredictable occurrences, maximize efficiency in attaining project objectives, and exploit opportunities when dangerous conditions arise.

2.2.3 Measurement of Stakeholder Management and Project Performance

2.2.3.1 Determinants of Stakeholder Management

The four main phases of stakeholder management are, according to PMI (2017), stakeholder identification, stakeholder management planning, stakeholder engagement management, and stakeholder engagement process control. A stakeholder's classification is based on a number of variables, including their role and relationship. It is possible to classify stakeholders as primary or secondary, internal or external. A comprehensive grasp of the qualities of stakeholders facilitates

the identification and prioritization of their involvement. Setting priorities is challenging since there aren't enough material, financial, or human resources to handle all the stakeholders (Warner, 2019). While certain stakeholders may have the power to influence the allocation of project resources and can provide their technical know-how to help determine whether the project succeeds or fails, others may simply be curious about the project's goal on a broad level. The project manager, who holds the authority to oversee the project, must play a crucial role in making the most of the limited project funds by assigning both time and resources to the most demanding tasks (Adek, 2016).

2.2.3.2 Project Performance Measurement

Projects are essentially collections of work that must be finished within the organization's resources and in accordance with predetermined goals. Project success is essential to the efficient execution of projects, despite the fact that it can occasionally be an impossible and difficult idea. The project performance indicators listed in Table 1 below are thought to be essential to the project's success (Biruk, 2023). Project management is the application of knowledge, skills, resources, and procedures to tasks meant to meet requirements. Project management is aided by the implementation and integration of the planning, initiation, execution, monitoring, and closing management processes (Yalew & Changgang, 2020).

Another definition of project management is the ability of professionals to create products that meticulously complete a project by putting together high-performance teams to ensure they have the best and most effective methods and techniques for qualification and control. The procedure is effective and simple to utilize (Matembo, 2016). Best Project management practices are a process that has been proven through implementation and testing use specific and measurable benefits and long-term values in terms of improved project performance outcomes like lower project costs, increased employee productivity, enhanced client experiences, and an increase in the number of new projects (Paul, 2022).

Table 1 Performance indicators for construction projects

Project Performance indicators	Description
Cost	• cost is fruitful if it satisfying the budget
Quality	• Can be well-defined by how match a set of inherent characteristics attains desires
Time	• The time is achievement if it satisfies the schedule
Scope	• Refers to all the action required in creation the products of the project and the method used to create them
The performance of the project	• Determining project performance awards the organization with a clear picture of the wellbeing of its projects and can grant faith in the project teams.
Satisfaction of stakeholder	• The stakeholders are pleased if they encounter their necessities and expectations
Project efficiency	• Can be dignified by the volume of Outputs found per the inputs utilized.
the effectiveness of the product	• The effectiveness of the product can be dignified by test the outcome of the project if it desired result or no.

Source: Biruk, 2023

2.2.4 Related Theory - Stakeholder Theory

This idea holds that the corporation's decisions may have an impact on parties other than only shareholders, hence stockholders may not always stand to gain or lose from the decisions the company makes. This study is based on the principle of stakeholders. It is imperative to identify and assess all stakeholders well in advance of the project's commencement. Apart from the owners or clients, many other stakeholders are impacted by the decisions made in projects (Seble, 2023).

Trust, reputation, and innovation can foster stronger stakeholder relationships, which can offer a business a competitive edge and enhance project success. There are stakeholders in every project who could affect its performance. Therefore, it's critical to identify these parties and determine if they pose a risk to or contribute to the project's goals (Adek, 2016). As a result, the authority and interest of each stakeholder in the project varies. Therefore, in order to comprehend the different attributes of the organization's stakeholders, such as their identities, backgrounds, and degrees of interest in the company's performance, the project management team must conduct a "stakeholder mapping" exercise (Kinyondo & Villanger, 2017). The theory emphasizes how crucial it is for

senior management staff to communicate with stakeholders. Managers in particular must understand how stakeholders affect the results of their projects. Although this idea originated in strategic management, it has been applied in many different fields, and its use varies according to the methodology and standards of evaluation employed (Gwaya et al., 2021).

This theory is helpful to this study since it explains how the interaction between the stakeholders and upper management determines their engagement. The rich environment that stakeholder theory produces improves the second variable in our study. The goal of this concept is to provide managers the capacity to understand, map, and strategically manage stakeholders. Because of this, stakeholders can be grouped and classified using stakeholder mapping according to their varying degrees of interest and influence inside the company. Stakeholder mapping is done to manage these stakeholders and have a positive effect on the company.

2.2.5 Relationship between Stakeholder Management and Project Performance

Building great relationships with stakeholders entails effective communication, understanding their requirements, managing expectations and responding to changing situations. Project managers can cultivate positive relationships that enhance the overall success of their projects by implementing these tactics. This study examines the beneficial effects of stakeholder management on project performance, considering that relational and prescriptive stakeholder management complement each other to improve project results (Saad et al., 2020)

2.2.5.1 Stakeholder Mapping and Project Performance

Because of this, stakeholders can be grouped and classified using stakeholder mapping according to their varying degrees of interest and influence inside the company. The company aims to reap the benefits of these stakeholders' contributions by effectively managing them (Kinyondo & Villanger, 2017). Mapping the names, backgrounds, and driving forces of the major stakeholders in respect to the company is crucial (Dagnachew, 2023). Each project's major stakeholders are first identified and ranked, and then an engagement plan is created to build and preserve long-lasting connections with them. This approach creates a stakeholder-circle tool (Al-Shaaby & Almessabi, 2018). Selecting pertinent stakeholders, fully describing their interests, quantifying those interests,

predicting their future actions to enhance those interests, and assessing the results are all necessary steps in the process of stakeholder mapping (Biruk, 2023). Project managers can identify stakeholders' potential influence more clearly thanks to additional tools provided by stakeholder mapping. Stakeholder mapping offers project managers new tools that help them more clearly identify the possible influence of stakeholders (Kinyondo & Villanger, 2017).

- ***Hypothesis 1 (H_1)- There is a positive and significant effect of stakeholder mapping on road project performance***

2.2.5.2 Stakeholders' Involvement and Project Performance

Involving stakeholders is essential because it advances the goal of completing the project on time, on budget, and with excellent outcomes. Involving stakeholders helps to ensure that project requirements and expectations are considered for both the present and the future (Paul, 2022). One of three fundamental approaches can be used to visualize stakeholder management and involvement in construction projects (Matembo, 2016). These have to do with seeing stakeholder involvement as a management technique, an ethical obligation, or a forum for discussion to promote mutual social learning. A well-planned stakeholder engagement/management approach can result in a variety of ramifications, from social learning to the collection of several forms of information (Adek, 2016). Collaboration between project managers and significant stakeholders should be stimulated through stakeholder management; nonetheless, this depends momentously on the ability and willingness of the workers to do so, necessitating the development of a high degree of cooperation (Kinyondo & Villanger, 2017).

- ***Hypothesis 2 (H_2)-*** There is a positive and significant effect of stakeholder' involvement on road project performance

2.2.5.3 Stakeholder Engagement and Project Performance

Incorporating all people, organizations, or groups that could be impacted by the project's outcome into project planning and decision-making is known as stakeholder engagement (Dagnachew, 2023). Stakeholder engagement and final project specifications in construction projects are related, and stakeholder requirements and interests greatly influenced project specifications (PMI, 2017).

Consequently, it is imperative that stakeholders be effectively involved in projects. According to Yalew and Changgang (2020), stakeholders would feel more invested and active in a project's implementation if they are better informed about it. The majority of project stakeholders take part in the phase of activity execution. Low stakeholder participation in the project's early planning stages has been deemed inadequate due to the documented instances of work disruption or suspension (Joseph et al., 2016). Warner (2019) said that in addition to resolving specification changes with stakeholders, project failure may be prevented in large part by maintaining managerial competences, service quality, communication skills, budget adherence, safety performance, and schedule adherence.

- ***Hypothesis 3 (H_3)-*** There is a positive and significant effect of stakeholder engagement on projects performance

2.2.5.4 Communication and Project Performance

Fostering mutual understanding among stakeholders requires effective communication. Discussion participants can share ideas and reach consensus on cultural institutions, actions, and events through conversation (Seble, 2023). Businesses have tried to employ a range of media to communicate social and environmental information in a way that is understandable to stakeholders in order to meet the needs of a wide range of stakeholders (Waris et al., 2022). Moreover, it establishes an immediate connection that serves as the basis for long-lasting corporate partnerships later on (Yalew & Changgang, 2020). There is virtually always a communication breakdown in construction projects. Businesses may find it difficult to communicate with a variety of stakeholder groups due to their varying expectations of the companies they do business with, informational requirements, and ways of responding to the various channels of communication at their disposal (Seble, 2023). The legitimacy of corporate communications on social, environmental, and ethical concerns is frequently questioned, especially in light of the public's suspicion of firms (Abdurazak, 2023).

- ***Hypothesis 4 (H_4)-*** There is a positive and significant effect of communication on road project performance

2.3 Empirical Literature Review

Seble (2023) used explanatory and descriptive research approaches to investigate how stakeholder management affects project success. Stakeholders are people or organizations that actively participate in a project and stand to benefit or lose from it. The process of communicating with stakeholders in a planned, timely, and coordinated way is known as stakeholder management. The research design used in the study was quantitative. It has been observed that the four independent factors—risk control, stakeholder empowerment, stakeholder communication, and stakeholder engagement—have a major and favorable influence on project success.

Abdurazak (2023) employed a descriptive research approach to assess the impact of stakeholder management on project success, utilizing Ethiopian Construction Works Corporation as a case study. The study found that increased project success in ECWC road building projects was a result of identifying stakeholders, planning stakeholder engagement, doing stakeholder analysis, corresponding with stakeholders, and monitoring stakeholder engagements. The study concluded that increasing project success in road construction projects built by ECWC was significantly impacted by the following stakeholder engagement strategies: identifying stakeholders, planning their involvement, conducting stakeholder analysis, communicating with them, and monitoring their involvement.

Dagnachew (2023) assessed the role of stakeholders' engagement and their impact on road construction projects in the case of AACRA using a descriptive and explanatory study involving about 90 participants. The results indicate that the variables used to evaluate the purposes of stakeholder involvement have a positive association with one another. To determine the effect of stakeholder engagement on the project's success, regression analysis was also conducted. To understand their role in the process, reviews of the literature on stakeholder participation in road construction projects were conducted. The findings demonstrate that the majority of the criteria provided to the respondents were significant and generally acknowledged by the participants.

Biruk (2023) used descriptive statistics, correlation analysis, and regression analysis to ascertain the impact of project stakeholders' participation on project success using an exploratory research methodology and a quantitative research approach. The study's findings demonstrate that the participation of all project stakeholders had a major influence on the first phase construction

projects at Mekdela Amba University's success. Furthermore, according to the regression model, each group of project stakeholders and the dependent variable of project performance have a positive and significant correlation. In the meanwhile, the findings demonstrate a robust correlation between active stakeholder participation and project success, with higher levels of engagement leading to better project outcomes.

Waris et al. (2021) conducted an evaluation of stakeholder management in Pakistani public sector infrastructure projects. This study shows how underperformance in projects has resulted from a lack of widespread application of stakeholder management strategies. Data for the quantitative study are gathered through the use of a questionnaire. The study created and validated the five main characteristics of stakeholder management: risk control, identification and classification, communication, engagement, and empowerment. The results show that "Risk Control" is the most crucial component of stakeholder management, while "Empowerment" is the least concerning strategy.

Stakeholder management was assessed by Paul (2022) as a way to improve project performance. Because they are the primary users of an integrated management system (IMS) and its regulating procedures, mid-level stakeholders were the study's primary emphasis. These three main categories are important in the context of this study because they are used to determine the stakeholder strategies that are being used on the projects. These specific strategies are influenced, among other things, by the stakeholders' attitudes toward communication, withholding input, building trustworthiness, and conflict escalation protocols.

Through a selection of finished road project examples, Abraham et al. (2021) evaluated the right-of-way acquisition process at Ethiopian road projects using both quantitative and qualitative data collection approaches. The study's conclusions showed that, notwithstanding the organization's standard operating procedure, Ethiopian Road Authority's stakeholder management procedures are subpar throughout all stakeholder management processes. The two processes—monitoring and responding upon monitoring results while interacting with right-of-way stakeholders, as well as engaging and communicating with them—are not well managed. Additionally, schedule and cost overruns were taken into account in the secondary data that was retrieved from a subset of finished road projects.

Joseph et al. (2016) examined the impact of stakeholder involvement on project implementation success and determined the main obstacles to stakeholder participation in developmental projects. Stakeholders significantly impacted the project's success due to their perceived incapacity to participate in technical talks and the project implementers' apparent reluctance to include them in decision-making. To tackle the challenges of stakeholder involvement and project impact, stakeholders need to develop the capacity to contribute significantly to discussions or designate capable representatives to handle their issues.

Additionally, Al-Shaaby and Ahmed (2018) looked into the relationship between stakeholder participation and project success in the mining sector. The study used a survey to collect data from mining experts in Ghana. The authors claim that enhanced awareness of stakeholder expectations, better communication, a sense of ownership over the project, and transparent decision-making were all benefits of stakeholder participation, which in turn improved project success.

According to Sintayehu et al. (2015), research was conducted in the western region of Ethiopian Road Authority classification to examine the impact of internal and external stakeholders on road developments. Through questionnaires and interviews, stakeholders—internal and external—were involved in this research. The analysis's conclusions show that, of the six ongoing projects included in this study, only one project (for which the researcher lacked complete data) has not had its design changed; the designs of the other five have changed as a result of influence from outside stakeholders. The brief timetable and the lack of communication between the project's partners and outside stakeholders were cited by the respondents as the main reasons.

2.4 Research Gap

A building endeavor requires a lot of cooperation and participation from people. The success of the construction project may be impacted by one party's lack of engagement. Conflicts between the parties involved also cause problems, delays, and cost overruns in many building projects. This suggests that project managers in the construction business should give stakeholder management in a project careful thought. With this in mind, the study demonstrated how stakeholder management affects a road project's final result. Moreover, the following succinctly describes the methodological, contextual, and spatial deficiencies identified in the previously described empirical investigations:

Contextual gap is the gap presented as a result in differences in the contextual properties. Seble (2023) tested the effect of stakeholder management on project success. While Abdurazak (2023) assessed the role of stakeholder management in enhancing project success on Ethiopian construction works corporation. Even if the majority of the studies including Joseph et al., (2016) focused on project success but Biruk (2023) differentiates between project management success, where the project is well managed to finish the desired scope within time and cost, and project success, where the project achieves its business objectives. Conversely, project performance refers to how well a project met the goals of the various stakeholders in its final form, and can be defined through a variety of criteria (such as relevance, impact, and sustainability of the project) (Gwaya et ak., 2021). On other hand, several studies reviewed explored the relationship between stakeholder participation and project success in non-governmental, infrastructure projects etc.; for example, Al-Shaaby & Ahmed (2018) in the mining industry, Waris et al., (2022) in public sector infrastructure projects and Joseph et al., (2016) determined tin developmental projects. Previous studies lacks to assess the effect of stakeholder's management on road project performance.

Geographical gap is a knowledge gap that considers the untapped potential or missing/limited research literature, in the geographical area that has not yet been explored or is under-explored. Several studies like Waris et al., (2022) conducted a research in public sector infrastructure projects in Pakistan. Al-Shaaby & Ahmed (2018) explored the role of stakeholder participation in Ghana. Others including Dagnachew (2023) assessed the role of stakeholders' engagement in Addis Ababa, Biruk (2023) in western region of Ethiopian Road Authority. But there is a lack of study that focused on a federal level or Ethiopian Road Administration projects. The study was based in federal republic of Ethiopian public road projects thus presenting a geographical gap.

The term "methodological gap" refers to the gap that results from restrictions in the research's procedures and methodologies (e.g., avoids positivism, bias, and explains the situation as it is). Using a descriptive research approach, certain studies, such as Abdurazak (2023), evaluated how important stakeholder management is to improving project success. We are aware that Creswell (2014) said that the lack of cause-and-effect link determination limits the use of this strategy. The method relies only on data that already exists; study factors are not altered or controlled, which

restricts the conclusions that may be made. Others, such as Al-Shaaby A. & Ahmed A. (2018), investigated the connection between mining sector project success and stakeholder participation.

Exploratory research, which is typically carried out when a researcher has just started an investigation and wants to understand the issue broadly, was used in this study. It falls short of providing an explanation for why specific occurrences operate as they do. However, some research, such as that conducted by Abraham et al. (2021), Seble (2023), and Dagnachew (2023), combined descriptive and explanatory study designs. Risk, stakeholder identification, and analysis were among the characteristics covered in these studies, which centered on stakeholder management procedures. Seble (2023), for instance, investigated the impact of risk management, stakeholder empowerment, participation, and communication on project success. In addition, Abdurazak (2023) lists stakeholders, plans for engaging them, analyzes them, communicates with them, and keeps track of their involvement.

These are more closely linked to the strategic management process and include determining and analyzing strengths and weaknesses both externally and internally, creating and carrying out action plans, assessing the degree to which plans have been successful, and making adjustments when intended outcomes are not being achieved. This study made use of a strategic pathway, which acknowledges that effective delivery requires stakeholder mapping, user involvement, and strategic communication. Greater awareness and support for efforts in creating and sustaining geospatial information are increased through engaging, communicating, informing, advocating, and educating through efficient methods and channels and effective communication strategies and plans (Sintayehu et al., 2015).

2.5 Conceptual Framework

The process of determining, assessing, involving, and managing the requirements and worries of people or organizations with an interest in the project is known as stakeholder management. There was one dependent variable and four independent variables in this study.

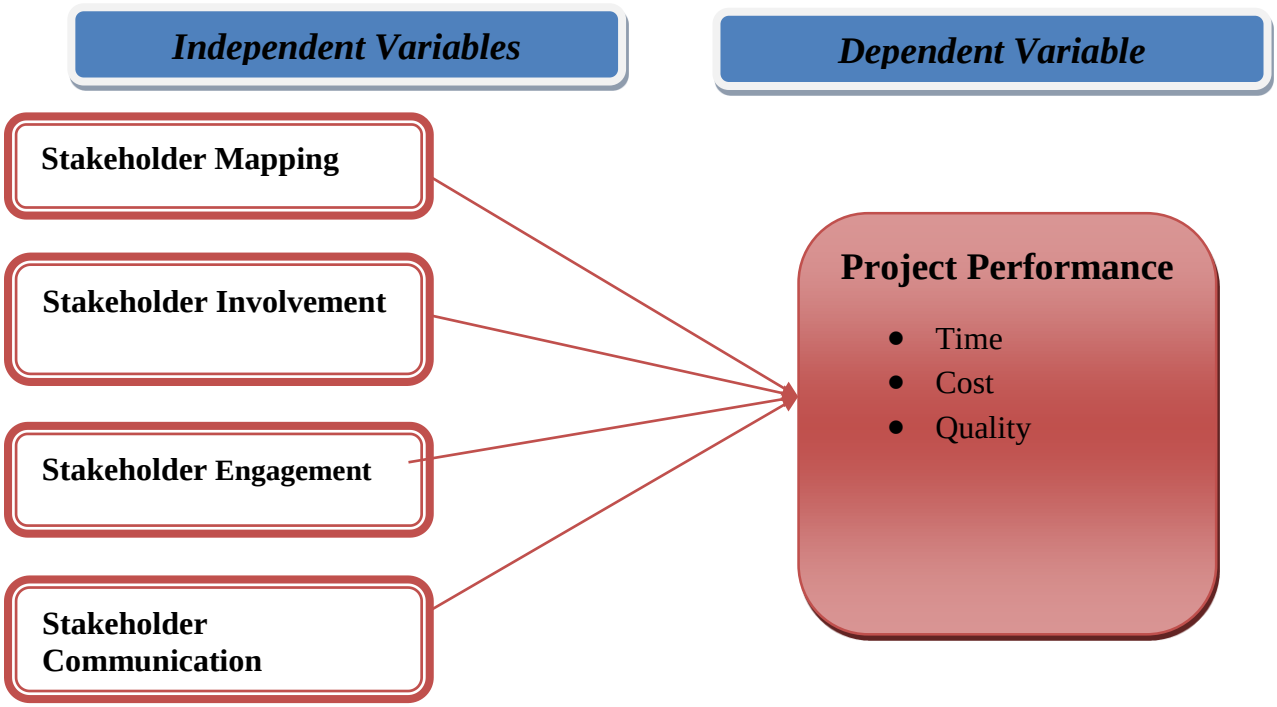


Figure 1 Conceptual framework

Adapted from Paul (2022)

In order to exceed stakeholder expectations and produce successful project outcomes, it is necessary to comprehend their interests and expectations. This study is an adaptation of Paul's (2022) evaluation of stakeholder management's potential to raise project performance. It identified particular tactics that depend on a variety of stakeholder attitudes, such as involvement, communications, and engagements. By analyzing stakeholders' influence and interest in a project, this study contributed stakeholder mapping—a method for identifying, prioritizing, and diagramming stakeholders. According to Seble (203), the Stakeholder Theory is a perspective on capitalism that emphasizes the interdependent interactions that exist between a company and its clients, partners, staff, investors, communities, and other stakeholders. The theory argues that a firm should create value for all stakeholders, not just shareholders.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

The research approach, methodology, design, data collection process, data analysis technique, and demography and sample are all covered in this chapter. Survey validity, reliability, and ethical considerations are also discussed. In order to determine the impact of stakeholder management on the completion of road projects in Ethiopia, ERA Directors, team leaders, and other chosen stakeholders were surveyed and interviewed as part of the research methodology.

3.2 Description of the Study

The five projects that were the subject of this analysis were submitted by the Ethiopian Roads Administration's Eastern Construction Project Management Program Directorare; construction on them is anticipated to start in 2019 and end in 2023 G.C.

Table 2 Lists of projects and history

I. No	Project Name	Contract Amount (ETB)	Project Commencement date	Project Total Length (Km)
1	Project A	1,518,683,761.00	26/08/2019	49
2	Project B	2,085,985,162.61	16/10/2020	71.67
3	Project C	1,482,000,000.00	9/08/2021	78
4	Project D	1,305,800,219.71	11/02/2019	84.2
5	Project E	1,502,371,329.85	11/02/2019	74.5

Source: ERA - Eastern region 5 projects, 2023/2024

These projects were picked because they show how managing stakeholders may enhance a project's overall implementation and provide the community and stakeholders with effective and efficient services, especially at the sector level. The five main projects of Semera PMO in the eastern area are displayed above. The oldest of these initiatives, Project A, began in August 2019 and is expected to cost about 1.5 billion Birr. The anticipated total cost of these projects is Birr 7,894,840,473.17. With an average total length of 84.2 km, Project D is the longest road building project out of the five. Project A is the shortest.

3.3 Research Approach

This study used a mixed-methodologies approach, that means the data was collected using both quantitative and qualitative methods in order to give a thorough knowledge of how stakeholder management affects the performance of road projects. The reason this study adapted mixed methodology is to have a comprehensive understanding of the study topic and to have a better credibility of the result. This study used close ended questions using questionnaires to collect the quantitative data and also used open ended questionnaires using Interview Questions. The same was used to gain knowledge and understanding of Ethiopia's road projects' effectiveness as well as the state of stakeholder management at the time. This study's main objective is to investigate the operation of Ethiopian road projects with respect to stakeholder management.

3.4 Research Design

The identified research gap was addressed and the objectives of this study were primarily met by using an explanatory research design. To establish causal relationships is the aim of explanatory design. Its primary objective is to ascertain how events unfold and which ones might have an effect on particular outcomes (Kothari, 2014). They are reflected in research hypotheses, which define the nature and orientation of the relationships between or among the variables under investigation. The researcher combined descriptive and explanatory research since characterizing the properties of a population or phenomenon is the main objective of descriptive research.

Here, the study discussed the respondents' level of understanding regarding stakeholder management, the performance of road projects in Ethiopia, and their informal relationships and traits. The research aims to determine the extent of stakeholder management, the performance level of road projects, and the impact of stakeholder management on mapping, communication, involvement, and engagement. These objectives are outlined in the first chapter of these drafts. This study takes an explanatory/causal approach by employing mathematical models and theories to determine the relationship or association between the variables and the frequency with which they occur. As a result, explanatory research is a suitable research design because this study looked into how stakeholder management affects the effectiveness of road projects. In addition, the study offered a comprehensive picture of Ethiopian road project performance and stakeholder

management in the instance of ERA. As a result, the researcher combined descriptive and explanatory methods.

3.6 Data Type and Sources

A significant type of data used in this study to solve the research difficulties was primary data, which came from 122 respondents (See following part; 3.7) who work on the aforementioned road project. Secondary data were also used into this investigation. Prior to using the secondary data, the researcher took reasonable steps to make sure it was sufficient, relevant, and trustworthy.

3.7 Unit of Analysis

In this study, individuals, specifically ERA staff as well as stakeholders and employees involved in Ethiopian road construction projects, would be the study unit of analysis.

3.8 Population and Sampling

3.8.1 Target Population

There are 177 people in the study region, according to employees of the consultants, contractors, and stakeholders from top-performing projects. There are 80 ERA CPM employees, utility companies and support groups like Ethiopia Electric Utility (10), Ethio Telecom (10), Ministry of Finance (5), and valuation specialists in the local administration from Semera (Afar) (30). There are also community representatives (10), staff members from Semera, Afar Region who work in right-of-way management (2), and key personnel from Supervision Consultants, Design Consultants, and Contractors (30).

3.8.2 Sample Frame

The March 2024 Manpower Report from ERA and the Manpower report from each project status report were the sources of the example framework.

3.8.3 Sample Size

Based on the sampling process and a well-known formula called Yamane's (1973), 122 sample sizes from the whole population were employed in this investigation. Selecting a group of people for a study in order to have each one act as a representative sample of the broader community from which the participants were drawn is known as sampling (Kothari, 2004). Kothari (2014) states that the target population may only require 5%–10% of the total, which is not a very large amount. Even if a correlation or regression involves a more involved computation, it still needs at least 50 participants. The following is the formula:

$$n = \frac{N}{1 + N(e)^2}$$

$$n = \frac{177}{1 + 177\ (0.05)^2}$$

$$= \boldsymbol{122}$$

Where n = the sample size

N = size of population

e = the level of accuracy (e = 0.05)

3.8.4 Sampling Procedure

Both probability and non-probability sampling techniques were used in this investigation. The researcher paid close attention to the study design and sample size because sampling strategy affects the validity of the study's findings and generalization. Among probability sampling techniques, the stratified random sampling technique was used to select samples from the target population, taking into account the employees' current working positions and the branches of the surveyed project and its associated project actors, such as consultants, contractors, employees of the client, and selected stakeholders and other related firms.

This sampling technique is important since it allows for equal selection from senior, middle, and other staff members based on their relative proportion to others. Every employee and official who was targeted had the opportunity to participate in the survey. The sample size from each branch was then determined using a proportionate stratified sample, which was selected using a systematic random sampling technique. Additionally, it recruited project officials and employees for the study using a straightforward random sample technique. Using a systematic random sample technique makes sense because it makes it easier for the researcher to speak with employees during business hours, which boosts the response rate.

Table 3 Sample Size Determination

Employees by Working Department	Population	Proportion	Sample Size
ERA Construction Project Directorate and Design Management Directorate Staff	**80**	**0.6893**	**55**
Support Organization Ethio telecom (10), Ethiopia Electric Utility (10), Ministry of Finance (5), and Valuation experts in the local administration from Semera Afar Region (30)	**55**	**0.6893**	**38**
Community Representatives (10) and Right of way Agents (2) from Semera Afar Region	**12**	**0.6893**	**8**
Key Staff Supervision Consultants, Design Consultants and Contractors from these projects (30)	**30**	**0.6893**	**21**
Total	**177**		**122**

Source: Survey result and ERA, 2024

In addition, this study employed the purposive sample approach to choose the most involved project staff in order to gather accurate and factual data regarding the management of the stakeholders and the project performance delays of the examined Road Administration project, as determined by the questionnaire. The number of respondents to be included from each selected actor among the entire sample population was determined by taking into account the percentage of personnel at each project performer list. Using the random sampling method, the researcher asked a subset of respondents—including ERA employees, utility providers, contractors, and consultants—to complete the questionnaire in order to reach the predetermined sample size.

3.9 Data Collection Tools

3.9.1 Questionnaire

It is a crucial technique for gathering data for this investigation. The questionnaires had a variety of semi-structured questions that were produced according to the study area. The items of choice for the remaining questions were presented, with the exception of a small number of questions. The questionnaire was created based on research conducted by Seble (2023) regarding stakeholder engagement and communication; Abdurazak (2023) on stakeholder involvement; mapping from Adek (2016); and Paul (2022) and Dagnachew (2023) on the performance of road construction projects. All of the items in this study were measured using a five-point Likert-type answer scale, with 1 representing strong disagreement and 5 representing strong agreement.

Respondent data was gathered mostly through closed-ended and open-ended questions on the questionnaire. Closed questions were utilized in this study because they have the following benefits: they are simple to process, improve answer comparability, and make it simpler to illustrate how variables relate to one another. For this research, it is preferable to an open question. The three components of the questionnaire were designed to gather data on the project performance, stakeholders' management, and respondents' background.

3.9.2 Interview Guides

Interview sessions were scheduled in order to gather pertinent information on the study area, project successes, stakeholder management, project performance, and internal and external stakeholders, practices, and effects. It was attempted to interview managers and staff who were involved in and working in the various departments of the surveyed road project up to fifteen (15 being the minimum authorized interview sample size of Palu (2022)). Project managers, experts, stakeholders, valuation specialists, representatives from support organizations, and stakeholders who were deemed to be knowledgeable about the performance of road projects in Addis Ababa were among the participants in the main interview session.

3.9.3 Document Review

The other methods of data collection used in this investigation were documents related to the study's subject and observation. These included the ERA's annual reports for 2023 and 2022, the Afar Region Project Monitoring Report for 2023, and minutes from stakeholder meetings. These included the Ministry of Finance's report from the April 2023 meeting, the Project Fund meetings in June 2023, and the meeting with the Afar Government Regional State in March 2023. Key data sources for those purposes included a variety of documents, including contracts, reports, action plans, and instructions that were either produced by the business or by other parties.

3.10 Validity and Reliability

3.10.1 Assessing Validity

Validity is the capacity of an instrument to measure what is meant to be measured. According to Creswell (2012), there are three types of validity in research: construct, predictive, and content. Through a review of the literature and the modification of tools used in previous studies, face and content validity were investigated in this study.

3.10.2 Pilot Test

In this study, a pilot test of ten (10) questionnaires was conducted for the road projects of the Addis Ababa City Roads Authority. To improve the clarity of the question items, a pre-test of the questionnaire's draft version was conducted. Non-sample respondents were given access to the questionnaire; they read it and offered input on the meaning of the items, which was taken into consideration. Changes were made and questions that were asked repeatedly were removed as a result.

3.10.3 Reliability Test

Reliability includes both the degree to which a study's activities may be repeated with the same results and the accuracy of the chosen research. Cronbach's Alpha was employed to assess the internal consistency and reliability of the dimensions of sales performance and digital marketing since each construct had numerous components. After testing, it was determined that all constructs had reliability values more than 0.75, which was considered acceptable (Kothari, 2014).

Table 4 Sample Size Determination

Variables	Cronbach's Alpha	N of Items	Decision
Stakeholders' Communication	.941	5	**Acceptable**
Stakeholders' Engagement	.879	5	**Acceptable**
Stakeholders' Involvement	.891	5	**Acceptable**
Stakeholders' Mapping	.823	5	**Acceptable**
projects performance	.953	6	**Acceptable**

Source: Survey Result, 2024

The total Cronbach alpha of the scales was employed in this investigation. Seble (2023) states that values of 0.70 or greater were taken into account in this context. This suggests that the Cronbach's alpha value, which was more than the suggested value of 0.70, was used to evaluate each construct.

3.11 Methods of Data Analysis

After the process of obtaining relevant data was completed, the appropriate data analysis method was used. The study demonstrated how the unprocessed data was formatted into an engaging and understandable manner. First, the empirical data was evaluated using descriptive statistics (frequency, mean, and standard deviation). Next, statistical techniques for correlation analysis—Pearson correlation, in particular—were applied to the data because the study used a Likert scale.

3.11.1 Data Processing

In order to clean and analyze the data for this study, the researcher entered it into SPSS V.27. Every entry underwent frequency analysis and range checks to ensure accuracy of the data entered. Cross-referencing the finished surveys allowed for the correction of data entry errors.

3.11.2 Descriptive Analysis

Descriptive statistics were computed to give an overview of the respondents' opinions and to characterize the participants' sociodemographic profile. Descriptive statistics, including the mean and standard deviation, were used to capture the characteristics of the variables under study. The research's findings were presented in an understandable and relevant manner to aid in interpretation and explanation. Furthermore, the collection, transcription, and organization of qualitative data was done in accordance with the objectives of the study. The data was then coded, meaning-added, categorized, edited, and organized thematically and through descriptive narrative.

3.11.3 Analysis Using Inferential Statistics

Regression and Pearson correlation are examples of inferential statistics that were employed in this study to ascertain the relationship between the independent and dependent variables. One part of inferential statistics is bivariate correlation, which looks at the relationship between the independent and dependent variables. In addition, correlation and linear regression were utilized to test for associations, and a multiple linear regression model was employed to determine the combined influence on the relationship between the dependent and independent variables. Multiple linear regression can also be used to determine the proportional contributions of each predictor to the total variance explained as well as the overall fit of the model (variance explained). When someone decides to employ multiple regression analysis, one stage in the process is to make sure the data they wish to use truly exists.

3.11.4 Model Specification

Model specification: Based on the theoretical regression model, the study's statistical regression model was built. Multiple regression statistical analysis was used to analyze the research findings

once the data were computed. was then mathematically characterized using multiple regression equation models. Based on the study's conceptual model, which is displayed below, the link between the two variables

$$Yi = \alpha + \beta_1(X_1) + \beta_2(X_2) + \beta_3(X_3) + \beta_4(X_4) + e$$

Where;

- Y_i = Road Project Performance
- X_1 = Stakeholder Mapping
- X_2 = Stakeholder Involvement
- X_3 = Stakeholder Communication
- X_4 = Stakeholder Engagement
- e- errors

3.12 Ethical Considerations

Throughout this examination, the researcher meticulously followed all research ethics rules. The participants in the study were selected with their full consent, given the all clear to confidently respond to questionnaires and to be aware of the purpose of the thesis, and given the guarantee that the information collected would be kept confidential.

Ethical permission was given by the university's Post Graduate Studies Program. The ERA, local government, utility companies, and the project all provided formal approval or an ethical letter. After that, a thorough conversation about the objectives and benefits of the study was held with representatives of the selected organizations. Then, a similar conversation with officials and staff followed. Consequently, authorization or approval was acquired by professional staff, and if required, a proper discussion about the objectives, nature, and purpose of the study was held in the Amharic local language.

This study took into account well-established and thorough research ethics, reminding us that it is unethical for a researcher to provide data that is biased or incomplete. They informed them that they could end the interview at any time. Confidentiality was strictly maintained for the duration of the investigation. As stated earlier, every piece of scientific evidence and supporting

documentation that was available was examined and appropriately acknowledged in terms of research ethics.

The study employed an approved questionnaire to collect data. To elicit further perspectives on the allegations, good qualitative data from the questionnaires was employed. Respondents were free to voice their thoughts because questionnaires also give them the anonymity required for study. Information confidentiality is ensured both during and after data collection, and participation in the study is completely voluntary. The right to privacy, danger, and the absence of any immediate advantages were all explained to participants, along with their ability to withdraw from the study at any time. The consent of the participants was acquired prior to any additional utilization of the required data, and it will remain confidential.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

This chapter presents the findings and commentary from the study. It includes an analysis of the responses on the selected project, a presentation of the results, and information on the response rate and demographic profile of the respondents. It also shows how information is interpreted, evaluated, and presented.

4.1 Response Rate

The 122 case organization employees operating in the study area were the study's target group, as stated in chapter three.

Table 5 Response Rate

Employees by Working Department	Sample	Returned Questionnaire	Response Rate
ERA Construction Project Directorate and Design Management Directorate Staff	**55**	**45**	82%
Support Organization Ethio telecom (10), Ethiopia Electric Utility (10), Ministry of Finance (5), and Valuation experts in the local administration from Semera Afar Region (30)	**38**	**35**	92%
Community Representatives (10) and Right of way Agents (2) from Semera Afar Region	**8**	**6**	75%
Key Staff Supervision Consultants, Design Consultants and Contractors from these projects (30)	**21**	**15**	71%
Total	**122**	**101**	83%

Source: Survey result, 2024

A total of 122 questionnaires were sent to a sample of workers from specific research projects; 101 of those were returned at the conclusion of the data gathering phase, yielding an 83% response rate. According to Shimelis (2019), a response rate of 50% is suitable for a study, 60% is good,

and 70% and beyond is remarkable. It got a very high rating. As a result, the 83% response rate in the table above was appropriate and steady for the research.

4.2 Demographic Profile of Respondents

The respondents' age, gender, educational background, and number of years of service in the examined firms are among their demographic details.

Table 6 Demographic of the Respondents

Variables		Count	%
Gender	Female	44	43%
	Male	57	57%
Age (in year)	Less than 30	9	9%
	31 -46 tears	47	46%
	47-65 years	34	34%
	Above 66 years	11	11%
Educational Status	Below High school	0	0%
	Diploma and Degree	52	51%
	Masters	45	44%
	Refused or Others	4	4%
Experience in working with road projects	Less than a year	10	10%
	About two or three years	21	20%
	4 – 6 years	15	15%
	Above 7	55	54%
Experience	Less than a year	18	18%
	About two or three years	34	34%
	4 – 6 years	21	21%
	Above 7	27	27%
Practiced in the field road projects (out of Addis Ababa)?	Less than a year	23	23%
	About two or three years	18	18%
	4 – 6 years	17	16%
	Above 7	44	43%

Survey Result, 2024

Before the data was analysed, the sampled respondents' unique demographic characteristics are shown in the above table. The survey involved 101 employees, and the findings show that 43% of respondents were female and 57% of the sampled respondents were male. Even if the gender distribution of research participants is reasonably equal and the majority of respondents are male, the results suggest that male project participants or actors may be in charge of the involvement in road projects at the analysed project level. This might be understood as a means of enabling more women to participate in and be employable in related projects by providing them with financial, educational, and other supports, so enabling them to work on more road projects. The same table reveals that, of the 101 respondents that were sampled, 9% were younger people or those under 30 years old, 46% were middle-aged adults or those between 31 and 46 years old, and merely 10% were older adults or those over 66 years old. This might be regarded as the study's information gathering from elderly and well-experienced individuals who have learned about road projects.

According to the above data, out of the 101 respondents that were sampled, more than half held a diploma or first degree, accounting for 45% of all respondents. Additionally, 43% of respondents pursued postgraduate studies at universities (masers and above). Similarly, the majority of responders are both married and unmarried. Because of this, the majority of responders are married, demonstrating that they have been acting in roles of accountability and responsibility as well as participating in stronger social relationships. In a similar vein, the vast majority of the sampled respondents had worked on massive road projects for more than two years, and the majority of them had solid experience working on road projects.

According to the study, the majority of respondents had a university degree, were well-educated, had expertise managing road projects, and had worked on road projects. In addition, they spent the majority of their working hours using the equipment, procedures, and systems for road projects. It was anticipated that the sampled works would offer pertinent solutions for the efficient management of road projects. This suggested that the majority of responders were knowledgeable about the topic being studied. This suggests that the study's inclusion of employees with substantial project expertise was fortunate in that it helped them gain a better understanding of the road projects' bid reviews and management.

4.3 Response Analysis

Descriptive statistics like mean and standard deviation were used to analyze the replies. Ten important medium and upper level managers who directly influence the tasks the project completes were interviewed. The ratings for the mean scores were from Shimelis (2019). For extremely good or difficult, they utilized mean scores ranging from 4.51-4.50, for medium or moderate, 2.51-3.50, for fair, and 1.00-1.50 for poor. Their respective fields of study were similar.

4.3.1 Responses on Communication

Table 7 Respondents Responses on Communication

Items	N	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Stakeholders in Ethiopian road Administrations communicated through official meetings.	101	3.71	1.0260	-1.184	.240	.355	.476
Early stakeholder communication during the design process can yield creative, superior solutions at cost-effective pricing.	101	3.72	1.0320	-1.069	.240	.020	.476
Setting priorities for the requirements of various stakeholders is facilitated by communication.	101	3.69	1.0263	-.888	.240	-.208	.476
Speaking with various stakeholders facilitates the exposure of various viewpoints and levels of expertise.	101	3.77	1.0224	-1.055	.240	.182	.476
Accurate data and information were obtained all over the project's existence.	101	3.69	1.0294	-1.044	.240	.001	.476
Grand Mean 3.72							

Source: Survey result, 2024

Results in the above table shows that the grand mean was scored as 3.72 with less SD and it was rated as very good. The majority of the respondents equally agreed that the road projects undertaken by the indicated projects had good communication with stakeholders. It means official meetings served as a means of communication for stakeholders in Ethiopian road administrations. Effective stakeholder communication at the outset of the design process can result in innovative, high-quality solutions at competitive prices. Communication has a key role in helping stakeholders set priorities for their requirements. Speaking with different stakeholders makes different points of view and skill levels more visible. Precise data and information were acquired throughout the duration of the project. In this study, the majority of the respondents strongly agreed that the quality and longevity of the road surface are dependent on a number of factors but main by consultation with stakeholders. Stakeholders will inform the clients and others about temperature, precipitation, wind, and sunlight, all of which contractors must consider during road construction.

4.3.2 Engagement

Table 8 Respondents Responses on Engagement

Items	N	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
At the start of the project, stakeholders had the opportunity to define the project's scope.	101	3.65	1.0322	-.843	.240	-.513	.476
At the start of the project, the expectations of the stakeholders were ascertained.	101	3.79	1.0267	-1.072	.240	.090	.476
At the start of the project, stakeholders received education regarding the goals and objectives.	101	3.25	1.0565	-.422	.240	-1.424	.476
At the start of the project, stakeholders were given the opportunity to establish the success criteria and factors for the project.	101	3.03	1.0552	-.214	.240	-1.583	.476
Potential issues raised by stakeholders were addressed at every stage of the project's development.	101	3.29	1.0512	-.450	.240	-1.341	.476
Grand Mean 3.40							

Source: Survey result, 2024

The results in above table show that the respondents agreed that engagement of stakeholders on the implementation of road construction projects under Ethiopian road construction as shown by the aggregate mean of 3.40 with a small significance variance. This means stakeholders have the chance to specify the project's parameters at the outset. The expectations of the stakeholders were determined at the outset of the project. Stakeholders were informed about the project's goals and objectives at the outset. Stakeholders were given the chance to determine the project's success criteria and elements at the outset. Stakeholder concerns were taken into consideration at every step of the project's development. But some interview respondents indicated that there are lack of engagement in road sector and these characteristics of the construction, particularly the lack of skilled and educated workforce, reliance on labour intensive methods and lack of single regulatory authority, present huge challenges to the management of road sector.

4.3.3 Involvement

	N	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
All the parties involved in a decision, activity, or outcome of the road projects of ERA.	101	3.63	1.0286	-.778	.240	-.585	.476
The stakeholders have been involved voluntarily in the road projects of ERA.	101	3.69	1.0271	-.951	.240	-.210	.476
ERA encourages stakeholders to be part of road projects planning.	101	3.58	1.0380	-.842	.240	-.617	.476
The stakeholders have high expectations for the road projects outcome.	101	3.54	1.0382	-.709	.240	-.870	.476
Stakeholders develop and share their strategies for supporting road projects in ERA.	101	3.70	1.0269	-.738	.240	-.717	.476
Grand Mean 3.63							

Source: Survey result, 2024

This study found that 3.63 as the grand mean score for stakeholders' involvement; it was rated as very good. It is also clear from the above table that, the study participants agreed that everyone engaged in a decision, action, or result related to an ERA road project. The ERA road projects have the voluntary participation of the stakeholders. ERA invites interested parties to participate in the planning of road projects. The stakeholders anticipate great things from the road upgrades. In ERA, stakeholders create and disseminate their support strategies for road construction. The

majority of respondents concurred that ERA has an effective and organized stakeholder analysis for project management. ERA has gathered insightful information about project execution. ERA closely monitors all of its road project activities to guarantee prompt completion. Enough money has been set aside by ERA for project management and supervision, including M&E. In order to make sure that the project is fulfilling the requirements and expectations of the people it is meant to benefit, stakeholder involvement is an essential component of project monitoring and evaluation (M&E). According to one expert, public works and transportation divisions within Ethiopian government projects are in charge of building or renovating roads, fixing potholes, and performing other maintenance duties.

4.3.4 Stakeholders Mapping

Table 9 Respondents Responses on Stakeholders Mapping

Items	N	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
ERA identifies the general stakeholders of the road sector,i.e., those influencing, and being involved in, the overall activities of the sector.	101	3.60	1.320	-.749	.240	-.711	.476
ERA understands stakeholder perspectives and interests in road sector.	101	3.38	1.413	-.372	.240	-1.321	.476
ERA visualizes relationships to objectives and other stakeholders in road sector.	101	3.31	1.419	-.305	.240	-1.373	.476
ERA ranks stakeholder relevance and identifying issue in road sector.	101	2.31	1.419	.744	.240	-.905	.476
ERA ensures stakeholders' needs and concerns are adequately addressed in road project.	101	2.39	1.378	.698	.240	-.878	.476
Grand Mean 3.00							

Source: Survey result, 2024

This study found a grand mean a score for stakeholders mapping (3.00) with below two standard deviation was rated as having good practices. This indicates that the road industry's general stakeholders are identified by ERA as those who participate in and have an impact on the sector's overall operations. ERA is aware of the interests and viewpoints of stakeholders in the road

industry. Relationships to goals and other road sector stakeholders are visualized by ERA. Stakeholder relevance and issue identification in the road sector are ranked by ERA. ERA makes sure that the demands and worries of stakeholders are sufficiently taken care of in road projects. One interviewee from this project highlighted as this company does not see everyone who has the power to impact its work and the relationships amongst them. Its ability to better engage stakeholders and concentrate on fostering relationships with significant partners within the company has not been greatly aided by mapping its pertinent stakeholders.

4.4 Responses on Project Performance Indicators

Table 10 Respondents Responses on Project Performance Indicators

	N	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Projects are executed and finished on time and within the budget assigned to them.	101	3.05	1.577	-.083	.240	-1.548	.476
Projects are implemented and completed within the specification and quality standard.	101	3.25	1.493	-.362	.240	-1.348	.476
The implementation of the project is consistently aligned with its intended goals and objectives.	101	3.12	1.608	-.300	.240	-1.535	.476
Effectively engaging stakeholders at the appropriate project phases is important.	101	3.23	1.509	-.397	.240	-1.332	.476
Seeking project feedbacks from stakeholders improves performance.	101	3.20	1.530	-.256	.240	-1.413	.476
Stakeholder management affects project performance	101	3.59	1.365	-.695	.240	-.712	.476
Grand Mean 3.24							

Source: Survey result, 2024

The below table shows that respondents' gave their opinion about project performance in this road construction project. The grand mean was scored as 3.24 with less SD and it was rated as good. It means projects are carried out and completed within the allocated budget and on schedule. Projects are carried out and finished in accordance with the requirements and quality level. The project's execution continuously adheres to the planned aims and objectives. It's critical

to involve stakeholders in projects at the right stages. Stakeholder feedback on a project helps to improve performance. Project performance is affected by stakeholder management. Interview respondents indicated that ERA has made significant improvements in their ability to handle the increased uncertainty that comes with various projects. They have implemented a quick response system to address the majority of their customer needs.

This study discovered that there was a lack of a project charter, improper definition of the project scope, improper sequencing and definition of project activities, improper control of the project schedule, improper implementation of integrated change control, improper estimation of the project's completion costs, improper gathering of stakeholder requirements, and improper budgetary planning. The length of a project activity was not calculated; There was no project charter or work breakdown structure (WBS) designed. There was no risk response strategy created; The following mistakes were made: a project risk was not recognized and its nature was not recorded; a risk was not tracked and managed; the materials were not bought correctly as per the plan and potential sources of the materials were not identified as per the procurement plan.

4.5 Inferential Analysis

To evaluate the hypothesis in this study, inferential analysis was done. The study employed a combination of descriptive and explanatory designs in order to achieve its goals. One explanatory design that is used to determine the link between independent and dependent variables is correlation analysis.

4.5.1 Correlation Analysis

The hypotheses discussed in the first chapter aimed to investigate the relationship between independent variables and dependent variable (road construction project performance) in the surveyed organizations. In this section, the study tried to accomplish the goal of the study through applying Pearson’s correlation.

Table 11 Correlation Test Result (N=101)

		Stakeholders' Communication	Stakeholders' Engagement	Stakeholders' Involvement	Stakeholders' Mapping	Projects Performance
Stakeholders' Communication	Pearson Correlation	1	.503**	.205*	.392**	**.503****
	Sig. (2-tailed)		.000	.040	.000	**.000**
	N	101	101	101	101	**101**
Stakeholders' Engagement	Pearson Correlation	.503**	1	.386**	.371**	**.639****
	Sig. (2-tailed)	.000		.000	.000	**.000**
	N	101	101	101	101	**101**
Stakeholders' Involvement	Pearson Correlation	.205*	.386**	1	.258**	**.537****
	Sig. (2-tailed)	.040	.000		.009	**.000**
	N	101	101	101	101	**101**
Stakeholders' Mapping	Pearson Correlation	.392**	.371**	.258**	1	**.566****
	Sig. (2-tailed)	.000	.000	.009		**.000**
	N	101	101	101	101	**101**
Projects Performance	Pearson Correlation	.503**	.639**	.537**	.566**	**1**
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	101	101	101	101	**101**
**. Correlation is significant at the 0.01 level (2-tailed).						
*. Correlation is significant at the 0.05 level (2-tailed).						

Source: Survey result, 2024

This study established that there is a positive correlation between the Stakeholders' Communication (r=.503) and project performance. In a similar vein, Gwaya et al. (2021) discovered a favorable correlation between them.

The correlation between perceived stakeholders' engagement (r=.639) and project performance of road project is positive and significant at significance level of 0.01 and correlation coefficient of 0.639. This suggests that when there is engagement, a higher level of road construction project experience will be reached. As well, Adek (2016) found it is positively and significantly related to road infrastructure project management.

At a significance level of 0.01 and correlation coefficient of 0.537, there is a positive and significant correlation between the perceived stakeholders' involvement and the project performance of the road project. This implies that a greater degree of road construction project experience will be attained when the client has the ability. Additionally, Bredillet et al., (2018)

discovered a positive and significant relationship between road infrastructure project management and it.

The perceived relationship between the stakeholders' mapping (r=.566) and the road project performance exhibits a positive and significant correlation, with a correlation coefficient of 0.566 and a significance level of 0.01. This suggests that when there is a good stakeholders' mapping, a higher level of road construction project experience will be obtained. Furthermore, Bredillet et al., (2018) found a strong and positive correlation between the abilities of clients and road infrastructure project management.

4.5.2 Regression Analysis

This analysis was used to identify the effect of stakeholders on performance of road construction project experience in Ethiopia. Hypotheses are tested by using this analysis. The researcher identified both general and specific objects by using regression method. Multivariate linear regression method is used to run the regression analysis. All decisions are made at significance level of 0.05. Model is summarized by using adjusted R squared. ANOVA analysis is conducted by F-statistics. Before running the regression analysis, classical model assumptions were tested.

4.5.2.1 Assumptions and Diagnostic Test Result

Normality Test

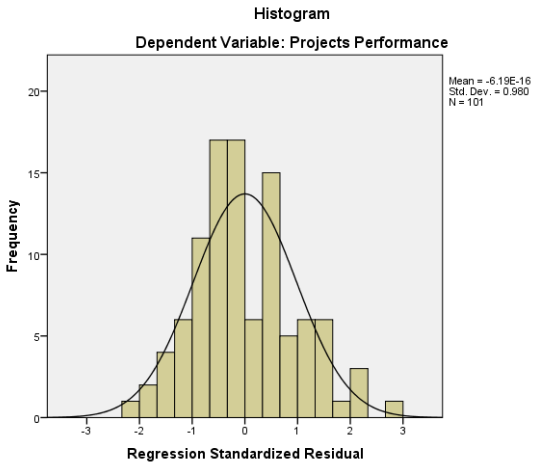


Figure 2 Normality Test Result

Source: Survey result, 2024

One of the fundamental presumptions of traditional linear regression models is that the error term should either have a regularly distributed anticipated value or have an expected value of zero (E(UT)) = 0. In order to determine the normal distribution of the residuals, the researcher used skewness and kurtosis. The outcome shows that the standard residuals are somewhat off the curve. The descriptive statistics of Kurtosis and Skewness statics computation are displayed in the above table. The range of values from -2 to 2 indicates that the distribution is normal, meaning the data is normally distributed and has a suitable variance for further investigation. This suggests that most scores fall somewhere in the middle of the distribution. Consequently, this suggests that the residuals

Multicollinearity

Table 12 Multicollinearity Examination Outcome

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Stakeholders' Communication	.698	1.433
	Stakeholders' Engagement	.645	1.550
	Stakeholders' Involvement	.835	1.197
	Stakeholders' Mapping	.791	1.264

Source: Survey result, 2024

When two or more of the input variables have an exact (or nearly exact) linear relationship, this is referred to as multicollinearity. Each term in the model has a VIF (Variance Inflation Factor) that represents the total effect of the regressors' dependence on that term's variance. Multicollinearity is specified by one or more big VIFs. Based on real-world experience, any VIF results that are greater than 5 or 10 suggest that multicollinearity has caused the related regression coefficients to be poorly estimated. The analysis's conclusion indicates that there isn't much degree of association or high multicollinearity among the variables. The VIF value of four factors was determined to be less than five or ten, as the above table illustrates. It may be said that these data did not exhibit any collinearity.

Autocorrelation

Table 13 Durbin Watson for Autocorrelation Test

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.789[a]	.623	.608	.356	1.848

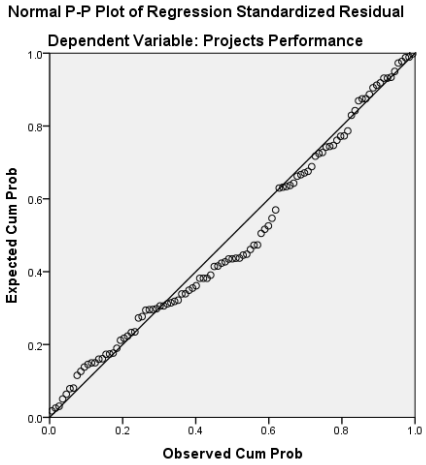
a. Predictors: (Constant), Stakeholders' Mapping , Stakeholders' Involvement , Stakeholders' Communication , Stakeholders' Engagement

b. Dependent Variable: Projects Performance

Source: Survey result, 2024

When considering the disturbance components of multiple linear regressions, it is assumed that the covariance between the error terms throughout time (or cross-sectionally, depending on the kind of data) is zero. In this investigation, the widely used Durbin-Watson Test (with a result of 1.802) was used to determine whether autocorrelation was present. Stated otherwise, it is presumed that there is no correlation between the errors. It would be said that the errors are "auto correlated" or "serially correlated" if they are not uncorrelated with one another. Therefore, this assumption has to be tested.

Linearity



Source: Survey result, 2024

Figure 3 Linearity

The fundamental concept of any normal probability plot is as follows: A plot of the theoretical normal distribution percentiles against the observed sample percentiles should be roughly linear if

the data have a mean and variance and conform to a normal distribution. Deduce that the data is essentially normally distributed if the points roughly follow the diagonal line. The probability of skewed data increases if there is a noticeable curvature in the points. As a result, this investigation discovered a typical P-P plot in addition to a diagonal line and several small circles.

4.5.2.2 Regression Test Result

Table 14 Regression Test Results Model Summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.789[a]	.623	.608	.356

a. Predictors: (Constant), Stakeholders' Mapping , Stakeholders' Involvement , Stakeholders' Communication , Stakeholders' Engagement

Source: Survey result, 2024

In order to determine the extent to which the independent variable influences the dependent variable, the value of R2 is inferred. The linear regression of four independent variables and one dependent variable is shown and discussed below. The dependent variable (road construction project performance experience) was explained by the three independent variables' total bundle of determinant elements, as seen in the above table (R2 =.623). This implies that the five independent variables account for 62.3% of the experience in road construction projects, with other unexplained factors accounting for 37.7% of the experience.

Table 15 Regression Test Results ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	20.090	4	5.022	39.705	.000[b]
	Residual	12.143	96	.126		
	Total	32.233	100			

a. Dependent Variable: Projects Performance

b. Predictors: (Constant), Stakeholders' Mapping , Stakeholders' Involvement , Stakeholders' Communication , Stakeholders' Engagement

Source: Survey result, 2024

Given that the second table displays the statistically significant result F= 39.705, it can be inferred that the combination of determinant elements has an impact on the performance experience of road construction projects. The null hypothesis is thus rejected by this investigation.

Table 16 Regression Test Results

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.019	.219		4.644	.000
	Stakeholders' Communication	**.118**	.057	.154	2.058	**.042**
	Stakeholders' Engagement	**.281**	.066	.333	4.275	**.000**
	Stakeholders' Involvement	**.196**	.045	.297	4.339	**.000**
	Stakeholders' Mapping	**.178**	.041	.305	4.337	**.000**

a. Dependent Variable: Projects Performance

Source: Survey result, 2023

From the above multiple regression table, we can easily compare the relative contribution of each of the different variables by taking the beta value under the unstandardized coefficients. The higher the beta value, the stronger its contribution becomes. Accordingly, the study found that stakeholders' communication and road construction project performance experience (Beta= .118 and Sig.= 0.042) makes the strongest unique contribution to explaining the construction project performance experience. The result revealed that, a one-unit effort increase or positive change in road construction project experience would lead to a 0.118 unit or 11.8 % increase in the level of by it.

The performance of road construction projects is positively and significantly impacted by stakeholders' engagement, according to the statistical significance of each variable in the above coefficients table (B=.281 and Sig =.0001). Bredillet et al., (2018) discovered that road construction project experience is impacted by road construction project performance. The

outcome exposed that, a one-unit effort increase or positive change in road construction project experience would lead to a 28.1% increase in the level of by it.

The investigation of the stakeholders' involvement that affects the road construction project experience showed that there is a positive effect of stakeholders' involvement on road construction project performance (B= .196 and Sig = .0001). Similarly, Saad et al., (2020) found that effective road project performance is positively affected by contractor's competency.

Additionally, the experience of working on a road construction project performance is positively impacted by stakeholders' mapping (B= .178 and Sig =.0001). According to Kinyondo & Villanger (2017), the performance of road construction projects is positively and significantly impacted by stakeholders' mapping.

4.5.2.3 Regression Mathematical Model

The equation of multiple regressions on this study is generally built on two sets of variables, namely dependent variable (road construction project performance) and four 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. The model of the study is: $\mathbf{Y=a+\beta_1x_1+\beta_2x_2+\beta_3x_3+\beta_4x_4+e}$

The multiple linear regression test result model of the study is based on the theoretical regression model as indicated follows

$$\mathbf{Y=a+.118\,x_1+.281\,\beta_2x_2+.196\,\beta_3x_3+.178\,x_4+e}$$

Where

Y= road construction project performance

a= the y intercept.

$X_1 – X_4$ – four independent variables depicted in chapter three and e= error term.

4.6 Discussion and Hypothesis Testing

Stakeholders' Communication

The results of this study showed a favorable association (r=.503) between project performance and stakeholder communication. The road construction project performance experience and stakeholders' communication, as determined by the study, have the greatest unique contribution to

explaining the construction project performance experience (Beta=.118 and Sig.= 0.042). The outcome showed that a 0.118 unit, or 11.8%, increase in the level of by it would follow a one unit effort increase or positive improvement in road building project experience. Likewise, Gwaya et al. (2021) found a positive association between them.

Stakeholders' Engagement

With a correlation value of 0.639 and a significance level of 0.01 between perceived stakeholder engagement (r=.639) and project success, there is a positive and statistically significant relationship. The statistical significance of each variable in the above coefficients table (B=.281 and Sig =.0001) indicates that stakeholder participation has a positive and significant impact on road construction project performance. According to Bredillet et al. (2018), road construction project performance has an effect on the experience of the project. The results showed that a one-unit increase in effort or a favorable change in the experience of a road building project would result in a 28.1% increase in its level. This implies that a better quality of road building project experience would be attained when there is interaction. Furthermore, Adek (2016) established that it is positively and significantly related to road infrastructure project management.

Stakeholders' Involvement

The perceived involvement of stakeholders and the road project's performance has a positive and significant link, with a correlation value of 0.537 and a significance level of 0.01. Stakeholder involvement has a beneficial impact on road construction project performance, according to the inquiry into how it influences the experience of the project (B=.196 and Sig =.0001). This suggests that when the client has the capacity, a higher level of road building project experience will be obtained. Furthermore, Bredillet et al. (2018) found a strong and positive correlation between it and road infrastructure project management. Similarly, Saad et al. (2020) discovered that the competency of the contractor has a beneficial impact on the successful road project performance.

Stakeholders' Mapping

With a correlation value of 0.566 and a significance level of 0.01 between the stakeholders' mapping and the road project performance, the perceived relationship between the two is positive and significant (r=.566). Stakeholder mapping also has a beneficial effect on the experience of working on a road building project (B=.178 and Sig =.0001). Stakeholder mapping has a good and

considerable impact on the performance of road construction projects, claim Kinyondo & Villanger (2017). This implies that a better degree of experience with road construction projects would be attained when there is a thorough mapping of stakeholders. Moreover, Bredillet et al. (2018) discovered a robust and affirmative association between road infrastructure project management and client competencies.

Table 17 Summary of Hypothesis Testing

Variables incorporated	B	Sig	Decision
H1 – Stakeholders' Communication has a positive and significant effect on road construction project performance	***0.118***	***0.042***	***Supported***
H2 – Stakeholders' Engagement has a positive and significant effect on road construction project performance	***0.281***	***0.000***	***Supported***
H_4 – Stakeholders' Involvement has a positive and significant effect on road construction project performance	***0.196***	***0.000***	***Supported***
H_5 – Stakeholders' Mapping has a positive and significant effect on road construction project performance	***0.178***	***0.000***	***Supported***

Source: Survey result, 2024

The summary table shows that stakeholders' communication (Beta= .118 and Sig.= 0.042), stakeholders' engagement, (B=.281 and Sig =.0001), stakeholders' involvement (B= .196 and Sig = .0001) and stakeholders' mapping (B= .178 and Sig =.0001) have a positive and significant effect on the performance of road construction projects. This study found that the Effect of Stakeholder Management on the Project Performance: the Case of Road Projects Administered under the Ethiopian Roads Administration was true after all of the stated hypotheses were accepted.

4.7 Qualitative Analysis Results

Qualitative Analysis

Interview sessions were scheduled to gather pertinent information on the study area, project success and stakeholder management (*stakeholder mapping, stakeholders' involvement, stakeholder engagement and communication*).

An interview was conducted among representatives from *ERA Staff: Team Leaders and Project Engineers, Local Administration: Woreda Representatives and Evaluation Committee, Contractors: Project Managers and Deputy Project Mangers, Consultants: Deputy General Managers and Resident Engineer* and *Design Consultants: Team Leader*.

A total of fifteen (15) people were interviewed, the details of the interviewees is summarized in the table here below:

Position	**Party**	**No. of People Interviewed**
Project Implementation Team (PIT), Team Leader	ERA	2
Right of Way (RoW) Administration, Team Leader	ERA	1
Project Engineers/Counterpart Engineers	ERA	3
Zone Administrator	Zone 01, Afar Regional State	1
Evaluation Committee	Zone 01, Afar Regional State	1
Project Manager	Contractor	2
Deputy Project Manager	Contractor	1
Resident Engineer	Engineer	2
Deputy Resident Engineer	Engineer	1
Team Leader	Design Consultant	1
Total		**15**

The respondents were asked to share their knowledge and understanding on the status/practice of stakeholder management (stakeholder mapping, stakeholders' involvement, stakeholder engagement and communication) in ERA, its impact on the performance and areas of improvement. In the next sections of the study the responses of the

The respondents from the Ethiopian Roads Administration (ERA) have responded that the Stakeholder Management is a key contributing factor in the good performance of the projects. They have identified that the major stakeholders in the road projects administered under ERA are the *Ministry of Finance, Ministry of Urban and Infrastructure, Contractors, Design Consultants, Supervision Consultants, Local Administrators, Financers, Banks and Insurances.* They have highlighted that in ERA; stakeholder management was not a topic given much focus in the previous years. However, in the past few years after realizing the serious impact caused by the same, ERA has given the subject matter a serious attention. Accordingly, ERA has prepared a stakeholder management Manual for the proper guidance and implementation for its staff while administering their respective projects.

The Contractor's and Consultants have responded that they don't have a specific guideline regarding the management of Stakeholders in ERA projects. However, they have adopted ERA's management strategies. In addition, they have mentioned that there is a noted improvement in the stakeholder management in ERA. As the topic is given more attention and they have also noted that the relevant stakeholders are involved and communicated timely as per the frequency required.

The Local administrators have indicated that they are one of the key stakeholders in the road project of ERA and have stated that to guarantee the effective execution and completion of projects, ERA works in conjunction with local administrations on a variety of road construction-related activities. Below is a summary of the anticipated participation between ERA and Local administrators as described by the interviewed representatives of the local administration:

- **Stakeholder Coordination**: In order to guarantee the participation and support of all pertinent stakeholders throughout the project, ERA collaborates with local administrations to identify and include local companies, government organizations, and community people.

- **Right of Way (RoW) Clearance**: Local administrators aid ERA in clearing obstructions from the Right of Way to promote smooth building activities. This includes negotiating with property owners and settling any problems relating to land acquisition.

- **Community Engagement**: Public meetings and consultations are held by ERA and local administration to update the community on the project, solicit input, and resolve any issues. This ensures community support for the project and helps to establish trust.
- **Resource Mobilization**: To support the construction efforts, ERA enlists the aid of local officials to mobilize manpower and materials from the area. Additionally, they help with liaising with regional suppliers.
- **Monitoring and Evaluation:** To track the project's development and assess its effects on the community, ERA works with local administrations. To make sure the project is on track and accomplishing its goals, this entails frequent site inspections, progress updates, and feedback sessions.
- **Conflict Resolution:** Any disputes or problems that come up throughout the construction process from the local community are largely resolved by local administration. To guarantee a seamless project implementation, they serve as a liaison between ERA, contractors, and the community.
- **Environmental and Social Safeguards:** To reduce the negative effects of building operations on the neighbourhood and environment, ERA collaborates with local administrations to put environmental and social safeguards into place. This includes actions to safeguard the community's safety and well-being, manage waste, and preserve natural resources.

The representatives continued to mention that these collaborative efforts between ERA and local administrators are essential for the successful execution of road construction projects, ensuring that they are completed on time, within budget, and to the required quality standards.

The Interviewees have summarized the undermentioned regarding the 4 key subject matters of stakeholder management in ERA:

- **Stakeholder Mapping**

  ERA’s PIT Team Leaders indicated that ERA has an improved stakeholder mapping process that identifies most of the relevant stakeholders, including government agencies, contractors, consultants, local communities, and international partners. This mapping ensures that all parties involved in road projects are recognized and their roles are clearly defined. However, they have indicated that most of the time the mapping process is conducted without a full understanding of the project scope and due to the same, some relevant stakeholders are not mapped/identified. ERA’s Row Team leader has stated that, most of the time ERA focuses on the key project implementing stakeholders and fails to comprehensively recognize that the users of the road are also relevant stakeholders of the project. However, following the preparation and utilization of the Stakeholder Management Manual, there has been significant improvement in stakeholder mapping.

  The interviewed Contractor’s representatives have stated that they typically rely on ERA's stakeholder mapping but also conduct their own assessments to identify key stakeholders relevant to their specific projects. This includes subcontractors, suppliers, and local labor forces.

  The Supervision Consultant’s based on several important factors, have stated that the Ethiopian Roads Administration's (ERA) current stakeholder mapping procedure can be classified as satisfactorily comprehensive, identifying most of the pertinent parties such as local communities, government organizations, suppliers, contractors, and other important parties. The Stakeholders are categorized by mapping according to their responsibilities, interests, and impact on the project. Consultants value the process's inclusivity, which ensures that all opinions are heard and taken.

  According to the local representatives, they have stated that they contribute to stakeholder mapping by identifying the local companies, members of the community, and other pertinent parties under their purview. They give ERA and contractors important context and local knowledge of the project area.

- **Stakeholders' Involvement**: The representatives of ERA have stated that ERA actively involves stakeholders in the planning and execution phases of road projects. In the planning phases, consultations are conducted with the local administrations regarding the road design, control points and scope of the road project. In the planning stage as stated by the ERA PIT team leader, the stakeholders involved are the Design Consultant, the representatives of the local administration and community people. In the execution phase, the major stakeholders that will be involved in the road project and the ones actively participating in the decision making of the project are the Ministry of Finance, the Contractor, the supervision consultant, the financers, local administrators, Banks & Insurances. Regular meetings and consultations are held to gather input and address concerns with the key relevant stakeholders. This inclusive approach helps in aligning project goals with stakeholders' expectations.

  The interviewed project Manager from the Contractor side has highlighted that the Contractors involve stakeholders primarily during the execution phase. They coordinate with ERA, consultants, and local administrators to ensure smooth project implementation. However, there may be instances where stakeholder involvement is limited due to time constraints or resource limitations.

  The Resident Engineer from the Supervision Consultant's side has stated that Consultants facilitate stakeholder involvement by organizing and conducting consultations, surveys, and workshops. They gather input from stakeholders to inform project design and implementation.

  In the execution phase the local administration are mostly involved in the Right of Way Clearance and maintenance of the Security around the project.

- **Stakeholder Engagement**: ERA prioritizes stakeholder engagement through continuous communication and collaboration. Engagement strategies include public consultations, workshops, and feedback sessions to ensure that stakeholders are informed, and their voices are heard.

The Contractor representative has mentioned that the Contractor as the main party responsible for the construction of the road, is actively engaged by ERA in the project matters. He continued to state that the engagement efforts by contractors vary depending on the project scope and complexity. Some contractors actively engage with local communities to address concerns and ensure minimal disruption, while others may focus more on internal stakeholders.

The Assistant Resident Engineer has stated that Engagement tactics by consultants include regular interactions with ERA, contractors, and local officials. They ensure that stakeholder feedback is incorporated into project plans and handle any concerns that occur during the project lifespan.

The Zone Administrator stated that building trusting relationships with community people and other local stakeholders is the main goal of local administrations' engagement initiatives. They strive to make sure that initiatives address any possible negative effects and are in line with local development objectives.

- **Stakeholder Communication**: The interviewed Team Leader from ERA has stated that ERA keeps lines of communication open and honest with all parties involved. Reports, letters, and official websites are used to communicate regular updates on the status, difficulties, and milestones of the project. Among stakeholders, this openness promotes cooperation and confidence.

  Through site inspections, meetings, and progress reports, contractors keep in regular contact with ERA and consultants. Although it may be less regular, communication with local communities and other external stakeholders is carried out when necessary to address particular issues.

  The Assistant Resident Engineer stated that the Consultants communicate with all parties involved in a clear and consistent manner. They give ERA and contractors technical reports, feasibility assessments, and progress reports. In order to guarantee that local communities' needs and concerns are met, communication with them is also given top priority.

The interview respondent's response in regard to the noted weak areas of stakeholder management in ERA and the recommended way forwards are summarized here-below:

- **Limited Involvement:** Some stakeholders are not sufficiently involved in the planning and execution stages of the project, especially those who are marginalized.
- **Inadequate Communication:** There are different times that insufficient communication has occurred between ERA and stakeholders, leading to misunderstandings and lack of transparency.
- **Ineffective Conflict Resolution:** Project delays and disruptions result from the ineffectiveness of the current ERA's dispute resolution procedures among stakeholders.
- **Insufficient Monitoring and Evaluation:** Robust systems for tracking and assessing the success of stakeholder engagement and management techniques are lacking.

Recommended Improvement Areas by Interviewed Personnel

- **Enhanced Involvement**: Make certain that all pertinent parties, including underrepresented groups, are located and included in the stages of project development and implementation. This can be accomplished with the use of thorough stakeholder mapping and inclusive engagement techniques.
- **Enhanced Communication**: To promote timely and transparent information sharing with all stakeholders, establish clear and consistent communication routes. Clear documentation of project progress and issues, regular updates, and feedback mechanisms can all help foster cooperation and confidence.
- **Effective Conflict Resolution Mechanisms:** Establish clear processes for resolving conflicts among stakeholders. This can help prevent delays and disruptions in the project and ensure that issues are addressed promptly and fairly.
- **Sturdy Monitoring and Evaluation:** Put in place strong monitoring and evaluation mechanisms to gauge how well stakeholder engagement and management techniques are working. This can guarantee that the needs of stakeholders are being satisfied and assist pinpoint areas that require improvement.

The respondents stated that by fixing the noted issues and putting the recommended changes into effect, ERA can further improve its stakeholder management procedures, which will boost stakeholder satisfaction and produce better project performance.

Triangulation of the Qualitative and Quantitative Analysis Results

The performance of the road projects undertaken by the Ethiopian Roads Administration (ERA) is significantly impacted by effective stakeholder management, which includes stakeholder mapping, involvement, engagement, and communication. According to the qualitative and quantitative analysis, thorough and precise stakeholder mapping guarantees that all pertinent parties—such as local communities, government organizations, suppliers, and contractors—are located and their roles are well-defined. Better project outcomes and more informed decision-making result from this inclusivity, which promotes a collaborative atmosphere where a range of viewpoints are taken into account. Proactive engagement tactics and consistent, open lines of communication.

ERA's stakeholder management procedures have improvement areas. Project success may be hampered by the communication, inclusion, and conflict resolution procedures that are lacking, as revealed by the qualitative study. Project performance can be greatly enhanced by addressing these shortcomings through improved lines of communication, more inclusion of stakeholders, chances for capacity-building, and the establishment of efficient dispute resolution procedures. Continuous improvement and stakeholder satisfaction can also be guaranteed by putting in place strong monitoring and evaluation mechanisms and creating a flexible stakeholder management strategy. ERA can get better project outcomes and eventually support the country's infrastructure development and economic expansion by bolstering these sectors.

CHAPTER FIVE

SUMMARY OF MAJOR FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter provides an overview of the study's conclusions. It meticulously crafted the presentation, building upon the main findings and summaries from the examination. The investigator provides potential suggestions and findings to help condense and complete the study.

5.2 Summary of Major Findings

Using explanatory and descriptive research design, the study found that

- The study's findings indicated a positive correlation (r=.503) between stakeholder communication and project performance. According to the study, the two factors that most uniquely contribute to understanding the construction project performance experience are the road construction project performance experience and stakeholders' communication (Beta=.118 and Sig.= 0.042).
- There is a positive and statistically significant association between perceived stakeholder participation (r=.639) and project success, with a correlation value of 0.639 and a significance level of 0.01. The performance of road construction projects is positively and significantly impacted by stakeholder participation, as shown by the statistical significance of each variable in the above coefficients table (B=.281 and Sig =.0001).
- With a correlation value of 0.537 and a significance level of 0.01 between the perceived engagement of stakeholders and the performance of the road project, there is a positive and significant relationship. The investigation of how stakeholder involvement affects the project's experience indicates that it has a positive effect on road construction project performance (B=.196 and Sig =.0001).
- The perceived association between the stakeholders' mapping and the road project performance is positive and significant (r=.566), with a correlation value of 0.566 and a significance level of 0.01. The experience of working on a road construction project is likewise positively impacted by stakeholder mapping (B=.178 and Sig =.0001).

5.3 Conclusions

Two benefits of having a strong stakeholder communication plan are that it reduces risks and gives stakeholders a clear image of the situation as it is in the actual world. This leads to improved decision-making because it increases stakeholder confidence, which is the foundation of cooperation. The study's conclusions indicate that better stakeholder communications will enhance road building projects' performance.

By including stakeholders, R&D in construction can obtain their support, insights, and opinions while also better understanding their needs, aspirations, and concerns. Clear and continuous communication is essential. The study concludes that improving stakeholder engagement will enhance the overall performance of road construction projects.

Companies provide the project brief, which outlines the goals, available funds, and schedule. To ensure that their criteria are fulfilled, they also keep an eye on the project's progress. Furthermore, clients have the final say in whether project deliverables are approved and when the project is deemed completed. This study concluded that participation will enhance the performance of road construction projects as a result.

The main benefit of a stakeholder map is that it demonstrates how organizations can influence their work and the relationships among them. They can focus on building relationships with important partners and improve stakeholder engagement by mapping the important stakeholders in their business. This study concluded that improved stakeholder mapping with clients will improve the performance of road construction projects.

5.4 Recommendations

The following action is suggested by this study in order to guarantee ongoing enhancements in the performance experience of road construction projects.

- Stakeholder communications will thereby improve the performance of road construction projects. The results of the study indicate that this company should use social media, email, project management software, and in-person meetings to effectively connect with

stakeholders. Emails ought to be their go-to and practical way of getting in touch with stakeholders.

- The study comes to the conclusion that raising stakeholder participation will improve road construction projects' overall performance. Therefore, this corporation should own any software that makes it easier for an organization to connect with the people, groups, and organizations that are involved in, impacted by, or have an impact on their project or job. Furthermore, the main instruments and strategies utilized to manage stakeholder participation should be managerial and interpersonal skills.
- Consequently, the study concluded that participation will enhance the performance of road construction projects. Thus, this company ought to enhance its decision-making process by providing access to a diverse array of viewpoints and areas of expertise. This can help it make more informed and comprehensive decisions, which will produce better outcomes. It is necessary for stakeholders to participate in the project's decision-making process and to have a common understanding. Participation from stakeholders leads to empowerment and shared project ownership.
- This study indicated that better stakeholder mapping with clients will increase the success of road building projects, thus this firm should strengthen its engagement plan based on audience knowledge. Each stakeholder for a project is identified on a stakeholder map with a contact level based on their possible effect and level of interest.

5.5 Implications for Stakeholders

Stakeholder participation in the study allowed researchers to investigate the elements that lead to successful road construction projects. It has been shown that when all stakeholders, including those who hire and manage the employees, work well together, there is a greater chance that the project will succeed. It was also found that the environment surrounding the project and the supervisors' competence were important variables. In order to guarantee smooth project operations and high-quality results, all of these aspects need to be considered at the same time. However, because there are so many variables to take into account and different stakeholders have different expectations for the project, managing a road construction project may be difficult.

5.6 Suggestions for Further Research

The same study can potentially be repeated over time in different contexts, such as road, health, and education initiatives in various regions of the country, to see if the results stay true or if the observations described in this study dramatically change. To determine the similarities and differences between Ethiopia and another country, as well as in the execution performance of private and public projects, stakeholder participation, project practices, and project performance, a comparative research can be carried out. This will broaden our understanding of the experiences, outcomes, and related difficulties that come with road construction projects.

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ANNEX

Appendix I – Questionnaire

ADDIS ABABA UNIVERSITY

SCHOOL OF COMMERCE

GRADUATE STUDIES PROGRAM

Dear respondents

In order to partially fulfill the requirements for the Master of Arts in Project Management degree, I, Biruhehiwot Zerihun, a postgraduate student at Addis Ababa University's School of Commerce, am currently conducting research on "*Assessment of The Effect of Stakeholder Management on the Project Performance: the Case of Road Projects Administered under The Ethiopian Roads Administration."*

This survey aims to gather information about the evaluation of stakeholder management's effect on project performance, particularly as it relates to road projects overseen by the Ethiopian Roads Administration. Here, I pledge that the information obtained from this survey will only be used for recommendations and that your answer will remain confidential in the report.

Kindly note that this is a self-administered survey. Although answering the questionnaire is voluntary, we kindly request that you do so and provide your honest input. Your cooperation is greatly welcomed in shaping the study's conclusions. The researcher will therefore truly thank you in advance.

Warm regards,

Biruhehiwot Zerihun

Section I: Personal Information or Background of Respondents

Instructions: Please enter (x) in the space provided for the appropriate response regarding your personal or demographic data.

Gender: Male ☐ Female ☐

Age: Less than 30 ☐ 31 -46 ☐ 47-65 ☐ Above 66 ☐

Education Level: Below High school ☐ Diploma and Degree ☐ Masters ☐ Refused or Others ☐

Your experience in working with road projects

Less than one year ☐ 2-3 Years ☐ 4 – 6 years ☐ Above 7 ☐

Please indicate your experience with road projects' stakeholders

Less than one year ☐ 2-3 Years ☐ 4 – 6 years ☐ Above 7 ☐

Others please indicate _____

For how many years have you practiced in the field federal road projects in Ethiopia

Less than one year ☐ 2-3 Years ☐ 4 – 6 years ☐ Above 7 ☐

Note – ERA – Ethiopian Road Administrations

Section II - Concerning the stakeholders Management in ERA

Direction *- Please enter (x) in the designated space to indicate your opinion about ERA projects stakeholders practices. Thank you. First off, how would you prioritize potential stakeholder management for the following federal road projects? Kindly mark the response choice you wish to utilize with a "X". Recall that the first letter denotes "disagree," the second, "strongly disagree," the third, "neutral," the fourth, "agree," and the fifth, "strongly agree."*

Code	Items	Level of Agreement				
		1	*2*	*3*	*4*	*5*
Stakeholders' Communication						
COM1	Stakeholders in Ethiopian road Administrations communicated through official meetings.					
COM2	Early stakeholder communication during the design process can yield creative, superior solutions at cost-effective pricing.					
COM3	Setting priorities for the requirements of various stakeholders is facilitated by communication.					
COM4	Speaking with various stakeholders facilitates the exposure of various viewpoints and levels of expertise.					
COM5	Accurate data and information were obtained all over the project's existence.					
Stakeholders' Engagement						
ENG1	At the start of the project, stakeholders had the opportunity to define the project's scope.					
ENG2	At the start of the project, the expectations of the stakeholders were ascertained.					
ENG3	At the start of the project, stakeholders received education regarding the goals and objectives.					
ENG4	At the start of the project, stakeholders were given the opportunity to establish the success criteria and factors for the project.					

ENG5	Potential issues raised by stakeholders were addressed at every stage of the project's development.					
Stakeholders' Involvement						
INV1	All the parties involved in a decision, activity, or outcome of the road projects of ERA.					
INV2	The stakeholders have been involved voluntarily in the road projects of ERA.					
INV3	ERA encourages stakeholders to be part of road projects planning.					
INV4	The stakeholders have high expectations for the road projects outcome.					
INV5	Stakeholders develop and share their strategies for supporting road projects in ERA.					
Stakeholders' Mapping						
SM1	ERA identifies the general stakeholders of the road sector ,i.e., those influencing, and being involved in, the overall activities of the sector.					
SM2	ERA understands stakeholder perspectives and interests in road sector.					
SM3	ERA visualizes relationships to objectives and other stakeholders in road sector.					
SM4	ERA ranks stakeholder relevance and identifying issue in road sector.					
SM5	ERA ensures stakeholders' needs and concerns are adequately addressed in road project.					

Part-III Concerning projects performance under ERA

Direction *- Please enter (x) in the space provided for the appropriate response regarding your project performance of ERA. Please indicate your choice of response by placing a "X" next to it. Keep in mind that 1 denotes "Strongly Disagree," 2 "Disagree," 3 "Neutral," 4 "Agree," and 5 "Strongly Agree."*

Code	Items	Level of Agreement				
		1	*2*	*3*	*4*	*5*
PP1	Projects are executed and finished on time and within the budget assigned to them.					
PP2	Projects are implemented and completed within the specification and quality standard.					
PP3	The implementation of the project is consistently aligned with its intended goals and objectives.					
PP4	Effectively engaging stakeholders at the appropriate project phases is important.					
PP5	Seeking project feedbacks from stakeholders improves performance.					
PP6	Stakeholder management affects project performance					

Thank You !

Appendix II – Interview Guideline

Addis Ababa University
School of Commence
Graduate Studies in Project Management

Interview guide for Stakeholder Management and Project /Performance

1. Position _____

2. Qualification_____

3. Please indicate the current status of stakeholder mapping, stakeholders' involvement, stakeholder engagement and communication in ERA.

_____
_____
_____

4. Are there the effects of stakeholder mapping, stakeholders' involvement, stakeholder engagement and communication, and their consequences on road projects performance?

_____
_____
_____

5. Please indicate the current road projects performance in ERA.

_____
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_____
_____
_____

6. Please explain the practice of stakeholder management in ERA projects.

_____
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_____

7. Please explain if the stakeholder management affects the performance of projects in ERA projects.

_____
_____
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_____
_____

8. Please explain how ERA can improve it's stakeholder management.

_____
_____
_____
_____
_____
_____

Thank you very much!