Addis Ababa University School of Commerce

Effect of Stakeholder Management on Project Success:

The Case of Bilalo-Kersa-Arsi Negele Road Project

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A Project Work Submitted to Addis Ababa University School of Graduate Studies in Partial Fulfillment of the Requirements for the Degree of Master of Arts (MA) in Project Management

Advisor: Dereje Abi (Phd)

July, 2023

Addis Ababa, Ethiopia

ADDIS ABABA UNIVERSITY

SCHOOL OF COMMERCE

DEPARTMENT OF PROJECT MANAGEMENT

GRADUTE PROGRAM

(MAPM)

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Advisor: Dereje Abi (Phd)

Declaration of Candidate

I, Seble Tefera the under signed, hereby declare that this research project work entitled “Effect of Stakeholder Management on Project Success: The Case of Bilalo-Kersa-Arsi Negele Road Project” as my original paper work and that it has not been submitted before anywhere either at Masters Level or Undergraduate for any award. Any information used from other works has been acknowledged.

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Statement of Certification

This is to certify that Seble Tefera has carried out this project work entitled “The Effect of Stakeholder Management on Project Success: The Case of Bilalo-Kersa-Arsi Negele Road Project” under my supervision. This work is her own original work and it is sufficient for submission as the partial fulfillment for the award of Degree of Masters of Art (MA) in Project Management.

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Approval by Board of Examiners

Members of the Board of Examiners approve that this research project entitled "The Effect Of Stakeholder Management On Project Success: The Case Of Bilalo-Kersa-Arsi Negele Road Project" undertaken by Seble Tefera fulfills the requirements for the Degree of Master of Arts in Project Management and is acceptable with regards to the standards and regulations of the University.

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Acknowledgement

First I would like to thank the Almighty God for helping me pass this challenging time with victory and for giving me strength, wisdom, and grace in my life.

Next I would like to express my deepest gratitude for my advisor Dr. Dereje A. for his commitment, passion, and continual suggestions. I would like to thank him for his guidance, advice and constrictive comments on each stage of this project.

Then I would like to thank my mother, who help and support me in every step of my life. Then I am grateful for all my family and friends who have supported me. Thank you for your motivation and support. Finally my gratitude goes to workers of the project who have participated in this project. Thank you all

Abstract

The aim of this study is to test the effect of stakeholder management on project success. Stakeholders are individuals or groups who are either actively involved in the project's work or who seek to gain or lose from it. Stakeholder management is a method that enables organized, timely, and coordinated engagement with stakeholders. The data for the study was collected from employees working at a road project in Ethiopia. A closed-ended questionnaire was used in the study to collect data, and 94 respondents participated. The researcher used explanatory and descriptive research approaches. The study used quantitative research design. Regression analyses was applied to generate outputs. The result of the regression shows that the four independent variables (stakeholder communication, stakeholder engagement, stakeholder empowerment and risk control) have a significant and positive effect on project success. Therefore improving those in a project improves the project success. While it is found that stakeholder identification have no significant effect on project success. Based on the results, recommendations and suggestion for further studies are forwarded in the study.

Key words: - stakeholders, stakeholder management, stakeholder communication, stakeholder engagement, stakeholder empowerment

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CHAPTER ONE

INTRODUCTION

This chapter gives readers the general insight of the project. This chapter includes background of the study, background of the organization, problem statement, general and specific objectives, significance of the study, research questions, scope of the study, limitation of the study and organization of the project.

1.1 Background of the study

A project is a unique, temporary collection of procedures with the goal of producing a service or a good under the limitations of time, cost, scope, risk, and quality. The fourth edition of the PMIBOK defines a project as a temporary endeavor carried out to provide a unique service, product, or result. It has a distinct start and finish. Projects are strategic tool used by organizations to drive innovation and add value (Rajablu et al. 2014).A project is considered successful if it fulfills or surpasses the stakeholders' expectations. A project's goal is to benefit all of its stakeholders. Benefits to stakeholders are one of the project's motivators, and achieving their goals is what makes the project successful.

Applying knowledge, skills, tools, and procedures to project activities in order to achieve project requirements is known as project management. Planning, executing the project plan, and monitoring performance are steps in the project management process (Watt, 2014).

When a project meets stakeholder expectations, it qualifies as successful. Stakeholders are individuals or groups who are either actively involved in the project's work or who seek to gain or lose from it (Adrienne, 2014). Stakeholders are people or organizations who get something from an organization. Stakeholders may also be impacted and have the power to negatively impact the organization. They are affected by what is done within an organization (Chinyio and Olomolaiye, 2009). In addition, an organization could negatively affect stakeholders or interfere with their rights. Stakeholders fundamentally impact and are affected by an organization's operations (Wiley 2010).

Stakeholders may have an impact on the objectives, operations, and even the existence of an organization. Contrarily, certain stakeholders may benefit by assisting the organization in achieving its aims, while others may be contradictory if they disagree with its objectives. According to PMI (2021), stakeholders supervise every aspect of a project. Stakeholders can influence a project's scope by pointing out the need to add, modify, or eliminate scope-related components. Time; either accelerating or delaying the completion of important tasks according to the schedule; Cost; by lowering expenses or by introducing processes or regulations that rise costs and require more resources. Project team; by limiting or providing access to individuals who have the abilities to accomplish the desired result. Planning; by supplying data for planning; by creating long-term goals, it can ensure that the project achieves its intended goal. Quality; - by modifying the standards for quality. Success; - by defining characteristics of success and how it is measured (Chinyio and Olomolaiye, 2009).

For at least four reasons, the project's stakeholders are crucial to project success. The initial one is for participation. Stakeholders are sources for various resources that are used for the project's implementation; these resources may be both financial and non-financial. The second is for determining the parameters by which the project's performance will be judged; these can include consultants, owners or clients, and governmental organizations. Thirdly, there are potential objections from stakeholders that may increase risk and harm the project's chances of success. This includes project stakeholders who are on the ground of the project; Examples include stockholders, employees, tenants, and landowners. Some stakeholders who are disregarded at the start of the project because they are thought to have little impact on it could end up causing a lot of unanticipated problems and threats that could prevent it from being completed. And fourthly there are stakeholders that are affected by the activities of the project either in a good or negative way. This might be connected to other problems including gas emissions, societal effects, and environmental friendliness. Users, staff, and the local community may all be considered in this.

PMI (2004) classifies stakeholders in a variety of ways. One of the classification is internal and external stakeholders. Internal stakeholders are individuals who work within the organization and are part of the project's body. External stakeholders are those who are not directly involved in the project but have an impact on it or are affected by it in some manner. Another classification is primary and secondary stakeholders; the primary stakeholders are those who are directly

involved in the project and are vital to its success; secondary stakeholders are those who are indirectly influenced by the project but are not critical to its success.

Stakeholder management is concerned with the relationship that exists between an organization and its stakeholders. These interactions can have a positive as well as negative impact on individuals and organizations. As a result, stakeholders must be managed in order to limit their negative effects and ensure that individuals and organizations achieve their goals. A multidimensional plot research is required to determine the amount of complexity of stakeholders. It is critical to categorize stakeholders as supportive, neutral, or negative. It is critical to make an attempt to move stakeholders from negative or neutral side to the supportive (Chinyio, and Olomolaiye, 2009). Poor communication, insufficient resources allotted to the project, changes in the scope of work, poor press coverage of the project, and negative community reactions to the project are examples of problems and uncertainties arising from stakeholders that lead to project failure (Karlsen, 2002).

Project managers/team leaders, Clients, client representatives, consultants, , structural engineers, services engineers, architects, sponsors, contractor, subcontractors, suppliers, the government, designers, employees, customers, project internal, end users, and the community are some parts of stakeholders in a construction project (Eyiah-Botwe, 2015). Legal authorities, process and service suppliers, competitors, banks, insurance companies, media, community representatives, public, visitors, regional development agencies, the natural environment, the press, and other civic institutions, are also among stakeholders in construction projects.

Construction projects involve a number of parties. According to Molwus (2014), stakeholders must be involved from the outset of the construction project, starting at the project's beginning. They must also be included in the design phase to ensure that values relevant to the construction project are established. This is useful for ensuring that every stakeholder's true or real expectation is met.

Stakeholders are involved in the project at various stages, taking on various roles and responsibilities, depending on the nature, complexity, and procurement method used (Eyiah-Botwe, 2015). Therefore, effective stakeholder management is crucial for achieving the project's objectives. Construction projects are started to accomplish particular goals, and the

accomplishment of those goals, including stakeholder satisfaction, determines the project's success.

According to observations, the majority of projects fail after implementation not because of poor execution but rather because of inadequate stakeholder involvement and interaction (Buertey 2016). Effective stakeholder management, according to Collinge (2016), is a key concept for project management success. In order to effectively involve stakeholders in the decision-making and execution of the project, it is necessary to: identify the individuals, groups, or organizations that could have an impact on the project or could be impacted by the project; analyze stakeholder expectations and their impact on the project; and develop appropriate management strategies (Jainendrakumar, 2016). Stakeholder management is a method that enables organized, timely, and coordinated engagement with stakeholders. In order to avoid effects on the project, particularly negative ones, stakeholders must be managed in each project. Throughout the whole project process, the project manager should be able to handle the varied interests of several stakeholders. The basic goal of stakeholder management is to direct and oversee stakeholder relationships and their integration with project procedures. Karlsen (2002), also provided the following set of justifications for carrying out a stakeholder management process: First, to get to know the project's stakeholders; second, to make sure that contribution and reward are balanced; third, to use as a foundation for managing stakeholders; Fourthly, it serves as a foundation for choosing who should be involved in establishing the project's objectives and how success is to be measured. The success of the project depends on how well the parties involved in the construction project manage their complicated interactions and relationships.

1.2 Background of the organization

This project is construction work of DC-5 road project. Its location is in oromia regional state. The length of the project is 92.238 km. The original completion date is on 15, August, 2022. The revised completion date is on 19, June, 2023. The type of contract is measurement with fixed unit price.

The works contract was signed on 23rd day of the month of March 2019, between Ethiopian Roads Authority (the Employer) and China Communications Construction Company Limited

(the Contractor). The contract amount is ETB 1,565,358,431.41 (Ethiopian Birr: One Billion Five Hundred Sixty-Five Million Three Hundred Fifty-Eight Thousand Four Hundred thirty-one and cents 41/100 only) inclusive of 10% contingency, provisional sums and 15% VAT. The project has been commenced on 16th day of the Month of August 2019 and it is to be completed in 36 months plus 24 months defects liability period.

SHELADIA Associates, Inc., in Sub-Consultancy with ENSIRAD Civil Systems Engineering PLC and HITCON Engineering PLC, has been engaged by the client for rendering consultancy service towards the construction supervision of Bilalo-KersaArsi Negele Road Project. Contract agreement has been signed between Ethiopian Road Authority and SHELADIA Associates, Inc., in Sub-Consultancy with ENSIRAD civil systems Engineering PLC and HITCON Engineering PLC on, and the commencement of the service was on.

1.3 Statement of the problem

Four segments could be found in Ethiopia's construction industry. They are: Sewage and Energy Projects, Real Estate and Industrial Park projects, Railway and Aviation projects, and Road Construction projects. According to a research by the Global Business Network Program in 2020, these segments of the construction industry are among those with the fastest expanding economies in Ethiopia. Road construction is a crucial component of Ethiopia's infrastructure expansion, as it is in many developing nations. Rural roads are particularly critical. 85% of the population of the country continues to reside in rural areas, according to a survey by ITE Construction and Interiors. The long-term growth of Ethiopia depends critically on connecting these locations to more developed regions.

A project such as constructing a road requires an enormous number of stakeholders. Several other parties are also affected, positively as well as unfavorably. The community living there and the land owners are particularly impacted by the road construction. It is therefore a very complicated matter to manage stakeholders in a road construction project.

In this project the three stakeholders the consultant, client and contractor are well analyzed and are well defined. But other stakeholders that may have an impact on the project are not well identified and analyzed. Like the wereda administration, governmental bodies like Ethiopian water works cooperation, Ethiopian electric cooperation, the community. This lead to confusion

in the role of the stakeholders and some delays. Delays are also brought on by the government entities like Ethiopian Electric Corporation and Ethiopian Water Works. Delays are being caused by Ethiopian Electric Corporation, which is in charge of picking up and collecting its electric poles, because the poles in the right of way aren't being raised on time. The Ethiopian Water Works Cooperation, which is required to pick its water and sewage pipes, is also adding to the project's delays. In addition, tenants and farmers who have not received adequate compensation are also causing delay because they do not depart in the proper manner or at the scheduled time.

Additionally, the three main stakeholders have a good communication. There is a monthly meeting performed by the three stakeholders. The consultant and the contractor communicate mainly using meetings, letters, and monthly progresses. Client communication with the project managers has a direct and high impact on a project. Financial issues, currency issues, equipment problems, issues related to the immigration related to the international experts, right of way issues, issues related to compensation are all responsibilities of the client so its timely involvement and communication is important for the success of the project. In this project the client and the community have a very low communication. This leads to fights as the land owners who deserve to be paid compensation were not paid on time, and this problem grows to make the project to be stopped for some time and causes some schedule slippages. Additionally the project design was not discussed among the community and rural administrations like the wereda's administration. On some point the project stopped because the wereda administration did not agree with the road design. And the design was revised. This took a lot of additional time.

Numerous construction projects do not achieve their goals in terms of cost, time, and quality. Ineffective management of stakeholder relationships is a major factor contributing to the failure of many large-scale construction projects worldwide (Sims and Kramer, 2015). A journal published by the Global Business Network Program in 2020 revealed that over 80% of construction projects in Ethiopia run over their budget and experience delays. The study also identified several reasons for project delays, including inadequate cost planning and monitoring during pre- and post-construction phases, modifications to standard drawings during construction, design alterations, inaccurate quantity take-off, insufficient stakeholder involvement, fluctuations in building material costs, and inadequate planning and coordination.

In his research, Black (1995) identified several reasons why projects fail, including insufficient definition of scope and work, inadequate allocation of resources, failure to anticipate regulatory changes, and negative community response. These issues are often linked to poor management of stakeholders. To address these challenges, it is important to prioritize stakeholder interests early on in the project and ensure that the community is supportive of the initiative, as they are key stakeholders and users of the project.

In Ethiopia, it is common for construction projects to run over their budget and deadlines, often resulting in failure to meet stakeholder needs and expectations. Stakeholder-related issues such as planning delays, cost overruns, and conflicts leading to litigation and claims are prevalent in construction management (Cleland, 2002; Olander and Landin, 2005). These problems arise from inadequate stakeholder management strategies, which fail to consider stakeholder input and interests at the project's inception or during its course. While stakeholder management has been studied extensively, as to my knowledge there is a lack of research specifically on Ethiopian construction projects and their stakeholder management. Additionally, as to my reading there are few projects that demonstrate the impact of stakeholder management on Ethiopian road construction.

1.4 Research objective

1.4.1 General objective

The main objective of this research is to examine the effect of stakeholder's management on success of a project.

1.4.2 Specific objectives

- To examine the effect of stakeholder identification on the success project,
- To examine the effect of stakeholder communication on the success of project,
- To examine the effect of stakeholder engagement on the success of project,
- To examine the effect of stakeholder empowerment on the success of project,
- To examine the effect of risk control on the success of project.

1.5 Research Questions:

These questions are raised in the study to analyze the effect of stakeholder management on project success. They are listed as follows:-

- How does stakeholder identification affect project success?
- How does stakeholder communication affect project success?
- How does stakeholder engagement affect project success?
- How does stakeholder empowerment affect project success?
- How does risk control affect project success?

1.6 Significance of the study

The purpose of this study is to demonstrate how managing stakeholders has an impact on a construction project. A construction project requires teamwork and the participation of many parties. The success of construction may be impacted by one party's lack of participation. Conflicts between the various parties also contribute to problems, delays, and cost overruns in many construction projects.

This demonstrates that project managers in the construction sector need to pay attention to stakeholder management in a construction project. In consideration of this, the study aims to demonstrate how stakeholder management affects a project's success. The study, in the author's opinion, expands knowledge of how stakeholder management affects project success.

The study's findings will improve project managers' understanding of stakeholder management in the construction sector. For all parties involved in the construction industry, particularly construction project managers, it also offers some awareness of the processes of stakeholder management.

Additionally, the study aims to contribute to the body of knowledge on stakeholder management in Ethiopia's construction sector. The study also helps project managers, clients, owners, governmental organizations, contractors, consultants, and notably project managers employ stakeholder management to ensure the success of their initiatives. The study also encourages

future scholars to conduct additional research and studies in the areas in order to close the knowledge gap left by this work.

1.7 Scope of the study

Among ten project management areas, this project is concerned only on one project management knowledge area which is stakeholder management. The research aims to find the relationship between project stakeholder's management and project success. Though project success has various dimensions, it is set to a single higher order variable.

Additionally the study is performed on a road project, specifically billalo-kerssa road project. The research focuses only on data collected from the sample of the workers currently working on the project. Due to time constraint it is not possible to include all the stakeholders therefore stakeholders directly working on the project; the contractor and consultants are the main focuses of the project.

1.8 Limitation of the study

The research have limitations in the following aspects: the research is performed only on one industry of a project. Additionally it is only performed on the two main participants of the road construction project which are currently working on the site.

Those are the contractor and the consultant. It do not involve other participants which makes it troublesome to generalize from it. And also other factors which have an impact on project success are not taken in to consideration.

1.9 Organization of the study

This study is composed of five chapters. The first chapter gives readers the general insight of the project. This chapter includes background of the study, background of the organization, problem statement, general and specific objectives, research questions, scope of the study, limitation and organization of the project.

The second chapter reviews related literatures on stakeholder's management. It includes concepts and definitions; theoretical framework, and finally the researcher develops conceptual framework based on the reviews of the literatures.

The third chapter includes the design and approach of the study performed to study the relation between variables. Then the population and sample size used for the data analysis; data source and collection method; model specification; analysis of data; reliability check; validity check; and ethical consideration of the project.

The fourth chapter includes the data analysis and results of the descriptive and inferential statistics. It includes demographical distribution of the respondents; analysis and result of descriptive analysis; analysis and results of the correlation; and finally the analysis and results of the regression.

The fifth chapter includes three parts: - the summary of results; the conclusion of the project; the recommendations that the researcher made from the research.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

This chapter reviews related literatures on stakeholders management. It includes concepts and definitions; theoretical framework, and finally the researcher develops conceptual framework based on the reviews of the literatures.

2.1Concept and definition

2.1.1 Definitions of stakeholders

Stakeholders have been defined in various ways by various scholars. While some definitions are too broad, others are too narrow. A few explanations of stakeholders include:

Stakeholders are defined by Chinyio and Olomolaiye (2009), as people or organizations who get something from an organization. Stakeholders may also be impacted and have the power to hurt the organization. An organization's operations have an impact on them.

One of the eight project performance domains identified by PMI in 2021 is stakeholders. The other seven are teams, project work, planning, delivery, measurement, uncertainty, development method, and life cycle.

Figure 1: project performance domains

Project stakeholders are people, organizations, or other entities that have the potential to either benefit from or harm a project (Eyiah-Botwe, 2015). Stakeholders act in ways that they believe will help them achieve their project goals, which may or may not be consistent with the project manager's project vision, mission, and goals (Sutterfield et al., 2006). A project stakeholder is an individual or group of individuals who have an interest in the project's success. They are representatives of numerous interests that will be positively or negatively impacted at different stages during the construction project, from the beginning to the delivery (Olander, 2007).

Stakeholders in a construction project are defined by Jurbe (2014) as people, groups, or organizations that have a stake in the project or have the ability to contribute to it. They will encounter a direct gain or loss from either the project's work or its results. According to Molwus (2014), stakeholders in a construction project are people, groups, or organizations that have a stake or can make a contribution in the project. They will experience a direct gain or loss from either the project's work or its results.

2.1.2 Stakeholder management

Stakeholder management, according to Jainendrakumar (2016), is the process of identifying the individuals, organizations, or groups that may have an impact on or be affected by the project; Investigate stakeholder expectations and how they affect the project; Create effective management strategies for engaging stakeholders in project decision-making and execution. Effective stakeholder management is a critical idea for project management success, according to Collinge, B. (2016).

Additionally, Karlsen (2002) outlined the stakeholder management method in six phases. The management process's initiation is the first step. The primary responsibility in this step is to decide on the goal of the stakeholder management approach. Identifying the stakeholders is the second phase. There are many techniques available to assist in identifying the stakeholders, including checklists, group meetings, expert interviews, and brainstorming sessions. The analysis of the stakeholders is the third step. Issues related to the stakeholders, such as their interest, contribution, expectations, power, domains, etc., are addressed.

The fourth phase focuses on communicating stakeholder assessment to the project's management and members. Understanding the stakeholders' identities and potential effects is helpful. The

creation of an implementation strategy is the fifth step. The stakeholders' influence and type are taken into account when developing the strategies. The strategies are regularly changed according to the progress of the project.

In their study, Park and Lee (2015) present a three-step strategy for managing stakeholders. In order to help them predict the type of response that will take place in the future, organizations must first identify and analyze the interests of the stakeholders. Which stakeholders should be involved can be determined using the recommendations provided in this stage. The development and implementation of stakeholder management strategies comes next. The strategies are chosen based on the stakeholders' priorities and type. The process of stakeholder management evaluation is the final step.

The four main processes of stakeholder management, according to PMI (2013), are stakeholder identification, stakeholder management planning, stakeholder engagement management, and stakeholder engagement process control. Additionally stating the four stakeholder management methods was Jainendrakumar (2016). The four main processes listed by the PMI are explained as follows: -

A. Stakeholder Identification

The process of selecting out parties with an interest in the project is known as stakeholder identification. Since numerous stakeholders are involved at various stages of the project, it is a continuous process.

It is carried out with the aid of many methods, including meetings, expert opinion, and stakeholder analysis. According to Jainendrakumar (2016), this method results in a stakeholder register that includes identifying information about the stakeholder, assessment information about their expectations and impact over the project, and stakeholder classifications such as internal or external, supporter, neutral, resistive, etc.

B. Planning the stakeholders engagement

The second process involves planning the stakeholder's engagement. A strategy is set out for how to create effective stakeholder engagement strategies from the initial phase through the completion of the project. It produces a well-defined, workable plan (Jainendrakumar, 2016).

The development and maintenance of strategic relationships among all project stakeholders is a crucial aspect of stakeholder management (Retta, 2021). In this process, strategies are developed to include stakeholders based on their needs, expectations, and potential impact on the project. This procedure is crucial for providing a workable plan to rapidly and successfully connect with the stakeholders. (PMI, 2017).

C. Manage the stakeholder engagement

The third process is this one. In order to effectively address stakeholders' demands, expectations, handle difficulties, solve problems, and win their support, project managers must effectively communicate with and work with them (Jainendrakumar, 2016). The major goal is to assist managers in raising support and reducing negative effects. Additionally, it aids in the stakeholders' understanding of the project's goals, objectives, advantages, and threats. Throughout the course of the project, this process is ongoing (PMI, 2017).

D. Monitoring stakeholders engagement

According to PMI (2017), monitoring stakeholders' engagement is a process for keeping track of how different stakeholders interact while also revising the engagement strategies and plans that were previously produced. The key benefit of this procedure is that it contributes to maintaining good stakeholder participation as the project is incorporated into the changing environment. Monitoring overall stakeholder relationships and modifying methods and plans for engaging stakeholders are the goals of this approach. The main advantage is to maintain or improve stakeholder engagement activities efficiency and effectiveness in ensuring project success (Jainendrakumar, 2016).

The five components of stakeholder management that have an effect on a project are identified by Waris et al. (2022) as follows: stakeholders identification, stakeholders communication, stakeholders engagement, stakeholders empowerment, and risk control. Khan et al. (2021) have also measured the management of stakeholders using those five constraints. The following section explains about the five constraints that this research uses as variables.

A. Stakeholder Identification

Stakeholder identification and classification is a basic component of stakeholder management that enables project experts to recognize and comprehend the stakeholders' perceptions and influencing tactics (Khan et al., 2021). Before attempting to engage them, all pertinent stakeholders should be identified.

The stakeholders should also be examined; their power, interest, need, potential impact on the project, and role should all be noted. This makes it simpler to interact with the stakeholders. Additionally, a register of stakeholders needs to be developed.

B. Stakeholder Communication

Stakeholder communication is an approach that promotes information sharing among the parties involved as well as their participation and empowerment (Khan et al., 2021). According to Chiniyo and Olomolaiye (2009), any organization's success is based on its capacity to build and sustain a productive and ongoing relationship with its stakeholders. Stakeholder needs and requirements must be identified through effective stakeholder communication. To sustain a positive relationship between the stakeholders, a communication should be properly planned; furthermore, the ways of involvement vary depending on the type of stakeholder (Chiniyo and Olomolaiye, 2009).

C. Stakeholder Engagement

Stakeholders are given the opportunity to specify the project's scope, success factors, and support the project continuously in this step. Stakeholder engagement is a process that assists in gaining support from stakeholders and minimizing their negative effects on the project lifecycle (PMI 2017).

According to PMI (2021), stakeholder engagement also comprises cooperating with stakeholders to introduce the project, specify their needs, control expectations, address problems, negotiate, set priorities, solve problems, and make decisions.

D. Stakeholder Empowerment

Stakeholder responsibility and commitment are maintained throughout the project lifecycle in a significant way due to stakeholder empowerment (Khan et al., 2021). Stakeholder empowerment is a crucial component of stakeholder management and involves educating and developing the skills of the stakeholders so that they can be self-sufficient and financially independent at the project's conclusion (Barbara, 2016).

The purpose of the trainings is to guarantee that there will be enough qualified personnel to manage the project. Additionally, it teaches other stakeholders how to effectively handle the project.

E. Risk control

Risk is described by (Ward and Chapman's study qtd in Khan et al., 2021) as uncertainty and unanticipated events that happen during the course of a project. Internal and external stakeholders in every construction project could potentially be causes of a risk. (Chinyio and Olomolaiye, 2009) listed two procedures that can be taken to identify stakeholder-related risks: (1) identifying as many risks in the project as possible; and (2) identifying the individual stakeholder who is associated with each risk. Even if there are several methods for identifying risks, brainstorming is the most effective one in the construction industry, according to Chinyio and Olomolaiye (2009). It makes it possible for construction stakeholders to hear and understand what other stakeholders consider as risk.

2.1.3 Construction project success

Success on a project might mean various things to different people. Every sector of the economy, project team, and person has their own unique definition of success. Construction is a dynamic sector of the economy. In the construction business, the definition of project success has remained vague (Chan, 2001). According to Chan's research, the three fundamental and most significant performance metrics in building projects are cost, time, and quality. Other construction project indicators were also listed in the study.

Time: Time is the duration for the project to be completed. Construction time is the complete time calculated as the number of days/weeks from the outset on site to the actual completion of the project. In this project additional time is given for the contractor because the delays are justifiable. The time delays are not only faults of the contractor. In this project time delays occurred because of COVID, problems related to the client, conflicts in the area which forced the workers to stop the work, shortage of materials in the country. As a result the contractor asked for additional time in claims and in total 10 months of additional time is given to it.

Cost: Cost is also an important measure. Cost is the degree to which framework conditions support completion of the project within the estimated budget. Cost is not limited to the bid amount, it is the total cost incurred from project initiation to completion. They therefore include all costs arising from variations and modifications during construction and costs arising from legal claims. B. Litigation, Filing and Arbitration. This project is over budgeted, but there are justifiable reasons for it. And it is acceptable by the consultant and client.

Value and Benefits: It is a measure of value that assesses the satisfaction of the owner's needs. For owners, this includes production amount, operating and maintenance costs, and flexibility considerations. This can be viewed as a "business benefit" from a completed project, as most projects are commercial.

Safety: Health and safety represents how well the environment contributes to the completion of projects without serious accidents or injuries.

Environmental performance: The construction industry is considered to be the main source of environmental impact. Construction projects affect the environment in many ways throughout their life cycle. Environmental issues are a global concern.

Quality: However, the evaluation of quality in the construction industry is subjective. Quality is defined as the set of characteristics required for a product or service to meet a specific need.

User expectations and satisfaction: The users are the people who actually work and live in the final construction project and who spend most of their time in the constructed facility.

Participant Satisfaction: Key stakeholders in a typical construction project are: Client, Design Team Leader, and Construction Team Leader. Their satisfaction can be used as a pointer of project success.

2.2Theoretical framework

2.2.1 Stakeholder theory

Freeman argues that the duties of management within a company are not to "stakeholders" or "shareholders", but to what he calls "stakeholders." Freeman stated many groups have moral claims against the company. This is because the company may harm or benefit them. This theory suggests that it is not just the people who own the company's stock that gain or lose when the company makes decision; because every corporate decision has a potential impact on the well-being of more people than just shareholders. This study is made based on stakeholder theory. Every stakeholder in a project shall be identified and analyzed well before the beginning of a project. Not only the owners or clients of a projects are impacted there are many other parties which are affected by actions implemented in projects.

2.2.2 The power/ interest of stakeholders

Power/ interest matrix is used for categorizing stakeholders of a project to allow an effective management. Mendlow’s matrix was developed in 1999 to analyze stakeholders. As stakeholders have claims, rights and expectations, they must be managed in each project to avoid any of their influences that could be contrary to a firm’s objectives. The ideal is to optimize by maximizing the benefits that are derivable from stakeholders while minimizing their potential negative impacts.

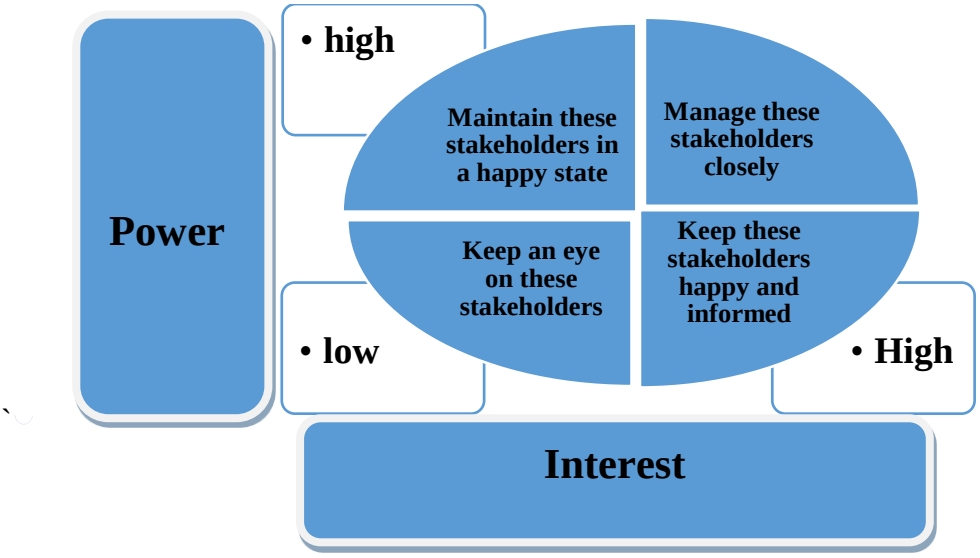

Figure 2 Power/ interest matrix

2.2.3 Resource dependency theory

Pfeiffer and Salancik (1978), resource dependency theory stated that organizations do not operate independently and they depend on other actors/ factors in the business environment. This reliance gives the external factors an edge in controlling how the organization carries out its operations. In the resource dependence theory, stakeholders that own resources required by the firm are considered valuable. Organizational theories view legitimate stakeholders as are those that really count. External environment needs to be clearly assessed in line with stakeholder expectations.

2.3 Empirical framework

A research done by Emmanuel Eyiah-Botwe, titled "An Evaluation of Stakeholder Management Role in GETFund Polytechnics Projects Delivery in Ghana", published by civil and environmental research, in 2015, also revealed that stakeholder management plays a big role in project success. The study used a mixed method of quantitative and qualitative surveys. It collects data using semi structured interviews and questionnaire.

The study found out that stakeholder management have an effect on project time, project cost overruns, scope variation poor payment schedule. It concluded that Stakeholder Management is therefore essential if project goals are to be achieved. Additionally it suggests that stakeholder management should be considered during every lifecycle of the project starting from the planning stage.

A study titled assessment on practices of stakeholder management in the Ethiopian construction sector aim to develop understanding of theoretical basis of stakeholder management in the Ethiopian construction industry. The study was performed on four local construction companies namely; Rama construction, MH engineering, Bereket Tesfaye Consulting Architects and Engineers and Transport program Management Office. The study used descriptive method research design. It used mixed research approach. The findings of the study showed importance of stakeholder management in the construction sector. The result shows that construction project managers fail to implement stakeholder management with the accordance of the standard methodology.

A research done by Waris et al. in 2022, in Pakistan titled “Stakeholder Management in Public Sector Infrastructure Projects” published by Journal of engineering, shows that stakeholder management practices have not been widely adopted, which has resulted underperformance of projects. The study is quantitative and data is collected using questionnaire. The study developed and validated five main dimensions of stakeholder management which are: - identification and classification, communication, engagement, empowerment and risk control. The results show that "Risk Control" is the most contributing dimension of stakeholder management, and "Empowerment" is the least concern among the practices. The study suggests that there is a need to establish a structured method to manage stakeholders to ensure that projects meets their objectives on time and within the limited budget.

A study done in Ethiopia on the effect of stakeholder management, entitled effect of stakeholder management on project performance in the case of GIZ aimed to identify the effect of stakeholder’s management on project performance. The study performed statistical analysis by using SPSS version 25. The researcher collected data using questionnaire. The study found out that the stakeholder management have a positive and significant effect on project performance.

2.4 Conceptual framework

From literatures reviewed above the researcher developed the following conceptual framework. Five independent variables are identified; which are: - stakeholders identification, stakeholders communication, stakeholder engagement, empowerment of stakeholder, and risk control. While project success is the dependent variable.

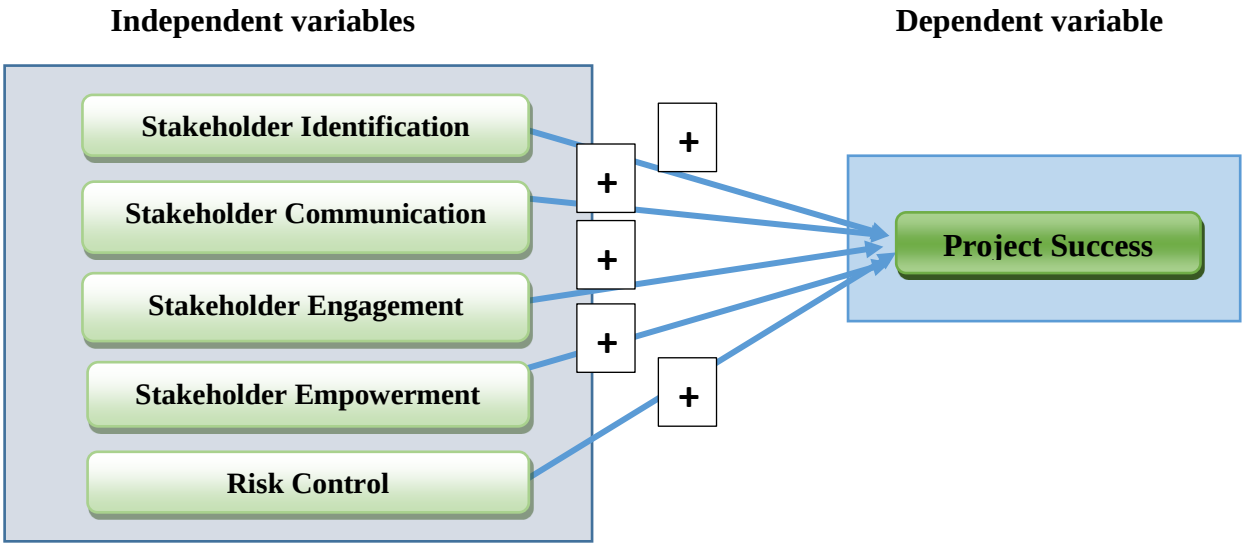

Figure 3: Conceptual framework

2.5 Research Hypothesis

Based on the discussions in the previous sections the following hypotheses are formulated;

- H1: Stakeholder identification has significant and positive effect on project success,
- H2: Stakeholder communication has significant and positive effect on project success,
- H3: Stakeholder engagement has significant and positive effect on project success,
- H4: Stakeholder empowerment has significant and positive effect on project success,
- H5: Risk control has significant and positive effect on project success.

CHAPTER THREE

RESEARCH METHODOLOGY

This chapter involves the design and approach of the study performed to study the relation between variables. Then the population and sample size used for the data analysis; data source and collection method; model specification; analysis of data; reliability check; validity check; and ethical consideration of the project.

3.1 Research Setting

This study assessed the effect of stakeholder management on project success. The data for this research is collected from worker at a road project named Bilalo-Kersa-Arsi-Negele road Project. It involves professional workers of the project who are currently working at the site; mainly the contractor and the consultant sides.

3.2 Research design

Study design is the organization of the conditions for collecting and analyzing data with the aim of enhancing the relevance of research objectives (Kothari, 2004). Research designs can be classified into three main categories. Those are: - Explanatory research design, descriptive research design and exploratory research design. Explanatory research identifies causal relationships between factors relevant to the research question. Descriptive research is used to provide an accurate and valid representation of the factors or variables that are relevant to the research question.

The Researcher primarily used explanatory research, because the main goal is to identify the impact of stakeholder management on project success. The researcher tried to find the relationship between the two variables; and the impact of the independent variable on the dependent one. Additionally, it used descriptive research to provide descriptions.

3.3 Research approach

The researcher used a quantitative research approaches. A qualitative research approach is a way to explore and create understanding of problems, while quantitative approach is a way of testing

theories and hypothesizes by measuring the relationship between the variables (Creswell, 2014). The researcher used quantitative approach to test the relationship between the two variables: stakeholder management and project success. It evaluated and analyzed the relationship between the variables and the impact of the independent variable on the dependent variable. It used close-end five scale Likert questionnaire as mechanism of data collection. It used descriptive analysis and inferential statistics for the analysis.

3.4 Population of study

Population of a study is the whole unit which is focus of the study. In this research the population was all the workers at the Arsi- kerssa road project. The population included all employees of the contractor and consultant who were working on the project. The population was equal to three hundred thirty three.

3.5 Sampling techniques

A sample design is a plan for obtaining a sample from the population. It refers to the technique or the procedure the researcher uses to select sampling units from which the study is done.

The researcher used stratified random sampling to collect data. It is a probability sampling procedure in which simple random sub-samples are drawn from different strata that are more or less equal on some characteristics. The population was divided in to two sub groups of professionals that are 105 workers of the project, and non-professionals that are 228. Then the data for this study was collected only from the professional groups, because the researcher believes that the professional workers give more reliable, and useful information for the study. All professional workers, 105 workers are taken for the analysis.

3.6 Data source and collection method

There are two data sources. These are primary and secondary data. The primary data is an original source of data because it is being gathered for the first time. It is gathered through observation or direct interaction with respondents; examples include questionnaires, interviews, and observations. Secondary data, on the other hand, is information that has already been gathered by another party. It is gathered through publications such as books, magazines, reports, and historical documents.

The researcher used both sources of data in order to achieve the objectives of this research. In this project the primary data was collected through structured questionnaire responses of respondents. The questionnaire was prepared using Google form and the produced link was sent to all respondents using telegram. This helped to collect data automatically. The response was collected on the researcher's Google account automatically when respondents submitted their answers on their phone. This helped the researcher to collect data easily and in short period of time. This also made it easier for the respondents, as they use their phone to reply to the questionnaire. Secondary data was collected from books, articles, journals, and contractual documents.

3.7 Validity and reliability

Validity, the most important criterion, describes how closely an instrument measures what it is intended to measure. To put it another way, the degree to which differences detected by a measuring tool accurately represent differences among the subjects of the test is known as validity (Kothari, 2004). The study used content validity. To enhance content validity, the research used a tested questionnaire. It adapted the questionnaire and variables from (Waries et al., 2022) and (Khan et al., 2021). Therefore, the variables and the questionnaire are well tested.

Reliability testing is a crucial additional test for accurate measurement. If a measuring device yields repeatable results, it is reliable (Kothari, 2004). Reliability measure of the variables for the respondents was measured by Cronbach's alpha coefficient. If the alpha values for each variable are above 0.7 it indicates that the designed instrument is acceptable. In this study all variables are tested for reliability and the result is above 0.7, which insures that the measuring instrument is reliable.

3.8 Analysis of data

Data can be analyzed in several ways. The data collected from the respondents on the researcher's Google account was exported in Microsoft excel file format for analysis. For analyzing the primary quantitative data collected from the questionnaire the researcher generated out puts using statistical package for social students (SPSS) computer software.

Descriptive analysis was used to analysis responses of respondents on each variable. Correlation was used to analyze the relationship among each variable. And Regression was used to analyze

the impact of the independent variable on the dependent variable. Furthermore, regression was used to determine statistical relationship between variables.

3.9 Model specification

3.9.1 Variables

Based on review of literature; - concept and definition, theoretical framework, empirical framework, and conceptual framework of the study the dependent and independent variables of the study are identified as follows:

Dependent variable: Dependent variable of the study is project success.

Independent variables: Independent variables of the study are four. Those are: -

- Identification of stakeholders
- stakeholder communication
- engagement of stakeholders
- empowerment of stakeholders
- risk control

3.9.2 Model of the study

In this study to test the relationship among variables regression will be used (Kothari, 2004). The independent variables are more than two therefore, multiple regression equation will be used.
The equation uses form of $\boldsymbol{Y = \alpha + b1X1 + b2X2\ldots. + bn\ Xn + e}$ (Kothari, 2004).
For this study the equation will be

$$P.S = \alpha + \beta 1S.I + \beta 2S.C + \beta 3E.S + \beta 4Em.S + \beta 5R.C + \varepsilon$$

Where, P.S - stands for project success
S.I - stands for stakeholder identification
S.C - stands for stakeholder communication
E.S - stands for stakeholder engagement
Em.S - stands for empowerment of stakeholder
R.C - stands for risk control
ε - Stands for error

3.10 Ethical consideration

The researcher mentions all secondary sources of data and the resources are cited correctly. In the questionnaire, the cover letter explains the purpose of the questionnaire. As well as, all participants will be informed that participation is voluntary. The information collected will be kept confidential. People's names will not be included in the confidentiality. The respondent's reply will not be used for any other purpose other than this research.

Additionally**,** it has been evident that the researcher also has ethical obligations to the scientific community on how data is analyzed and reported in the study. Accordingly, genuine information has been forwarded not to mislead the scientific community.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

This chapter includes the demographical distribution of the respondents, descriptive analysis, correlation of the variables, and regression analysis. The details are presented below: -

4.1 Response Rate

The researcher distributed 105 questionnaires to workers on the project. From the 105 respondents only 94 of them fully replied to the questionnaire appropriately, 11 responses were not used in the analysis. Therefore a total 94 responses are used for the analysis. This is equal to 90% response rate, so it is acceptable to proceed to the analysis.

4.2 Reliability

Reliability is measure of whether scores resulting from past use of the instrument demonstrate reliability. It tests the internal consistency of responses. And also it tests if the items are stable over time. If the alpha value of each variable are above 0.7 it indicates that the design is acceptable. The cronbach's Alpha of all variables is listed in the following table

Variable	**cronbach's Alpha**	**Number of item**	**Remark**
Stakeholder identification	.874	6	Reliable
Stakeholder communication	.806	6	Reliable
Stakeholder Engagement	.847	6	Reliable
Stakeholder Empowerment	.700	5	Reliable
Risk Control	.752	4	Reliable
Project success	.887	11	Reliable

Table 1: Cronbach's alpha values of variables

From the above table the researcher ensures that the measurement is acceptable, since all alpha values of the 6 variables are above 0.7.

4.3 Demographic distribution of respondents

The demographic distribution of the respondents is described using descriptive analysis by frequency and percentile as follows: -

		Frequency	Percent
Gender	Female	19	20.2
	Male	75	79.8
Age	below25	24	25.5
	25-30	28	29.8
	30-40	26	27.7
	above 40	16	17.0
Job placement	Contractor	73	77.7
	Consultant	21	22.3
Work Experience	below 5 years	43	45.7
	5-10	32	34.0
	above 10 years	19	20.2

From the total 94 respondents 19 respondents are female and the remaining 75 of the respondents are male. Calculating this in percentile, 20.2 percent of the respondents are female and the remaining 79.8 of the respondents are male. The number of female workers is very low. This indicates that the gender distribution is very low in this project.

From the total 94 respondents, 24 respondents are below 25 years, 28 are between 25 and 30, 26 are between 30 and 40, and the remaining 16 are above 40 years old. This shows there is agood age distribution among workers of the project.

From the total 94 respondents, 43 of them have an experience below 5 years, 32 of the respondents have an experience between 5 and 10 years, and the rest 19 have an experience above 10 years. The distribution of work experience is good.

From the 94 respondents 21 of them are working in the consultant side and the remaining 73 of them are working in the contractor side. This shows most of the respondents are from the contractor side.

4.4 Result of Descriptive analysis

In order to study the existence and importance of every sub variable of the main variables according to the response; descriptive analysis is used. Means and standard deviations of independent variables (stakeholders identification, stakeholders communication, stakeholder engagement, empowerment of stakeholders, and risk control) are analyzed using descriptive analysis. To make the interpretation easier the following scales were assigned for the results of mean (Al-Sayaad et al., 2006, as cited by Alemu, 2021).

Mean score range

Mean range	**Response Option**
1 to 1.80	Strongly disagree
1.8 to 2.6	Disagree
2.6 to 3.4	Neutral
3.4 to 4.20	Agree
4.2 to 5.00	Strongly Agree

Table 2: Scales assigned for mean values

Source: (Al-Sayaad et al., 2006, as cited by Alemu, 2021)

Additionally, the standard deviation measures the dispersion of given data indicates how close to the average the data is clustered. The smaller the standard deviation the better consistent response or reaction is. Standard deviation that is less than plus or minus 2 is considered to represent measurements that are closer to the mean or average value (J.Rumsey, 2021).

Responses of the respondents for the questions of the variables are analyzed using descriptive analysis. The result is prepared in tables as follows: -

4.4.1 Descriptive analysis of stakeholders identification

	Mean	Std. Deviation	Minimum	Maximum
Stakeholders were identified at the beginning of the project.	3.15	1.126	1	5
Stakeholders were analyzed at the beginning of the project.	3.29	1.043	1	5
Stakeholder's perceptions about the projects were learned at the beginning of the project.	3.19	.859	2	5
Stakeholder's role is learned at the beginning of the project	3.19	.931	1	5
Stakeholder's strategies were learned at the beginning of the project.	3.03	1.140	1	5
Stakeholders register were created at the beginning of the project	3.49	.913	1	5
Aggregated mean	**3.22**	**1.00**		

Table 3: Descriptive analysis of stakeholder identification

The mean value of the table shows level of agreement of the respondents towards the practices of stakeholders identification. From the mean value of the responses it can be seen that the respondents mostly are neutral about the 6 activities of stakeholder identification. The table summarizes that the mean of the responses, which is equal to 3.22, falls to the third category which ranges from 2.6 to 3.4. Additionally, the standard deviation of this variable is equal to 1, which is lower than 2. Standard deviation that is less than plus or minus 2 is considered to represent measurements that are closer to the mean or average value (J.Rumsey, 2021).

This result implies that even though there is a good practice of this variable in the project, it is far from the maximum value which is five; therefore there is a room for improvement.

4.4.2 Descriptive analysis of stakeholder communication

	Mean	**Std. Deviation**	**Minimum**	**Maximum**
Stakeholders communication path was defined at the beginning of the project.	3.15	1.295	1	5
Information and accurate data were gathered throughout the lifecycle of the project.	3.70	.960	2	5
Stakeholders data information was stored throughout the lifecycle of the project.	3.72	1.092	1	5
Stakeholders data information was distributed to the respective stakeholders throughout the lifecycle of the project.	3.79	1.135	1	5
Stakeholders were enabled to exchange information with project management team throughout the lifecycle of the project.	4.00	1.047	2	5
Stakeholders were enabled to share information with each other throughout the lifecycle of the project.	3.54	1.133	1	5
Aggregated mean	**3.65**	**1.11**		

Table 4: Descriptive analysis of stakeholder communication

The mean value of the table shows level of agreement of the respondents towards the practices of stakeholders communication. From the mean value of the responses it can be seen that the respondents mostly agree about the 6 practices of stakeholder communication. The table summarizes that the mean of the responses, which is equal to 3.65, falls to the fourth category which ranges from 3.4 to 4.20. Additionally, the standard deviation of this variable is equal to 1.11, which is lower than 2. Standard deviation that is less than plus or minus 2 is considered to represent measurements that are closer to the mean or average value (J.Rumsey, 2021).

The result implies that there is a good stakeholder communication in the project. The practices of stakeholder communication are being used at a good level, even though some improvements are required. In this project the communication of the three stakeholders is at a good level, this needs to be improved by involving other stakeholders too.

4.4.3 Descriptive analysis of stakeholder engagement

	Mean	Std. Deviation	Minimum	Maximum
Stakeholders were enabled to outline the project scope definition at the beginning of the project.	3.12	.841	1	4
Stakeholder's expectations were learned at the beginning of the project.	2.96	.994	1	5
Stakeholders were educated about project aims and objectives at the beginning of the project.	3.20	.811	2	5
Stakeholders were enabled to define project success factors and success criteria at the beginning of the project.	3.43	.945	1	5
Stakeholders potential concerns were addressed throughout the lifecycle of the project.	3.57	.967	2	5
Stakeholders constant support were earned throughout the lifecycle of the project.	3.72	1.101	2	5
Aggregated mean	**3.33**	**0.94**		

Table 5: Descriptive analysis of stakeholder engagement

The mean value of the table shows level of agreement of the respondents towards the practices of stakeholders engagement. From the mean value of the responses it can be seen that the respondents mostly are neutral about the 6 practices of stakeholder engagement. The table summarizes that the mean of the responses, which is equal to 3.33, that falls to the third category which ranges from 2.6 up to 3.4. Additionally, the standard deviation of this variable is equal to 0.94, which is lower than 2. Standard deviation that is less than plus or minus 2 is considered to represent measurements that are closer to the mean or average value (J.Rumsey, 2021).

This result implies that even though there is a good practice of this variable in the project, it is far from the maximum value which is five, therefore there is a room for improvement.

4.4.4 Descriptive analysis of stakeholder empowerment

	Mean	Std. Deviation	Minimum	Maximum
Stakeholders were kept inspired and motivated throughout the lifecycle of the project	3.63	1.026	1	5
Stakeholders were committed to the project	3.76	1.084	1	5
Stakeholders were enabled to participate in the decision-making process throughout the lifecycle of the project.	3.86	.850	2	5
Stakeholders were enabled to monitor project progress throughout the lifecycle of the project.	2.87	1.070	1	5
Stakeholders were enabled to identify and negotiate their objectives	2.83	1.033	1	5
Aggregated mean	**3.39**	**1.01**		

Table 6: Descriptive analysis of stakeholder empowerment

The mean value of the table shows level of agreement of the respondents towards the practices of empowerment of stakeholders. From the mean value of the responses it can be seen that the respondents mostly are neutral about the 5 practices of empowerment of stakeholders.

The table summarizes that the mean of the responses to be 3.39, that falls to the third category which ranges from 2.6 to 3.4. Additionally, the standard deviation of this variable is equal to 1.01, which is lower than 2. Standard deviation that is less than plus or minus 2 is considered to represent measurements that are closer to the mean or average value (J.Rumsey, 2021).

This result implies that even though there is a good practice of this variable in the project, it is far from the maximum value which is five, therefore there is a room for improvement.

4.4.5 Descriptive analysis of Risk control

	Mean	Std. Deviation	Minimum	Maximum
Risk (threat or opportunity) probability assessment is done in the project	3.64	1.004	1	5
Risk (threat or opportunity) impact assessment is done in the project	3.37	1.126	1	5
Risk (threat or opportunity) is communicated with all stakeholders.	3.33	1.031	1	5
Risk response is being planned and implemented	3.41	1.046	1	5
Aggregated mean	**3.44**	**1.05**		

Table 7: Descriptive analysis of risk control

The mean value of the table shows level of agreement of the respondents towards the practices of risk control in the project. From the mean value of the responses it can be seen that the respondents mostly agree about the 4 practices of risk control. The table summarizes that the mean of the responses to be 3.44, that falls to the third category which ranges from 3.4 to 4.20. Additionally, the standard deviation of this variable is equal to 1.05, which is lower than 2. Standard deviation that is less than plus or minus 2 is considered to represent measurements that are closer to the mean or average value (J.Rumsey, 2021).

It can be seen that there is a good risk control practice in the project. The result shows that practices of risk control are being performed in the project, but it is not as higher as expected therefore, there is a need for some improvement. The project should be prepared for all risks that arise from different causes.

4.4.6 Descriptive analysis of project success

	Mean	Std. Deviation	Minimum	Maximum
The project is being completed on time	3.20	.887	1	5
The project is being completed according to the budget allocated	2.62	.893	1	4
The outcomes of the project are likely to be sustained	4.05	.821	1	5
The outcomes of the project will directly benefit the intended end users, through increasing efficiency	4.39	.793	2	5
The project will do best job solving problems of the community	4.05	.943	1	5
I am satisfied with the progress by which the project is being implemented	3.39	1.128	1	5
Project team members are satisfied with the process by which the project is being implemented	3.21	1.015	1	5
The project have no or minimal startup problems because it is accepted by it is end users	3.18	1.016	1	5
The project will led to directly improved performance for the target beneficiaries	3.98	1.016	2	5
The project will make a positive impact on the target beneficiaries	3.95	1.061	2	5
Project specifications will be met by time of handover	3.18	.927	1	5
Aggregated mean	**3.56**	**0.95**		

Table 8: Descriptive analysis of project success

The mean value of the table shows level of agreement of the respondents towards the indicators of project success in the project. From the mean value of the responses it can be seen that the respondents mostly agree about the 11 practices of project success. The table summarizes that the mean of the responses to be 3.56, that falls to the third category which ranges from 3.4 to 4.20. Additionally, the standard deviation of this variable is equal to 0.95, which is lower than 2. Standard deviation that is less than plus or minus 2 is considered to represent measurements that are closer to the mean or average value (J.Rumsey, 2021).

It can be seen the project is being completed on a good level of success, but there is some improvements required. The result implies that the project teams are satisfied by the progress of the project. The responses show that the project will improve the life of the beneficiaries and the target population. Additionally it will benefit the intended users directly and it will solve problems of the beneficiaries.

4.5 Correlation result and analysis

If there is a relationship between the variables, it can be found using the correlation analysis. It makes it possible to ascertain the relationship's direction and strength/magnitude. The relationship's direction might be either positive, negative, or zero. The strength of a linear relationship between the two variables is measured by a statistic called the correlation coefficient which is in range from -1 to +1. (±1) correlation coefficients implies a perfect relationship; coefficients ranging from (±0.9 to ±0.7) implies a strong correlation; coefficients ranging from (± 0.6 to ± 0.4) have moderate correlation; coefficients ranging from (± 0.3 to ±0.1) have weak correlation; and zero coefficient implies no correlation (Dancey & Reidy, 2007, qtd. Groom, 2021).

P-values below 0.05 are called significant, p-values below 0.01 are called highly significant, and p-values below 0.001 are called very highly significant. They are often marked *, **, and *** respectively in tables of results.

	stakeholder identification	stakeholder communication	stakeholder engagement	stakeholder empowerment	risk control	project success
stakeholder identification	1	.648**	.732**	.638**	.375**	.621**
stakeholder communication	.648**	1	.756**	.729**	.300**	.828**
stakeholder engagement	.732**	.756**	1	.711**	.488**	.696**
stakeholder empowerment	.638**	.729**	.711**	1	.194	.551**
risk control	.375**	.300**	.488**	.194	1	.646**
project success	.621**	.828**	.696**	.551**	.646**	1

Table 9: result of correlation

The result of the correlation analysis shows that the relationship between stakeholder identification and project success is significant at 99% (p=0.000), and positive (coefficient =0.62). This result implies that the two variables have a relationship.

The result of the correlation analysis shows that the relationship between stakeholder communication and project success is significant at 99% (p=0.000), and positive (coefficient =0.828,). This result implies that the two variables have a relationship.

The result of the correlation analysis shows that the relationship between stakeholder engagement and project success is significant at 99% (p=0.000), and positive (coefficient =0.696). This result implies that the two variables have a relationship.

The result of the correlation analysis shows that the relationship between stakeholder empowerment and project success is significant at 99% (p=0.000), and positive (coefficient =0.551). This result implies that the two variables have a relationship.

The result of the correlation analysis shows that the relationship between risk control and project success is significant at 99% (p=0.000), and positive (coefficient =0.646,). This result implies that the two variables have a relationship.

4.6 Multiple liner regression Analysis

In the study data collected from scaled type questionnaire is entered to software to analyze the regression among the independent variables (stakeholder identification, stakeholder engagement, stakeholder empowerment, risk control) and the dependent variable, project success. Multiple linear regression refers to an analysis concerned with the study of the dependence of one variable, the dependent variable on more other variables, the independent variables.

4.6.1 Multi collinearity

The explanatory variables are assumed not to be correlated with one another when employing the regression method (Brooks, 2008 qtd. Alemu, 2021). The bigger the value of Variance Inflation Factor (VIF), the more problematic or collinear the variable X is. A general guideline is that a variable is very collinear if its VIF is greater than 10.VIF of a variable exceeds 10, that variable is said be highly collinear (Gujarati, 2004).

Variance Inflation Factor (VIF) for the independent variables has been computed using SPSS. The result presented in below reveals that the VIF for all the variables is below 10, this indicates that there is no multi collinearity among the independent variables.

Coefficients[a]

Model	Collinearity Statistics	
	Tolerance	VIF
stakeholder identification	.425	2.353
stakeholder communication	.349	2.868
stakeholder engagement	.260	3.851
stakeholder empowerment	.375	2.669
risk control	.708	1.412

a. Dependent Variable: project success

Table 10: Test of multi collinearity

4.6.2 Normality Test

Many statistical tests and procedures make the assumption that the data is distributed (bell-shaped). It is required to run a normality test on the data before applying statistical methods that presuppose normality. If there is strong evidence to the contrary, one should only reject the hypothesis that the study data has a normal distribution. While it may be tempting to determine the data's normality by producing a histogram of the data, as the picture below illustrates, the data's histogram is normal, therefore it is presumed that multiple linear regression analysis is doable. The dependent variable's normality is shown by the histogram below.

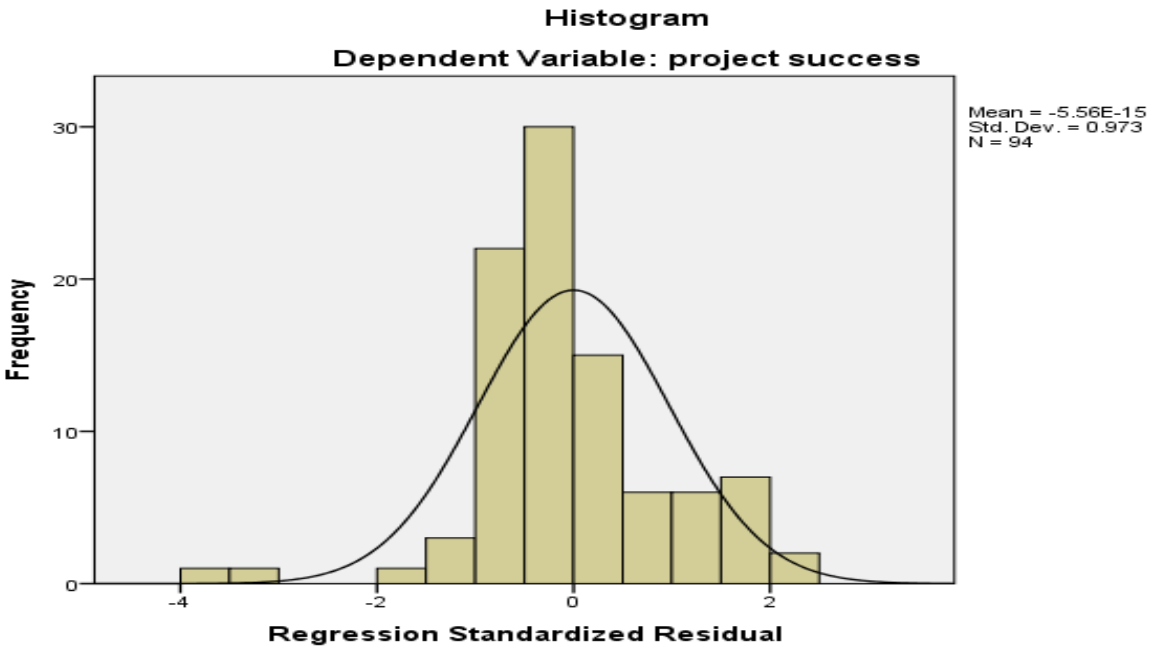

Figure 4: Plot of Histogram

4.6.3 Assumption test of Independence of Residuals

The independence of the residuals can be measured by Durbin-Watson statistics. The value of the Durbin-Watson statistic ranges from 0 to 4. As a general rule, the residuals are independent (not correlated form one observation to the other one) if the Durbin-Watson statistic is approximately 2, and an acceptable range is 1.25 - 2.50 (Muluadam, 2015 cited by Alemu, 2021). For this study the output value of Durbin-Watson is 1.32, indicating that there is no correlation among the residuals.

					Durbin-Watson
R Square Change	F Change	df1	df2	Sig. F Change	
.869	116.298	5	88	.000	1.313

Table 11: Test of independence of residuals

4.6.4 Model Fit Test

The multiple regression model's hypothesis test establishes the cause-and-effect link between the dependent and independent variables. R2 and the F test are used to determine the model's ability to fit the data. The results are displayed in the tables below:

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.932[a]	.869	.861	.247

Table 12: Model fit test

R2 for the model is 86.9 % while the adjusted R2, which takes into account the loss of degrees of freedom associated with adding extra variables, is 86.1%. Adjusted R2 interpreted implies 86.1% variability of project success can be explained by the independent variables (stakeholder identification, stakeholder communication, stakeholder engagement, empowerment of stakeholder, and risk control) of the study. This implies that stakeholders are the main players for the success of a project. 24.6 % of variability of project success is explained by other factors than the independent variables.

4.6.5 Cross validation

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	35.395	5	7.079	116.298	.000[b]
	Residual	5.356	88	.061		
	Total	40.751	93			

Table 13: Result of ANOVA

Additionally, Analysis of variance (ANOVA) shows the joint significance of all independent variables in explaining the dependent variable. P-value less than 0.05 implies that the null hypothesis of all factors taken together is approximated by zero is rejected. In this test the result shows that F for the model equals 116.298, with p-value (sig value) of 0.000. Hence, all independent variables (stakeholder identification, stakeholder communication, stakeholder engagement, empowerment of stakeholder, and risk control) taken together can explain the dependent variable (project success). Therefore, the regression model is a good fit of the data.

4.7 Discussion of coefficient of Regression

The regression result presented in table below showing the effect of stakeholder management on project success is analyzed in context of literatures. Additionally here Coefficient estimates (β) and p-values (sig. values) are observed to determine direction and significance of variables.

Model	Unstandardized Coefficients		Standardized Coefficients	Sig.
	B	Std. Error	Beta	
(Constant)	.541	.158		.001
stakeholder identification	.074	.158	.080	.081
stakeholder communication	.571	.055	.791	.000
stakeholder engagement	.135	.047	.132	.008
stakeholder empowerment	.067	.078	.072	.025
risk control	.430	.059	.457	.000

Table 14: Result of coefficients and significance

The equation uses form of $Y = \alpha + b1X1 + b2X2\ldots. + bn\ Xn + e$ (Kothari, 2004).

For this study the equation will be: -

$$\mathbf{P.S = \alpha + \beta 1\ S.I + \beta 2\ S.C + \beta 3\ E.S + \beta 4\ Em.S + \beta 5\ R.C + \varepsilon}$$

Therefore based on this analysis,

$$\mathbf{P.S = 0.54 + 0.791\ S.C + 0.132\ E.S + 0.072\ Em.S + 0.457\ R.C + \varepsilon}$$

Where, P.S - stands for project success

S.I - stands for stakeholder identification

S.C - stands for stakeholder communication

E.S - stands for engagement of stakeholders

Em.S - stands for stakeholder empowerment

R.C - stands for risk control

ε - Stands for error

4.8 Result of the Regression analysis

The result of regression shows that the coefficient parameter (β) for stakeholder identification is 0.08 with p-value of 0.081. The p-value shows significance of (0.081) > 0.05; which implies stakeholder identification has no significant effect on project success. Therefore, the hypothesis that stated effect of stakeholder identification on project success is significant and positive is not supported.

The result contradicts with the literature therefore; this study suggested further investigation on the relationship between the two variables.

The result shows that stakeholder communication has a positive ($\beta = 0.791$) and significant ($P = 0.000$) effect on project success. Therefore the proposed hypothesis that states stakeholder communication has a significant and positive effect on project success is supported.

The finding is in line with literature of studies of (Khan, 2021) and (Waris, 2022); who found out that stakeholder communication has a significant and positive impact on project success. Implying that a change in stakeholder communication; changes project success positively. Furthermore, improving the stakeholder communication improves the project success of a project.

The result shows that stakeholder engagement has a positive ($\beta = 0.132$) and significant ($P = 0.008$) effect on project success. Therefore the proposed hypothesis that states stakeholder engagement has a significant and positive effect on project success is supported.

The finding is in line with literature of studies of (Khan, 2021) and (Waris, 2022); who found out that stakeholder engagement has a significant and positive impact on project success. Implying that, a change in stakeholder engagement; changes project success positively. Furthermore, improving the stakeholder engagement improves the project success of a project.

The result shows that stakeholder empowerment has a positive ($\beta = 0.072$) and significant ($P = 0.025$) effect on project success. Therefore the proposed hypothesis that states stakeholder empowerment has a significant and positive effect on project success is supported.

The finding is in line with literature of studies of (Khan, 2021) and (Waris, 2022); who found out that stakeholder empowerment has a significant and positive impact on project success. Implying that a change in stakeholder empowerment; changes project success positively. Furthermore, improving the stakeholder empowerment improves the project success of a project.

The result shows that risk control has a positive ($\beta = 0.457$) and significant ($P = 0.000$) effect on project success. Therefore the proposed hypothesis that states risk control have a significant and positive effect on project success is supported.

The finding is in line with literature of studies of (Khan, 2021) and (Waris, 2022); who found out that risk control has a significant and positive impact on project success. Implying that a change in risk control; changes project success positively. Furthermore, improving the risk control improves the project success of a project.

4.9 Summary of Hypothesis

From the results of the regression the hypothesis developed in the second chapter are tested. The results of the regression analysis and hypothesis test can be is summarized in the following table:

Hypothesis	Description	Result	Decision
H1	Stakeholder identification has a positive and significant effect on project success.	Not Significant (P= 0.081)	H1 Not accepted
H2	Stakeholder communication has a positive and significant effect on project success.	Significant (P= 0.000) Positive (Cof. = 0.791)	H2 Accepted
H3	Stakeholder engagement has a positive and significant effect on project success.	Significant (P= 0.008) Positive (Cof. = 0.132)	H3 Accepted
H4	Stakeholder empowerment has a positive and significant effect on project success.	Significant (P= 0.025) Positive (Cof. = 0 .072)	H4 Accepted
H5	Risk control has a positive and significant effect on project success.	Significant (P= 0.000) Positive (Cof. = 0.457)	H5 Accepted

Table 15: Summary of hypothesis

CHAPTER FIVE

SUMMARY OF THE RESULTS, CONCLUSION AND RECOMMENDATION

5.1 Conclusion

- The mean values of the three variables (Stakeholder identification, stakeholder engagement, and stakeholder empowerment) are all in the neutral category. Implying the three variables are being performed in the project at a good but not satisfying level.
- The mean values of the two variables (Stakeholder communication, and risk control) are all in the agree category. Showing most respondents agree that these variables are being performed in the project at better level.
- The effect of stakeholder identification on project success is not significant. Therefore, the proposed hypothesis is not accepted.
- The effect of stakeholder communication on project success is significant and positive. Therefore, the proposed hypothesis is accepted.
- The effect of stakeholder engagement on project success is significant and positive. Therefore, the proposed hypothesis is accepted.
- The effect of stakeholder empowerment on project success is significant and positive. Therefore, the proposed hypothesis is accepted.
- The effect of stakeholder risk control on project success is significant and positive. Therefore, the proposed hypothesis is accepted.

5.2 Recommendation and suggestion for further study

Recommendations and suggestion for further studies were made based on major findings of the study. Those are listed as follows:

5.2.1 Recommendation

- The findings of the regression show that the four variables (stakeholder communication, stakeholder engagement, stakeholder empowerment, and risk control) have a significant and positive effect on project success. This implies that improving this variables improves the success of a project. Therefore, project managers should give focus to these practices.
- The mean values from the descriptive analysis shows that, even though the results are above the mean, they are not close enough to the maximum value. Implying that project managers in the project should improve the practices of the variables.
- Furthermore, Stakeholder identification, stakeholder engagement, and stakeholder empowerment should be given more focus, since their mean values are all in the neutral category.
- All construction projects should perform stakeholder management practices effectively, for the success of their project. As the result show that stakeholder management has a positive and significant effect on project success, the project success can be improved by improving practices of stakeholder management in projects.

5.2.2 Suggestion for further study

- The result from this study shows that the variable stakeholders identification have no significant impact on project success. This contradicts with the literature of the study that states that the variable stakeholder identification have a significant effect on project success. Therefore this study suggests further investigation of the relationship between the two variables.

- Data for this study is collected from a single project under ERA. The study would be sound if other industries were included in the study. Additionally due to time constraint the study focused mainly on the two stakeholders of the project (the contractor and the consultant). Therefore this study suggested further study involving other industries; and also other stakeholders to have sound generalization about the relationship between stakeholder identification and project success.

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Appendices:

Addis Ababa University

School Of Commerce

Research Questionnaire

Dear participants,

The researcher Seble Tefera is a student of Masters of Arts in department of Project management at Addis Ababa University School of commerce. You are invited to participate for a research study entitled “The Effect of Project Management on Project Success: The Case of Bilalo-Kersa-Arsi Negele road project”.

Please be assure that your answers will be treated with confidentiality. Your honest answers are needed for this research. Information obtained will be used only for statistical analysis and academic use only. Additionally after you submit the answers your identity will not be revealed, since the google account will not show your telegram or google account for the researcher.

I would be gratefully if you could take few minutes of your time, and fill this questionnaire. Your participation is very much appreciated.

If you have any questions,

E-mail: Sebit7@gmail.com

Tel: +251923781304

Thank you

Please mark in the boxes to show your answers.

Make sure that you only choose one answer from the alternatives.

Section1: Demographical information

1, Gender

Male ☐

Female ☐

2, Age

Below 25 ☐

25 - 30 ☐

30 - 40 ☐

Above 40 ☐

3, Work experience

Below 5 years ☐

5– 10 years ☐

Above 10 years ☐

4, Job placement

Contractor ☐

Consultant ☐

Section 2: stakeholder identification

Stakeholder identification		Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
1	Stakeholders were identified at the beginning of the project.					
2	Stakeholders were analyzed at the beginning of the project.					
3	Stakeholders perceptions about the projects were learned at the beginning of the project.					
4	Stakeholders role were learned at the beginning of the project.					
5	Stakeholders influential strategies were learned at the beginning of the project.					
6	Stakeholders register were created at the beginning of the project					

Section 3: stakeholder communication

Stakeholder communication		Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
1	Stakeholders communication path was defined at the beginning of the project.					
2	Information and accurate data were gathered throughout the lifecycle of the project.					
3	Stakeholders data information was stored throughout the lifecycle of the project.					
4	Stakeholders data information was disseminated to the respective stakeholders throughout the lifecycle of the project.					
5	Stakeholders were enabled to exchange information with project management team throughout the lifecycle of the project.					
6	Stakeholders were enabled to share and exchange information with each other throughout the lifecycle of the project.					

Section 4: stakeholder engagement

Stakeholder engagement		Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
1	Stakeholders were enabled to outline the project scope definition at the beginning of the project.					
2	Stakeholder's expectations were learned at the beginning of the project.					
3	Stakeholders were educated about project aims and objectives at the beginning of the project.					
4	Stakeholders were enabled to define project success factors and success criteria at the beginning of the project.					
5	Stakeholders' potential concerns were addressed throughout the lifecycle of the project.					
6.	Stakeholders constant support were earned throughout the lifecycle of the project.					

Section 5: stakeholder empowerment

Stakeholder empowerment		Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
1	Stakeholders were kept inspired and motivated throughout the lifecycle of the project					
2	Stakeholders were committed to the project					
3	Stakeholders were enabled to participate in the decision-making process throughout the lifecycle of the project.					
4	Stakeholders were enabled to monitor project progress throughout the lifecycle of the project.					
5	Stakeholders were enabled to identify and negotiate their objectives					

Section 5: Risk control

Risk control		Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
1	Risk (threat or opportunity) probability assessment is done in the project					
2	Risk (threat or opportunity) impact assessment is done in the project					
3	Risk (threat or opportunity) is communicated with all stakeholders.					
4	Risk response is being planned and implemented					

Section 6: Project Success

Project Success		Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
1	The project is being completed on time					
2	The project is being completed according to the budget allocated					
3	The outcomes of the project are likely to be sustained					
4	The outcomes of the project will directly benefit the intended end users, through increasing efficiency					
5	The project will do best job solving problems of the community					
6	I am satisfied with the progress by which the project is being implemented					
7	Project team members are satisfied with the process by which the project is being implemented					
8	The project have no or minimal startup problems because it is accepted by it is end users					
9	The project will led to directly improved performance for the target beneficiaries					
10	The project will make a positive impact on the target beneficiaries					
11	Project specifications will be met by time of handover					