

ADDIS ABABA UNIVERSITY



COLLEGE OF BUSINESS AND ECONOMICS

SCHOOL OF COMMERCE

**The Role of Stakeholder Engagement and Their Impact
on Road Construction Projects: The case of Addis Ababa
City Roads Authority**

By: Dagnachew Mane

Advisor: Worku M. (PhD)

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The Role of Stakeholder Engagement and Their Impact on
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Roads Authority

By: Dagnachew Mane

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Advisor: Worku M. (PhD)

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APPROVED BY BOARD OF EXAMINERS

Members of the Board of Examiners agree that Dagnachew Mane Nebso research project "The role of stakeholder engagement and their impact on road construction projects in the case of AACRA" meets the requirements for the Master of Arts in Project Management degree and is acceptable in terms of the University's standards and regulations.

Board of Examiners

External Examiner

Internal Examiner

Advisor

STATEMENT OF DECLARATION

With the guidance and support of the research project advisor, I hereby declare that this study, titled "The role of stakeholder engagement and their impact on road construction projects in the case of AACRA" is my original work and has not been presented for degree or other purposes in any university or places. I further confirm that all the sources of materials used for this thesis are properly acknowledged.

Declared by: Dagnachew Mane Nebso

Signature _____

Letter of certification

This is to certify that Dagnachew Mane has carried out this project work entitled “The role of stakeholder engagement and their impact on road construction projects in the case of AACRA” under my supervision. This work is original in nature and that is not submitted to any institution.

Worku M. (PhD),
Project work Advisor

Signature _____

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ABSTRACT

This project work was conducted on Addis Ababa city roads Authority with the aim of assessing the role of stakeholders' engagement and their impact on road construction projects in the case of AACRA. For the purpose of the study some variables were considered and analyzed which includes stakeholder engagement practice in planning, design and construction. Their engagement relevance for the economy, environment and the society were identified. The study design is comprised of descriptive and explanatory research participating about 90 personals. Both primary and secondary data were collected by using questionnaire and review of previous documents. The primary data was collect through a well-structured questionnaire which was distributed to owner (AACRA), contractor and consultant. The collected data was statistically analyzed by SPSS version 26. The results demonstrate a favorable link between the factors utilized to evaluate the functions of stakeholder engagement. Furthermore regression analysis was conducted and effects of stakeholder engagement on success of the project were determined. To understand their function in road construction projects, literature evaluations on stakeholder participation were conducted. The findings indicate majority of the variables presented for the respondents were significant and generally agreed upon by the participants. The stakeholder engagement in planning, design and construction phase was obtained satisfactory. The results of regression analysis indicate the factors have a positive impact on the success of road project. Generally, the stakeholder collaboration currently in place is encouraging but it needs further improvement and this can be enhanced through setting up different mechanisms as recommended in the paper. This demonstrates that the stakeholders' engagement in road construction is now proceeding well and is well received. The author suggests establishing a well-structured frame work for engaging stakeholders, enhancing the current communication channels and documenting the current practice for future usage as a steppingstone helps for better result and satisfaction in road projects.

Keywords: Stakeholder engagement, AACRA, Project, client, consultant, contractor

Abbreviations and Acronyms

AACRA	Addis Ababa City Roads Authority
GDP	Growth Domestic Product
PMBOK	Project Management Body of Knowledge
PMI	Project Management Index
SD	Standard Deviation
EEPCo,	Ethiopian Electric Power Corporation
ETC,	Ethiopian Telecommunications Corporation
AAWSA	Addis Ababa Water and Sewerage Authority
PAP	Project Affected Persons

CHAPTER-ONE

1. INTRODUCTION

1.1. Background of the study

The construction industry is among the major activity that contributes for the economic growth and development of a country. And the building and implementation of infrastructure projects can serve as a representation of and a gauge for these. To be completed and successful, these construction projects require a variety of participants, procedures, and activity phases. The effectiveness of the management, financial, technical, and organizational performances of the relevant parties will also be necessary for carrying out construction project operations (Kundi and Unab, 2014).

The infrastructure network for road transport can be thought of as the conduits that enable a nation's socioeconomic operations. But up until this point, a large portion of the developing world, namely Africa, has lacked appropriate transportation infrastructure. Road infrastructure building involves purchasing land and installing infrastructure through construction activities, all of which have varied effects on the environment, society, and the economy. For instance, people and businesses may be displaced during road construction due to disruptions in the environment and traffic. On the other hand, it enhances inter-locational mobility, promotes economic expansion, and expands chances for employment development (Winch, 2002).

In this new global economy, stakeholder engagement is increasingly being incorporated into construction project practises in order to get good project outcomes. Stakeholder identification, for instance, is an important part of the first scoping step and ought to happen before an engagement plan is created and consultations start. Each stakeholder typically has a unique interest in the project, which can lead to disagreements, shifting priorities, and a significant rise in complexity. The project's stakeholders can cooperate to improve comfort and quality of life while reducing harmful environmental effects and boosting the project's economic viability with the aid of a carefully managed stakeholder engagement process. Therefore, every "sustainable development" plan should consider stakeholder interaction to be a fundamental component (Karlsen, J.T. ; Grae, K. and Massaoud 2008).

Public input is essential when making decisions about the neighbourhood's road system. The environment for making decisions is exceedingly complex, and there is a significant need for new roads and bridges. Stakeholders are not only given a say in these issues, but they may also limit or help find solutions (Bryson, 2004). A few transportation-related tasks that considerably benefit from public participation include planning, formal policymaking, programme and service design, and assessment.

Stakeholder management encompasses more than just the organizations and people participating in a project or event. Instead, it is a process that involves a systematic approach to identifying all stakeholders, prioritizing their requirements and interests, analyzing, and overseeing all activities carried out in connection with the stakeholders with a view to the project's success (Lock, 2007; Eskerod, and Jepsen, 2008).

A project's stakeholders will feel more invested in and engaged in its execution the more information they have about it. Most project stakeholders participate during the activity execution phase. Because of the incidents of work interruption or stoppage that have been documented, minimal stakeholder involvement in the project's commencement and planning phases has been judged to be insufficient. Additionally, it has been noticed that the Project Affected Persons (PAPs) and complementary service providers are not sufficiently involved in the projects. This is demonstrated by the frequent halts and interruptions of work activities caused by landowners who have not been promptly paid, as well as the stalling of construction projects in areas where service lines are situated within the road reserve. In this stage of the project, these stakeholders play a critical role in reducing and managing risks (Lehtiranta, 2014).

Governmental organisations like EEPCo, ETC, and AAWSA, as well as consultants, contractors, and clients' involvement are critical to the success of road construction projects carried out in Ethiopia because these organisations are crucial to the planned construction process. The AACRA, the client in charged with of managing city roads, is one of the key players in the case of Addis Ababa city.

The Addis Ababa City Roads Authority (AACRA), which was established by the city administration on March 15, 1998 G.C., has the authority and responsibility for managing contracts, supervising their completion, repairing existing roads, building new asphalt and gravel

roads, installing sewers, ensuring traffic safety, and building bridges within the city. In addition to ensuring the quality of road construction and establishing adequate conditions for the standard on which the road network is principally promoted in accordance with the city master plan, it also maintains roads.

It is possible to get insight into best practises and problems for future projects with the aim of promoting sustainable and equitable infrastructure development by investigating various stakeholder involvements on AACRA projects.

1.2. Problem Statement

Road construction projects commonly fail, which may be related to the absence of key stakeholders from project operations. Despite the vast body of knowledge regarding project planning and management, project failure is still documented. Stakeholders look forward to taking part in the decision-making process throughout the project cycle. This is not the case, though, as accusations of exclusion are still being made Omondi, K., and Kinoti (2020). Road infrastructure projects must be carried out and completed successfully if a nation is to flourish and grow. It is simple to realise how important the building industry, particularly the road construction sector, is in many nations, including Ethiopia. 80% of all capital assets, 10% of a country's GDP, and more than 50% of the wealth invested in fixed assets, for instance, are accounted for by substantial building operations in many emerging nations. The sector offers a lot of employment opportunities as well, maybe second only to agriculture (E. Achuen, 2013).

According to recent estimates, Addis Ababa is home to more than 60% of Ethiopia's total car population. The road network in Addis Ababa has limited space and right-of-way. It has a limited capacity, the tarmac is in poor condition, and on-street parking is usually necessary due to a lack of parking places. Despite the fact that there are numerous pedestrians, a sizable component of the roadway network lacks a pedestrian route. Despite the fact that Addis Ababa has less vehicles than other countries, daily traffic jams are severe due to the absence of modernised roadways, and as a result, visitors take an average of 4 hours to navigate the city. Currently the administration of Addis Ababa city, by collaborate with Chinese government several road infrastructure are launched in different area of the city.

For the successful accomplishment of these road construction projects the participation of different stakeholders from the initial to the final phase of the road project is very important. The study stated that stakeholder involvement is crucial for ensuring that the organization meets its duties to the people it serves by guaranteeing transparency and accountability. However in many road infrastructure development projects engagement of these stakeholders is not adequate both in the planning and execution of projects.

As studies from different countries such as Rahman and Alzubi (2015); Mandala (2018) indicate that inadequate stakeholder participation has caused a wide range of problems such as disruption of communities living around the project area, Economic impacts, misunderstanding among the stakeholders causing conflicts, Delays as a result of unresolved issues and environmental impacts on the area are some of them. Therefore, assessing the engagement level of different parties becomes vital.

1.3. Research question

- How stakeholder engagement can be incorporated in road infrastructure planning, design and implementation phases of the process?
- What are the major economic, social and environmental influences of road construction and how it can be identified through stakeholder engagement?
- How stakeholder engagements can contribute to measuring the effectiveness of road construction projects?

1.4. Objective of the Study

The general objective of this study is to assess the role of stakeholder engagement on road construction projects and their impact under Addis Ababa City Roads Authority. To achieve the above general objective, the proposed research has following specific objectives.

- To identify ways to incorporate stakeholder engagement in road infrastructure planning, design and construction stages of the process.
- To assess the major economic, social and environmental influences on road construction and ways by which it can be identified through stakeholder engagement?
- To evaluate stakeholder involvement in determining the efficiency of road development projects

1.5. Significance of the study

The research on the role of engagement of stakeholder on road development projects provide many benefits the major one is it facilitates meaningful and productive discussions among the stake holders which help for collaboration, trust building and improving the construction quality of the roads. The other importance is it develops transparency and accountability as all stakeholders represented adequately and have the opportunity to be part of the decision making process. . In addition to the above points it gives guidance to policy makers, experts and other representatives on how they can effectively communicate with one to another and engage with the community.

The research theory is based on R. Edward Freeman's innovative idea of stakeholder theory, which holds that good management should be founded on connections with all stakeholders; which includes the Client, consultants, contractors and the public communities. Therefore, the discussions and findings from this study give a better insight towards the benefits and difficulties regarding stakeholder engagement. Differentiating the best practices helps for sustainable road development and suggests the opportunities for future improvement through identifying the gaps from what were required.

1.6. Scope of the Study

The Addis Ababa City Road Authority (AACRA)'s road owner which is the Authority by itself, consultants, and contractors and public representatives will be the respondents to be allowed for this survey. The specific project survey focuses on specific road projects built by the client of AACRA, including on-going projects that were completed within the last five years (during the years 2018-2023 G.C.). The contractor may have been local or foreign. The study mainly focuses on the authority (i.e. AACRA) and didn't attempt to explore other regional firms. This is due to economical and time constraints. Therefore, the investigation of the study will be associated with the role of stakeholder engagement on road infrastructure in city Addis Ababa.

Here below there are some list of projects under construction and recently completed.

Table 1-1: Ongoing and recently completed AACRA projects

	Project Name	Length(m)	Width(m)	Contractor	Consultant
1	Kality Ring Road - Bulbula - Kilinto Roundabout Road Projects (LOT-2)	10500	40/50	China Communications Construction Company Limited ; CCCC	Highway Engineers and Consultants Plc
2	Kera Kebet Beret - Gofa Mebrat Hail Condominium Junction Road Project	2140	30	MELCON Construction PLC	Best Consulting Engineers Plc
3	Fafa Food Factory - Dama Hotel - Bihere Tsege - Sene Zetgne School - Debrezeit Road Project	3515	15/20	Yotec Construction	United Consulting Engineers Plc
4	Autobes Tera - Mesalemia - 18 Mazoria (Kolfe Ring Road Project)	3350	40/50	China Railway Seventh Group Co. Ltd.	Omega Consulting Engineers PLC
5	CMC Junction - Summit Medhanialem and Goro - CMC Overpass Bridge Junction to CMC RA - Summit Road Junction	4934	20	Rama Construction PLC	FORTRESS Engineering Consultants & Associates PLC
6	Tuludimtu Condominium Access Road Project	1380	40	Diriba Defersha General Contractor PLC	Gondwana Engineering Plc in sub consultancy with YAWIT Engineering Plc
7	Construction Works of AACRA Garage Vehicles and Machineries Garage, Store and Clinic Project	NA	NA	METEC	TCD

8	Gofa -Military Camp-Gofa Mebrat Condominium - NOC Fuel Station Junction Asphalt Road Project Imperial and Kadisco Intersections	1000	41	Hazi ii General Construction and Trading Plc Engineering Co. Ltd.	Prominent Consulting Engineers Plc
9	Bole Arabsa Condominium - Ayat Condominium	1500	30	Senan construction PLC	Beza Consulting Engineers Plc
10	Africa Avenue - Bole Medhanialalem Square - Traffic Police - Misrak Atekalay - British Embassy Urban Road Project	4400		China Civil Engineering Construction Corporation	H.P Gauff Ingenieure GmbH & Co. KG-JBG

1.7.Limitation of the Study

This study on stakeholder engagement is limited on city Addis Ababa in spite of the fact that road construction nature is dynamic from place to place. Additionally, on Addis Ababa city there are many consultants and contractors but the study bases some of them for performing the task. The results of the study are based on the thoughts and perceptions of the people who participated in the questioner. Some respondents were reluctant to fill the questionnaire and even doesn't respond back, which is another problem faced when conducted the research.

1.8.Organization of the Paper

The paper will consist of consists five chapters. And their composition will as follows

- The **first chapter** deals with the deals with introductory parts of the study, which includes: the introduction itself, background of the study, statement of the problem,

research objectives, general objective, specific objectives, significance of the study, scope of the study, and finally, limitation of the study.

- **Chapter two** comprises a review of the theoretical background as well as the empirical findings of related literatures.
- **Chapter three** presents the design and methodology part.
- In **chapter four**, the results and findings of the study are going to be discussed.
- **Chapter five** will deal with the summary of findings, conclusions and recommendations that is forwarded both by the respondents and by researcher based on the result obtained.

CHAPTER-TWO

2. LITERATURE REVIEW

2.1.Introduction

Freeman (1999) was the proponent of the stakeholder theory. In regard to the project and its success, the theory discusses stakeholder management. In order to meet as many of a person's preferences as feasible, the theory looks at individual preferences. Generally speaking, the stakeholder approach contends that each person or group participating in a project is doing so in order to advance their own interests. According to Talley et al. (2016), stakeholder engagement is a process that involves including all individuals, groups, or institutions that will be or may be impacted by the project's outcome in project planning and decision-making.

According to Rajeev and Kothai (2014), who also noted that stakeholder needs and interests primarily influenced project specifications, stakeholder engagement and final project specifications in construction projects are related. As a result, there is a sufficient need to successfully involve stakeholders in projects. Further analysis revealed the significance of effective stakeholder participation, according to Rahman and Alzubi (2015) also found that when addressing changes in specification with stakeholders, management capabilities, service quality, communication skills, budget adherence, safety performance, and schedule adherence were crucial in preventing project failure.

In order to reduce the cost of transportation for manufacturing inputs and outputs, it is crucial to build roads and offer transportation services, and this cannot be achieved without involving stakeholders. For developing nations like Ethiopia to prosper economically and socially, suitable road transport services must be provided. Motorized inter-urban freight and passenger movements take the majority constituent as it is estimated to be about 90 to 95. percent are made by road. However, due to its limited road system, Ethiopia has continued to face severe obstacles in its efforts to achieve socioeconomic development and the decrease of poverty.

Given that the primary goal of the study is to evaluate how stakeholders are involved in road development projects. The goal of this chapter is to provide a critical examination of the body of information already available on the function of construction projects, particularly those connected to the road sector, stakeholder involvement, and the necessity of managing stakeholders.

The literature review consists of three parts. The role of the transportation industry is discussed in the first portion, which is followed by the chapter's other component, which is a theoretical review section. This section defines the term "stakeholder" before presenting various stakeholder classifications from various angles, which is followed by the subtopic "stakeholder interest in construction projects." Stakeholder management needs, stakeholder analysis, and stakeholder communication were also covered. The conceptual framework is covered in the review's concluding section.

2.2. The role of road for transport service

The country's economic development and transformation are significantly facilitated by the transport industry. As the transportation system enhanced accessibility for markets and business becomes better which can develop integration of the different areas, diversification of the economy and as whole growth of the country facilitated. (European Bank, 2013)

By providing the physical networks and services necessary for the economy to function and move people and products, transportation is a crucial enabler of growth. Transport broadens access to markets and services by linking key economic hubs within a nation. In terms of access to markets and fundamental services like health and education, transportation enables the individual mobility that is vital for the inhabitants of the region.

Nevertheless, despite significant investment initiatives in many nations, there is still a great need for investment because the current transportation infrastructure cannot meet the region's economic objectives. Infrastructure that facilitates trade, integrating the nations of the area into the regional and global marketplace, and infrastructure that promotes national integration, connecting suppliers with customers and balancing national economies, both remain priorities. Additionally, there is still much to be done to progress sector transformation, which frequently necessitates a thorough and protracted engagement with the public sector. (European Bank, 2013)

2.3. Theoretical literature reviews

2.3.1. Stakeholders Definition

The term "stakeholders" has no universal definition that all researchers can agree upon. Depending on the nature of their stakes, different authors have characterized stakeholders in slightly different ways, but generally similar ways. Stakeholders, in Freeman's definition (1984), are any group or person that has the potential to influence or be affected by the cooperation's goal's accomplishment. He traced this back to a document from the Stanford Research Institute from 1963, which indicates that stakeholders as backbone for the organization without their engagement it cannot exist. In a similar vein, Juliano (1995) asserted that project stakeholders can include any person, group of people, or team that is impacted by the project. Similar terms were used by Awakul and Ogunlana (2002) to define the parties involved in construction projects, but they argued that non-governmental organizations, public servants, academics, and other interested parties should be included as well. According to Smith and Love (2004), stakeholders are both direct and indirect representatives of interests that can contribute to the proposed project. These individuals may include:

- Owner/client,
- Senior managers/executives, facilities managers, project managers,
- Purchasers, subcontractors, suppliers, and other process or service providers,
- Design team members (if appropriate) and
- Others, depending on the project and attitude of the organization to participation and involvement in the process.

Stakeholders are defined by the PMI (2004) as individuals or organizations that actively participate in the project or whose interests may be impacted by the project's execution or conclusion. And these definitions presented on the above can be criticized for being overly inclusive because they call for including everyone as a stakeholder in a project.

2.3.2. Stakeholders' Classification

This section examines how to categorize various stakeholders based on their possession of particular traits, their contractual connections with the project and with one another, and their attitudes towards the project. These topics are covered in the following sub sections:

2.3.2.1. Stakeholders categorization based on characters (Power, Legitimacy, Proximity and Urgency)

Stakeholders have particular characteristics that define their relationship to and capacity to assert their rights and influence the project. They are: authority, proximity, urgency, and power (Mitchell and al., 1997; Walker et al., 2008). The following is a definition of these qualities:

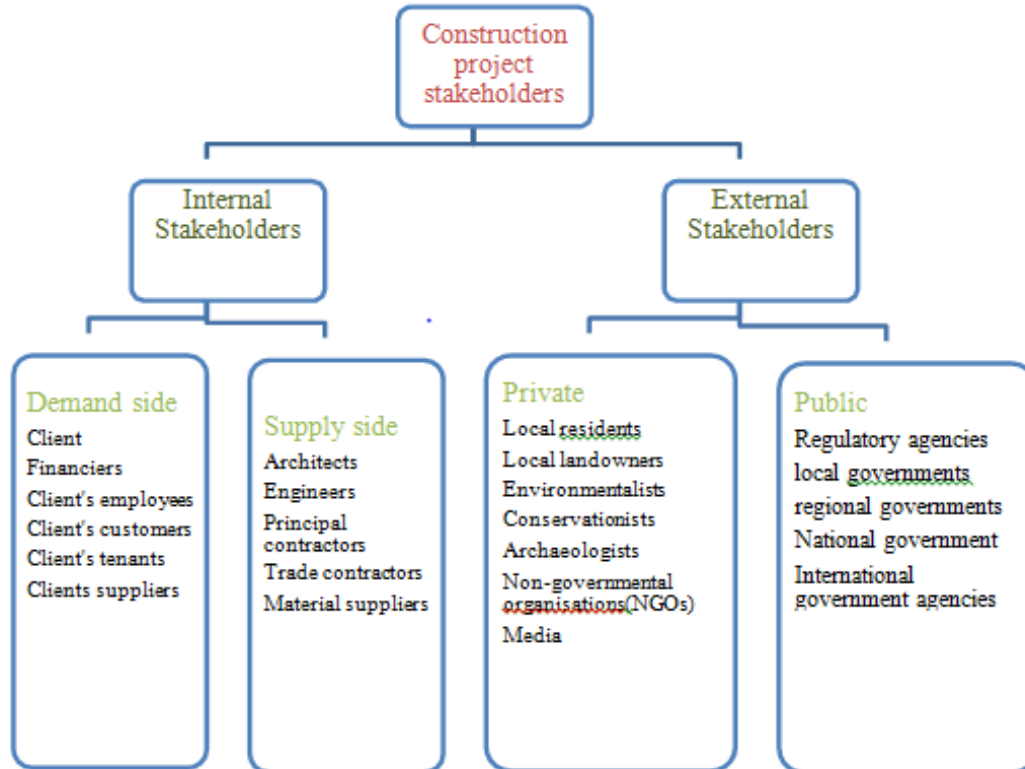
- Power: Related with stakeholder influence on other parties character or the project's decision-making process. Both acquiring and losing this are possible.
- Legitimacy: The perceived truth of a claim made by a stakeholder. It can also be described in terms of how project stakeholders face some risks that could either be advantageous or damaging to the project.
- Proximity: relates to how closely a stakeholder is connected to the project. They may participate directly in the project or work remotely from it, depending on their location.
- Urgency: The degree to which a demand by stakeholders is urgent and needs to be addressed right now.

Since proximity is easier to operationalize than legitimacy and is more difficult to explain, it may be more beneficial to use proximity as a quality rather than legitimacy (Yang et al., 2009).

2.3.2.2. Classification according to contractual relationship

Winch (2010) divides Depending on their contractual relationship with the customer, stakeholders in construction projects are divided into internal and external. Stakeholders with direct connection with projects are known primary or direct stakeholders whereas the secondary or indirect stakeholders are those who have no direct connection to the project and are actively participating in it from a distance (Newcombe, 2003; Smith and Love, 2004). Those who are considered internal stakeholders and fall under the categories of demand and supply sides are those who are legally bound to the project owner. External stakeholders, who are divided into those on the private and public sides of the project, do not have a contractual relationship with the project owner but do have some rights and interests in it.

Figure 2-1: Categorization of stakeholders (Winch, 2010).



2.3.2.3. Classification according to stakeholder attitudes towards the project

According to Olander (2007), stakeholders are either supporters or opponents of the project, and in a similar vein, (Aaltonen et al., 2008; Chinyio and Akintoye, 2008) regard stakeholders to be either pro or con the project. These are crucial for the project management's decision-making and resource allocation processes, especially if they are to have any chance of influencing the neutral, hostile, or anti-project stakeholders.

2.3.3. Construction Projects' Stakeholders and Their Interests

Leung and Olomolaiye (2010) categorised the interests of the stakeholders in construction projects into five basic groups. However, for some projects, there may be differences in the individual stakeholder groups participating and their respective interests. And these five groups by Leung and Olomolaiye (2010) includes; Clients, Consultants, Contractors, External public parties and External private parties.

- **Clients:** private and public clientele are among them. The public client's interests include ensuring that the project will support the organization's strategy, ensuring the efficient and economical use of resources, offering financial assistance, and ensuring that the construction product is successfully and economically procured.
- **Consultants:** They consist of an engineer, a quantity surveyor, a construction manager, and additional consultants necessary to meet the project's requirements. Executing their individual professional obligations to their employers is their main concern.
- **Contractors:** These typically include the main, subcontractors, and their staff. The main contractor's principal goal is to successfully complete the work as planned and carry out any additional tasks outlined in the contracts that have been given to them. According to the terms and conditions of the contract, the subcontractors complete the job that has been allocated by the client or the principal contractor.
- **External public parties :** These include institutional industries (professional bodies), the general public, the media, labour unions (employers' associations), government agencies, and district boards that serve as consultative committees.
- **External private parties:** local citizens, nearby communities, local landowners, archaeologists, environmentalists/conservationists, rival businesses, the media, and others are among these.

For summarizing a wide range of stakeholders, all of whom may have varying interests throughout the project life cycle, are involved in building projects. Given the multiplicity of these interests, stakeholder management is crucial for construction projects.

2.3.4. Communication with Stakeholders

Gregory (2003) emphasized the need of continuing communication to involve stakeholders and promote mutual understanding. Through dialogue, participants in a discussion can share their perspectives and come to consensus on cultural structures, actions, and events. He also noted how spirited discussion promotes information, exposes flawed thinking, and aids in the development of wise decisions and public policies. According to Siew et al. (2013), companies have tried using a variety of media to provide social and environmental information in a way that is understandable to stakeholders in order to satisfy the demands of a wide group of stakeholders.

Additionally, it forges an immediate connection that serves as the basis for future business connections that will last.

Communication on construction projects is inevitably fraught with difficulties. The difficulty for businesses seeking to communicate in this area is that varied stakeholder audiences have different expectations of businesses, distinct information demands, and different ways in which they will react to the various communication channels available. Particularly, the veracity of corporate communications on social, environmental, and ethical issues is frequently questioned against a backdrop of public cynicism towards firms (Dawkins, 2004).

2.3.5. Stakeholder Mapping

Understanding the main stakeholders' identities, backgrounds, and motivations in relation to the business through mapping is crucial (BSR, 2011). Each project's stakeholder-circle tool is created using a technique that first identifies and prioritizes the project's important stakeholders before creating an engagement plan to forge and sustain strong bonds with them (Bourne and Walker, 2008).

Stakeholders can be mapped by choosing the appropriate stakeholders, describing their interests in detail, measuring those interests, predicting their future behavior to satisfy those interests, and assessing how that behavior will affect the project team's ability to manage the project (Gibson, 2000; Cleland, 1999). Stakeholder mapping gives project managers extra tools to more clearly see the possible influence of stakeholders.

2.3.6. Stakeholder Risk Management

Construction projects are generally typified by fractured relationships between contracting parties, misaligned goals, and risk-averse attitudes, according to Rahman and Kumaraswamy (2004). Despite the recent usage of sophisticated procurement strategies like alliances (which contain contractual incentive systems), the industry continues to encounter difficulties in establishing risk/reward systems that inspire project stakeholders (Rose, 2008).

According to Brown (2013), stakeholders can be managed from a risk management viewpoint, hence being inventive and thorough when identifying stakeholders is beneficial. The advantages of consulting with the stakeholders from the perspective of risk management are said to be

numerous and include, higher levels of trust with stakeholder groups, stakeholders being able to contribute to decisions affecting their future, higher quality information for making business decisions, a wider understanding in the community of constraints upon firms, stakeholders feeling more involved in decision-making processes and feeling their interests are being considered; and the like (Loosemore, 2010). The stakeholder paradigm, according to Loosemore, is predicated on the idea that people are not rational when considering risk but are instead influenced by the social and cultural networks in which they are embedded.

2.3.7. Stakeholder Analysis

It was first recommended by Freeman (1984) as a tool for managers to engage proactively with their external environment in the face of a quickly evolving global marketplace. Stakeholder analysis is a useful research tool, according to Simmons and Lovegrove (2005), and it may also be used to discover and resolve conflicting stakeholder claims in the context of performance management. The justification is that including stakeholder analysis in decision-making models is essential when the viability of the developed system depends on its acceptability to various stakeholder groups, or when the quality or acceptability of decisions are likely to be improved by incorporating various stakeholder viewpoints (Banville et al., 1998).

It is possible to include stakeholders in the decision-making process who may have the authority and interest to bring about sustainability-related performance as well as those who may be interested in various sustainability-related issues by classifying stakeholders according to their level of power and interest (Zsolnai, 2006). According to Harvey (2011), the creation of the list of stakeholders is the first step in the stakeholder analysis process. The roles and impacts table is the second step, and rating the stakeholders on specific criteria is the third. In contrast to legitimacy, which is defined as "socially accepted and expected structures or behaviors" (Mitchell et al., 1997), power can be coercive, utilitarian, or normative. A stakeholder can gain or lose power. The firm can increase its community credibility and gain access to new market segments by incorporating stakeholder analysis into the relevant strategic development processes. In addition, by fostering interactions with other companies, the firm can increase its capacity to effect larger environmental changes (Merrilees et al., 2005).

2.3.8. Stakeholder Dynamics

Construction stakeholders' interests and stakes can be as varied as the stakeholders themselves, and they might change during a project's life cycle (Chinyio and Akintoye, 2008). For instance, locals' main concern is how the project will affect their amenity and immediate surroundings; local landowners want to ensure that the project won't harm their interests; environmentalists want to protect the environment from pollution and/or destruction; competitors want to gain a competitive advantage through their actions; and the media want to influence people's perceptions of the project's reputation. Since stakeholder influence and control over project decisions and actions depend on their amount of power and other related project attributes, these interests may vary as the project moves forward.

Understanding how stakeholders' characteristics will change (become more dynamic) as the project progresses can help you choose the best technique for including them. It should be mentioned that thorough stakeholder analysis is primarily necessary to comprehend the dynamism of stakeholders (Aaltonen et al., 2008). The ability of project management to manage changes in stakeholder interests and influence, changes in stakeholder attributes, changes in stakeholder relationships, the ability to predict stakeholders' likely reactions to project decisions, and the management of how project decisions affect stakeholders all point to this construct.

2.3.9. Stakeholders' Collaboration in Construction

Managing the interests of the various parties involved in a building project calls for teamwork, coordination between the client, design, and construction teams, and the sharing of individual knowledge and abilities in order to gain support from all potential sources.

Collaboration is defined as the cooperative effort of two or more partners in a business to attain a common objective that neither can do alone (Grey, 1985). These definitions make it apparent that in order for the partnership to be successful and reach its intended aim, a number of requirements must be met by all parties involved. Despite the fact that this definition only discusses individuals and not organizations, it is nevertheless regarded as being extremely thorough because it touches on the majority of the crucial elements that any collaborative endeavor depends upon.

In the context of the construction industry, Akintoye and Main (2007) defined the success and failure variables for collaborative collaborations. The primary success variables are the parties' dedication of sufficient resources, their equity in the partnership, their understanding of the significance of non-financial advantages, and their clarity of aims. The primary failure factors are their lack of confidence and consolation, as well as their lack of expertise and business fit. Collaboration is crucial for resolving disputes and antagonistic interactions in the construction industry as well as for gaining and preserving a competitive advantage.

In order to prevent or resolve stakeholder issues in the project, Jamal and Getz (1995) define stakeholder cooperation as a method of collective decision-making among important internal stakeholders. However, it should be understood that the privilege to take part in stakeholder engagement does not equate to an automatic capacity for success. At various project stages, it would be required to decide who should coordinate the stakeholder management process and when stakeholders should be involved.

2.3.10. Need to Manage/Engage Stakeholders in Construction Projects

Previous researches on construction management have noted concerns and problems relating to stakeholders. According to Karlsen (2002), Olander and Landin (2005), Olander and Winch (2010), these problems can arise within or outside of projects and can range from delays in project planning and execution to cost overruns and disputes that result in legal action. The majority of these either result from the project's inability to take into account the interests and inputs of the stakeholders from the outset, or because those considerations changed as the project progressed, which may also be related to inadequate stakeholder management practices.

Any construction project's planning, development, and completion should be considered to include the steps of identifying, evaluating, and analyzing stakeholder needs and influence. Stakeholder involvement is essential because it helps achieve the objective of completing the project on schedule, within budget, and with high-quality results (Romenti, 2010; Sallinen et al., 2013). Engaging stakeholders in the development of business models enables organizations to improve their capacity to provide project value more effectively and, as a result, to meet the needs of various stakeholder categories (Mathur et al., 2007).

The focus of stakeholder engagement should be on identifying individuals who will be affected (or are likely to be affected) by the project and actively involve them in project design and delivery to for the purpose of ensure that the project is sensitive and responsive to the local requirements and conditions (Mathur et al., 2008). Additionally, the combined power of opposing stakeholders working against the progress of the project as a result of their perceived non-involvement and consideration of their interests will result in a prolonged and delayed planning and design process if the concerns of opposing external stakeholders are not acknowledged (Olander, 2007).

Over the past few decades, managing project stakeholders has grown substantially more difficult for two reasons (Winch, 2010): the first one is since external stakeholders now have more influence over the process, as shown by both the institutionalization of external stakeholders' rights through a tightening regulatory context and the rise of environmental activism that followed the collapse of socialist mass movements. And the other is financiers now pay considerably more attention to the formulation of the project mission to ensure that their investment will actually give the intended return due to the move to concession contracts securing finance on the asset being developed by the project. This supports the idea that stakeholders must be involved throughout the whole project life cycle in order to provide the project mission definition the much-needed attention. This will necessitate that all pertinent stakeholders join the project early enough and stay as long as they have something to contribute to the end aim.

Therefore, obtaining stakeholder support and contributions to the project, achieving the best results, and making efforts to pay attention across a range of stakeholders rather than limit attention to a few stakeholders are all reasons to engage in stakeholder management on projects (Jepsen and Eskerod, 2009).

2.3.11. Critical Success Factors (CSFs) for Stakeholder Engagement in Construction Projects

When project execution decisions are made, having a thorough understanding of stakeholder-related aspects might help (Yang et al., 2014). CSFs should therefore receive continuous and attentive maintenance.

The effectiveness of a project depends on stakeholder involvement, finds a 2013 study by Beringer. Although the demands, goals, roles, and priorities of project stakeholders vary, there is a link between stakeholders and project success. Considering that the project will be impacted by their decisions, and the project's outcomes may have an impact on their interests. Stakeholder requirements and satisfaction must be met effectively and formally in order to ensure project success.

Four elements were highlighted by Olander and Landin (2008) as influencing the stakeholder management process: Analysis of the needs and concerns of stakeholders; communication of potential advantages and disadvantages to stakeholders; assessment of alternate options; project management; and relations with the media. Through efficient stakeholder communication and the establishment of shared project goals and priorities, we can enhance the managing process of construction projects (Jerges et al., 2000). Using factor analysis, Yang et al. investigated and divided 15 crucial success elements for stakeholder management in construction into five major components. Additionally, Li et al. (2011) recognized flexible project management as a crucial success element for stakeholder management in building projects.

Stakeholder involvement strives to take into account both current requirements and expectations for the project as well as future needs and expectations. According to Einur et al. (2016), early-stage stakeholder participation in New Zealand construction projects is the key factor in the efficiency and effectiveness of project performance. According to Sindhu and Karthiyayini (2016), the number one priority factor in India contributing to higher cost overruns in construction projects was poor stakeholder involvement. Poor stakeholder participation, according to Rahman and Alzubi (2015), was a major cause of construction project cost overruns and project failure.

Although repeatable, the difficulty of completing a construction project is as a result of its dynamic the dynamic and individual nature of each project. Following the identification of the determining factor for the success of a construction project, it becomes mandatory for construction professionals to complete adequate training and skill-updating programs in order to support the sustainability of project management systems.

2.4.Stakeholder Management Approaches/Frameworks

Given these theoretical foundations, the framework offers a distinct and innovative interpretation of the diverse body of literature and a method for organizing data collection and analysis that will be expanded upon in the following phase of the study. In order to provide sufficient validity and value, this framework's goal is to make sense of the study's initial structure and, in turn, help define the range of the inquiry to be looked at. A conceptual framework might assist center the discussions that are emerging around these larger shifts by clarifying the promise and constraints of formal literatures in a practical sense (Gibb, 1994).

Stakeholder management and involvement in construction projects can be conceptualized using one of three different methods (Mathur, et al., 2008). These are related to perceiving stakeholder engagement as a managerial method, an ethical duty, or a platform for discussion to promote reciprocal social learning. The capturing of many types of information to social learning are just a few of the consequences that a properly structured stakeholder engagement/management process can produce. Stakeholder management should promote collaboration, however doing so between project managers and significant stakeholders depends heavily on the workers' capacity and willingness to do so, which calls for a significant level of teamwork to be fostered (Bourne, 2005).

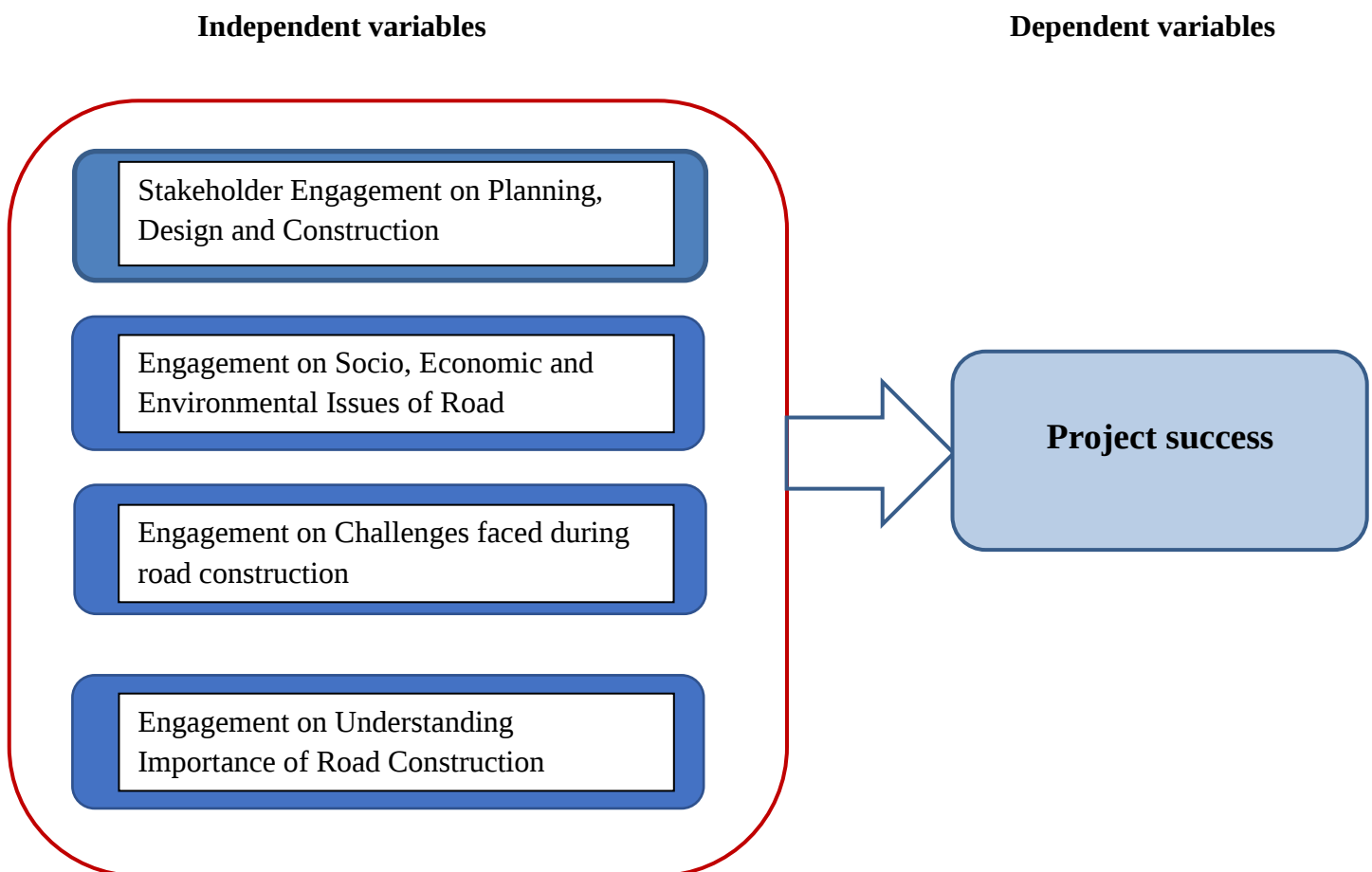
One of the researches made in Kenya by Henry (2016) on identification process of projects and their influence on performance of the construction found that stakeholders were always involved at every stage of the project. The majority of respondents, however, disagreed that stakeholder involvement was always encouraged and that stakeholder mapping was always carried out at the project commencement stage. The study proposed that management in project management should increase stakeholder involvement during the project initiation stage, strengthen stakeholder mapping, and enhance stakeholder analysis tool as this would influence project management.

Other study was made by Mandala (2018) focusing on the effect of involvement by stakeholders on road construction execution in Kenya—in the case of Bondo Sub County and Siaya County. Descriptive statistics were employed for the analysis and an exploratory research approach was utilized. According to the report, Bondo Sub County's road construction projects performed

successfully because stakeholders were involved in the project identification process. Project managers should include stakeholders in various project identification processes, such as the execution of phase reviews, according to the study's recommendation.

Based on a study of how to manage stakeholders' needs and expectations, Takim (2009) found that while the government and consultants place a strong emphasis on construction project coalitions and using lobbying techniques to influence policy, the private sector places a strong emphasis on forming coalitions with other stakeholders and using lobbying techniques itself. Takim advised that in order to create alignment and feedback among them, it is important to encourage communication with all relevant stakeholders throughout the project life cycle, especially in the front end project planning.

Figure 2-2: Conceptual framework



CHAPTER THREE

3. RESEARCH DESIGN AND METHODOLOGY

On this chapter the techniques used for this research work are described. The methodological considerations for the research work such as Research Design, Sample Size and Sampling techniques, Data collection methods and procedures and Data analysis and presentation have discussed.

3.1. Research Design and Approach

Research can be divided into three categories, according to Robson (2002): explorative, descriptive, and explanatory, depending on the goals it seeks to achieve. Exploratory research is defined as the pursuit of novel understandings, the formulation of new hypotheses, or the illumination of previously unknown phenomena. The accurate portrayal of individuals, occasions, or circumstances is characterized as descriptive research. Using a descriptive survey method, the research questions were addressed and their features will be measured. Additionally, an explanatory method was involved to show the effects of the variables on the success of the road project.

A combination of qualitative and quantitative methodologies was used in the study. Qualitative research designs incorporate human events including human interactions, social organizations, and the like (Newman and Benz, 1998: 12), whereas quantitative research designs generate numerical data and utilize statistics to improve numerical data (Leedy and Ormord, 2005:147). A given occurrence can be described, interpreted, verified, and evaluated using qualitative design rather than quantitative design (Newman and Benz, 1998: 12).

The types of research employed under this study were using well-structured questionnaires containing both open-ended and closed-ended. This questioner helps the researcher to observe deeply and analyze the population under study. The main aim of gathering qualitative and quantitative data were to acquire all necessary data as much from the entire of studied population that had used to answer research question in relation to the engagement of stakeholders on road infrastructure projects on AACRA projects.

3.2.Type and Source of Data

Both primary and secondary data were used in this research. Primary data are those that are directly obtained from the original sources, whereas secondary data are those that are obtained indirectly via reports and publications (Chandran, 2004).

Biggam (2008) defined a primary source of data as information that a researcher independently obtains utilising surveys and a particular topic. Primary data was collected through self-administered questionnaires (SAQ). The Self-Administered open and closed ended questionnaires and semi structured interviews was employed as a primary data collection. A questionnaire is a tool created to ask the same set of questions to numerous people, according to Hernon and Whitman (2001).The benefits of the questionnaire were taken into consideration when selecting it. The questionnaire is less expensive, according to Kurnar (2005), because it conserves time, as well as human and financial resources.

Since secondary data was also as important as the primary data, the researcher had collected essential data from secondary sources. The Secondary data was collected from different kinds of sources such as books, research papers (both published and non-published), internet sources, and articles from different magazines have taken.

3.3. Population of the Study

According to Kombo and Tromp (2006), a population is a group of people, things, or things from which samples are taken. Additionally, the target population is isolated from the larger group of people who share the same trait. Target population, according to Hair et al. (2010), is referred to as a specific group of individuals or item for which inquiries can be made or observations made in order to create the necessary data structures and information. Stakeholders from the Consultant, Contractor, Client (i.e. AACRA), and some selected community members were participated to make up the study's population. According to Zikumund (2003), a population is defined as the entire group of research subjects that the researcher is interested in. This population contributed to the composition of the sample's base. 104 employees who directly manage and oversee projects at the project expert and project manager levels make up the study's target group.

3.4. Sample Size and Sampling Techniques

The term "sample size" refers to the appropriate number of respondents selected for the study, and it was taken from the total population of employees working in the organization. This was done in consideration of the fact that studying a subset of the population would be more manageable than studying the entire population due to time, cost, and accessibility. In order to represent the entire population, the sample size will be set. According to Alreck & Settle (2005), sample size is chosen after accounting for practical considerations, statistical precision, and resource availability. According to Lowler (1984), there are a lot of inadequacies for choosing sample sizes because there isn't a single, perfect method for doing so.

As such the researcher used the following sample size determination formula to estimate the representative sample of the population. The formula was developed by Taro Yamane (1973). It is calculated as;

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

Where: **n** is the sample size

N is the population size = 139

e is level of precision or sampling error (0.05)

For the purpose of conducting the research three projects were selected taking into consideration the available time. The selected projects and number of potential respondents presented below.

Table 3-1: Total Population

	Project Name	Number of population		
		Contractor	Consultant	Client (AACRA)
1.	Bole Arabsa Condominium - Ayat Condominium	21	11	22
2.	Kera Kebet Beret - Gofa Mebrat Hail Condominium Junction Road Project	27	14	
3.	Africa Avenue - Bole Medhanialem Square - Traffic Police - Misrak Atekalay - British Embassy Urban Road Project	30	14	

Source: Author, 2023

$$n = 141 / (1 + 139([0.05] ^2)) = 103.2$$

Therefore, the total sample size obtained using this formula was approximately 104.

3.5. Method and Tools of Data Collection

The data collection instrument used for this research was a questionnaire. Questionnaire was selected for the purpose of data gathering because it is effective to collect data about “facts, activities, level of knowledge, opinions, expectations and aspirations and attitudes and perceptions” (Siniscalco and Auriat, n.d:7). Closed and open-ended questions were created for the questionnaire in accordance with the necessity for obtaining both quantitative and qualitative data to answer the study topics.

Research methodologies that combine qualitative and quantitative components were used. While quantitative research concentrates on determining the link between variation in dependent and independent variables, qualitative research is concerned with phenomena’s related with quality or kind, which are qualitative phenomena.

3.6. Procedure of Data Collection

The researcher had selected the techniques under the assumption that they are time and cost efficient for the aim of gathering pertinent data. According to Kurnar (2005), the questionnaire is less expensive because it saves time, along with people and financial resources. It is helpful for learning knowledge that is challenging to convey (Gerhardt, 2004). Final recipients of the questionnaire have include the project manager, resident engineer, project supervisor, project consultants, clients, technical team members, and project experts from the community.

A likert scale, which is a five-point scale, was used to allow respondents to indicate whether they agree or disagree with the study topics in the questionnaire. The questionnaire was created from a variety of sources of literature and modified in accordance with the goals of this investigation.

3.7. Data Analysis and Presentation

3.7.1. Data Processing

Both manual and computerized systems were used for the data processing. The obtained data was edited, coded, classified, and tabulated as part of the data processing method. Data cleaning up and data reduction were the first two stages of data processing. Data cleaning has involved editing the obtained raw data to find inconsistencies, mistakes, and omissions in responses as well as ensuring that the questions were correctly and consistently answered. The next step was to assign numerical or other symbols to the responses in order to categories them into a small number of groups or classes. The process of classifying or grouping a sizable amount of raw data into groups and classes based on shared features were subsequently is used. Data that share similar characteristics were grouped together, dividing the data into various groupings. The raw data was compiled into tabulation at the end and presented for additional study.

3.7.2. Method of Data analysis

Here the collected data was processed to identify the relationships and patterns between and/or among data groups through statistical tools (i.e. namely descriptive analysis, correlation and regression analysis). According to Parcell & Baker from 2017, narrative analysis is a category of analytic frames whereby researchers analyze narratives that are told in the context of their research and/or are shared in daily life.

3.8. Validity and Reliability

According to Muller (2011), validity and reliability are measures used in quantitative research to assess the accuracy of the measurement tool and its consistency. The most important criterion, validity, is how well a measurement tool captures the intended outcome (Kothari, 2004). Validity describes how accurately or successfully an instrument measures the variable that the researcher is trying to assess. An effort will be made to establish the data collecting tool's content validity in order to guarantee that the survey questions accurately represent the themes that will be measured (Gerhardt, 2004).

A measure's constancy is what makes it reliable. The measurement is regarded as reliable if the same result can consistently be obtained by applying the same techniques under the same conditions. The most used test to assess a measure's internal consistency is Cronbach's α . A number between 0 and 1 represents the Cronbach's α result. A dependability core with a value of 0.7 or greater is considered acceptable (Heale et al., 2015). Cronbach's Alpha for this study was 0.971, which is above the permissible limit.

Table 3-2 : Reliability statics for the sample

Reliability Statistics for Separate Items				Reliability Statistics		
No.	Item	Cronbach's Alpha	N of Items	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
1	Planning	0.905	5			
2	Design	0.857	5			
3	Construction	0.869	5			
4	Socio economic	0.859	5			
5	Challenges	0.902	10			
6	Importance	0.856	5			
				0.971	0.972	35

3.9.Ethical Consideration

This study addressed ethical issues regarding participant anonymity and privacy. Throughout the dissemination of the questionnaire, respondents were made aware of the purpose and advantages of the study as well as their full right to accept or decline participation. The respondents were given complete flexibility to answer the questionnaire in order to ensure the respect, dignity, and freedom of each study participant as well as to maintain the study's confidentiality. Participants were also made aware that any details they gave about their company would be kept confidential and not be disclosed to any other parties, including any employees. The responses of each respondent were examined as they were given, without any prefabrication, falsification, or modification. The study work was carefully and severely examined to prevent negligence and mistakes.

CHAPTER FOUR

4. DATA PRESENTATION, ANALYSIS AND INTERPRATON

4.1. Introduction

The descriptive, correlation and regression analysis subsections make up this chapter. Tables are used in the first component, which is the descriptive analysis, to display the data that was gathered through questionnaires. The acquired data has also been examined and explained by the researcher. Followed by, correlation analysis was made to determine how closely the variables are related. Moreover regression analysis was conducted to show the effect of engagement of stakeholders on project success.

Descriptive statistics stand for the conversion of raw data into useful information, which can be interpreted to explain a group of dimensions. They stand for one of the most crucial first phases of statistical data processing. Frequencies, percentages, averages, and standard deviation are just a few of the outputs that can be included in this type of statistical analysis (Pallant, 2007). Additionally, explanatory method was involved on the regression analysis section to analyze the underlying factors contribute to the project success. Stakeholder engagement in road construction projects is examined in this chapter along with related discussions and findings that are included in the AACRA.

The data was gathered via a survey questionnaire that was distributed to 104 respondents, but 90 of them or around 87% of the responses, were filled out and returned. Using Excel and SPSS 26.0 software, a statistical technique was conducted to evaluate the organization's project management practice in order to analyze the acquired data in accordance with the main goal of this study.

4.2. Demographic data of the respondents

Demographic data about the respondents are included in this section along with their general backgrounds. Gender, age, educational attainment, job title, and prior work experience were all factors considered in this study.

Table 4-1 : Demographic data of the respondents

Items	Variables	Frequency	Percentage (%)
Gender	Male	62	70.2
	Female	28	29.8
Age	<25	6	6.4
	25-35	74	83.0
	35-45	10	10.6
Academic status	Diploma	2	2.2
	Bachelor Degree	58	63.8
	MSc./MA Degree	30	34.0
Type of organization	Consultant	38	42.2
	Contractor	33	36.7
	Client	19	21.1
Experience on the organization	<5	60	66.7
	5-10	22	24.4
	10-15	6	6.7
	>20	2	2.2
Total years of experience	5-10	36	40.0
	10-15	52	57.8
	>20	2	2.2

Table 4.1 depicts the demographic information of the respondents. Regarding the academic qualification of the respondents, 63.8% are first degree holders and 34.0% of the respondents have Masters and the remaining 2.2% have Diploma.

The other demographic data were the age of the respondents, majority of them are between the ages of 26 and 35, which accounts for 83% of the population, while 10.6% are between the ages of 36 and 45 and 6.4% are younger than 25. Among the respondents that took part in the study,

70.2% are men and 29.8% are women. This shows that men make up the bulk of the stakeholders in road construction. According to the information gathered from the questionnaire, of the 90 respondents, 42.2% were consultants, 36.7% were contractors, and the remaining 21.1% were AACRA clients, the regional road authority. These indicate that the project team members may contribute significant information to the study's goal, taking into account the various organizational sectors. The other demographic variable presented on the table is about respondents' years of experience in their organization and at the company, 66.7% of them have less than five years' experience, 24.4% have between five and ten years' experience, respondents with experience between ten and fifteen are estimated to have around 7% of the total, and the remaining percentage is made up of respondents with more than twenty years' experience at the company. Finally, the table presents cumulative years of experience of the respondents at the company. 40% of the respondents have less than five years' experience, 2.2% have more than twenty years' experience, and the majorities roughly 57.8% have between 10 and 15 years' experience. One may infer from the study that the majority of the personnel have sufficient experience with the company to take part in this research.

4.3.Descriptive Statics of variables

The stakeholder responses were used in this phase of the research to gauge how involved they felt in the city of Addis Ababa's road development projects. For each question on the Five-Point Likert scale, mean scores and standard deviations were computed using the data collected. Then descriptive statistics, the mean, and the standard deviation were taken into account to gauge how they felt about the road projects as a proportion of the Likert questions.

4.3.1. Respondents perception on planning related questions

Table 4-2 : Respondents perception on planning

Statement	Level of Agreement in (%)					Mean	Standard Dev.
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree		
The project stakeholders (i.e. client, consultant,	0.00	10.00	6.67	51.11	32.22	4.06	0.866

contractor, community,...) were participated on project planning.							
The project stakeholders (i.e. client, consultant, contractor, community,...) were aware of the goals and objectives of the road project.	0.00	4.44	6.67	46.67	46.67	4.27	0.785
Stakeholders express their opinion on the project planning phase.	0.00	6.67	13.33	55.56	22.22	3.95	0.794
Stakeholders given project scope details during planning phase.	4.44	30.00	26.67	26.67	12.22	3.12	0.972
Project stakeholders know the time frame of the project on the planning phase.	0.00	8.89	31.11	31.11	28.89	3.80	0.948

On the above table a minimum and maximum mean score average values of 1 and 5 are taken respectively. While the mean average score is 3. And for the planning related items all have a mean value which is above the average. The result from the above table indicates that 51.11% (45) of the respondents agree that the stakeholders participated on project planning, and 6.67% (6) of the respondents were neutral regarding the project plan participation, 32.22% (29) of the respondents strongly agree. And for the question is whether project stakeholders were aware of the goals and objectives of the road project 46.67% (42) of the respondents agree, 42.22% (38) of the respondent strongly agree and 6.67% (6) of the respondents were neutral. Coming to the other point which is related to expressing their opinion 55.56% (50) of the respondent agree while 22.22% (20) strongly agree and 13.33% (12) of the respondents were neutral. And also for the question, if stakeholders given project scope details at planning stage 26.67% (24) of the respondents agree, 12.22% (11) of the respondents strongly agree and 30.0% (27) were

disagree. For the last question under this section which is about knowing timeframe of the project 31.11% (28) of the respondents agree, 28.89% (13) of the respondents strongly agree and 31.11% (28) were neutral. We can see from the above answers regarding the questions listed related to stakeholder engagement on planning as an overall it is satisfactory but for one item (i.e. stakeholders given project scope details during planning phase) the mean is around the average.

4.3.2. Respondents perception on Design related questions

Table 4-3: Respondents perception on design

Statement	Level of Agreement in (%)					Mean	Standard Dev.
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree		
During the design stage stakeholders (i.e. client, consultant, contractor, community,...) input were considered.	0.00	6.67	13.33	46.67	33.33	4.07	0.866
Priorities of stakeholders were clearly understood and incorporated into the design.	0.00	6.67	28.89	31.11	33.33	3.91	0.951
The design meets transportation demand and quality of the stakeholder.	0.00	6.67	22.22	42.22	26.67	3.91	0.890

The status and milestones of the design process adequately communicated among the stakeholders.	13.33	25.56	22.22	24.44	14.44	3.01	1.151
Design outcome issues and impacts notified and discussed among the stakeholders.	0.00	8.89	15.56	44.44	31.11	3.98	0.919

Here we can give illustration on what the above table shows. The result from the above table indicates that 46.67% (42) of the respondents agree that the stakeholders input in the design were considered, and 13.33% (12) of the respondents were neutral regarding this, 33.33% (30) of the respondents strongly agree. The other question under this section identifies whether project stakeholders priorities clearly understood and incorporated into the design of the road project 31.11% (28) of the respondents agree that the project priorities were understood 33.33% (30) of the respondent strongly agree and 28.89% (26) of the respondents were neutral. To discuss about transportation demand and quality requirement included in the design 42.22% (38) of the respondent agree while 26.67% (24) strongly agree and 22.22% (20) of the respondents were neutral. And for the question, if stakeholders communicated about the status and milestones of the design 24.44% (22) of the respondents agree, 14.44% (13) of the respondents strongly agree and 22.22% (20) were neutral. The last question under this section is about design issues and impacts 44.44% (40) of the respondents agree, 31.11% (28) of the respondents strongly agree and 15.56% (14) were neutral. According to the results the stakeholders participation and know how on the design process of the road construction is good and their mean is about four(4) except for their understanding and communication on status and milestone of the design process.

4.3.3. Respondents perception on road construction

Table 4-4: Respondents perception on road construction

Items	Level of Agreement in (%)					Mean	Standard Dev.
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree		
Stakeholders informed about the project development timely.	2.22	17.78	22.22	31.11	26.67	3.62	1.132
Stakeholder expresses their views on the construction process.	2.22	4.44	20.00	48.89	26.67	3.98	0.797
Information related to effects on traffic flow during construction is known by the stakeholders.	2.22	8.89	24.44	35.56	28.89	3.80	1.053
Stakeholders have safety precaution information to be used at the road construction phase.	4.44	11.11	24.44	40.00	20.00	3.60	1.069
During the road construction stakeholders made several meetings.	0.00	6.67	24.44	37.78	31.11	3.93	0.919

Tables 4.4 shows that 31.11% (28) of the respondents agree that the stakeholders obtain information about project development and 22.22% (20) of the respondents were neutral

regarding the project plan participation, 26.67% (24) of the respondents strongly agree. And for the question is whether project stakeholders express their opinion at construction stage 48.89% (44) of the respondents agree that the project work was managed 26.67% (24) of the respondent strongly agree and 20.0% (18) of the respondents were neutral. Coming to the other point which is related to understanding traffic flow related impacts 35.56% (32) of the respondent agree while 28.89% (26) strongly agree and 24.44% (22) of the respondents were neutral. And also for the question, if stakeholders given project scope details at planning stage 40.0% (36) of the respondents agree, 20.0% (18) of the respondents strongly agree and 24.44% (28) were neutral. For the last question under this section which is about facilitating meetings through the construction process 37.78% (34) of the respondents agree, 31.11% (28) of the respondents strongly agree and 24.44% (22) were neutral. We can see from the above answers regarding the questions listed the organization has a good project integration management. And the mean for describing the stakeholder engagement on road construction is greater than 3.6 for all of the indicators which depicts, their engagement is adequate.

Summarizing this section with the reflection of the respondents on the open ended question to identify whether the current stakeholder collaboration is adequate or not? If not, what ways have to be used for enhancing their participation? Their feedback indicates that; there are differing views on the effectiveness of the existing stakeholder partnership, according to the responses given. While some respondents indicate happiness with the partnership and offer numerous suggestions for improving stakeholder participation, others express dissatisfaction. Some of the respondents consider the level of stakeholder cooperation to be adequate. But there are others who are displeasure and make several suggestions for improving stakeholder participation. These techniques include setting up meetings, raising awareness of the value of participation, frequent, clear communication, incorporating stakeholders at every stage of the project, and forming a task force or representative organization to monitor and provide input. They emphasize the need to raise community awareness in order to boost stakeholder participation.

There is general agreement among many respondents that the stakeholder collaboration currently in place is encouraging and needs to be improved, for example, by improved communication, engagement throughout the project life cycle, and awareness-building efforts.

4.3.4. Respondents perception on challenges on road construction

Table 4-5: Respondents perception on challenges on road construction

Items	Level of Agreement in (%)					Mean	Standard Dev.
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree		
Issues and challenges presented by stakeholders adequately addressed.	0.00	11.11	22.22	47.78	18.89	3.74	0.903
The project stakeholder were informed about the plan for solving the problems expected	0.00	6.67	22.22	51.11	20.00	3.84	0.838
The stakeholders were proactive to resolve issues.	15.56	15.56	15.56	46.67	22.22	3.76	0.978
Enough and adequate resources were supplied to deal with project related difficulties.	2.22	20.00	37.78	22.22	17.78	3.33	1.075
Stakeholder participation plays vital role for the success of the road project	2.22	0	15.56	33.33	48.89	4.27	0.903

Table 4.5 indicates that 47.78% (43) of the respondents agree that the issues presented by stakeholders have addressed adequately, and 22.22% (20) of the respondents were neutral regarding the project plan participation, 18.89% (17) of the respondents strongly agree. And for the question is whether project stakeholders know the plan in solving the problems faced 51.11% (46) of the respondents agree that the project work was managed 20.0% (9) of the respondent strongly agree and 22.22% (20) of the respondents were neutral. Coming to the other point which is Stakeholders were proactive to resolve problems 46.67% (42) of the respondent agree while 22.22% (20) strongly agree and 15.56% (14) of the respondents were neutral. And also for the question, if adequate resources were supplied to deal with the difficulties stage 22.22% (20) of the respondents agree, 17.78% (16) of the respondents strongly agree and 37.78% (34) were neutral. For the last question under this section which is about importance of stakeholder participation for its success 33.33% (30) of the respondents agree, 48.89% (44) of the respondents strongly agree and 15.56% (14) were neutral. For concluding this section on stakeholders engagement related to giving response to the problems and challenges they faced is good as agreed by the respondents for all of the items and their mean values gives greater than 3.7 except for one which defines their role for supplying adequate resources for overcoming the challenges is not as the others.

In addition to the Likert scale questions above two open ended questions were given to the respondents to have a better understanding on the stakeholders' engagement challenges regarding the construction projects. The first question was what are the most frequent misunderstanding on road construction among the different stakeholders and how can be cleared up? the respondents response shows that; the most common misconceptions in road construction between the various stakeholders include a lack of actual knowledge about road design, unclear responsibility delineation, payment delays, community unrest causing disruptions, challenges related to compensation and cultural/religious sites, discrepancies between design and construction stages, and improper design issues. Misunderstandings can also a result of problems including conflicting priorities, resource shortages, communication problems, and reluctance to share knowledge. It takes better communication, openness, active stakeholder engagement, on-time work completion, and a collaborative approach to achieve shared project goals to resolve these misunderstandings. It is crucial to take into account community issues, plan well, stick to deadlines, and guarantee stakeholder responsibility.

These misunderstandings can be reduced, making road building projects go more smoothly, by encouraging understanding, outlining roles, and creating good communication channels.

The respondents' reaction for the other question which was; what strategies have to be followed by road construction companies for managing conflicting agendas and demands between stakeholders? Depicts that;

Different approaches are needed to manage stakeholders' divergent agendas and expectations in road construction businesses. Initially, it is essential to encourage honest and open communication between all parties concerned. In order to properly resolve problems, it is also crucial to hold ongoing meetings and supply the essential information. Conflicting agendas can be managed by cultivating strong connections with stakeholders through regular communication and incorporating them in decision-making processes.

Additionally, the employment of mediators or external participation with technology and metrics can bring different viewpoints to the table and aid in dispute resolution without doing too much harm. Depending on the seriousness of the disputes, other tactics include engaging in talks, mediation, arbitration, or litigation. In conclusion, balancing competing agendas and demands calls for skills including effective decision-making, adherence to rules, teamwork, problem-solving, and the use of mediation or other conflict resolution techniques.

4.3.5. Respondents perception on importance of the road construction

Table 4-6: Respondents perception on importance of the construction

Items	Level of Agreement in (%)					Mean	Standard Dev.
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree		
Inputs from the stakeholders helped for practicing informed decisions.	0.00	4.44	11.11	53.33	31.11	4.11	0.777

Stakeholder participation increased project profits.	0.00	2.22	20.00	41.11	36.67	4.11	0.818
Project scope and timeframe were determined through stakeholder engagement.	0.00	11.11	31.11	35.56	22.22	3.69	0.963
Throughout the project lifecycle the stakeholder connection were constructive and cooperative.	4.44	28.89	28.89	23.33	14.44	3.13	0.818
Stakeholder involvement assessed routinely and necessary improvements made.	2.22	6.67	28.89	33.33	28.89	3.80	1.007

To give illustration on The result from the above table which indicates that 53.33% (48) of the respondents agree that the stakeholders participation helps for making informed decision, and 11.11% (10) of the respondents were neutral regarding the project plan participation, 31.11% (28) of the respondents strongly agree. And for the question is whether project stakeholder contributions increased project profits 41.11% (37) of the respondents agree that the project work was managed 36.67% (33) of the respondent strongly agree and 20.0% (18) of the respondents were neutral. Coming to the other point which is stakeholder role in determining the scope and timeframe of the road project 35.56% (32) of the respondent agree while 22.22% (20) strongly agree and 21.11% (28) of the respondents were neutral. And also for the question, if stakeholders have constructive connection among them 23.33%

(21) of the respondents agree, 14.44% (13) of the respondents strongly agree and 28.89% (26) were neutral. For the last question under this section which is about assessing their involvement regularly 33.33% (30) of the respondents agree, 28.89% (26) of the respondents strongly agree and 28.89% (26) were neutral. Concluding the section which discusses about stakeholders engagement for tackling the challenges is satisfactory and have a mean value which indicates they are good with the current way. But the mean for item describing about their relation were smooth throughout the project life cycle is around 3(three) which indicates there were arguments and misunderstandings were part of the process.

Participating stakeholders have many advantages; as the respondents describe on the open ended questions there are many advantages to including stakeholders in the planning and design stages of road construction. Primarily, it makes sure that the project plans correspond with the stakeholders' actual demands and objectives, producing a result that is more relevant and effective. It promotes a culture of trust and accountability by giving stakeholders' opinions a chance to be heard and by responding to their concerns. This encourages project action transparency and keeps the project accountable for its choices and activities. Due to the fact that stakeholders believe their opinions are being taken into consideration, their involvement in the project also boosts ownership and sponsorship, which eventually aids in its sustainability.

Additionally, incorporating key players in the planning and design stages reduces miscommunications and disputes. Potential problems and deviations can be quickly detected and resolved, minimizing the need for rework or redesign, through efficient stakeholder cooperation and communication. This results in higher-quality outputs, improved time management, and cost-effectiveness. Furthermore, by drawing on their knowledge and skills, stakeholders' participation promotes improved decision-making. It assists in locating key problems and their solutions, reducing project delays and adverse social and environmental effects.

In conclusion, involving stakeholders in the planning and design stages of road projects has advantages such as tailored project plans, increased ownership, reduced conflicts, improved decision-making, and better project outcomes in terms of quality, budget, and timeliness. The success, enjoyment, and long-term viability of a project all depend greatly on stakeholder involvement.

4.3.6. Respondents perception on environmental, social and economic aspects

Table 4-7: Respondents perception on environmental, social and economic aspects

Items	Level of Agreement in (%)					Mean	Standard Dev.
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree		
The stakeholders contribute to reduce the economic effects of the road construction project.	0.00	2.22	17.78	51.11	28.89	4.07	0.735
The stakeholders express their opinion and suggestion on social effects of the road project.	0.00	6.67	8.89	55.56	28.89	4.07	0.810
Stakeholders made aggressive response to lessen negative social effects.	11.11	22.22	33.33	20.00	13.33	3.02	1.038
The road project enhanced the residents' way of life.	2.22	2.22	17.77	48.89	28.89	4.00	0.881
The stakeholders participated in identifying the possible opportunities and challenges related to socially, economy and the environment.	0.00	4.44	24.44	47.78	23.33	3.91	0.818

Table 4.7 depicts that 51.11% (46) of the respondents agree that the stakeholders take part in reducing economic impacts of the road construction , and 17.78% (16) of the respondents were neutral regarding the project plan participation, 28.89% (26) of the respondents strongly agree. And for the question is whether project stakeholders express their opinion to minimize social

impacts 55.56% (50) of the respondents agree that the project work was managed 28.89% (26) of the respondent strongly agree and 8.89% (8) of the respondents were neutral. Coming to the other point which is stakeholder response towards social impacts were aggressive 20.00% (18) of the respondent agree while 23.33% (12) strongly agree and 33.33% (30) of the respondents were neutral. And also for the question, if the road project enhanced the community way of life 48.89% (44) of the respondents agree, 28.89% (26) of the respondents strongly agree and 17.78% (16) were neutral. For the last question under this section which is about understanding the challenges and benefits of the road project on social, economic and environmental aspects 47.78% (43) of the respondents agree, 24.44% (22) of the respondents strongly agree and 23.33% (21) were neutral. We can see from the above answers regarding the questions listed the organization has a good project integration management. Summarizing what is presented above on identifying stakeholder engagement on social, environmental and economic activities is promising as their mean for most of the items give a value around 4 (four) but for one item on their required aggressive response on reducing social impacts is 3.02 which indicates their response was lower.

4.3.7. Respondents perception on efficiency measures

Table 4-8: Respondents perception on efficiency measures

Items	Level of Agreement in (%)					Mean	Standard Dev.
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree		
Construction schedule of the project adequately evaluated by the stakeholders.	0.00	11.11	22.22	42.22	24.44	3.8	0.942
The stakeholders are informed about quality of the road project.	0.00	6.67	13.33	52.22	27.78	4.02	0.839
Safety issues related to the	4.44	20.00	22.22	31.11	22.22	3.47	1.194

road project handled effectively by the stakeholders.							
Stakeholders engaged on assessing project areas that require improvements.	0.00	2.22	24.44	48.89	24.44	3.96	0.781
Final output of the road project was revealed to the stakeholders.	0.00	0.00	8.89	64.44	26.67	4.18	0.584

What the above table represents is that 42.22% (38) of the respondents agree that the stakeholders evaluate adequately the construction schedule, and 22.22% (20) of the respondents were neutral regarding the project plan participation, 24.44% (22) of the respondents strongly agrees. And for the question is whether project stakeholders informed about the quality of the project 52.22% (47) of the respondents agree that the project work was managed 27.78% (25) of the respondent strongly agree and 13.33% (12) of the respondents were neutral. Coming to the other point which is safety issues are handled appropriately 31.11% (28) of the respondent agree while 22.22% (10) strongly agree and 22.22% (10) of the respondents were neutral. And also for the question, stakeholders give their feedback on areas requiring improvements 48.89% (44) of the respondents agree, 24.44% (22) of the respondents strongly agree and 24.44% (11) were neutral. For the last question under this section which is final output of the project is revealed to the stakeholders 64.44% (58) of the respondents agree, 26.67% (24) of the respondents strongly agree and 8.89% (8) were neutral. We can see from the above answers regarding the questions listed the organization has a good project effectiveness measurement in relation to stakeholders engagement. In overall the mean values and the percentages obtained for each items shows it has a good practice.

The participants of the research presented several approaches can be used to develop a long-term strategy for involving stakeholders beyond the current project for the open ended questions.

Primarily it's crucial to create lines of communication with stakeholders that are both transparent and unambiguous, and to keep in regular contact with them. This can involve setting up meetings, sending out recurrent updates, and handling any potential problems or complaints. Creating a system to store and track stakeholder data, interests, and engagement history is another strategy. This makes it easier to understand the needs and preferences of stakeholders and encourages continued involvement even after the project is finished. Long-term engagement can also be facilitated by regularly assessing stakeholders' performance and holding them accountable.

In general, developing a long-term strategy to involve stakeholders entails cultivating open communication, upholding accountability, developing trust, offering continuing support and training, and setting procedures for resolving issues and disagreements. Road construction businesses can build enduring partnerships with stakeholders that go beyond specific projects by implementing these techniques.

4.4. Results and Discussion of Inferential Statistics

4.4.1. Correlation Results of Project engagement items

Data from the scale-typed questionnaires were loaded into the SPSS software version 26 for processing the correlation analysis in this study.

Finding a relationship between the variables is made easier with the help of the correlation analysis. It enables you to gauge the direction and size of the relationship. The direction of the relationship may be neutral, negative, or positive. The strength of a linear relationship between two variables is measured by a statistic called the correlation coefficient, which ranges from -1 to +1; coefficients ranging from ± 0.9 to ± 0.7 have 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 coefficients ranging from ± 0.3 to ± 0.1 (Dancey & Reidy, 2007).

Table 4-9: Pearson correlation result

		Correlations					
		Planning	Design	Constructi on	ChaImp or	SocEcEnv	Success
Planning	Pearson Correlation	1.000**	.844**	.748**	.593**	.579**	.622**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	90	90	90	90	90	90
Design	Pearson Correlation	.844**	1.000	.841**	.771**	.742**	.761**
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	90	90	90	90	90	90
Construction	Pearson Correlation	.748**	.841**	1.000	.802**	.778**	.814**
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	90	90	90	90	90	90
ChaImpor	Pearson Correlation	.593**	.771**	.802**	1.000	.867**	.897**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	90	90	90	90	90	90
SocEcEnv	Pearson Correlation	.579**	.742**	.778**	.867**	1.000**	.888**
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	90	90	90	90	90	90
Success	Pearson Correlation	.622**	.761**	.814**	.897**	.888**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	90	90	90	90	90	90

Source: Survey SPSS result, 26.0

Pearson=s correlation test has been used; the outcome is shown in in the table below (i.e.table 4.14). The aim of stakeholder engagement in planning, design, and construction, the difficulties and importance of their engagement, social, economic, and environmental qualities, and their effective measures adopted at project completion are all shown by the Pearson correlation coefficients for the variables.

From the above table result we can illustrate that the direction of the relationship for all of the variables is positive. The stakeholder engagement variables on road construction projects regarding stakeholders engagement on planning=0.622 is moderately related with project success whereas stakeholders engagement on designing=0.761, stakeholders engagement on construction=0.814, stakeholders engagement on project challenges=0.897 and stakeholders engagement on socio economic issues=0.888 indicates they are strongly related to project success (effectiveness) as per the results of the correlation.

4.5. Regression Analysis

The purpose of the regression analysis was to determine the extent to which the independent variables (i.e., stakeholder involvement in planning, design, construction, challenges faced, and participation in social, economic, and environmental issues) explain the dependent variables (i.e. success or effectiveness). Regression analysis was used in this study to investigate how stakeholder involvement affected the success of the road building. Brooks (2008) claims that the classical linear regression model (CLRM) is predicated on certain premises, which are addressed in the following sections.

Assumption 1; There is no Autocorrelation

The assumption is met, in accordance with Brooks (2008), when the covariance between the error terms is zero over time or across sections. It is assumed that the errors are unconnected. There is no autocorrelation in the residuals if the Durbin-Watson (DW) test statistic is equal to 2. The study's DW result, which is 1.628, shows that the assumption was accurate.

Table 4-10: Autocorrelation test result

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.930 ^a	.864	.856	.242	1.628
a. Predictors: (Constant), Planning, Construction, Design, Challenges, SocEcEnv					
b. Dependent Variable: Success					

Source: Survey SPSS result, 26.0

Assumption 2; Multicollinearity Test

One variable is identified as collinear if the value of the Variance Inflation Factor (VIF) is higher and according to (Gujarati, 2004) for VIF values of greater than 10. It has been determined how much inconsistency there is in the independent variables. It is demonstrated that there is no multicollinearity between the independent variables by the fact as show below all the variables have VIF values of less than 10 in the table below.

Table 4-11: Multicollinearity test result

Model		Collinearity Statistics	
		Tolerance	VIF
1	Planning	.264	3.789
	Design	.158	6.321
	Construction	.213	4.688
	Challenges	.195	5.118
	SocEcoEnv	.226	4.419

Source: Survey SPSS result, 26.0

Assumption 3; Normality

According to Gujarati (2004), the normality test examines whether the error term has a normal distribution with a constant variance and a zero mean. Here in order to identify the normality of the data the probable value (p-value) for Kolmogorov-Smirnov and Shapiro-Wilk tests have to give a value of greater than 0.05. For this research case the significance values attained were above 0.05, showing that this assumption was likewise supported.

Table 4-12: Normality test result

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Success	.107	90	.120	.945	90	.237
a. Lilliefors Significance Correction						

Source: Survey SPSS result, 26.0

Assumption 4; There is Homoscedasticity

The individual and collective importance of the independent variables for the dependent ones is discovered by ANOVA which stands for analysis of variance by assessing the value of F. The result for F indicates 106.844 for the model with p-value (sig value) is 0.00. Having P-value less than 0.05 and F stat greater than 0 implies, the dependent variables may account for project success (i.e. dependent variable) in road construction when considering them together.

Table 4-13: ANOVA test result

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	31.284	5	6.257	106.844	.000 ^b
	Residual	4.919	84	.059		
	Total	36.203	89			
a. Dependent Variable: Success						
b. Predictors: (Constant), Challenges, Planning, Construction, Design, SocEcEnv						

Source: Survey SPSS result, 26.0

Model Summary

Table 4-14: Model Summary of the analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.930 ^a	.864	.856	.242
a. Predictors: (Constant), Planning, Construction, Design, Challenges, SocEcEnv				

Source: Survey SPSS result, 26.0

Discussion of Regression Results

The regression result presented in table 4.14, for the purpose of showing the effect of stakeholder engagement on project success was analyzed considering both theoretical and empirical literatures. Depending on the values of coefficient estimates (β) and sig. value (p-value) the direction and significance levels can be determined.

Table 4-15: Predictor variables weights in the test

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.468	.168		2.787	.007
	Planning	.050	.067	.059	.749	.045
	Design	.033	.085	.040	.393	.029
	Construction	.123	.069	.155	1.781	.008
	Challenges	.405	.085	.432	4.744	.000
	SocEcEnv	.351	.076	.388	4.592	.000

Source: Survey SPSS result, 26.0

As the result presented on the table above, the coefficient estimate (β) for stakeholders engagement on planning is 0.050 with the corresponding p-value of $0.045 < 0.05$ which indicates that keeping the other variables constant, a unit increment on stakeholders engagement on planning results in an increase in project success. Therefore the result implies there is a positive relationship among engagement on planning and project success. For the other variable regarding stakeholder engagement on designing stage the coefficient estimate (β) is 0.033 and sig. value of $0.029 < 0.05$; hence keeping the other four factors a unit increase by stakeholders engagement on design outcomes 0.033 unit increase on project success. Consequently, the design stakeholder engagement on has positive effect on project effect. Regarding to stakeholders engagement on construction as it is presented on the table above the coefficient estimate (β) 0.123 with p-value of $0.008 < 0.05$; showing the engagement of stakeholders on construction has a positive impact on project success. And keeping the other variables constant a unit increase on construction causes

0.123 unit increment on project success. The fourth variable to be discussed is the stakeholder engagement on challenges related to road construction project; for the coefficient estimate (β) equals 0.874 and p-value of $0.000 < 0.05$, indicating that a unit increase on stakeholders engagement on project challenges results 0.405 unit increase on success of the project keeping the other variables constant. The last variable is stakeholders engagement on social, economic and environmental issues which shows results of 0.351 for coefficient estimates and p-value of $0.000 < 0.05$, indicating there is an outcome of 0.351 unit increase on project success with holding the other variables constant for the stakeholder engagement. Moreover, the relationship between the variables and the project success is positive as it was before for the other independent variables.

CHAPTER FIVE

5. SUMMARY, CONCLUSION AND RECOMENDATION

5.1.Introduction

This last section of the study provides a summary of the results from the research questionnaire replies. The conclusion has been reached based on the findings of the replies provided and relevant literature with regard to the research topic. The recommendation for the current stakeholder engagement gap is presented.

5.2.Summary of major finding

The roles of stakeholders in AACRA road projects are the main subject of this study. The overall findings of the research can be summarized as the following; the majorities of respondents were men, had first-degree holders' experience ranging from 5 to 10 years. Only 2% of the total responses have more than 20 years of experience. According to the respondents' organizational makeup, consultants make up the majority of the respondents (42.2%), while clients make up the least amount (21.1%), which is due to the fact that clients have fewer people who can manage and take part in more projects than consultants.

The study's primary data were collected using Likert scale questioners, which was summarized in the study's descriptive results. According to the respondents' knowledge of their current project stakeholder engagement practices in planning, design and construction stage of road projects. As well as assessing the major social, economic and environmental influences and efficiency measurement as a result of stakeholder engagement practices roles in the case of Addis Ababa City Roads Authority.

From the descriptive result, the majority of the variables presented for the respondents are significant and generally agreed upon. The stakeholder engagement in planning, design and construction phase is obtained satisfactory. Their engagement in efficiency measurement and input for economic, social, and environmental issues were also found essential and played a significant influence in its improvement. Generally, with the exception of a few, the respondents indicated that there are satisfactory practices in relation to the characteristics listed on the Likert

scale inquiry. The majority of the factors have greater percentages of agreeable responses, and the mean values for all of them are close to four (4), demonstrating that stakeholder participation in road development is currently going well.

The results from the open ended questions show that stakeholder collaboration currently in place is encouraging but it needs further improvement and this can be enhanced through setting up meetings, raising awareness of the value of participation, clear communication, incorporating stakeholders at every stage of the project is important. There are some frequent misunderstandings on road construction among the different stakeholders which includes unclear responsibility delineation, community unrest causing disruptions, challenges related to compensation and cultural/religious sites. The strategies to be followed by road construction companies for managing conflicting agendas Conflicting agendas can be managed by cultivating strong connections among them or depending on the seriousness of the disputes, other tactics include engaging in talks, mediation, arbitration, or litigation. The other finding was benefits can be obtained as a result of involving stakeholders in the planning and a design phase of road which promotes a culture of trust and accountability by giving stakeholders' opinions a chance to be heard and by responding to their concerns. A long term approach to engage stakeholders can be achieved through this can involve setting up meetings, sending out recurrent updates, and handling any potential problems or complaints. Creating a system to store and track stakeholder data, interests, and engagement history is another strategy.

For the purpose of showing the link between the effects of stakeholder engagement on project success regression analysis were used. Prior to these assumptions were taken to verify whether they are okay to proceed on. According to the result all of the independent variables have a positive impact with various degree of influence by which the higher influence comes from stakeholder engagement on challenges around 40.5 %, 35.1 % as a result of engaging on socio economic issues, 12.3 % engagement on construction phase and lower influence result from engagement on planning and design stage with 5.0 % and 3.3 % respectively.

5.3.Conclusion

Prior studies and research in the study's field were incorporated through an empirical evaluation. Based on the literature review, a testable hypothesis was formed, and a conceptual framework was made to investigate the impact of the variables of defining the purpose of stakeholder

involvement in planning, design, and construction, assessing the key social, economic, and environmental influences, and efficiency measurement.

A self-made questionnaire was prepared using the 5-point Likert scale from the study framework guide. Following that, 90 participants (87% response rate) were queried for information. The statistical analysis was carried out using SPSS version 26.0 and Excel spreadsheets. For the purpose of describing the phenomena exhibited by the variables under study, descriptive, correlational and regression analyses were used. From the descriptive statistics, it can be concluded that respondents believe the variables presented in questionnaire to be significant and acceptable. With the mean values circling around four (4) on the Likert scale, the respondents strongly agreed with the majority of the variables. This demonstrates that the stakeholders' engagement in road construction is now proceeding well and is well received. But there were some variables with average acceptance and practice ratings from the respondents. These characteristics may require additional attention and emphasis in order to increase stakeholder participation and positive output in road development.

The results of the open-ended questions and suggestions demonstrate that stakeholder collaboration is currently developing but needs to be improved. This can be done by organizing meetings where stakeholders can exchange ideas and build understanding, by promoting the importance of participation, by establishing clear channels of communication. Coming to the next point through stakeholder engagement practice the respondents benefited as it promotes a culture of trust and accountability. The other point made here is that miscommunications frequently happen in road construction as a result of various circumstances, some of which can be stated. These circumstances include responsibility delineation uncertainties and issues connected to compensation. And the response can go even farther and involve litigation, arbitration, or mediation to resolve these misconceptions and divergent viewpoints.

The findings from the correlation and regression analysis indicate that there is there is a positive and strong relationship among the variables and the project success. Therefore, the results indicate proper engagement of stakeholder can enhance the success of road construction projects on AACRA projects. Additionally, the findings of the study indicate that project success mainly influenced by engagement of stakeholders on road construction challenges, followed by their engagement on socio-economic issues and third stakeholder engagement on construction phase. On the other hand stakeholder engagement on planning and design phases gives the lowest

impact rate on the success of the project. Therefore, stakeholder engagement on socio-economic related issues has much influence on road construction development.

In conclusion, effective long-term stakeholder engagement in road construction projects necessitates a combination of measures that enhance ongoing communication, address concerns, and foster relationships. As mentioned previously, scheduling regular meetings enables direct communication and information sharing. Furthermore, responding quickly to any possible issues or complaints shows a dedication to stakeholder satisfaction. Last but not least, developing a system to store and track stakeholder information, interests, and engagement history allows for a more customized approach and aids in understanding their requirements and preferences. Establishing meaningful and fruitful connections with stakeholders can help to ensure their ongoing projects well.

5.4.Recommendation

According to the research's findings and conclusions, the researcher makes the following suggestions to support and aid the authority in enhancing the organizational culture and boosting organizational effectiveness.

- Among the variables on the Likert scale some of them shows lower agreement levels comparing to the others and needs further research to identify the underlying reasons. The list of these variable which needs for further investigation includes the questions; stakeholders given project scope details during planning phase, the status and milestones of the design process adequately communicated among the stakeholders, throughout the project lifecycle the stakeholder connection were constructive and cooperative and stakeholders made aggressive response to lessen negative social effects needs further research to identify the underlying reasons. Moreover, the results from the regression also show some of the factors have minimal impact rate on project success and needs further actions.
- Establishing a framework for conducting regular meeting is required. The stakeholders now have a chance to come together, exchange insights, obtain comments, provide updates, and work on project-related issues. These can assist in creating diverse views to be thought about.

- Communication channels need to be enhanced for ensuring effective and timely dissemination of information to the stakeholders. Using clear and concise language to pass details of the project, activity progress and obstacles that are tackled required information can transfer through different platforms such as social media, websites and regular meetings.
- Stakeholders must be involved in the project lifecycle. Their comments and suggestions help shape the project's goals and tactics. These could increase stakeholders' feelings of ownership.
- Potential problems must be recognized and handled proactively. In order to accomplish the project's main objective, complaints from stakeholders and problems must be swiftly identified. Open lines of communication must be maintained in order to provide prompt problem resolution.
- Establish management system to store centralized data to track stakeholder interest, previous challenges, coping mechanisms and history of their engagement. Using this system key stakeholder and their preferences identified easily.
- It is necessary to execute routine monitoring and evaluation procedures in order to measure stakeholder engagement. The results of the evaluation help to increase their commitment to upcoming projects.

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QUESTIONNAIRE

Questionnaires

A survey on the role of stakeholder engagement and their impact on road construction projects; In the case of AACRA

Dear Sir/Madam

The purpose of this survey is to obtain data for the specified study being conducted as a partial fulfillment of MA Degree in Project Management at Addis Ababa University School of Commerce. On this questioner issues related to planning, design, construction practices have included. Additionally social, environmental and economic issues are tired to be assessed. Challenges and importance of the stakeholder engagement is the other points presented for respondent's feedback.

There are three parts to the questionnaire. First, there is a section with respondents' private information. The second section, which gauged how much respondents agreed, refrained from responding, or disagreed with the claims, was created to gather information on topic the role of stakeholder in road construction projects. The last part of the question is comprised of open indeed questions to obtain some additional information that were not addressed on the second section and require detailed answers. You are kindly requested to tick (✓) the extent to which you agree with the statements given in the table below.

All the data included on this questionnaire will be used only for academic research purpose and will be kept confidential.

I already want to say thank you for your valuable time and cooperation.

Dagnachew Mane

Part I: Personal information of the respondents

1.1. Name of organization (Optional): _____

1.2 Academic Status

PhD. _ MSc. Degree: , BSc. Degree: _Diploma: Other_

1.2 Age of the respondent

_____25-35 years: __35-45 years: __45-55 years__≥55years

1.3 Gender of respondent:

Male: __ Female_

1.4. Type of Organization:

Client/Employer: __, Consultant: _____, Contractor: __, Sub contract: _____

If any please specify, _____

1.5. Total years of experience::

<5 years: __5-10 years: __10-15 years: __15-20 years__≥20years_____

1.6. Years of experience on this organization:

<5 years: __5-10 years: __10-15 years: __15-20 years__≥20years_____

Part II- Sign (√) mark on the option that you agree on the space provided

	To study the role of stakeholders on Planning, Design and construction	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
1	The project stakeholders (i.e. client, consultant, contractor, community,..) were participated on project planning.					
2	The project stakeholders (i.e. client, consultant, contractor, community,..) were aware of the goals and objectives of the road project.					
3	Stakeholders express their opinion on the project planning phase.					
4	Stakeholders given project scope details during planning phase.					
5	Project stakeholders know the time frame of the project on the planning phase.					
6	During the design stage stakeholders (i.e. client, consultant, contractor, community,..) input were considered.					
7	Priorities of stakeholders were clearly understood and incorporated into the design.					
8	The design meets transportation demand and quality of the stakeholder.					
9	The status and milestones of the design process adequately communicated among the stakeholders.					
10	Design outcome issues and impacts notified and discussed among the stakeholders.					
11	Stakeholders informed about the project development timely.					
12	Stakeholder expresses their views on the construction process.					
13	Information related to effects on traffic flow during construction is known by the stakeholders.					
14	Stakeholders have safety precaution information to be used at the road construction phase.					
15	During the road construction stakeholders made several meetings.					

	Related to Challenges and Importance	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
16	Issues and challenges presented by stakeholders adequately addressed.					
17	The project stakeholder were informed about the plan for solving the problems expected					
18	The stakeholders were proactive to resolve issues.					
19	Enough and adequate resources were supplied to deal with project related difficulties.					
20	Stakeholder participation plays vital role for the success of the road project					
21	Inputs from the stakeholders helped for practicing informed decisions.					
22	Stakeholder participation increased project profits.					
23	Project scope and timeframe were determined through stakeholder engagement.					
24	Throughout the project lifecycle the stakeholder connection were constructive and cooperative.					
25	Stakeholder involvement assessed routinely and necessary improvements made.					

	Related to Social, economical and environmental Issues	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
26	The stakeholders contribute to reduce the economic effects of the road construction project.					
27	The stakeholders express their opinion and suggestion on social effects of the road project.					
28	Stakeholders made aggressive response to lessen negative social effects.					
29	The road project enhanced the residents' way of life.					
30	The stakeholders participated in identifying the possible opportunities and challenges related to socially, economy and the environment.					

	Related to effectiveness measuring	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
31	Construction schedule of the project adequately evaluated by the stakeholders.					
32	The stakeholders are informed about quality of the road project.					
33	Safety issues related to the road project handled effectively by the stakeholders.					
34	Stakeholders engaged on assessing project areas that require improvements.					
35	Final output of the road project was revealed to the stakeholders.					

Part III- Please give short answers for the questions below

1. Do you think the current stakeholder collaboration is adequate? If not, what ways have to be used for enhancing their participation?

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2. What are the most frequent misunderstanding on road construction among the different stakeholders and how can be cleared up?

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3. In your opinion, which benefits can be obtained as a result of involving stakeholders in the planning and design phases of road?

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4. What strategies have to be followed by road construction companies for managing conflicting agendas and demands between stakeholders?

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5. What mechanisms do you advise for creating a long term approach to engage stakeholders that extends beyond the current project?

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