ST. MARY'S UNIVERCITY
SCHOOL OF GRAGDUATE STUDIES
MASTER OF ARTS IN PROJECT MANAGEMENT

ASSESMENT OF FACTORS AFFECTING PROJECT IMPLEMENTATION:

THE CASE OF SELECTED OVERPASS

BRIDGE AND APPROCH ROAD PROJECT ADDIS ABABA CITY ROAD AUTHORITY

By: SHIMELES BIRU

JUNE, 2022
ADDIS ABABA, ETHIOPIA

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APPROVED BY BOARD OF EXAMINERS

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Advisor	**signature**
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Name of examiner	**signature**

DECLARATION

The under designed declared that this paper entitled assessment of factors affecting project implementation practice the case of ACCRA the out sourced of selected Overpass Bridge and Approach Road Project that is done around Bole CMC, "is my original work. I have carried out this research paper work independently with the guidance and support of my research paper advisor. This study has not been submitted any degree/diploma in my institution and that all sources of materials used for the study have been duly acknowledged.

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Name signature

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ENDORSEMENT

This thesis has been submitted to St.mary's university student of graduate studies for examination with my approval as a university advisor.

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Advisor signature

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Acknowledgments

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Shimeles Biru

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LIST OF ACCRONYMS

AACRA: Addis Ababa City Road Authority

DV:-Dependent Variable

IV:-Independent Variable

APMBoK:-Project Management Book of Knowledge

Abstracts

AACRA (Addis Ababa road Construction Authority) is one of the governmental Organizations in the city administration of Addis Ababa. The mission and responsibility of the organization constructing asphalt roads, bridges, drainages and other access roads according to the defined design with different resource materials by itself and In addition to constructing road projects using local and foreigners contractors by outsourcing the projects. Unfortunately project implementation process is challenging for the organization because of several reasons.

Available evidence indicates that a lot of challenges with project implementation process particularly on out sourcing road projects. Most out sourced projects not completed with the desired goal of the organization objective. The reporting data on the archive of the organization documentation center clearly shows that, the challenging has been continued. The objective of this study to investigate factors affecting project implementation and to address the integrated solution and fill the gap of project implementation by the outcome of the study. Explanatory research will be conducted in the study by using different literature reviewing about the subject matter and collocating relevant data which used for computation of the performance evaluation indicator with mixed use qualitative and quantitative method. The study's sample will be drawn using basic random sampling. All concerned body participates in the study as a frame sample.

Keywords: Project implementation, project managers competency, Project equipment, Project fund, project integration

CHAPER ONE
INTRODUCTION

1.1. Background of the Study

Wandersman, (2009.Project implementations defined as "a specified set of activities designed to put into practice an activity or program of known dimensions", What is proposed in the project document (i.e. transforming the project proposal into the actual project.) or Management of the project or executing the project intentions. The process of project implementation, involving the successful development and introduction of projects in the organization, presents an ongoing challenge to managers. The project implementation process is complex; usually requiring simultaneous attention to a wide variety of human resource, budgetary, and technical variables. Projects implementation is usually preceded by a well-defined project plan meant to guide during the implementation stage. However, there usually arise variations as activities progress.

Jeffrey K. Pinto (1998), To successfully implement a project usually difficult and complex. The implementation stage is the most challenging one. During the implementation of projects, commitments are designed to achieve the projects of the desire results as well as determine the success or failure of the projects. Most of the time success of any project can be defined based on several things, some of are, timeliness, working within the budget and meeting stakeholder's expectations. Likewise failure of any project would entail several things which may include: lateness of the project in terms of not adhering to the initial schedule, cost ineffectiveness dissatisfied stakeholders and failure to be accountable. In terms of implementation, details of the project and high team coordination requirements are the basic issue.

The project manager has to devote more time on human, financial and technical variables as key to the realization of project implementation. From available literatures it is apparent that the following determinants are the ability to affecting project implementation. This in-exhaustive list includes: contractors performing below standard and expectation, insufficient budget ,change in the original design, poor planning or shoddy work by architects, escalation of project cost due to inflation, specification of costly and imported materials. There are lots of Factors that lead to success of projects. Among those factors Good management practice and Involvement of

beneficiaries or community, stakeholder participation, Political Commitment and detail of plan Design, are the fundamentals. The success of the contractor and the project manager will usually be judged according to how well they achieve the three primary objectives of cost, performance and time.

Ika, & Donnelly (2017).Studies on project management developed several success factors for successful project implementation, among those are Clearly defined goals including the general mission of the project as well as commitment to those goals on the part of the project team members, competent project manager, top management support, competent project team members, sufficient resource allocation, adequate communication channels, control mechanisms, feedback capabilities, and responsiveness to clients. The above lists represent some of the factors that for successful project implementation.

In Ethiopia there are a lot of developmental programs. Among those program's road construction sector is the first and playing the major role. Its importance emanates largely from the direct and indirect impact it has on all economic activities. It contributes to the national output and stimulates the growth of other sectors through a complex system of linkages.

Wambui, Ombui & Kagiri (2015). Efficient road construction projects can provide a solid platform for reviving the economy and for building a more balance and independent economy during stable political conditions. The consequences of bad performance on road construction may be loss in productivity, additional expenditures by way of rework and repair, in the short term. In the same scenario poor efficient can hurt reputation of the organization in the long term, for achieving this road project goal, project management can play a great role by identifying factors which are outside the control of the project management which could determine the success or failure of a project implementation.

Helping the Addis Ababa city roads authority to identify the critical attributes responsible for achieving the desired efficient level (success factors) and also to find the attributes adversely affecting the project implementation efficient (failure factors) has been the motivating factor behind this study. Realizing these aspects, the study undertaken to suggest ways to improve efficient as well as to take care of certain critical factors that may lead to loss of efficient road construction in Addis Ababa City Road Authority out Source projects.

1.2. Statement of the Problem

The research undertaken in the construction sector shows that road construction faces numerous challenges. Many of construction operations challenges are the direct result, while others are indirect results. Nguyen, & Ogunlana (2004). Amazingly construction issues are not the challenges of projects, rather by the construction managers addressed and managed to ensure project success. The demanding realities of the planning and control of construction operation that faces the project to understand particularly by the construction managers, it is critical. Construction projects do not always meet their goals. Available evidence indicates that, there is a lot of challenges on road construction projects due to different reasons. A large number of projects manifested that have cost overrun, delayed completion period and poor quality resulting to collapsed constructions, in addition to high maintenance costs, not functional properly, and dissatisfied clients .

A previous research suggests that building projects characterize a unique set of things to do that must be taken vicinity to produce a special product or deliverable. Ika, (2009) The constriction task is often recounted as successful when it is completed on time, within budget, and in accordance with specifications and to the stakeholder's satisfaction. Some time, beyond the control of the management there are many factors which should decide the success or failure of a project. However, the success of a assignment is judged by means of assembly the criteria of cost, time, safety, resource allocation, and first-rate as determined in the preliminary planning process

Road construction projects can activate the economy of once country, during peaceful and stable political conditions. When there is a good performance of project implementation during construction process it helps to mitigate the objective of the project, while under target or bad performance on the project can hurt once country economy by demanding of rework in the short term, While in the long term it may have effect on the country trade and investment development. Roads can help in minimizing poverty and building a more independent economy, if there are problems on construction of road projects that could have a negative effect on poverty reduction to once country economic development. In Ethiopia especially in Addis Ababa There are lots of road construction projects that didn't get accomplished according to the plan or the required design specification of the organization, as well as those road construction projects may consume more than the initial budget regarding to the finical plan and consume more time regarding to the schedule period which is written in the contract document of the project.

Previous researches have shown that construction initiatives signify a special set of things to do that must take location to produce a special product Gann, & Salter (2000). However, the success of a project is judged through meeting the standards of cost, time, safety, resource allocation, and

high-quality as determined in the initial planning process. In spite of an apparent hole between project success and completion, a direct connection between them nevertheless exists. Numbers of research elevate a query of slows down progress in this location related to a success judgment. Discussing success factors it would be logical to address a definition of task success which in turns is prompted by means of several factors. Roads can help in minimizing poverty and constructing a greater unbiased economic system and if there are troubles on construction of road initiatives that may want to have a bad impact on poverty reduction and as soon as the country financial development. Therefore this study seeks to assess the factors influencing project implementation of road construction which is the Out Sourced projects in under Addis Ababa city road Authority see what factors can have affect while implementing the road construction project

1.3. Research Question

- How does project managers competency influence road construction projects implementation?
- How does project equipment influence road projects implementation?
- How does project funds influence on road construction project implementation look like?
- How does project controlling effects on project implementation?
- How does the influence of external stakeholders look like the magnitude and level of integration on project implementations?

1.4. Objective of the Study

The overall objective of the study is to Asses factors affecting project implementation practices under the Addis Ababa city Roads Authority, Out Sourced projects with a focus on selected project of selected Overpass Bridge and Approach Road Project.

1.4.1. Specific Objectives of the Study

- To assess how the competency level of the project manager have effect on project implementation;
- To assess the experience of the project in terms of managing the available construction equipment;
- To assess the influence of project funds on road construction projects Implementation;
- To assess the effect of project controlling on project implementation, and
- To examine the effect of integration with pertinent stakeholders

1.5. Significance of the Study

The study of this paper has great advantage for the contractor as well as the organization. Because the study can determine those factors that can affect on the project implementation. Therefore the study to take an urgent measure to attain the goals of the road construction projects of Addis Ababa City Road Authority according to the objective. The study encourages further researchers on the area to made research as it's not exhaustive. It is also can benefit scholars who would wish to undertake further studies aimed to identifying and assessing the factors that can have great influence on road construction projects implementation.

1.6. Scope of the Study

The study was conducted focusing on the selected Overpass Bridge and Approach Road Project that is done around Bole CMC, which is out sourced by the Addis Ababa city Road Authority. The study targeted a population of 100 respondents from the Contractor in order to assess factors affecting project implementation practices. 80 permanent staffs of the project 20 staff contract employee members are target population in the data collection process. The study was scatter at the selected Overpass Bridge and Approach Road Project by targeting across the employees of various staffs which include Forman, engineers, project manager, operator, surveyor and drivers.

1.7. Gap of the Study

The study may encountered the following problems: when conducting the study the researcher does not have good experience but the student researcher tries to fill this gap by referring different books and by conducting with the advisor in addition to communicating with different experienced people.

1.8. Definitions of Terms

- **Project**: It is a sequence of tasks that must be completed to attain a certain outcome.
- **Project implementation**: is a specified set of activities designed to put into an activity or program of known dimension.
- **Road Construction**: the act of constructing any new road construction or Reconstruction of existing roads to be used by the community

1.9. Organization of the Study

The study organized in five chapters; the first chapter is an introductory part of the study which introduces the overall study. This part consists of background of the study, statement of the problem, research question, objective, significance, and gap of the study. The second chapter focuses on review of related literatures in which previous studies are conducted. In this chapter theoretical literatures, theoretical frame work, empirical review and conceptual frame work which is written on factors that can affect road construction projects implementation are included. The third chapter consists of research approach, research design, population and sampling technique, sources of data, data collection instruments, procedures of data collection, data analysis method, reliability test, model and variable specification and ethical consideration. The fourth chapter focused on analysis of the collected data from respondents using SPSS20 software to analyze quantitative data. the fifth chapter presents a summary of the study findings and comes up with conclusions based on the outcome of the data collected and analyzed with different methods and based on the finding of the study recommendation are made

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Theoretical literature

2.1.1 Concept of project implementation

There is growing recognition that different types of projects require different approaches to their management, requiring management procedures tailored to the needs of the project and project managers selected with appropriate competencies Müller & Turner (2007). Increasing globalization of projects and project management adds to this diverse mix, creating intercultural challenges for project managers Ostrom, et,al (1999). Professional associations are beginning to recognize this diversification of project management. The project management literature agrees that there are two components of project success. Jugdev & Müller (2005).

Achieving project success is becoming more important in the highly competitive construction industry. Large and complex construction projects are becoming more difficult to complete successfully in developing countries. Spinner, M.P. (1997). The quest for achieving greater productivity in road construction projects, and their quality need has been the desire of road project clients in financing projects involving huge contract sums, yet this vision keeps failing due to the perceived "conflicts of interest" existing among project parties. In addition, many projects have failed due to the inability to maintain standard procedures and the required operational effectiveness regarding the attainment of targeted project goals.

The World Bank (2003) mentioned that some of these procedures are loose and are often supplemented by circulars that are unclear and often contradictory and this greatly influence project outcome. Clearly, the study has shown that seven out of ten projects surveyed suffered delays in their execution. Mbinya, (2018). Several researchers have addressed similar studies on cost overruns, unbudgeted financial burdens, disputes, arbitration, adversarial relationships, cash flow problems and time overruns, Udofia, Hadikusumo & San Santoso, (2015).

2.1.2 Factors Affecting Project Implementation

2.1.2.1. Project Manager's Competency

Thus, competence covers non-public characteristics (traits as understood via the characteristics college and emotional intelligence),knowledge and abilities (including talent and problem-solving ability, as nicely as administration skill).However, it goes on to exhibit that different competence profiles are fabulous in special circumstances, protecting the contingency school. Finally, personal characteristics also encompass charisma and vision, and it is feasible to construct up specific competency profiles to suit distinctive types of leadership such as transactional and transformational leadership.

Types of Competence

Frame, J. D. (1995) show that many of the authors identify up to four types of competence that determine leadership performance (Kets de Vries & Florent-Treacy, 2002;Marshall, 1991; Zaccaro et al., 2001):

- Cognitive
- Behavioral
- Emotional
- Motivational

Based on their own observations and their analysis of the literature, Dulewicz and Higgs (2003) suggest that three types of competence explain most managerial performance:

- Intellectual (IQ)
- Managerial skill (MQ)
- Emotional (EQ).

From the above list, they have broken cognitive into intellectual (intelligence and problem solving abilities) and managerial (knowledge and skills of management functions). They have combined emotional, behavioral and motivational (Barnard's cathectic functions) into one. intellectual competence (IQ) accounts for 27% of leadership performance, managerial competence (MQ) accounts for 16%, and emotional competence (EQ) accounts for 36%.Emotional competence is therefore the most significant, but the other two are important, as Barnard and Confucius suggested.

Competence is the capability of an individual to do a job properly. A competency is a set of defined behaviors that provide structured information enabling the identification, evaluation and development of the behaviors in person personnel. Bolden, Gosling, et, al (2003) Competencies are additionally what humans need to be successful in their jobs. Job potential are not the identical as job task. Competencies consist of all the associated knowledge, skills, abilities, and attributes that form a person's job. This set of context-specific traits is correlated with most advantageous job performance and can be used as a well known towards which to measure job overall performance as properly as to develop, recruit, and rent employees. By having expertise defined in the organization, it allows personnel to understand what they want to be productive. When suitable defined, competencies, approves organizations to consider the extent to which behaviors personnel are demonstrating and the place they might also be missing (Lewis, James P. 1998). Based on the overview of Shtub, Avraham, Bard, Jonathan, & Globerson, Shlomo (1994). the position or duties that should be on every venture manager are shown below:

Providing Feasibility Studies, Project Summary, and Project Strategy

Before begin any construction project, the assignment manager should make a survey on the kingdom of the site. The mission manager have to also be knowledgeable in a study on the kingdom of improvement of the site to be made or a construction through determining what kind of gear or equipment that desires to be organized to start a construction. The project manager also must think about accessibility of heavy vehicles into construction site. After making feasibility studies on the construction site, the project manager should also provide a project summary report form in order to carry out the next process with ease and according to a predetermined plan. When completed the project summary, project manager should also provide project strategy from early stages until the completion of the project. Barnes, (1988).

Planning Activities, Tasks, Schedules and Budgets

The important of the planning provided by a project manager is to avoid any problems during the process of construction project. In planning activities, the project manager can forecast any incremental of budget if completed projects exceed the expected time. Project managers needs to provide planned work schedule, so that every part of the work must be completed according to the plan. Besides that, the project manager also has the responsibility to manage the budget that has been provided from the client or developer to complete the construction project (Smith, K.A. 2000)

Managing the Human Resource

In managing human resources, the project supervisor has to also center of attention on people ethics in the process of finishing construction. Employee ethics is emphasized due to the fact in order to preserve the challenge going for walks easily and to avoid any issues arising. If the employee does now not follow a predetermined ethics in work ethic, managers want to take motion as quickly as viable by means of giving the sentence. This is because, to warn other employees to usually be ethical in work. Schwalbe, (2009).

Manage the Project Quality and Safety and Health

The first-class of the project is one of the achievements that have to be accomplished by means of the undertaking manager in order to exhibit the competence or has the nature of outstanding management in managing a project. The first-class of the challenge is additionally vital for a reduced in size organization to make certain that the mission has been properly managed with the project manager and comfy the client. Worker's security and fitness is very vital in order to reduce accidents and fatalities. This situation is managed through strict law. Spinner, (1989).

Monitoring the Project Progress

The next position or obligations as a project manager is to control the monitoring of projects, and screen progress report. In monitoring the development of the project, the assignment manager should ensure challenge development that has been made is on schedule. Lewis, James, (1998)

Commissioning of Mechanical and Engineering Packages

Administer project closed-out by carrying out commissioning of Mechanical and Engineering packages, organizing handing over activities and performing contract closed-out, post-contract evaluation and post mortem review Lewis, James (1998).

Leadership Characteristics Skills

Communication

This communication is additionally the simple abilities for a task leader, this is due to the fact conversation is the capacity of a project manager or chief to listen, persuade, and to recognize what others imply by their behavior. Communication capabilities for leaders in managing tasks are wished in reaching the goals of a project. As a skilled leader in communicating this way may additionally make it simpler to engage between undertaking leader or project manager with the workers, in the case of any problems occurring on development initiatives that can be done rapidly and without problems. Conrad, (2014).

Problem Solving and Decision Making

For a leader it is essential to understand how to resolve a problem, how to distinguish the source of the problem, pick out realistic solutions, and the last action is to put in force it. Between the elements in problem fixing is blanketed in the problems to be solved and selections need to be made to remedy the issues that have come about. Mumford, Zaccaro, (2000).

Team Building

As a project manager also have to engage in crew building competencies as integral for the success of a project. For each choice made by means of a project manager or a chief must be recognized with the information of their subordinates, due to the fact humans surely need to recognize what precisely is required of a leader, or a sharing of information and learning, and in the determination method for an authentic group leader. Conrad, (2014).

Conflict Resolution

In a construction project undertaken, typically the struggle is a predominant hassle that have to be faced by way of the project manager or project leader. As a project manager to unravel conflicts is a very tough project in keeping the situation of the task ran smoothly. In this chapter, this war can be defined as the difference between two or greater trusts, the fighting of ideas in solving a problem, or hobby in assignment administration Conrad, (2014).

Planning and Goal Setting

Planning in accomplishing an objective is important, because as a project manager should be smart and wise in preparing any planning procedure has been designed so that each and every construction project can proceed smoothly. As a chief in managing a task additionally want to draw roads and planning with the aim that all the goals of the project construction technique can be effectively carried out. Poister, & Streib, (2005).

Sense of responsibility

In the tournament of any issues involving workers, as a chief or project manager must sense responsible for the project manager should take care of each and every employee. Besides that, if there is any conflict on-site construction project manager needs to manipulate the hassle because it has emerge as my responsibility as a manager in controlling the problem. The project manager is also accountable for main initiatives in various elements to the universal success of a project, which include cost, schedule, best and safety necessities. Poister & Streib (2005).

Time Management

Based on the study Spinner, (1989), time is an important component of the construction process. If as a project manager who leads a project did not manage time accurate can lead to delays in the completion of a project. The delays in the completion of a mission can result in extra costs to the provision in a construction project. In addition, as a project manager who leads the project

must be smart enough to decide and manage techniques in time to prepare a progress with the aid of degrees which have been designed in the Critical Path Method.

2.1.2.2. Project Equipment

Equipment are the tools, machines, or other things that you want for a specific job or undertaking Tangible property (other than land or buildings) that is used in the operations of a business. Examples of equipment include devices, machines, tools, and cars. Ahuja, Dozzi & Abourizk, (1994).

Krazner (2005) defined development gear as to heavy obligation vehicles, specifically designed for executing development tasks, most regularly ones involving earthwork operations. They are also acknowledged as heavy machines, heavy trucks, construction equipment, engineering equipment, heavy vehicles, or heavy hydraulics. They generally contain five equipment systems: implement, traction, structure, energy train, control and information Heavy gear functions thru the mechanical gain of a simple machine, the ratio between input pressure applied and pressure exerted is multiplied.

Some equipment makes use of hydraulic drives as a most important supply of motion. The management of construction tools is a hard task. There are two options with the development organization both purchase the equipments or take on rent. Equipment prices may also range from 5% to 10% of the universal building price of a constructing to 40% or extra of the whole cost for a public-works project. Given the high value of equipment, the purchaser lease selection has a substantial affect on organization profitability. In heavy construction works, optimizing gear decision based on financial collaboration analyses has a predominant function in the success of foremost development projects.

For construction projects, particularly the heavy civil work projects, gear is comprehended as one main useful resource that undertaking managers depend upon to operate the required work. Equipment may also be owned by means of the organization or rented for a period of time. Equipment fleet may symbolize the greatest investment in the lengthy time period for development companies. This step is viewed integral in order to evaluate the condominium alternative and to help decision-makers. The economic evaluation of building equipment is mostly targeted on figuring out the proudly owning and running expenses as properly as the financial lifestyles for each kind of equipment. In order to right complete the gear not pricey analysis, all expenses associated with the selected gear need to be considered. Frame, (1995) described that tools determination is a critical element in the execution of many building projects. This is to be an awful lot extra indispensable in heavy building initiatives the place the equipment fleet performs a essential role in performing the work. In this type of projects, the gear fleet may also symbolize the largest element of the bid price. He additionally described that the financial analysis of building gear is in general focused on figuring out the owning and operating fees as well as the financial life for each kind of equipment.

In order to excellent complete the equipment low cost analysis, all costs related with the selected tools need to be considered, it is additionally better to described a technique that assigned downtime fees to a unique 12 months of gear existence on the groundwork of an estimated percentage of downtime elevated by way of the deliberate hours of operation for the machine and the hourly value of a alternative or apartment machine.

2.1.2.3. Project funds

"Funding" is the act of presenting monetary resources, commonly in the form of money, or different values such as effort or time, to finance a need, program, and project, usually by means of an organization or government. Generally, this word is used when a firm makes use of its interior reserves to fulfill its necessity for cash, while the term “financing” is used when the corporations acquires capital from external sources Spinner, (1989) . Available funds can also refer to funds that can be withdrawn from a margin account at a brokerage firm, where margin loans are still outstanding.

2.1.2.4 Project Controlling

One of the fundamental issues in the challenge manipulate literature is the problem of defining control. This comes about because the challenge management lookup has a multiplicity of meanings for control. Control is described as a role, as a process, and as an effect.

Frame, (1995).Control is additionally mentioned as a practice, a system and a trouble. Isaac and Navon, (2014).The difficulty of agreeing on a in many instances standard definition might also be due to the fact of the exhausting variety of skill-sets needed to measure, monitor, analyze, record and re-schedule projects. Five top project manager skills, but manage is not on their list. Frame, (1995), on the other hand, writes that manipulate is an essential managerial talent integral for all undertaking administration roles. Thus, all project managers want trip and understanding of the purpose, feature and approaches of manipulate within projects. This information is embedded in project control tools and methodologies Frame, (1995). Therefore, in this document the term “construction project manage professionals” identifies managerial practitioners who all have journey with a vary of kinds of construction projects and project control mechanisms

Frame, (1995). In addition, the dynamic nature of a construction challenge Ahuja, Dozzi, & amp; Abourizk, (1994) is first-rate understood from a systems viewpoint due to the fact enhancement in productivity requires measures of more than one shape of activity. The complicated interplay between activities of project initiatives entails elements such as work readiness, work flow reliability, substances logistics, etc. A structures view of productivity implies project management approaches aligned to systems-based construction management methodology Ahuja, Dozzi, & amp; Abourizk, (1994). Arguably the nice regarded is Lean Construction. The imperative concept of Lean Construction is production efficiency, described as minimizing waste. Thus, in this report the idea of control is described as the utility of a

systemic project manage system. The strategies of project control, for the functions of this report, are linked to the notion of production efficiency (for simplicity sake described as reduction of waste). And accelerated project productivity is regarded to be the expected consequence of a well applied mission manage machine Ahuja, Dozzi, & Abourizk, (1994)

The APMBoK takes a extensive view of what is supposed by using the phrase “control” APM, (2000). Planning, measuring, monitoring, and taking corrective motion are all generally protected in the manipulate cycle. Typically, initiatives utilize a control system, which video display units the difference or hole between the planning variables and the authentic results. Project manage structures indicate the route of change in preliminary planning variables compared with proper performance.

2.1.2.4.1 Types of Project Control Mechanism

Basic Types of Project Control Mechanism in Project Management are as follows: In a project, it is very convenient to lose sight of the real objectives. Large projects acquire existence of their personal and, if left to themselves, can spin out of control. There have to be mechanisms to control the project and to ensure that the task is intending as planned. Mostly, the control over a task focuses on the following three factors of the project:

i. Performance

ii. Cost

iii. Time

The objective of having controls is to find out that there is a hassle and then to alter course through taking corrective measures. Project control is not truly waiting for things to go incorrect and then fixing it. It is specially to have structures to pick out problems earlier than they happen themselves. There are three primary kinds of manage mechanisms- cybernetic, go/no-go, and publish performance Ahuja, Dozzi, & amp; Abourizk, (1994).

1. **Cybernetic Control**:

This is the most common variety of control mechanism. A undertaking has inputs and outputs. The outputs can be in the form of milestones that have to be met. Cybernetic controls center of attention on the outputs. If these milestones or outputs do not measure up to the set standards, then the situation is investigated to see if there is a adequate motive to change patterns of activity. The focal point of this variety of control is to minimize deviations from a standard. The more the deviation, more is the interest the state of affairs warrants. Lawrie, Abdullah, (2016).

2. Go/No-go Control:

Go/no-go control takes the structure of testing to make sure that positive preconditions are met earlier than a challenge is undertaken. This type of control can be used for a unique phase of the project too. Go/no go controls are linked to the true plans and are now not independently set on a calendar

3. Post-performance Control:

Post-performance controls are utilized after the completion of the project or the task, The focal point right here is not on altering what has already happened however in making sure that top and horrific practices are recorded for being of assist in future projects. Ahuja, Dozzi, & amp; Abourizk, (1994).

2.1.2.5 Project Integration

Stakeholder administration is one of the most fundamental components of task management. Disagreements and modifications in project characteristic is time, plan and finances at the time of construction may also arise due to have an impact on and terrible participation of stakeholders in the project. So to keep away from such a like problems strong engagement between exterior stakeholders and undertaking doing parties is indispensable and high emphasis have to be provide to time, price range and graph of tasks Murad, Nov (2015)the main stakeholders of Addis Ababa city road authority are Community, Contractors, Small enterprises, Suppliers of raw materials. Frame, (1995)

The value of early stakeholder involvement

The chances of influencing project success are considered to be first-class all through the early project ranges because decisions made early reduce needless adjustments all through later development and even the whole life cycle costs. According to numerous studies early stakeholder involvement yields at least the following benefits

- Leads to a lower likelihood of growing poor designs
- Early involvement In the sketch stage leads to a greater probability of a extra effective design, accelerated construction operations and less crap
- Early expertise about the task lets in room for innovative solutions and the intensive exchange of ideas . Frame, (1995)

2.2. Empirical Review

Shaban, (2008) in his thesis on factors affecting the performance of construction projects in the Gaza Strip, found out that the most important factors agreed by the owners, consultants and contractors were: average delay because of closure and materials shortage, availability of resources as planned through project duration, leadership skills for project manager, escalation of material prices, availability of personals with high experience and qualification and quality of equipment and raw materials in project.

According to Amusan, (2011) studied factors affecting construction cost performance in Nigerian construction sites. It was discovered from the analysis that factors such as contractor's inexperience, inadequate planning, inflation, incessant variation order, and change in project design were critical to causing cost overrun, while project complexity, shortening of project period and fraudulent practices are also responsible. According to Fetene, (2008) a study did on causes and effects of cost overrun on public building construction projects in Ethiopia. From the results it was found that 67 out of 70 public building construction projects suffered cost overrun. The rate of cost overrun ranges from a minimum of 0% to the maximum of 126% of the contract amount for individual projects.

Bui and Ling, (2010) in the study that was carried out in Vietnam on factors affecting construction project outcomes discovered that major enablers that lead to project success are foreign experts' involvement in the project, government officials inspecting the project and very close supervision when new construction techniques are employed. A factor which leads to poor performance is the lack of accurate data on soil, weather, and traffic conditions. According to Iyer, & Jha, (2005). did a research on factors affecting cost performance evidence from Indian construction projects and found out that the project manager's competence and top management support are found to contribute significantly in enhancing the quality performance of a construction project.

Nyangilo, (2012) did an assessment of the organization structure and leadership effects on construction projects' performance in Kenya, he found out that lack of appropriate project organization structures, poor management systems and leadership are the major causes of poor project performance. Iyagba, Odusamiand Omirin, (2003) did a research on the relationship between project leadership, team composition and construction project performance in Nigeria.

The tests of the hypotheses led to the conclusion that there was significant relationship between the project leader's professional qualification, his leadership style, team composition and overall project performance. No significant relationship was found between the project leader's profession and overall project performance.

2.3. Conceptual Framework

The main objective of this research is to asses factors that have influence on project implementation practice of AACRA with particular focus on the Out Source project which is the selected Overpass Bridge and Approach Road Project. The dependent variable is project implementation while the independent variables are project manager's competency, project equipment, project fund, project integration and project controlling.

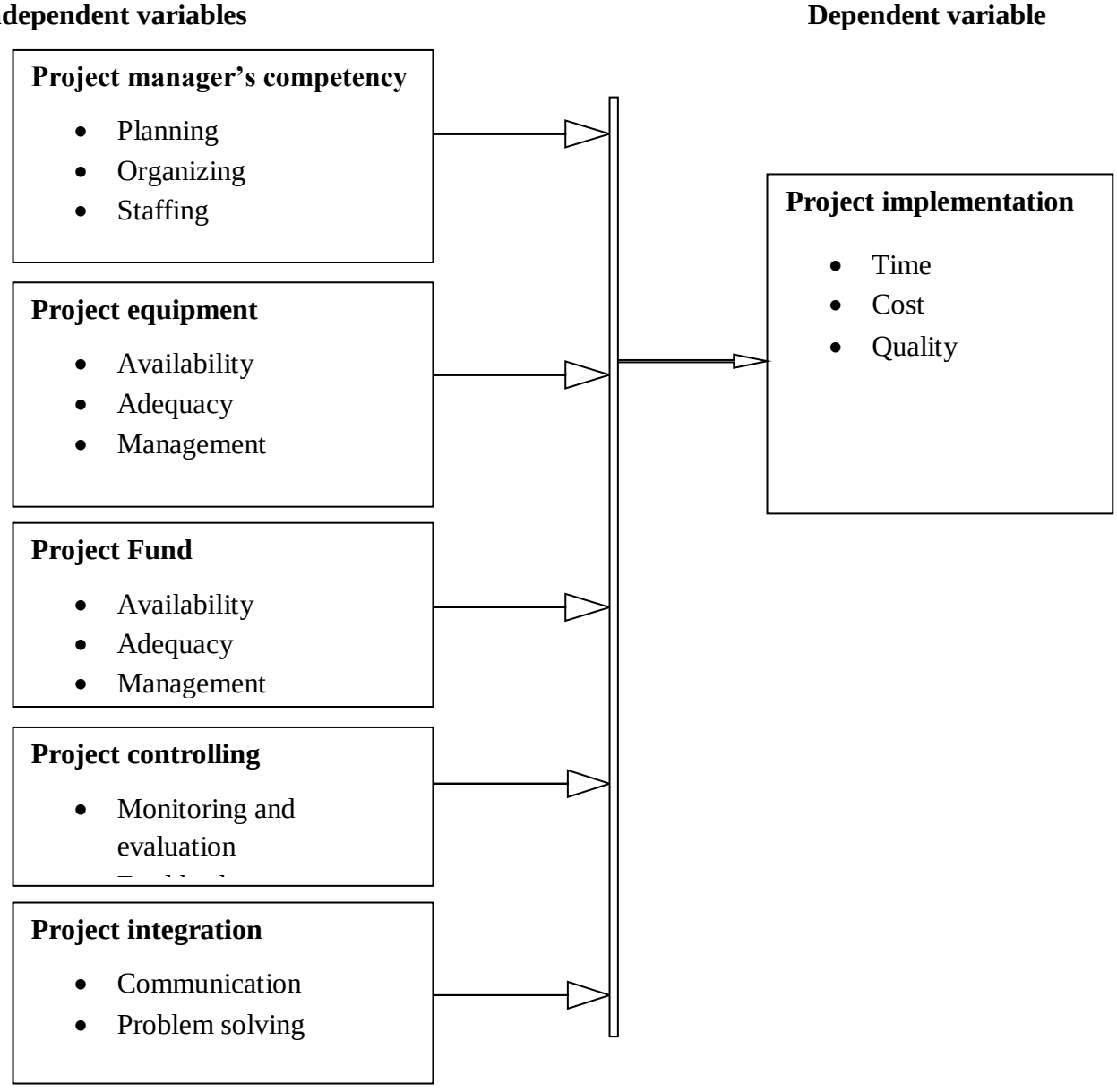

Figure 2.1 conceptual framework

Source: David,Dr.Kepha & Dr.aAssumpah, 2015

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1. Research approach

The researcher used explanatory type of research method, because it tries to explain the investigating of extent and nature of cause-and-effect relationships between the variables or factors affecting project implementation in road construction under the organization. The research will be conducted with mixed use by qualitative and quantitative method.

3.2. Research Design

Research design is a master layout that specifies the methods and procedures for collecting and examining the wished information, Zikmund, et, al (2014).The study adopted Explanatory research design in assessing the factor affecting project implementation and in identifying the factors that have impact on the success and failure of project implementation. Explanatory research is conducted in order to identify the extent and nature of cause-and-effect relationships. Causal research can be performed in order to verify influences of specific modifications on present norms, a variety of procedures etc. Causal studies center of attention on an evaluation of a scenario or a unique hassle to explain the patterns of relationships between variables.

Explanatory studies might also play an instrumental function in phrases of identifying motives behind a broad vary of processes, as well as, assessing the affects of changes on current norms, processes. Explanatory research normally provides the advantages of replication if necessity arises. These types of research are related with higher stages of inner validity due to systematic determination of subjects. The explanatory survey design method were terrific and beneficial in exploring how these elements affecting roads project tasks implementation the case of the selected (Gurd Shola - Summit - Yeka/Bole) Overpass Bridge and Approach Road Project

3.3. Population and Sampling Technique

Addis Ababa City Road Authority presently constructing roads throughout in Addis Ababa city by itself as well as the organization will outsource the road projects for contractors to constructing roads. For this study One of the selected out Sourced project were signing contract agreement undertaking was Gurd Shola - Summit - Yeka/Bole Over Pass Bridge and Approach Road Project. Target population will defined as a universe of the find out about as all contributors of actual or hypothetical set of people or events to which an investigation wishes to generalize results. Therefore goal and find out about population of this learn about consist of employee and project managers in the selected Road Project.

3.3.1. Target Population

The target people of this find out about will believed to have journey and know-how in the area of find out about in road construction tasks implementation in the project. Because of the nature of the road construction the researcher select the task which is without difficulty reachable and proximate to acquire data chosen for the cause of the study. The researcher will use simple random sampling. Simple random sampling be an impartial representation of a group. It is regarded a fair way to select a pattern from a large population when you consider that each member of the people will an equal chance of getting selected. From goal find out about population 80 employee and 20 project managers will the chance to be which include in the sample based on simple random sampling and to select those employee and project managers the researcher used list of personnel of the construction project which is saved in the human resource management office of the contractor company.

3.3.2. Sample Method

To select sample project the researcher used non probability sampling technique. The researcher selected this project which is 8.3 km lengthy road project that takes comparatively long project duration and which participate high number of employees among other projects based on convenience sampling

3.3.3. Sampling Size

To draw sample size from the population the researcher used the following sample determination method developed by Yamane's formula, a sample of 80 staffs are selected from the target population of 100.

Figure 3.3.3.1to calculate the sample size

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

Where:-

'n' is the sample size,

'N' is the population size, and

'e' is the level of precision

$$n = \frac{100}{1+100(0.05^2)} = \frac{100}{1.25} = 80$$

3.4. Source of Data

To reach on a sound finding the researcher gathered primary and secondary data from those target populations using questionnaire and from document review. In order to gather primary data self-administered questionnaire used and in order to collect secondary data document review from the documentation center of the AACRA made.

3.5. Data Collection Instruments

To undertake the study both primary and secondary data were collected. Secondary data were collected from different journals, books, periodicals, and from internet sources. Primary data were collected from self-administered questionnaire. The questionnaire was originally prepared by Dr. Assumpah, 2015 and by making some modification on it is used for this study. The information gathered through questionnaire used to determine the possible answers to the research questions and will provide relevant information needed to achieve the research objectives which are collected from target population of the study.

3.6. Procedures of Data Collection

The questionnaire in this research is close ended. Part one is the respondent demographic characteristics. Respondent's information includes gender, age and educational level. Part two includes questions about project manager's competency, project fund, project equipment, project integration, project controlling mechanisms.

3.7. Data Analysis Method

After gathering the necessary data, the findings will be properly tallied, tabulated, analyzed, interpreted, and summarized so that conclusions and recommendations can be forwarded. Among various methods of data analysis percentages, mean and standard deviation using regression analysis will be used. This is because the student researcher believes that percentage mean and standard deviation can be adequate to analyze the data and convey the information in a simple and understandable way in addition the study using statistical package for social sciences (SPSS20) to analyze qualitative data. This program used to analyze the descriptive statistics by measuring the central tendency and to measure the distribution of the data.

3.8. Model and variable specification

For the analysis of the DV and IV of the study multiple regression model used in the regression analysis of variables the model stated as follows:

$Y=\alpha+\beta1x1+\beta2x2+\beta3x3+\beta4x4+\beta5x5\ldots\ldots+\beta nXn+£i$

Where:

Y=dependent variable (project implementation)

α=the constant term

X1, X2, X3, X4, X5=independent variables (project managers competency, project fund, project equipment, project integration and project controlling).

β1, β2, β3, β4, β5= the slope coefficient of continuous variable

£i= random error/residual term

3.8.1. Assumption

- It is assumed that project implementation and project manager's competency has direct relationship.
- It is assumed that project implementation and project equipment has direct relationship.
- It is assumed that project implementation and project fund has direct relationship.
- It is assumed that project implementation and project controlling has direct relationship.
- It is assumed that project implementation and project integration has direct relationship.

3.9. Response Rate

From the data collected, out of the 80 questionnaires administered, 56 were filled and returned, which represents 70% response rate. This response rate is considered satisfactory to make conclusions for the study. Mugenda and Mugenda (2003) observed that a 50% response rate is adequate, 60% good and above, while 70% rated very good. This collaborates with Bailey (2000) assertion that a response rate of 50% is adequate, while a response rate greater than 70% is very good. This implies that based on this assertion, the response rate in this case of 70% is therefore very good.

3.10. Reliability Test

Reliability refers to the consistence, stability, or dependability of the data. Whenever an investigator measures a variable, he or she wants to be sure that the measurement provides dependable and consistent results. Bannigan, K., & Watson, R. (2009). A reliable measurement is one that if repeated a second time gives the same results as it did the first time. If the results are different, then the measurement is unreliable (Mugenda & Mugenda, 2003). To measure the reliability of the data collection instruments an internal consistency technique using Cronbach's alpha will be applied. Cronbach's alpha is a coefficient of reliability that gives an unbiased estimate of data generalize ability. An alpha coefficient of 0.75 or higher indicated that the gathered data is reliable as it has a relatively high internal consistency and can be generalized to reflect opinions of all respondents in the target population. Reliability analysis of the questionnaire is made through SPSS 20 demographic variables of the questionnaire are included for the purpose of this analysis 7 variables are included the cronbach's alpha of the questionnaire is .808 that means 80.8% of respondents have similar way of understanding for the questionnaire that is filled by them.

Table 3.1 Reliability Statistics

Cronbach's Alpha	N of Items
.808	7

Source: own survey, 2022, Output generated by SPSS20

All 7 items of dependent and independent variables returned Cronbach's alpha value is 0.808 which is greater than 0.7, then the responses generated for all variables used in this research were reliable enough for data analysis.

3.11. Ethical Consideration

The willingness of individuals to disclose the necessary information plays significant role for the successful completion of this research. For this reason, while conducting this research the researcher agreed to make sure that treating both the respondents and the information they provide with honesty and respect.

CHAPTER FOUR
DATA ANALYSIS AND INTERPRETATIONS

4.1. Introduction

The chapter represents the empirical findings and results of the application of the variables using techniques mentioned in chapter three. Specifically, the data analysis was in line with specific objectives where patterns were investigated, interpreted and implications drawn on them.

4.2. Demographic variables of respondents

This section sought to determine the demographic variables of the respondents in the AACRA. The findings are shown as in table.

Table 4.1 demographic variables

Variable	classification	frequency	Percentage
Gender	Female	14	25
	Male	42	75
Age	18-25	11	19.6
	26-40	44	78.6
	41-55	1	1.8
Level of Education	Diploma	6	10.7
	Bachelor	42	75
	Masters	8	14.3

Source: own survey, 2022

From respondents gender data collected to show the gender disparity of the respondents. The study sought to determine the gender distribution of the respondents in order to establish if there is gender disproportion at road construction industry. From the findings it's indicated that 75% were male and 25% were female. From the findings, it was noted that most respondents were between the ages of 26-40years old, this age bracket was noted to have the highest percentage of 78.6% respondents. From the findings, it can be inferred that the respondents were old enough to provide reliable insights relevant to the study. The study sought to seek the level of education of the respondents. From the responses in the questionnaires it was noted that majority of the respondents (75%) were bachelor degree level. The study, from this finding could generally infer that most respondents were well educated and knowledgeable and would therefore provide relevant information on the area of researcher study.

4.3. Project Managers Competency

Table 4.2 Project Managers Competency

Factors	n	Mean	Std. Deviation
To what extent does Organizing influences road construction projects completion?	56	3.8571	.72434
To what extent do you think Staffing influences the road construction project completion?	56	3.9286	.68376
To what extent protecting Worker's safety and health has important in order to reduce accidents and fatalities?	56	4.2857	.62419
To what extent does Communication among staffs and stakeholders influences the road construction projects?	56	3.8214	.93628
To what extent The time required to resolve conflicts between AACRA with stakeholders has influence during implementation of road construction projects?	56	3.3750	1.05421
Valid N (listwise)	56		
Aggregate mean	56	.85356	0.8045

Source: own survey, 2022

The finding of the study indicated that project manager's competency have great influence for the successful implementation and achievement of project goals. This was shown by respondents response of protecting employees safety and health during work attained a mean of 4.2857, the Staffing influences the road construction project completion attained a mean of 3.9286, Organizing influence on road construction projects attained a mean of 3.8571, the necessity of Communication among staffs and stakeholders influence on the road construction project attained a mean of 3.8214 and time required to resolve conflicts between AACRA with stakeholders attained a mean of 3.3750. Based on the responses collected from questionnaire project manager's competency has great influence road construction projects Completion in AACRA out sourced projects.

4.4. Project equipment

Table 4.3 project equipment

Factors	n	Mean	Std. Deviation
To what extent is Quality of work influenced by project equipments of road construction projects implementation and Completion in road construction projects?	56	4.2143	.65267
To what extent that Shorter operating cycle is influenced by project equipments in road construction projects implementation and Completion in road construction a projects?	56	4.4286	.53452
To what extent does availability of machinery influences road construction projects implementation and Completion in road construction projects?	56	4.2500	.47673
To what extent is Level of project advancement is influenced by project equipment's in road construction projects?	56	4.2679	.55567
To what extent construction equipment's which are used currently are advanced enough to complete the construction of road as planned in your project	56	3.0357	.89370
Valid N (list wise)	56		
Aggregate mean	56	4.0393	0.62265

Source: own survey, 2022

From the study majority of the respondents agreed that Level of project advancement is influenced by project equipment's in road construction projects attained a mean of 4.2679, the responses was strong enough in showing the availability of machineries in road construction projects and influence it has on road construction projects attained a mean of 4.2500, project equipments and machineries has great influence for successful implementation and achievement of project objectives. This was shown by respondents response on Shorter operating cycle is influenced by project equipments in road construction attained a mean of 4.4286, Quality of work influenced by project equipments of road construction projects implementation attained a mean of 4.2143, construction equipment's which are used currently are advanced enough to complete the construction of road as planned in a target project attained a mean of 3.0357. Based on the responses collected from questionnaire project equipment has great influence road construction projects Completion in AACRA out sourced projects.

4.6. Project Fund

Table 4.4 project fund

Factors	n	Mean	Std. Deviation
To what extent does Availability of funds influence road construction projects Completion in road construction projects?	56	4.4643	.50324
To what extent to which Adequate funds influence road construction projects Completion in road construction projects?	56	4.2679	.55567
To what extent does Management of funds influence the road construction projects Completion in road construction projects?	56	4.4643	.50324
Valid N (list wise)	56		
Aggregate mean	56	4.3988	0.52071

Source: own survey, 2022

From the study majority of the respondents agreed that project funds has great influence for successful implementation and achievement of project objectives. This was shown by respondent's response of Availability of funds and Management of funds during implementation of road construction projects attained a mean of 4.4643 respectively and Adequate funds for constructing roads scored a mean of 4.2679. The outcome of the study agrees with Ameh (2011) in which he observed that inadequate funds for the project lead to time over run thereby negatively impacting on construction project implementation. Adequate funding guarantees reasonable cash flow. There should, therefore, be effective funding of project by project owners to avoid unnecessary time overrun with its attendant effect on cost. The study results also agree with Tawil (2013) who observes that financial resources are the most prominent critical factors ineffective project implementation. He states that insufficient capital and progress payment negatively affects progress of work in a construction site

4.7. Project controlling

Table 4.5 project controlling

Factors	n	Mean	Std. Deviation
To what extent does Effective monitoring influence the road construction projects implementation?	56	4.1071	.67900
To what extent does Effective evaluation influence the road construction projects implementation?	56	4.1071	.67900
How effective is controlling of budget, time and quality of design?	56	4.1964	.72412
Valid N (list wise)	56		
Aggregate mean	56	4.1368	0.69404

Source: own survey, 2022

From the study majority of the respondents agreed that project controlling has great influence for successful implementation and achievement of project objectives. This was shown by respondents response on the effectiveness of budget, time and quality of road construction project of AACRA scored a mean of 4.1964 and effective monitoring influence on road construction projects and how effective evaluation has influence in road construction projects implementation attained a mean of 4.1071.

4.8. Project integration

Table 4.6 project integration

Factors	n	Mean	Std. Deviation
How satisfactory is the relationship between ACCRA out sourced project and major stakeholders?	56	3.4821	.53906
To what extent does the influence of external stakeholders have effect on the successful implementation of road construction projects?	56	4.1964	.58526
How well are disagreements with stakeholders solved in project implementation?	56	3.5893	.68162
Valid N (list wise)	56		
Aggregate mean	56	3.7559	0.60198

Source: own survey, 2022

From the study majority of the respondents agreed that integration with stakeholders has great influence for successful implementation and achievement of project objectives. This was shown by respondents response on influence of stakeholders on project implementation attained a mean of 4.1964, when disagreements arise between ACCRA out sourced projects and stakeholders how well the problem solved scored a mean of 3.5893 and the relationship between ACCRA and stakeholders scored a mean of 3.4821.The outcome of the study agree with (murad, nov 2015) Stakeholder management is one of the most essential parts of project management. Disagreements and change in project characteristics is time, design and budget at the time of construction may arise due to influence and poor participation of stakeholders in the project. So to avoid such alike problems strong engagement between external stakeholders and project doing parties is necessary and high emphasis should be give to time, budget and design of projects.

4.9. Correlation analysis

The Spearman's product-moment correlation coefficient (or Spearman's correlation coefficient for short) is a measure of the strength of a linear association between two variables and is denoted by r. Spearman's correlation was used to measure the degree of association between variables under consideration i.e. independent variables and the dependent variable. A correlation coefficient expresses quantitatively the magnitude and direction of the relationship between two variables. Spearman's correlation coefficients range from -1 to +1. Negative values indicates negative correlation and positive values indicates positive correlation where Spearman's coefficient. The following table provides a framework for describing the strength of the measure of association:

Table 4.7Applied Approaches

Measure of Association	Descriptive Adjective
> 0.00 to 0.20 ; < -0.00 to –0.20	Very weak or very low
> 0.20 to 0.40; < -0.20 to –0.40	Weak or low
> 0.40 to 0.60; < -0.40 to –0.60	Moderate
> 0.60 to 0.80; < -0.60 to –0.80	Strong or high
> 0.80 to 1.0; < -0.80 to –1.0	Very high or very strong

This table is from MacEachron, Basic Statistics in the Human Services: an Applied Approach,

Table 4.8 correlation analysis

		Project Implementation	Project managers competency	Project equipment	Project fund	Project controlling	Project integration
project implementation	Pearson Correlation	1	.759**	.787**	.797**	.832**	.696**
	Sig. (2- tailed)		.000	.000	.000	.000	.000

Source: own survey 2022, output generated by SPSS

The study in table 4.8 above show that all the predictor variables on project implementation of Project Managers Competency, Project Equipment, Project Funds, project controlling and Project Integration were shown to have a positive association between them at a significant level.

4.10. Regression analysis

Multiple regression models show the relationship between a dependent variable and a collection of independent variables. According to IBM SPSS Manual multiple linear regressions is used to model the value of a dependent scale variable based on its linear relationship or "straight line" relationship to one or more predictors".

Assumptions

Multiple Linear regression Normality of the distribution,

Multiple Linear relationship and Homoscedasticity (equal variance). Because the study used five independent variables in multiple regressions, there are two additional assumptions that must be assess independent of residuals, Multicollinearity. All of these assumptions are presented below in the tables:

4.10.1 Statistical assumption and diagnostic test:- normality, linearity, homoscedastitcity

Table 4.9 Descriptive Statistics

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Project Managers Competency	56	.059	.319	-.823	.628
Project Equipment	56	.229	.319	-.175	.628
Project Fund	56	.449	.319	-.668	.628
Project Controlling	56	-.003	.319	-.641	.628
Project Integration	56	-.256	.319	-.757	.628
Valid N (listwise)	56				

Source: own survey, 2022

Multiple regressions require that the IVs in the analysis be normally distributed. The skewness statistics for all independent variables are within the acceptable range for normality (-1.0 to +1.0). All variables meet the assumption of normality

ANOVA

Table 4.10 ANOVA table

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	11.498	5	2.300	28.730	0.000 ^{b}
	Residual	4.002	50	0.80		
	Total	15.500	55			
a. Dependent Variable: Project Implementation						

Model Summary b

b. Predictors: (Constant), Project controlling, Project fund, Project integration, Project Managers competency, Project equipment

Source: own survey, 2022

When doing regression analysis we determine whether or not there is a relationship between the IV and the DV by examining the ANOVA table. This can be thought of as the overall fit of the regression model. If the F statistic is significant, we can assume the IV, taken together; have a relationship with the DV. in this case, the probability of the F statistic for the regression analysis is 0.000, less than the level of significance of 0.05.

Table 4.11 model summery

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	DurbinWatson
	.861 [a]	.742	.716	.28292	1.633
a. Predictors: (Constant), Project managers competency, Project Equipment, Project Fund, Project Controlling, Project Integration					
b. Dependent Variable: Project Implementation					

Source: own survey, 2022

The Durbin-Watson statistic is used to test for independent of residuals. The value of the DurbinWatson statistic ranges from 0 to 4. In this case, Durbin-Watson is 1.633; we can assume independence of residuals the R

Table 4.12 coefficients/effect of factors project implementation on completion

Model		Un standardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std .Error	Beta		
1	(Constant)	.344	.459		.729	.000
	Project Managers competency	.145	.169	.200	.856	.003
	Project equipment	.764	.391	.820	1.951	.002
	Project Fund	.859	.261	.730	3.925	.002
	Project controlling	.071	.159	.091	.455	.001
	Project integration	.854	.248	.871	3.439	.001
a. Dependent Variable: Project Implementation						

Source: own survey, 2022

The results presented in the above table shows that taking all other independent variables at zero, a unit increase in Project managers competency leads to a .145 increase in road construction project successful implementation; a unit increase in Project Equipment leads to .764 increase in road construction project successful implementation ,a unit increase in Project Fund leads to .859 increase in road construction project successful implementation; a unit increase in project controlling leads to .071 increase in road construction project successful implementation and a unit increase in Project integration leads to .854 increase in road construction project successful implementation. From the findings it can be concluded that Project Managers Competency,

Project Equipment, Project Funds, Project Controlling and project integration influences Construction Project Completion

4.11. Summary of hypothesis testing

In the hypothesis of five independent variables are statistically significant effects on dependent variable of project Implementation. This summary shows table 4.13 below.

Table 4.13: Summary of hypothesis testing results

Hypothesis	Statistical result		Decision
	Beta	Seg.	
Project management competence have influence on project implementation	.145	.003	Accepted
Project equipment have strong influence on project implementation	.764	.002	Accepted
Project fund have strong influence on project implementation	.859	.002	Accepted
Project controlling have influence on project implementation	.071	.001	Accepted
Project integration have strong influence on project implementation	.854	.001	Accepted

Research hypothesis testing and interpret

- Decision for H1: As it can be seen in the table 4.13 above sig-value of project managers competence is .003, this is less than the significance level of 0.05. Therefore, there is significant relationship between project manager's competence and project implementation.
- Decision for H2: As it can be seen in the table 4.13 above sig-value of project equipment is .002, this is less than the significance level of 0.05. Therefore, there is significant relationship between project equipment and project implementation.
- Decision for H3: As it can be seen in the table 4.13 above sig-value of project fund is .002, this is less than the significance level of 0.05. Therefore, there is significant relationship between project fund and project implementation.

- Decision for H4: As it can be seen in the table 4.13 above sig-value of project controlling is .001, this is less than the significance level of 0.05. Therefore, there is significant relationship between project controlling and project implementation.
- Decision for H5: As it can be seen in the table 4.13 above sig-value of project integration is .002, this is less than the significance level of 0.05. Therefore, there is significant relationship between project integration and project implementation.

CHAPTER FIVE
SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1. Summary of findings

Respondents of the study comprised of all employees and project managers which is participated on the studied project. The result suggests that at the problem of gender, the company is male ruled implying gender imbalance. The respondents had attained excessive education at the level from diploma, degree and above. The response rate of 70 % was considered very enough for the observe. The research approximately investigated that project manager competency, project equipment, project fund, project controlling and project integration has a significant influence for the successful road construction project implementation.

5.2. Conclusions of the study

The constructing organization is a primary component, a key contributor and essential participant in the economic improvement of any given economy. It gives several employment possibilities to the skilled, semi professional and unskilled segments of society's labor force, affords market for improvement substances as a result uplifting living requirements to many human beings and offers the infrastructural platform for in addition economic development. Due to several benefits derived from the organization to the economy, it is quintessential and essential to facilitate its effectiveness in overall performance and shipping from the discovering of the find out about the following conclusions are made:

- Based on the finding it has been conclude that, Project manager's competency has great influence on successful implementation and completion of AACRAS out sourced road project, Gurd Shola - Summit - Yeka/Bole Overpass Bridge and Approach Road Project
- Based on the finding it has been conclude that, project equipment has high influence on successful completion of road construction projects in AACRAS out sourced road project, Gurd Shola - Summit - Yeka/Bole Overpass Bridge and Approach Road Project
- Based on the finding it has been conclude that, Project fund availability, adequacy and management have great influence on successful implementation and completion of the projects in AACRAS out sourced road project, Gurd Shola - Summit – Yeka /Bole Overpass Bridge and Approach Road Project
- Based on the finding it has been conclude that, Project controlling has a significant advantage for the successful completion of road construction projects in AACRAS out

sourced road project, Gurd Shola - Summit - Yeka/Bole Overpass Bridge and Approach Road Project.

- Based on the finding it has been conclude that, Project integration which includes Relationship with stakeholders, problem solving when disagreements arise has high influence on road construction projects Completion in AACRAS out sourced road project, Gurd Shola - Summit - Yeka/Bole Overpass Bridge and Approach Road Project.

5.3. Recommendation

- The study recommended that, AACRA will be give high attention on empowering project managers in order to ensure that they have the skill and knowledge in the functions of planning, organizing, staffing and monitoring and controlling of projects
- The study recommended that, AACRA will be increase their concern on management of equipments because the costs of equipment's are expensive to afford.
- The study recommended that, AACRA will be continuously manage on how projects utilize funds which is planned to be used in running projects.
- The study recommended that, AACRA will be give high emphasis for monitoring and controlling of road construction projects.
- The study recommended that, AACRA will be give high emphasis for the community and other major stakeholders because their influence will have impact on project parameters of time, cost and quality of design.

Finally, the researcher also recommends that project management competency should be improved, better plan to utilize project equipment, forecasting and focus on properly utilizing project fund. Monitoring and controlling is a series issue in out sourced project's so; AACRA should be attentively evaluate the progress on time. Focus on maintaining the integration of stakeholder participation to meet the project goal.

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