



**WOLLEGA UNIVERSITY  
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**COLLEGE OF ENGINEERING AND TECHNOLOGY**

**DEPARTMENT OF CONSTRUCTION TECHNOLOGY AND MANAGEMENT**

**ASSESSMENT ON FACTORS AFFECTING UNIVERSAL RURAL ROAD ACCESS  
PROGRAM (URRAP) PROJECTS COMPLETION, IN CASE OF EAST WOLLEGA  
ZONE, OROMIA, ETHIOPIA**

**A Thesis Submitted To School of Graduate Studies, Wollega University, College of  
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Degree of Masters of Construction Technology and Management**

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As members of the Board of Examining of the Final MSc. thesis open defense, we certify that we have read and evaluated the thesis prepared by DESALEGN OLI under the title “Assessment on Factors Affecting Universal Rural Road Access Program (URRAP) Projects Completion, In Case of East Wollega Zone, Oromia, Ethiopia” and recommend that the thesis be accepted as fulfilling the thesis requirement for the Degree of Master of Science in Construction Technology and Management in Wollega University.

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## DECLARATION

This Independent Research Theses Entitled “*Assessment On Factors Affecting Universal Rural Road Access Program (URRAP) Projects Completion, In Case Of East Wollega Zone, Oromia, Ethiopia : A Case Study*” Is My Original Work And Has Not Been Presented For A Degree In Any Other University.

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## **ABSTRACT**

*Infrastructure projects, such as road constructions, are one of the most important projects in Ethiopia. Growth in this sector is critical for growth in national income as it is among the largest sectors that generates employment within the country as well as a key driver for economic development of Ethiopia. Oromia Roads Authority has administered many projects at the Regional level involving local contractors on the projects. However, projects executed by contractors are facing critical problems with respect to Completion. There are several factors that affecting Universal Rural Road Access Program (URRAP) Projects Completion. Accordingly, this Factors Affecting Universal Rural Road Access Program (URRAP) Projects Completion in Eastern wollega in different Woredas, In line with these problems the aim of this study was to Assess On Factors Affecting Universal Rural Road Access Program (URRAP) Projects Completion. The methodology for this study was include study area, study design, description of population, sampling technique, data collection, validity and reliability of data, data quality control, and data analysis. Also ethics in conducting research was included. The data was analyze the pre-coded questionnaires was entered and analyzing using the statistical package for social sciences (SPSS Version 22) computer software program. Finally, conclusions implies that absence of performance and advance guarantee bond in the agreement, slow and late payment, late revising design and approving, delay of subcontract, shortage and quality of construction materials and unforeseen site condition are the top most factors Affecting URRAP project completion identified and ranked in the study. The study also recommended that factors affecting URRAP project completion related to all stakeholders that are involved in URRAP program should have strategic planning and integrations in order to overcome the problems.*

**Key Words:** *URRAP project, Project completion, East Wollega Zone Road Authority, Factors affecting URRAP project completion.*

## **ABBREVIATIONS**

BOQ	Bill of Quantity
GNP	Gross National Product
GDP	Gross Development plan
MDG	Millennium Development Goal
ORA	Oromia Rural Roads Authority
OSHS	Occupational Health and Safety Standards
URRAP	Universal Rural Road Access Program
POA	Procurement Oversight Authority

# CHAPTER ONE

## 1. INTRODUCTION

### 1.1. Back ground of the study

The construction sector, which is the largest domestic industry in Ethiopia, has also been one of the leading industries in the global economy. Construction industry plays an important role in the economic uplift which approximately accounts for 15.9 % of global domestic product (GDP) and development of the country.

The road construction sector in particular is very important for the development and economic growth of any developing country. M. Haseeb (2011). In developing countries such as Ethiopia, a road transport industry plays an immense role in fuelling the process of economic development by providing a market access incentive for agricultural goods, production outputs in a regular consumption decision. Road infrastructure's role in expansion of education, social and health facilities, trade facilities and providing access to employment is tremendous.

Roads contribute to economic growth and poverty reduction. Road development affects total economic growth, agricultural growth, population growth, urban poverty reduction and rural poverty reduction. Efficient markets, adequate health services, a diversified rural economy and balanced industrial development would remain irrelevant without infrastructure.

Efficient development strategies require a noble infrastructure as their backbone. Transportation infrastructure is an effective factor of production. Power consumption and health problems are also associated favorably with the availability of road infrastructure. Most of Africa's poor trade performance is the result of weak infrastructure. The convenience and quality of road infrastructure also influences food prices. Road investments help the poor through their impact on the rural non- farm economy. A rise in paved roads is positively and substantially linked to growth in Gross Domestic Product (GDP) per capita in urban areas.

(Ross, 2008) described project delivery as the world's oldest documented profession. Professionals use a number of definitions to define project efficiency. URRAP contractors' performance problem appears in many aspects in developing countries. Many road projects fail in time performance, others fail in cost performance and others fail in other performance indicators. In the past there were many road projects which finished with poor performance

because of many evidential reasons such as: obstacles by client, non-availability of materials, road closure, amendment of the design and drawing, additional works, waiting the decision, handing over, variation order, amendments in Bill of Quantity (B.O.Q) and delay of receiving drawings. There are other indicators for problems of URRAP road contractor's performance in developing countries such as project management, coordination between party, monitoring, and feedback and leadership skills. In addition, political, economic and cultural issues are three important indicators related to failures of road projects' performance in a country (Mihic et al., 2014).

History of construction projects can be traced back to Egyptian pyramids, early Greek settlement around Mediterranean, Roman Empire constructions of temples and structures in medieval age (Eja & Ramegowda, 2020). As it is known that in the 18th century is renaissance period which saw much significance to architecture and industrial revolution. Also, 19th century saw large improvements in construction industry particularly in railways and buildings. (Leslie, 2017) mentions that during the 1959-1969, the construction of Suez Canal was an international project of great proportions and contractors had gained experience in the construction of large buildings, railways, petrochemicals, dams and reservoirs. (Ross, 2008) mentions that great Britain was first to go global with railway construction and the first major international construction company was built up by Pearson in great Britain at about the turn of the century. Now there are massive projects constructed all over the world, driving the national economy.

(Hyvari, 2006) mentions that large engineering projects such as airports, transport, power, oil and gas constitute most important business sectors in the world. This massive infrastructure investment has led to emergence of companies such as Vanderveorde and (Leslie, 2017) who assert that 'construction is a \$3.5 trillion industry worldwide, amounting to between 6 and 8 percent of GDP in most countries.

Universal rural Road Access programme was started as a programme by the government of Ethiopia in 2011. Scope of the work includes Construction of small drainage structures, surfacing of the road construction, construction of bridge and construction of check dams. Because of this, many contractors were established as part of the government programme in

East Wollega Zone. As it is seen from documents, many contractors were established in this zone and many of them failed because of not completing the projects.

Work on providing construction services in East Wollega Zone has made considerable progress since Oromia roads authority (ORA), assumed responsibility for them, but the construction companies have had to build from a low base, including a huge backlog of rehabilitation and development work, few institutions, and very little funding. So, they have had to work in every difficult physical, social, political, economic and institutional circumstance. For a number of reasons, the performance of construction projects has not been as impressive fundamentally because of the government failure to establish a coherent institutional and policy framework (World Bank, 2017).

Factors affecting URRAP projects Completion is related to many topics and those factors are absence of performance guarantee bond and advance guarantee bond in the agreement ,slow and late payments, late revising design and approving, delay of sub contract, shortage and quality of construction material and unforced site condition are inside the stake holders in Construction industry in the Oromia suffers from many problems and complex issues in program at East Wollega Zone area for about 5 years (ORA 2016).

There are many realistic reasons such as closures amendment of drawings and amendment of the design and delayed funds release. In addition, there are other different reasons affecting construction projects completion in the Oromia such as poor management and leadership, inappropriate participants, poor relations and coordination, absence of motivation, minor or decision making systems, inadequate infrastructure, sudden political problems, cultural problems and economic conditions. The construction industry is complex in its nature because it comprises large numbers of parties as owners (clients), contractors, consultants, stakeholders, and regulators (ORA 2016).

Despite this complexity, the industry plays a major role in the development and achievement of society's goals. It is one of the largest industries and contributes to about 11% of the gross national product (GNP) in industrialized countries (Olusola et al., 2016).

Oromia is no exception; the local construction industry is one of the main economic engine sectors, supporting the Oromia Regional economy. As East Wollega Zone is also part of Oromia, it also shares this fact. As in Oromia, also share same problem of poor completion. As

East Wollega Zone is one of Zone found in the Oromia and it also shares the same thing as that of the world and the country.

East Wollega Zone is among Zone which has many economic resources. Even though there is a huge economic resource in the Zone, the roads, which connect the farmer's Kebeles to the main road, was not enough before 2011. However, starting from this period the Federal and Regional Government started Millennium Development Goal (MDG) and part of this goal was universal rural road access programme (ORA 2011).

The purpose of this Thesis study was assessing Factors Affecting URRAP Projects Completion, In Case of East Wollega Zone, and Oromia, Ethiopia.

Project completion is defined as the date completion of all improvement necessary for the startup, location or expansion of the business with the community. On this context of URRAP project completion, project completion is a measure on time and with the agreed quality or the outcomes that results from management decisions and the execution of those decisions by members of the organization to complete the projects.

This is what outside of those who are outside of the stakeholders can see clearly. When addressing about contract type of this programme, the contract of this programme is fixed rate. The rate is fixed by the client at regional level by considering Zone roughly. Mostly what is considered here is location of surfacing material, cement and stone for structure. The rate and items of works has been changed three times until know (ORA 2011).

The earthwork items are removed from the contract after 2005 E.C. The rate was changed three times. First, in 2011, then in 2012, lastly in 2013 and separately it was changed for bridges in 2018. The contract at the first time was commenced on 2011.

This contract includes all the items which are included for the road construction at this standard. However, after 2012 the client starts to execute the earth works by his own budget to reduce the cost. In addition the rate of the remaining works is also reduced. The effect of this reduction of both the rate and the item affected both the client and the contractors.

This Thesis study was conducted mainly to assess the factors affecting the completion of the Universal Rural Road Access Program (URRAP) projects in East wollega Zone.

## **1.2. Statement of the Problem**

In Ethiopia construction project completion problems appears through different directions. Due to several reasons construction projects in East wollega zone challenges in their completion instead of achieving their planned goals. Most these challenges are related what we call it project completion problems. However According to Islam and Trigunarsyah (2017), Construction completion is one of the basic constrains to achieve the project objectives in developing countries. This project time delays usually lead to adverse effects on the growth of national economies, contribute to major financial losses, and hold back the development of the economy and construction industry, Ahmed Senouci, et al, (2016). Different study has identified different causes and different groups causing completion across/within continent/countries and set different ranking for causes and groups. Causes and groups causing completion are country, location and project specific and there are no root causes that can be taking for granted to be the most effective or the least effective delay causes (Remon F. Aziz, et al, 2016).

According to the study conducted on Ethiopian construction industry by Werku Koshe, K. N. Jha, (2016) shows that in Ethiopia only 8.25% projects have been finished to the original targeted completion date. According to this study, the remaining 91.75% delayed off its contractual time. In regard to Addis Ababa road construction, delay is becoming the major challenges that the authority is facing and challenging the life of the residents.

The study deduced that poor communication and lack of awareness in POA which is also used in the implementation of the Ministry's Projects were the main challenges facing project implementation. In Ethiopia, construction of URRAP Construction plays an essential role in socio-economic development of the country. Since URRAP construction project comprises from many processes starting from initiation to completion, it passes several activities in each significant stages to accomplish the URRAP project goals.

URRAP Project failure is one of the major problems facing the Road construction industry in Eastern Wollega Zone Oromia; the failure of any project is mainly related to the problems and failure in completion. Some projects fail in as poor management and leadership, inappropriate participants, poor relations and coordination, absence of motivation, minor or decision making

systems, inadequate infrastructure, sudden political problems, cultural problems and economic conditions (ORA)

As the incompleteness of URRAP project has a negative impact on the East Wollega Oromia road construction, the overall objective of this study was therefore to assess Factors Affecting Universal Rural Road Access Program (URRAP) Projects Completion, In Case Of East Wollega Zone, and Oromia, in order to assist key players in the URRAP to overcome completion problems and to improve completion of the URRAP in the study area.

In Ethiopia there is some empirical evidence on assessing factors affecting URRAP construction completion in URRAP, for instance, on factors affecting time and cost overrun in road construction projects in Addis Ababa was done (By, Abubeker Jemal 2015), and on assessment of cause and impacts of local contractors' time and cost performance in Ethiopian roads authority projects by (Rahel Kassahe, 2016).

But they didn't show the assessing factors affecting URRAP projects completion in East Wollega Zone Oromia, Ethiopia. The researcher motivated to fill knowledge gap by assessing factors affecting URRAP projects completion in East Wollega Zone Oromia, Ethiopia. so that bring the gap between the studied and study area factors affecting URRAP Project completion are mentioned as following:-

To assess the absence of performance bond and advance guarantee bond in the contract in the study area, problems of equipment like machinery lease for the URRAP contractors, non-compensation of society property influence Universal Rural Road Access Program project completion, and fund from different sources can influence URRAP construction project, the unit price of problems related to URRAP project completion and corruption. Coping strategies they employ during factors affecting URRAP projects completion in East Wollega Zone Oromia are unknown in the study area. So, due to the lack of information on the above mentioned issues, policy makers in the study area are challenged on making decision to solve or reduce the problem that the URRAP construction project are facing because of completion project in the area.

So, this is identified as a gap and intended to fill these gap. Therefore, it is interested in conducting this study to assess factors affecting URRAP projects completion in East Wollega Zone Oromia, Ethiopia. Therefore, this thesis study was required to address this gap. So this is

the main reason for the researcher to assess factors affecting URRAP projects completion in East Wollega Zone Oromia, Ethiopia and problems of affecting URRAP projects completion in order to identify this problems and which will help the policy makers, the local Government, CBO, NGO, the communities to develop policies and other concerned body has to develop intervention study that may improve and sustain the completion of URRAP projects.

### **1.3. Research Questions**

The following set of questions is used to guide the integrated study of assessing factors affecting URRAP projects completion in East Wollega Zone Oromia, Ethiopia.

1. What are the factors that influence the completion of URRAP project in East Wollega Zone?
2. What are the top factors which influence URRAP construction project completion in East Wollega Zone?
3. What remedial measure is needed to reduce the factors that influence URRAP project completion in the study area?

### **1.4. Objective of the Study**

#### **1.4.1. General Objective**

The main objective of this study is assessing the factors affecting the completion of the Universal Rural Road Access Program (URRAP) projects in East wollega Zone, Oromia

#### **1.4.2. The Specific Objectives**

The specific objective of Study is guided by the following:

1. To identify the factors that affects the completion of Universal Rural Road Access Program Projects in study area,
2. To determine the top factors which influence URRAP construction project completion in study area, and
3. To propose the remedial measure on factor that influencing URRAP project completion in the study area.

### **1.5. Scope of the Study**

The study was limited itself geographically, thematically and methodologically. Geographically, this study emphasis in East Wollega Zone specifically on five Woredas that are found In East wollega Zone which are affected URRAP Project completion. These Woredas are Gudiya Bila, Haro Limu, Jima Arjo, Diga and Leka Dulacha.

Thematically, the scope of this study was assess the factors affecting the completion of the Universal Rural Road Access Program (URRAP) projects in East wollega Zone, Oromia, Having working in east Wollega Zone, knowledge of the area to make my study successful since I know the whole Woredas in the zone very well.

### **1.6. Limitation of the Study**

This research was conducted in different Woredas mentioned above in East Wollega zone that selected as factors of URRAP project completion. The recognized limitations of this thesis research are that the data collected and use just one year, excluding temporal elements for resource and time constraint. Given the dynamic nature of URRAP projects situation across time and space, findings particularly in relation to assess factors affecting URRAP Project completion (the coping strategy) to make viable interpretation to the larger five Woredas units was not possible.

### **1.7. Significance of the Study**

The researcher will believe that the study would have the following multidimensional significances. Firstly, it could serve as an insight for government, NGO, CBOs and interested body to aware of URRAP project completion of study area. So that they can provide multiple strategies, programs to address the projects for the community the surrounding. Secondly, it would provide novel ideas to the policy makers in their efforts to improve problems related to URRAP Project Completion. Thirdly, it would contribute to sustainable development of URRAP in Oromia and in general this proposal study area in particular by providing comprehensive information on URRAP Project completion and coping mechanism of study area. Fourth, it would bridge the gap and address the deficiencies of research on the issues in the present political, economic, social, environmental and cultural dynamics for policy makers.

Finally, the results of this study will contribute to other studies on an assessment of the factors affecting the completion of the Universal Rural Road Access Program (URRAP) projects in

East wollega Zone, Oromia and context and may be used as benchmark information by the students and researchers interested in this area for further study.

### **1.8. Operational terms**

Construction: Is the general term meaning the art and the science to form something physically such as road, bridged or buildings.

Project: A set of organized activities aimed at achieving a set of goals. It has a specific time

Project Cost: Refers to the degree of compilation of construction work within the estimated budget.

Completion: accomplishing the project at optimum date and optimum cost

Parties: those contractor, consultant and clients that are stake holder on the contract

### **1.9. Organization of the paper**

The paper contains five chapters and organized as follows: the first chapter contains introduction part of the study, which includes statement of the problem, research questions, and objective of study, significant of the study, scope and limitation of the study. While, chapter two is the review of theoretical and empirical literatures; the methodology was stated on chapter three and on chapter four, data analysis and interpretation. Lastly the paper has presented conclusion of the result and recommendation as chapter five.

## **CHAPTER TWO**

### **2. LITERATURE REVIEW**

#### **2.1. Introduction**

This chapter researched and sourced literature ranging from academic books and journals that address the factors affecting efficient delivery of roads construction for the purpose of this study. Academic articles stimulate and provide theoretical understanding relevant literature on the aspects pertaining to the efficient performance on road construction among KURA. It comprises the conceptual framework, theoretical review, and empirical review, and critique of the review.

#### **2.2. Theoretical Framework**

A Theoretical framework is a set of statements or principles devised to explain a group of facts or phenomena especially one that has been repeatedly tested or is widely accepted and can be used to make predictions about natural phenomena (Lucia, and Lepsinger, 2009). Theories are analytical tools for understanding, explaining, and making predictions about a given subject matter. It comprises the conceptual frame work, theoretical review, and empirical review, critique of the review and the research gap of the study.

##### **2.2.1. Management Theory**

Management is the process of designing and maintaining an environment in which individuals, working together in groups, efficiently accomplish selected aims (Koontz and Weihrich, 2000). In its expanded form, this basic definition means several things. First, as managers, people carry out the managerial functions of planning, organizing, staffing, leading, and controlling. Second, management applies to any kind of organization. Third, management applies to managers at all organizational levels. Fourth, the aim of all managers is the same to create surplus. Finally, managing is concerned with productivity this implies effectiveness and efficiency.

Managing, like all other practices whether medicine, music composition, engineering, accountancy, or even baseball is an art; it is know-how. It is doing things in the light of the realities of a situation. Yet managers can work better by using the organized knowledge about management. It is this knowledge that constitutes science. However, the science underlying

managing is fairly crude and inexact. This is true because the many variables with which managers deal are extremely complex. Nevertheless, such management knowledge can certainly improve managerial practice. Managers who attempt to manage without management science must put their trust to luck, intuition, or what they did in the past (Gardiner, 2000). In managing, as in any other field, unless practitioners are to learn by trial and error, there are no place they can turn for meaningful guidance other than the accumulated knowledge underlying their practice; this accumulated knowledge is theory. For practical purposes, all managers must develop three sets of skills, namely; conceptual, technical, and human (Peterson 2004).

### **2.2.2. Agency Cost Theory**

Agency theory is the branch of financial management theory that looks at conflicts of interest between people with different interests in the same assets. This most importantly means the conflicts between: shareholders and managers of companies, shareholders and bond holders. The theory explains the relationship between principals, such as a shareholders, and agents, such as a company's managers. In this relationship the principal delegates (or hires) an agent to perform work. The theory attempts to deal with two specific problems: how to align the goals and principal of funds management so that they are not in conflict (agency problem), and that the principal and agent reconcile different tolerances for risk.

The case fund managers faced major problems in implementing finance theory, especially with MPT and CAPM when estimating stock returns, and when using optimization routines to find the efficient frontier and the optimum risk, return portfolio. The problems arose, in part, because of the limitations of public domain data and because of the uncertainty implicit in forecasting stock risk and return characteristics. These problems also arose because of the many controversies and fundamental problems facing finance theorists laid the foundations of modern portfolio theory ( Minocha, 2006). He stated that investors seek a risk/return trade off by seeking to maximize returns for a given level of risk or to minimize risk for a given level of return. Argued that a portfolio manager needed to know the weighting of for each of  $N$  stocks,  $N$  estimates of expected return and of variance of return, and  $N(N-1)/2$  estimates of covariance of return between each pair of stocks in the portfolio. This information could be used to generate a large number of feasible portfolios which were dominated by a smaller number of efficient risk/return portfolios lying on the efficient frontier.

Risk averse, rational portfolio managers could choose one of these portfolios to reflect their or their clients risk/return preferences (utility). Given the above input data the portfolio selection problem could be solved to find the optimal solution using a quadratic programming approach. This approach was further simplified by the development of the Capital Asset pricing model by Sharpe and Lintner in the 1960s. They identified a single factor, linear model, in which a company's Beta measured the stock's return volatility relative to that of the market overall. This model reduced the number of covariance (now company to market return) to be estimated to the number of stocks in the portfolio. This much simplified the estimation and portfolio construction decision process.

(Markowitz, 2012) argued that finance theory tells us what is to be estimated in the form of future risk and return and how estimates for specific shares are to be combined to form estimates for the portfolio as a whole. However, theory does not tell us how to make the estimates of return, variance and covariance. These parameters are not known with certainty and some form of estimation bias is inevitable, given that some combination of historic data and/or forward looking subjective or expectancy data has to be used.

### **2.2.3 Change Agency Theory**

Change agency theory has been found to be of particular relevance to understanding innovation associated with electronic construction project, where financial, managerial, informational and technological constraints tend to restrict innovativeness and entrepreneurship (Ross, 2008) agents can either be internal or external. Internally the owner of institutes and other sectors forces can act as champions, advocates and leaders of change (McElroy, 2010). According to (Ross, 2008), technology simplifies and reduces task needing manual skill and strengths especially in factories and either forms of production property applied can increases productivity. The use of reprogram able robots for such tasks as welding spraying material handling and other helps to eliminate dirty or harassers and repetitive work robots and computer aid manufacturing (CAM) as well as reducing costs improving quality and the consistency of finished quality and the consistency of finished products. The unused technology requirements enhance problem solving skills and the ability to interpret, and is thus likely to lead to widening gap between skilled and non-skilled workers (Leslie, 2017).

## **2.3. Project Success Criteria**

### **2.3.1. Time and Cost Criterion**

Almost every paper on success criteria never forgets to mention about these two traditional criteria which are often grouped under project efficiency dimension. Further, it could be noted that there is no confusion among researches on the usage of those two terms (e.g. (Turnerb, 2017); Heravi 13th International Conference on Business Management 2016 704 and Ilbeigi, 2012; Khosravi and Afshri, 2011).

### **2.3.2. Time or Schedule**

Refers to the agreed/approved duration for the completion of the project Time can be measured in terms of construction time, speed of construction and time overrun (Naoum, 2000) and Chan, 1997 as cited in (Parfitt and Sanvido, 2001). (Lehtonen, 2005) proposed schedule performance index and it is a measure of the schedule efficiency of a project.

### **2.3.3. Cost**

Refers to the degree of compilation of construction work within the estimated budget (Parfitt and Sanvido, 2001) explain that cost should not be confined only to the tender sum and therefore, it includes any costs arise from variations, modification during construction period and the cost created by the legal claims, such as litigation and arbitration. The measure of cost can be in the forms of unit cost, percentage of net variation over final cost (cost overrun). (Lehtonen, 2005) introduce the cost performance index (CPI) which is a measure of the cost efficiency of the project.

### **2.3.4. Quality Criterion**

This is a traditional criterion but it is confusingly used. In literature, it could be noted that while some researchers used quality as a single main criterion (e.g. (Lim & Mohamed, 1999); (Parfitt and Sanvido, 2001); (Pinto & Slevin, 1988) ; (Atkinson, 1999) some other researchers use quality, technical performance and functionality as separate criteria (e.g. (Turnerb, 2017) ; Al-Tmeemy, 2011). Heravi and Ilbeigi (2012) use product quality and process quality separately. (Elattar, 2017) also refers quality and technical performance as two distinctive criteria. However, the quality of a project was commonly defined as meeting technical specifications (Khosravi & Afshari, 2011). (Kenny, 2008) as cited in (Turnerb, 2017) mentions that quality is intertwined with issues of technical performance, specifications, and achievement of functional

objectives and it is the achievement against these criteria that will be most subject to variation in perception by multiple project stakeholders. It is assumed that product quality and process quality are embedded in the functionality and technical performance in construction project context. (Parfitt and Sanvido, 2001) stress that quality, technical performance, and functionality is closely related and are considered important to the owner, designer, and contractor. Chan and (Parfitt and Sanvido, 2001) further mentions that the quality would be measured subjectively using a seven-point scale. Chan (2000) and Chan et al. (2002) as cited in (Takim & Adnan, 2009) consider project functionality as one of the success measures in the post-construction phase when the project is finished and delivered. According to them, project functionality correlates with expectations of 13th International Conference on Business Management 2016 705 project participants and can best be measured by the degree of conformance to all technical specifications.

### **2.3.5. Safety Criterion**

The issue of safety has been raised for a long time (Parfitt and Sanvido, 2001); (Alzahrani & Emsley, 2013) (Parfitt and Sanvido, 2001) and it has been used without complication. Chan and Chan (2001) adopt the definition presented by (Almohawis, 2001). Accordingly, safety refers to the degree to which the general conditions promote the completion of a project without major accidents or injuries. Generally, safety assessments would be carried out by regulatory bodies such as Department of Labour of Sri Lanka and institutions offering certifications such as ISO, OSAHS. These evaluations which are commonly known as audits form a strong base to measure safety in project sites. (Lehtonen, 2005) proposes a safety performance index considering safety issues in executive project outcome.

### **2.3.6. Client Satisfaction Criterion**

(Nguyen, 2013) use the term “satisfaction” while (Elattar, 2017) and Chan and Chan (2001) use “participant satisfaction” and “user satisfaction” separately. (Pinto & Slevin, 1988) , Al-Tmeemy et al. (2011), Heravi and Ilbeigi (2012) and Khosravi and Afshari (2011) use only “the client/customer satisfaction”. (Takim & Adnan, 2009) use client satisfaction and describe it with benefit to end user, benefit to client, project + functionality, aesthetic value, client satisfaction on service, end user satisfaction on product, pleasant environment and easy to maintain. Heravi and Ilbeigi (2012) proposed client satisfaction index which is the result of a questionnaire consisting of 28 sub-factors. Chan and Chan (2001) propose that participant

satisfaction could be measured by the seven-point scale system as it is subjective. However, for the purpose of developing this framework, it is important to develop specific criteria to avoid confusions.

## **2.4. Explanation of Variables**

### **2.4.1. Project Managers Competency**

Competencies are the ability of an individual to do a job properly. A competency is a set of defined behaviors that provide a structured guide enabling the identification, evaluation and development of the behaviors in individual employees (Chan and Mohan 2009). Competencies are also what people need to be successful in their jobs. Job competencies are not the same as job task. Competencies include all the related knowledge, skills, abilities, and attributes that form a person's job. This set of context-specific qualities is correlated with superior job performance and can be used as a standard against which to measure job performance as well as to develop, recruit, and hire employees. Competencies provide organizations with a way to define in behavioral terms what it is that people need to do to produce the results that the organization desires, in a way that is in keep with its culture. By having competencies defined in the organization, it allows employees to know what they need to be productive. When properly defined, competencies, allows organizations to evaluate the extent to which behaviors employees are demonstrating and where they may be lacking (Lehtonen, 2005). For competencies where employees are lacking, they can learn. This will allow organizations to know potentially what resources they may need to help the employee develop and learn those competencies.

Competencies can distinguish and differentiate your organization from your competitors. Competencies can provide a structured model that can be used to integrate management practices throughout the organization. Competencies that align their recruiting, performance management, training and development and reward practices to reinforce key behaviors that the organization values. Monitoring is the systematic and routine collection of information from projects and programmes for four main purposes. Monitoring is a periodically recurring task already beginning in the planning stage of a project or programme. Monitoring allows results, processes and experiences to be documented and used as a basis to steer decision-making and learning processes. Monitoring is checking progress against plans. The data acquired through

monitoring is used for evaluation. Evaluation is assessing, as systematically and objectively as possible, a completed project or programme. Evaluations appraise data and information that inform strategic decisions, thus improving the project or programme in the future (Lehtonen, 2005).

#### **2.4.2. Project funds**

"Funding" is the act of providing financial resources, usually in the form of money, or other values such as effort or time, to finance a need, program, and project, usually by an organization or government. Generally, this word is used when a firm uses its internal reserves to satisfy its necessity for cash, while the term 'financing' is used when the firms acquires capital from external sources (Gyula, 2008). Available funds may also refer to funds that can be withdrawn from a margin account at a brokerage firm, where margin loans are still outstanding.

#### **2.4.3. Project Equipment**

Equipment are the tools, machines, or other things that you need for a particular job or activity Tangible property (other than land or buildings) that is used in the operations of a business. Examples of equipment include devices, machines, tools, and vehicles (Hyvari, 2006). (Lehtonen, 2005) defined construction equipment as to heavy-duty vehicles, specially designed for executing construction tasks, most frequently ones involving earthwork operations. They are also known as heavy machines, heavy trucks, construction equipment, engineering equipment, heavy vehicles, or heavy hydraulics. They usually comprise five equipment systems: implement, traction, structure, power train, control and information Heavy equipment functions through the mechanical advantage of a simple machine, the ratio between input force applied and force exerted is multiplied. Some equipment uses hydraulic drives as a primary source of motion.

#### **2.4.4. Project Technological Innovation**

Technology is the collection of techniques, methods or processes used in the production of goods or services or in the accomplishment of objectives, such as scientific investigation. Technology can be the knowledge of techniques, processes, etc. or it can be embedded in machines, computers, devices and factories, which can be operated by individuals without detailed knowledge of the workings of such things. Technology has many effects. It technology has helped develop more advanced economies (including today's global economy) and has

allowed the rise of a leisure class (Lehtonen, 2005). Various implementations of technology influence the values of a society and new technology often raises new ethical questions. Examples include the rise of the notion of efficiency in terms of human productivity, a term originally applied only to machines, and the challenge of traditional norms. Innovation is a new idea, more effective device or process. Innovation can be viewed as the application of better solutions that meet new requirements, inarticulate needs, or existing market needs. This is accomplished through more effective products, processes, services, technologies, or ideas that are readily available to markets, governments and society.

The term innovation can be defined as something original and more effective and, as a consequence, new, that "breaks into" the market or society. While a novel device is often described as an innovation, in economics, management science, and other fields of practice and analysis innovation is generally considered to be a process that brings together various novel ideas in a way that they have an impact on society (Kenny, 2008).

Innovation is the process of translating an idea or invention into a good or service that creates value or for which customers will pay. Innovation involves deliberate application of information, imagination and initiative in deriving greater or different values from resources, and includes all processes by which new ideas are generated and converted into useful products. In business, innovation often results when ideas are applied by the company in order to further satisfy the needs and expectations of the customers. Innovation is synonymous with risk-taking and organizations that create revolutionary products or technologies take on the greatest risk because they create new markets (Lehtonen, 2005).

#### **2.4.5. Universal Rural Road Access Program, URRAP in Ethiopia**

The government of Ethiopia has focused on road, especially, rural road under URRAP as part of its plan. According to the article of ERA, the reason for the continued pervasiveness of poverty is generally associated with low productivity of subsistence crop and a rain fall dependent cultivation which is vulnerable to the vagaries of weather (ERA 2011). This is because the driving sector for economy of Ethiopia is agriculture. Moreover, continued poverty prevalence is aggravated by the country's rugged terrain, uneven geographic distribution of population and the predominance of isolated rural settlements with poor spatial integration according to ERA. ERA on its" article entitled "universal rural road access program" about

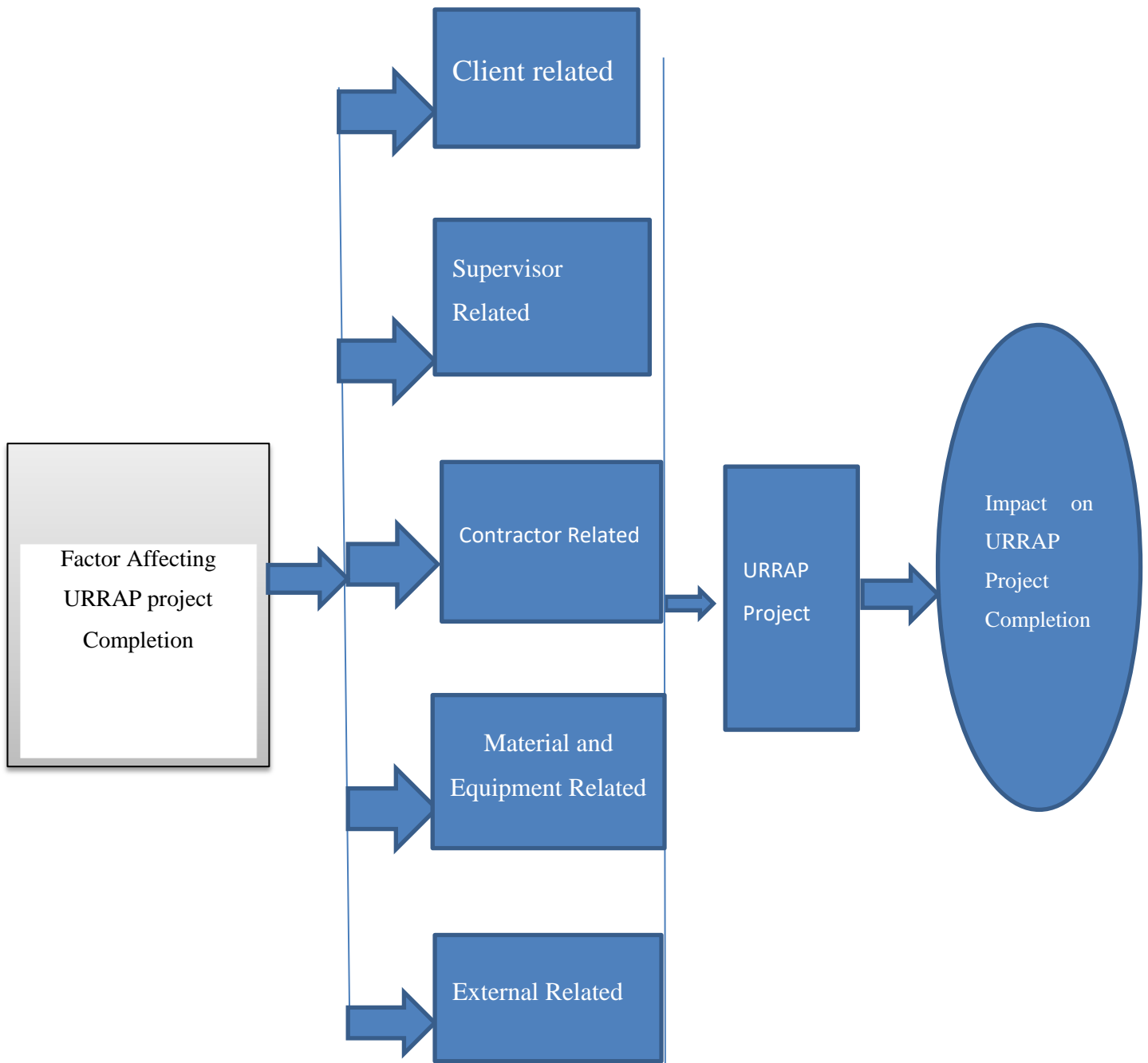
the importance of rural transport and services further describes that, isolation and unreliable or non-existent access to markets stifles economic activity and further adds burden to the rural poverty (ERA 2011).

That is why, Abebe Dinku on the presentation in 2016 stated that about 70% of Ethiopia's capital budget was spent on infrastructure development for ten years back from 2016. Gradually this capital expenditure accounted for a large share of the budget is decreased from 51% in 2015/16 to 46% in 2016/17 according to African economic outlook of 2018 (ERA 2020). Among this capital budget of federal government about 18.95% has been spent on the road sector (ERA 2020). Thus, the implementation of URRAP is aiming to accelerate the growth of rural areas in the country. As agricultural products cover major share in export, the increase in its productivity has direct impact on GDP of a country, meanwhile increases deposit of foreign currency.

## **2.5. Conceptual framework of the study**

In citation of previous study the construction industry is said to be one of the most unsafe industry because of its high rate of fatalities (patric ,2011).based on the literature review in Ethiopia generally existing factors affecting construction projects can be grouped by own project characteristics related to factors client related, supervisor related, contractor related factors, material , Equipment related and External related. All the above factors are highly associated with a nature of specific URRAP Project completion and it's for fact that factor were observed during the implementation of study they have relation with the factors of that specific project in the study area. Accordingly, the study assesses the factors affecting URRAP Project Completion in the study area. The conceptual frame work which organized relationship between the independent variable (client, supervisor, contractor, material and Equipment and External) and dependent variable (URRAP Project Completion). This study looks at the independent variable affecting URRAP Project completion. So the variables are client, supervisor, contractor, material and Equipment and External and URRAP Project Completion.

The study was guided by conceptual framework stated as below:



**Figure 2:1: Conceptual Frame work of the study**

## CHAPTER THREE

### 3. RESEARCH METHODOLOGY

#### 3.1. Introduction

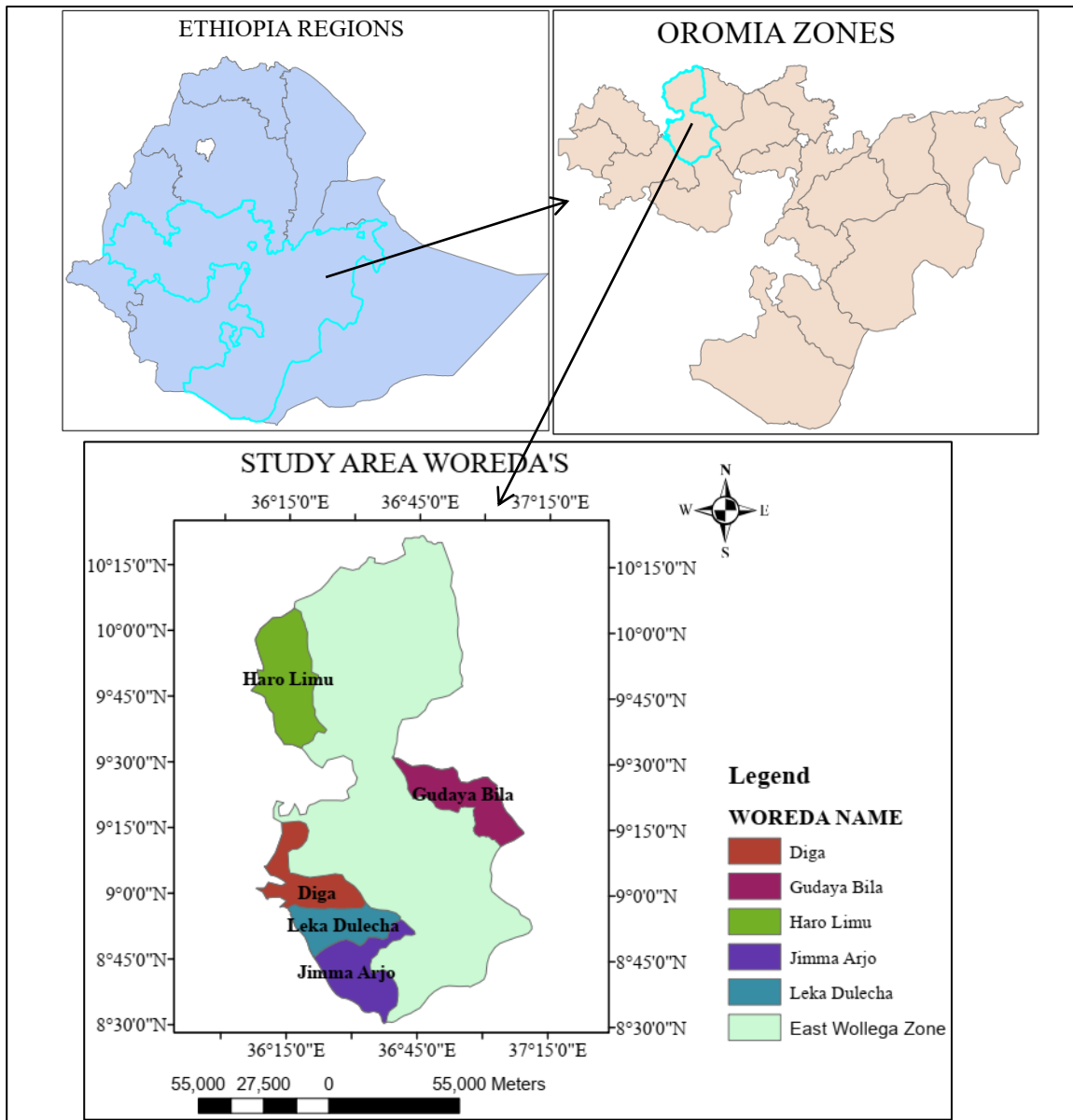
This chapter discusses the proposal research methodology used in this study and it presents details of the research design, target population, sample size and sampling procedure, data collection tools, piloting of instruments, validity and reliability of instruments, data collection procedures, data analysis techniques and ethical considerations while conducting the study.

#### 3.2. Description of the Study Area

East Wollega Zone is one of the zones of Oromia National Regional State and comprises 17 rural districts namely Haro Limmu, Limmu, Ebantu, Gidda Ayyana, Kiremu, Guto Gidda, Sasigga, Digga, Leka Dullecha, Jimma Arjo, Nunnu Kumba, Wama Hagalo, Boneyya Boshe, Gudeyya Bila, Gobbu Sayyo, Sibbu Sire, and Wayyu Tuka and one town administration, Nekemte town. East Wollega Zone is classified into 287 rural peasant associations with 5 towns which were called municipality towns and 23 urban centers of rural districts. These five towns were Arjo, Anger Gute, Ayyana, Sire and Nekemte Town. This zone is located at 331 km west of Finfinne (Addis Ababa) and it's at junction point of Jimma town (Jimma Zone), Ghimbi town (West Wollega Zone), Bure town (Gojjam), Shambu town (Horo Guduru Wollega Zone), and Ambo (West Shewa Zone) routes which makes the favorable the town for commercial, communication and other activities.

The total land area of the zone is about 14,103 km<sup>2</sup> which accounts for about 3.88 % of the total area of the National Regional State of Oromia.

The study area is located in East Wollega zone. The Zone is the largest zone of East Oromia. The Woredas that found in East Wollega zone that selected by considering the factors of URRAP project completion. These Woredas are Gudiya Bila, Haro Limu, Jima Arjo, Diga and Leka Dulacha. Where the URRAP project completion problems are encountered and selected under the study area.



Source: owned 2021

Figure: 3.1 Location Map of Study Area

### 3.3. Research Design

To understand the assessment factors affecting URRAP project completion and the intervention made by project of ORA, a Census sample method was employed. This research design was preferable to conduct this research as the respondents sample was small in number to give answers to the questions about their attitudes and opinions towards the issue and it was found useful to analyze the data that could reveal the present conditions.

The other approach used for this research study was qualitative approach, which is concerned with the subjective assessment of attitudes, opinions and perceptions in which such situations where the function of the researcher's insights and impressions that generated results either in non-quantitative form or in the form which were not subjected to exact quantitative analysis. Questionnaire, interview and focus group discussions was employed to collect the data for the study. The data gather was triangulated using the above two approaches of data analysis. Therefore, the researcher believed that these approaches could make the findings of the research more reliable

### **3.4. Target Population**

The populations used in this study was URRAP projects Completed in East Wollega zone and participants such as, client, contractors, and supervisor and five in each Woredas Leaders.

The respondents included in the survey involved of a total of five study area were: - 10 from zonal Road office professionals (supervisors), 25 as a clients from Woredas road authority, one contractor from each woreda and five person from one contractor so totally 25 respondents from contractors and one respondents from Woredas as Woredas Leaders totally five respondents from five woreda finally numbers of respondents was 65. The numbers was determined on the basis of the time available for conducting the research, available funding for the study and the reliability of the respondents.

The selection of those project participants is due to the fact that they are likely to have an in-depth knowledge of the factors affecting URRAP Project completion, and these factors was truly be reflected by this specific group of people, which was resulted in meeting the thesis research objectives.

### **3.5. Sample size and sampling procedure**

The study participants are composed of 60 professionals and 5 from woreda leaders from the 5-target population who have been engaged in URRAP road construction projects. From the target population the researcher has purposively distributed 43 questionnaires to the whole respondents mentioned to reach out the population with adequate engineering background and non-engineering who were able to answer the research questions and 9 questionnaires were distributed to the client, 9 questionnaires were distributed to the contractor and 9 to the

supervisor finally 16 questionnaires were distributed to all respondents for those who have been actively engaged in the URRAP road construction projects in the study area.

### **3.6. Sampling techniques**

In this study, respondents were selected based on their experience, knowledge and participation in URRAP road construction projects. The study adopted a purposive sampling method. Tayie (2005) explains a purposive sample as one that comprises of subjects who are selected based on certain specific characteristics needed for a study and rules out subjects who do not meet this standard. This necessitated the use of purposive sampling technique for the study.

### **3.7. Data Collection Instruments**

On the data collection, the study relied mainly on primary data. The researcher used questionnaire as the research instrument. The study utilized questionnaire that was developed for generating information on key variables of interest from the target respondents in the study. A self-administered questionnaire were dropped to each respondent and picked later. The questionnaire consisted of closed ended questions. A pilot study was conducted to determine if there were flaws, limitations, or other weaknesses within the data collection instrument to make the necessary revisions prior to the implementation of the study.

The study took 10% of the population for pilot test (Coopers & Schindler, 2010). The researcher adopted content validity which refers to the extent to which a measuring instrument provides adequate coverage of the topic under study. The content validity was achieved by subjecting the data collection instruments to an evaluation group of experts who will provide their comments and relevance of each item of the instruments and the experts to indicate whether the item was relevant or not.

### **3.8. Methods of Data Analysis**

Data collected was analyzed using quantitative method with the help of (SPSS) version 22 and excel. Data processing was carried out through editing, coding and classification. Quantitative data was analyzed by employing descriptive statistics and inferential analysis. Descriptive statics such as measures on central tendency and dispersion along with percentages was used to organize and summarize numerical data.

### **3.9. Reliability and Validity of Research study Instruments**

#### **3.9.1. Reliability of Research study Instruments**

Reliability is the constituency with which research instruments measure what it implications to measure. The test –retest technique was used to test reliability of research instruments; the test involved administering the same instruments twice to the same group of subjects.

#### **3.9.2. Validity of Research study Instruments**

(Mugenda, 2018) define validity as the accuracy and meaningfulness of inferences, which is based on research results. The study apply content validity as a measure to which data obtained from the research instruments meaningfully and accurately reflect or represent a theoretical concept. The researcher was used the expert judgment method to determine content validity. The researcher gives a copy to the supervisor, to check if it represents all objectives of the study.

### **3.10. Research Ethics**

The researcher had followed ethically and morally acceptable processes throughout the research process. The data was collected with the full consent of the participants and they were aware about the purpose of the study. Documents reviewed from the organization remained confidential. The findings and results from this study was not be used for another purpose. During this study respondents were free to respond their own opinion from their experience, and their personal information such as name and detailed information was not mentioned.

## CHAPTER FOUR

### RESULTS AND DISCUSSION

#### 4.1. Introduction

This chapter presents data analysis, presentation and interpretation of primary data, which was collected from respondents through questioner on each contents of the study from sixty-five respondents and This section includes the demographic information, presentation of findings and analysis based on the objectives of the study and as explored by the interview and questionnaires, where both qualitative and quantitative methods have been employed. All of the questionnaires were fully completed which helps the study to be considered adequate for analysis and reporting. The results are presented on the assessing the factors affecting the completion of the Universal Rural Road Access Program (URRAP) projects in East wollega Zone, Oromia.

#### 4.2. Demographic Information

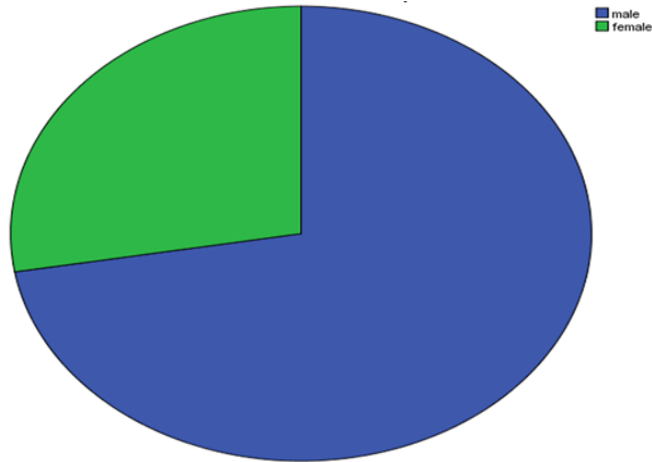
The demographic information of the respondents included gender, age, level of education and their position in the organization how long they have had worked.

**Table 4.1. Characters of Demographic Information**

No	Demographic variable	Category	Frequency	Percent
1	Sex	Male	47	72.3
		Female	18	27.3
		Total	65	100
2	Age	18 – 25 Years	5	7.7
		26 – 35	8	12.3
		36 – 45	47	72.3
		45 and above years	5	7.7
		Total	65	100
3	Educational Level	Certificate	6	9.2

		Diploma	2	3.1
		Degree	49	75.4
		Masters and above	8	12.3
		Total	65	100
4	Position	Client	28	43.1
		Contractor	16	24.6
		Supervisor	12	18.5
		Woredas Leaders	9	13.8
		Total	65	100
5	Experience	1 – 5 Years	15	23.1
		6 – 10 Years	19	29.2
		11 – 15 Years	24	36.9
		16 and above	7	10.8
		Total	65	100

Based on above table 4.1, the study revealed that majority of respondents were male as shown by 47 (72.3%) response rate compared to 18 (27.7%) of their female counterparts. Given the work force gender representation in organization, I would say both genders were adequately represented with the study.



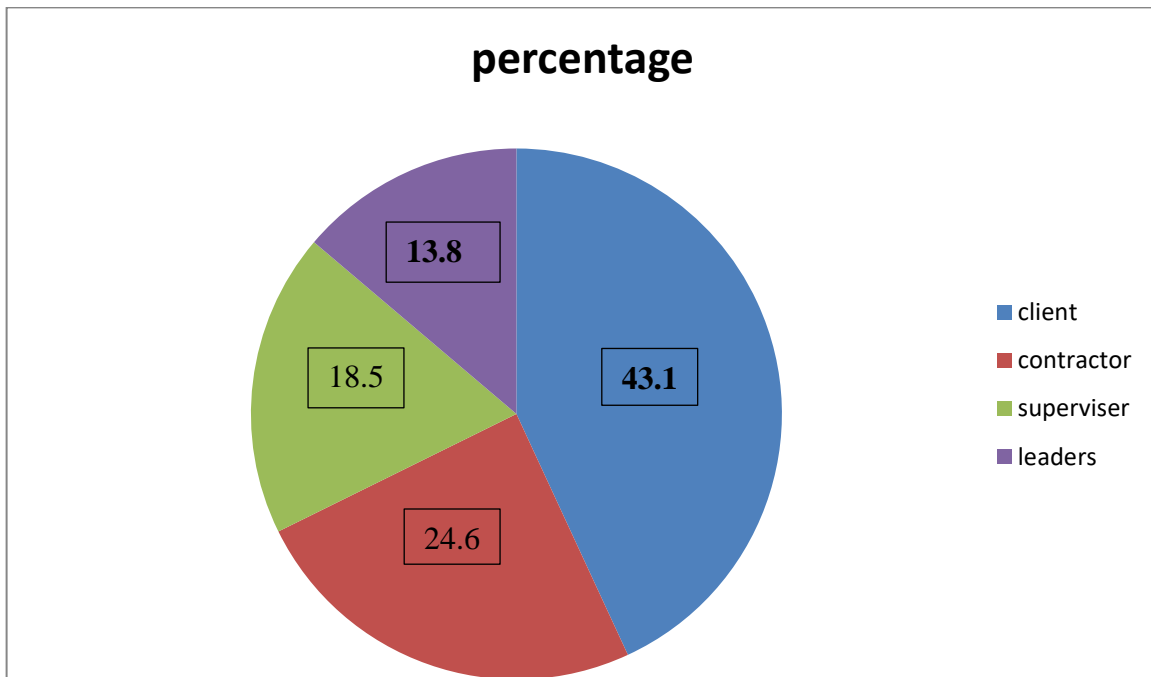
**Figure : 4.1 Sex of respondents**

From the findings, majority of the respondents 47 (72.3%) indicated that their age ranged between 36-45 years, followed by 8 (12.3%) who indicated that their age range was between 26-35 years. The findings also revealed that 5 (7.7%) of the respondents were aged between 18-25 years and 5 respondent (7.7%) 45 and above years of age. Also it can be inferred that the respondents were mature enough to provide reliable and sufficient information in relation to the completion of the Universal Rural Road Access Program (URRAP) projects in East wollega.

From the study findings the majority of respondents 49 (75.4%) indicated that they had university first degree (undergraduates) as their level of education, it also followed by 8 (12.3%) of the respondents who had post graduate (masters and above), the findings also revealed that 6(9.2%) and 2 (3.1%) who had completed diploma. Therefore it indicates that the respondents are well educated and have different profession like civil engineering, construction management, surveying engineering, structural engineering, road technician and etc. Thus have the knowledge and skills required to describe project completion in URRAP.

As seen from the table (4.1), from the total of 65 respondents, 28 (43.1%)owner/client organization, 16(24.6%) from contractor organization ,while the supervisor 12(18.5%) and the remaining were leaders from woredas. The findings concurred with completion of the Universal Rural Road Access Program (URRAP) projects in East wollega that position in the organization personnel are able to effectively communicate and share ideas. This enhances fast

information transfer and participants on assessment the factors affecting the completion of the Universal Rural Road Access Program (URRAP) projects in East wollega Zone, Oromia.



**Figure: 4.2 Position of the respondents**

Based on the findings, the majority of the respondents 24 (36.9%) had worked in the organization for a period between 11-15 years followed by 19(29.2%) who had 6-10 years of experience in the organization. While 15 (23.1%) of the respondents had worked in the organization for a period between 1-5 years and the respondents 7 (10.8%) had worked for above 16 years and above. The findings therefore suggest that the respondents were experienced enough to provide valuable responses on factors affecting the completion of the Universal Rural Road Access Program (URRAP) projects in the study area.

**4.3. Factors Affecting URRAP Projects Completion Related to Client**

Here it shows responses on Factors Affecting URRAP Projects Completion. The respondents were asked to state the extent of Factors Affecting URRAP Projects Completion in the study area. A five point scale was used to rate the responses where: 1-To a very great extent, 2-To a great extent, 3-To a moderate extent, 4-To a little extent, 5- No extent.

**Table: 4.2: Factors Affecting URRAP Projects Completion Related to Client**

No	Client Related	Response/Extent	Frequency	Percent
1	1.1. Absence of performance guaranty bond and advance guaranty bond in the agreement	to a very great extent	51	78.5
		to a great extent	4	6.2
		to a moderate extent	6	9.2
		to a little extent	3	4.6
		no extent	1	1.5
		Total	65	100.0
	1.2. Slow and late payments	to a very great extent	8	12.3
		to a great extent	8	12.3
		to a moderate extent	38	58.5
		to a little extent	7	10.8
		no extent	4	6.2
		Total	65	100.0
	1.3.Change orders (changes about design or working process	to a very great extent	10	15.4
		to a great extent	12	18.5
		to a moderate extent	8	12.3
		to a little extent	32	49.2
		no extent	3	4.6
		Total	65	100.0
	1.4. none compensation of society property	to a very great extent	36	55.4
		to a great extent	12	18.5
		to a moderate extent	9	13.8
		to a little extent	6	9.2
		no extent	2	3.1
		Total	65	100.0
	1.5. Lack of sufficient cash for project implementation	to a very great extent	7	10.8
		to a great extent	11	16.9
		to a moderate extent	32	49.2

	to a little extent	6	9.2
	no extent	9	13.8
	Total	65	100.0
1.6. Bureaucracy	to a great extent	25	38.5
	to a moderate extent	10	15.4
	to a little extent	13	20.0
	no extent	11	16.9
	Total	6	9.2
1.7. Unite price or unite rate	to a very great extent	11	16.9
	to a great extent	17	26.2
	to a moderate extent	21	32.3
	to a little extent	4	6.2
	no extent	11	16.9
	Total	65	100.0
1.8. Slow decision making	to a very great extent	9	13.8
	to a great extent	10	15.4
	to a moderate extent	14	21.5
	to a little extent	25	38.5
	no extent	7	10.8
	Total	65	100.0
1.9. Problem of funding	to a very great extent	12	18.5
	to a great extent	31	47.7
	to a moderate extent	11	16.9
	to a little extent	8	12.3
	no extent	3	4.6
	Total	65	100.0

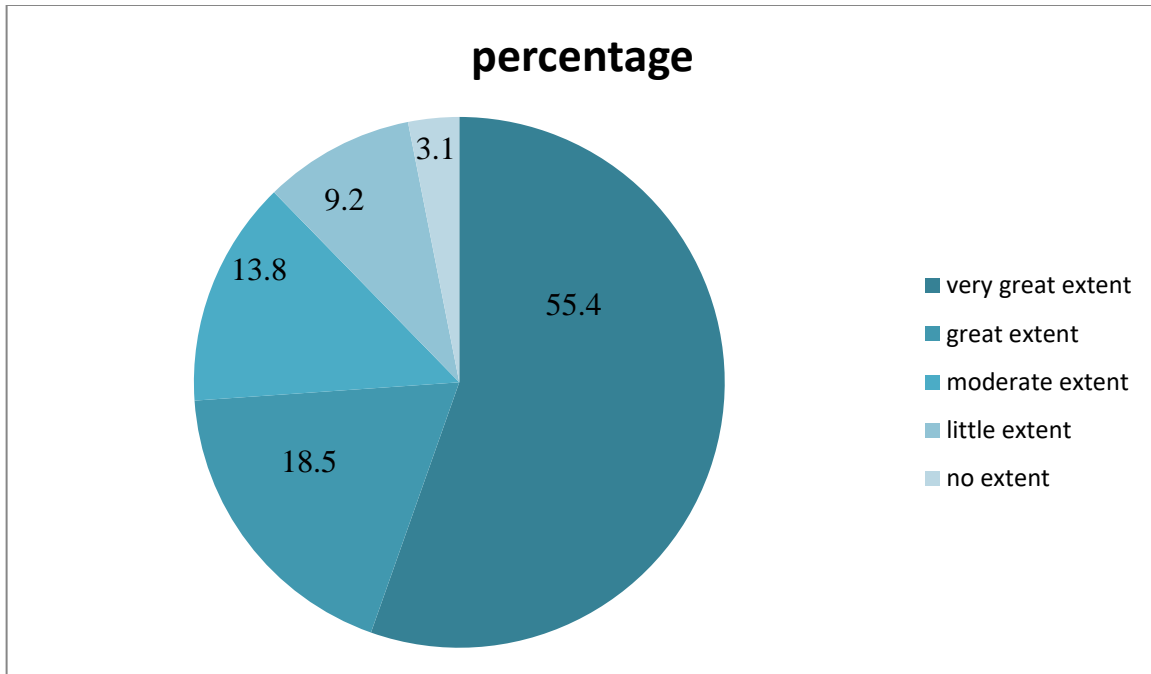
From the findings in Table 4.2, the majority 78.5% indicated that Factors Affecting URRAP Projects Completion was Absence of performance guaranty bond and advance guaranty bond in

the agreement made between the both parties and it shows to a very great extent. 9.2% of the result show to a moderate extent. While 6.2% of the result indicates that Factors Affecting URRAP Projects Completion as Absence of performance guaranty bond and advance guaranty bond in the agreement related to client to a great extent. This implies that the above factors affecting the completion of the Universal Rural Road Access Program (URRAP) projects to a very great extent

According to findings, the result indicated that 58.5% to a moderate extent because of Slow and late payments by the clients as a Client Related factors affecting the completion of the Universal Rural Road Access Program (URRAP) projects in East wollega Zone, 12.3% of the result indicated to a very great extent While 10.8% respondents indicated to a little extent and participants reveled 6.2% to no extent. This implies that the above factors affecting the completion of the Universal Rural Road Access Program (URRAP) projects to a moderate extent.

Based on the above table 4.2, the result indicated that 49.2% to a little extent because of delay in Change orders (changes about design or BOQ) as Client Related on factors affecting the completion of the Universal Rural Road Access Program (URRAP) projects .18.5% of the respondents indicated to a great extent While 15.4% respondents indicated to a very great extent and participants reveled 4.6 % no extent. This indicated that Change orders (changes about design or BOQ) as Client Related on factors affecting the completion of the Universal Rural Road Access Program (URRAP) projects has no impact on completion of the Universal Rural Road Access Program.

As mentioned in table 4.2, Above, the top five point scale Factors Affecting Universal Rural Road Access Program (URRAP) Projects Completion in the East wollega Zone are ranked and summarized in the table by analyzing the data collected from the respondents' perception indicated that 55.4% to a very great extent, 18.5% of the respondents indicated to a great extent While 13.8% respondents indicated to a moderate extent, 9.2 to a little extent and 3.1 % no extent. The outcomes showed that none compensation of society property as Client Related is ranked as to a very great extent and it has a great impact on the successfulness of the URRAP project.



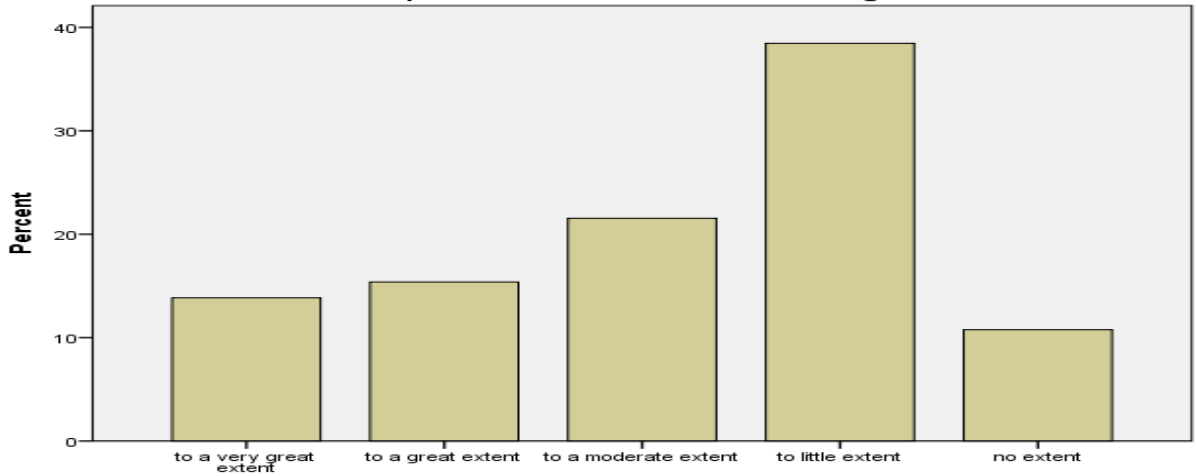
**Figure: 4.3 Non compensation of society property**

According to findings on the Table: 4.2, the result indicate that 49.2% to a moderate extent on Lack of sufficient cash for project implementation as Client Related on factors affecting the completion of the Universal Rural Road Access Program (URRAP) projects, 16.9% of the result indicate to a great extent While 13.8% result show no extent, 10.8% result indicate to a very great extent and 9.2% result indicate to little extent. This implies that Lack of sufficient cash for project implementation as Client Related on factors affecting the completion of the Universal Rural Road Access Program (URRAP) projects have moderate extent impact on completion of the Universal Rural Road Access Program.

The findings show that 38.5% of the output was to a very great extent, 15.4% to a great extent, and 20% to a moderate extent while 16.9% to little extent and 9.2% no extent. The outcomes showed that Bureaucracy in client organization have a very great extent impact on completion of the Universal Rural Road Access Program projects. The response also shows that the bureaucracy have a great impact on accomplishment of the projects.

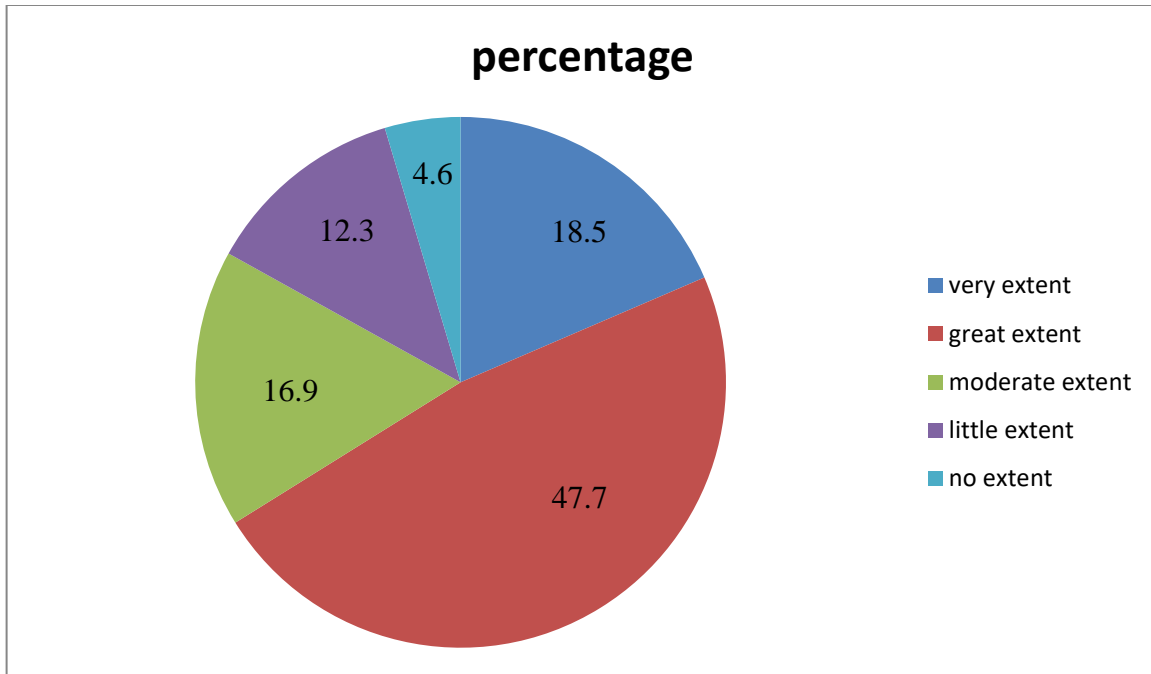
Results of respondents 'survey presented in the above table demonstrate that Factors Affecting Universal Rural Road Access Program (URRAP) Projects Completion due to Unite price or unite rate as Client Related showed 32.3% to a moderate extent.

The result shows that 38% to little extent of the respondents said that the reason for none completion of Universal Rural Road Access Program (URRAP) projects is due to Slow decision making of Client.



**Figure: 4.4 slow decision making**

From the findings in table 4.2, majority of the respondents/ 47.7% to a great extent due to Problem of funding as Client Related can affect the completion of Universal Rural Road Access Program (URRAP) projects, Most of respondents /18.5% to a very great extent due to Problem of funding as Client Related for completion of project. So this implies that funds must consider as a key to successfulness of project. Therefore the organization should fund or allocate the enough budgets for the project to overcome the problem.



**Figure: 4.5 Problem of funding**

Generally as seen from the above table 4.2, the nine Factors Affecting Universal Rural Road Access Program (URRAP) Projects Completion in the study area that are identified as a top Factors Affecting URRAP projects Completion by respondents are presented. Accordingly, the four most Factors Affecting in the overall results are indicated in boldface for to a very great extents are “Absence of performance guaranty bond and advance guaranty bond in agreement made between the parties related to Client, none compensation of society property related to Client, Bureaucracy as client related, Problem of funding as Client Related” was identified as the top Factors of completion of URRAP project in the study area by all respondents. This shows that The client should make re design the URRAP programm, should modify contract or agreement content by involving performance guaranty bond and advance guaranty bond in contracts, fund enough budget for projects and allocate appropriate budget for compensation of society property, that bring into line to complete the projects.

#### **4.4. Factors Affecting URRAP Projects Completion supervisor Related**

Here it shows responses on Factors Affecting URRAP Projects Completion. The respondents were asked to state the extent of Factors Affecting URRAP Projects Completion in the study area. A five point scale was used to rate the responses where: 1-To a very great extent, 2-To a

great extent, 3-To a moderate extent, 4-To a little extent, 5- No extent Information related to the respondents working organization that they are currently working or were working for helps to determine in which Affecting URRAP Projects Completion to identify the supervisor Related. The reason for asking this question was it is fair to include all project parties who were working on during the period of project on construction in the study for full understandings of the Factors Affecting URRAP Projects Completion.

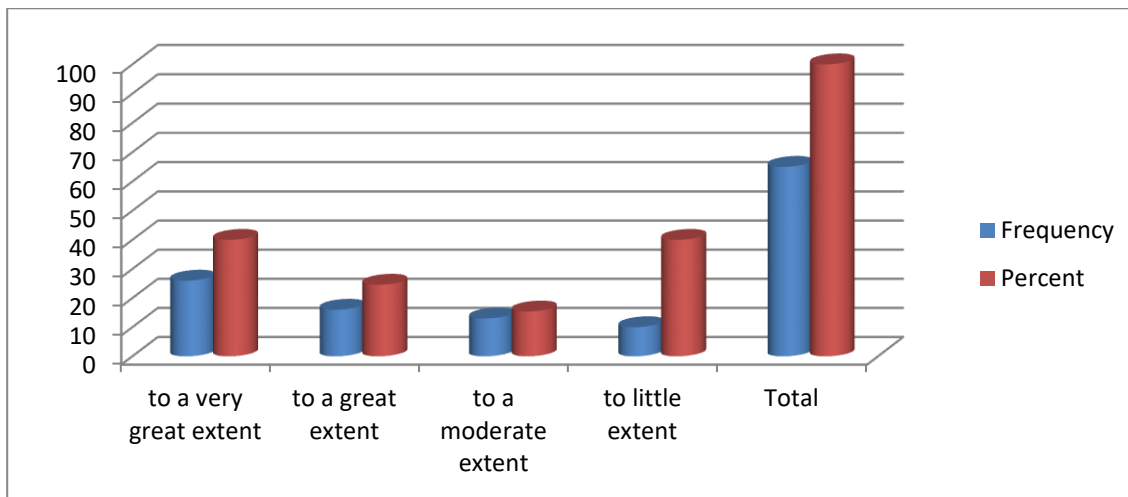
**Table: 4.3. Factors Affecting URRAP Projects Completion Related to supervisor**

No	Supervisor Related	Response/Extent	Frequency	Percent
2	2.1. on Late in revising and approving design documents	to a very great extent	26	40.0
		to a great extent	16	24.6
		to a moderate extent	13	15.4
		to a little extent	10	11.0
		Total	65	100
	2.2. under estimating the cost of project	to a very great extent	22	33.8
		to a great extent	16	24.6
		to a moderate extent	14	21.5
		to a little extent	12	18.5
		no extent	1	1.5
		Total	65	100.0
	2.3. preparation of in adequate design and contract document	to a very great extent	13	20.0
		to a great extent	13	20.0
		to a moderate extent	18	27.7
		to a little extent	21	32.3
		Total	65	100
	2.4. waiting in approval of contractor documents	to a very great extent	3	4.6
		to a great extent	6	9.2
		to a moderate extent	13	20.0
		to a little extent	34	52.3
no extent		9	13.8	

	Total	65	100.0
2.5. Non-availability of consultant's staff on site	to a very great extent	25	38.5
	to a great extent	16	24.6
	to a moderate extent	10	15.4
	to a little extent	11	16.9
	no extent	3	4.6
	Total	65	100.0
2.6. Improper project planning and scheduling	to a very great extent	6	9.2
	to a great extent	11	16.9
	to a moderate extent	15	23.1
	to a little extent	30	46.2
	no extent	3	4.6
	Total	65	100.0
2.7. inaccurate initial project scope estimate	to a very great extent	3	4.6
	to a great extent	3	4.6
	to a moderate extent	15	23.1
	to a little extent	32	49.2
	no extent	12	18.5
	Total	65	100.0
2.8. insufficient data collection and survey before design	to a very great extent	12	18.5
	to a great extent	3	4.6
	to a moderate extent	15	23.1
	to a little extent	32	49.2
	no extent	3	4.6
	Total	65	100.0
2.9. inadequate experience of consultants	to a very great extent	6	9.2
	to a great extent	13	20.0
	to a moderate extent	16	24.6

		to a little extent	27	41.5
		no extent	3	4.6
		Total	65	100.0

According to respondents view illustrated above, 40% of the result were to a very great extent, 24.6% to a great extent, 15.4% to a moderate extent while 11% to little extent and 10% no extent. The outcomes showed that the supervisor was late on revising and approving design documents as supervisor related. This shows that it had a very great extent impact on completion of the Universal Rural Road Access Program.



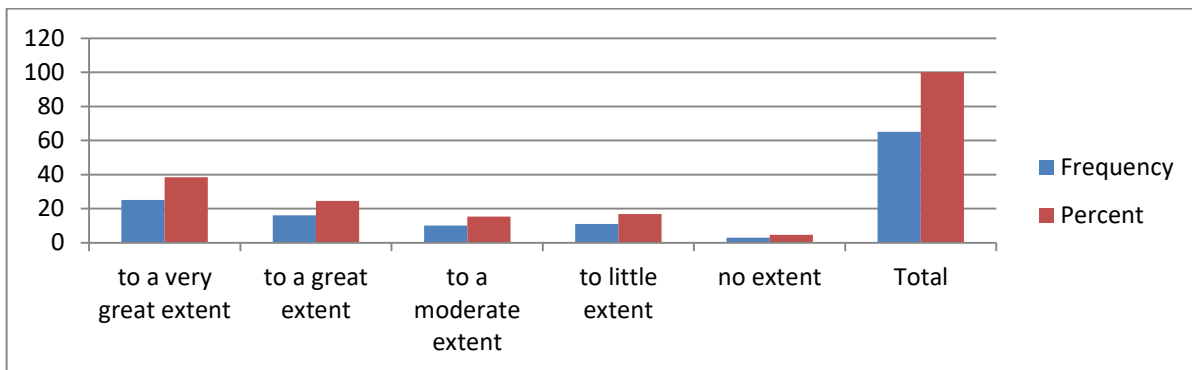
**Figure: 4.6 late on revising and approving design documents**

It is presented in the above table 4.3, most of respondents asked if they know about under estimating of cost of project as supervisor related on factors affecting the completion of the Universal Rural Road Access Program (URRAP) projects completion in the study area and then 33.8% to a very great extent. 24.6% to a great extent, 21.5% to a moderate extent while 18.5% to little extent and 1.5% no extent. This shows that under estimating project cost had impact on completion of URRAP project.

The result shows that 32.3% to little extent 20% to a very great extent. 20% to a great extent, 27.7% to a moderate extent of the respondents said that factors affecting the completion of the Universal Rural Road Access Program (URRAP) projects on preparation of in adequate design and contract document error as supervisor Related, The study implies that the preparation of in

adequate design and contract document as supervisor Related does not problem to achieve the completion of the Universal Rural Road Access Program in the study area.

As shown in table 4.3. the outcome of the study showed that, 38.5% of the respondents were to a very great extent, 24.6% to a great extent, 15.4% to a moderate extent while 16.9% to little extent and 4.6% no extent. The outcomes showed that the Non-availability of consultant's staff on site as supervisor Related on factors affecting the completion of the Universal Rural Road Access Program (URRAP) projects have to a very great extent impact on completion of the Universal Rural Road Access Program projects.



**Figure: 4.7 Non-availability of consultant's staff on the site**

The findings show that 46.2% of the respondents were, to little extent, 23% to a moderate extent, 16% to a great extent while 9.2% to a very great extent and 4.6% to no extent. The results showed that the respondents on Improper project planning and scheduling in the supervisor Related to little extent.

From the findings in table 4.3, majority of the respondents show that 49.2% of the respondents were, to little extent, 23.1% to a moderate extent, 18.5% to no extent while 4.6 % to a very great extent and 4.6% to a great extent. The results showed that the result on improper project planning and scheduling as supervisor Related to little extent

It is presented in the above table 4.3, most of result show that 49.2% of the respondents were, to little extent, 23.1% to a moderate extent, 23.1% 18.5% to a very great extent while 18.5 to a great extent and 4.6% to a great extent respectively. The results showed that the result on an improper project planning and scheduling as supervisor Related to little extent.

Respondents result presented in the above table 4.3, show that inadequate experience of consultants on Factors Affecting Universal Rural Road Access Program (URRAP) Projects

Completion was 41.5% of the respondents were, to little extent, 24.6% to a moderate extent, 20% 18.5% to a great extent while 9.2 to a very great extent and 4.6% no extent. The results showed that the respondents have adequate experience of consultancy as supervisor Related.

As summarization depending on the above table 4.3, the nine Factors Affecting Universal Rural Road Access Program (URRAP) Projects Completion in the study area particularly studied as Supervisor Related are identified as a top Factors Affecting URRAP completion by respondents and presented. Accordingly, the most Factors affecting in the overall results are indicated in boldface to a very great extent are “Late in revising and approving design documents ,under estimating , non-availability of consultant's staff on site” was identified as the top Factors of completion of project in the study area by all respondents. This shows that supervisor must revise and approve the design documents on time and establish the staff camps at the site.

#### **4.5. Factors Affecting URRAP Projects Completion Related to Contractor**

The overall result of the section of this study shows Factors Affecting URRAP Projects Completion and the respondents were asked to state the extent of Factors Affecting URRAP Projects Completion in the study area. A five point scale was used to rate the responses where: 1-To a very great extent, 2-To a great extent, 3-To a moderate extent, 4-To a little extent, 5- No extent Information related to the respondents working organization that they are currently working or were working for helps to determine in which Affecting URRAP Projects Completion to identify the overall result of the study shows the Related.

**Table: 4.4. Factors Affecting URRAP Projects Completion Related to Contractor**

No	Contractor Related	Response/Extent	Frequency	Percent
3	3.1. Absence of full discipline in their firms	to a very great extent	8	12.3
		to a great extent	13	20.0
		to a moderate extent	18	27.7
		to a little extent	21	32.3
		no extent	5	7.7
		Total	65	100.0
	3.2. Delays of sub-contractors to complete the works	to a very great extent	18	27.7
		to a great extent	21	32.3
		to a moderate extent	18	27.7
		to a little extent	16	24.6
		no extent	5	7.7
		Total	65	100.0
	3.3. Old techniques and methods for construction	to a very great extent	13	20.0
		to a great extent	19	29.2
		to a moderate extent	10	15.4
		to a little extent	20	30.8
		no extent	3	4.6
		Total	65	100.0
	3.4. inadequate management and supervision by the contractor	to a very great extent	15	23.1
		to a great extent	17	26.2
		to a moderate extent	6	9.2
		to a little extent	24	36.9
		no extent	3	4.6
		Total	65	100.0
3.5. Rework due to faults during construction	to a very great extent	15	23.1	
	to a great extent	17	26.2	
	to a moderate extent	9	13.8	
	to a little extent	22	33.8	
	no extent	2	3.1	
	Total	65	100.0	
3.6. incorrect construction	to a very great extent	15	23.1	
	to a great extent	17	26.2	
	to a moderate extent	9	13.8	
	to a little extent	22	33.8	
	no extent	2	3.1	
	Total	65	100.0	

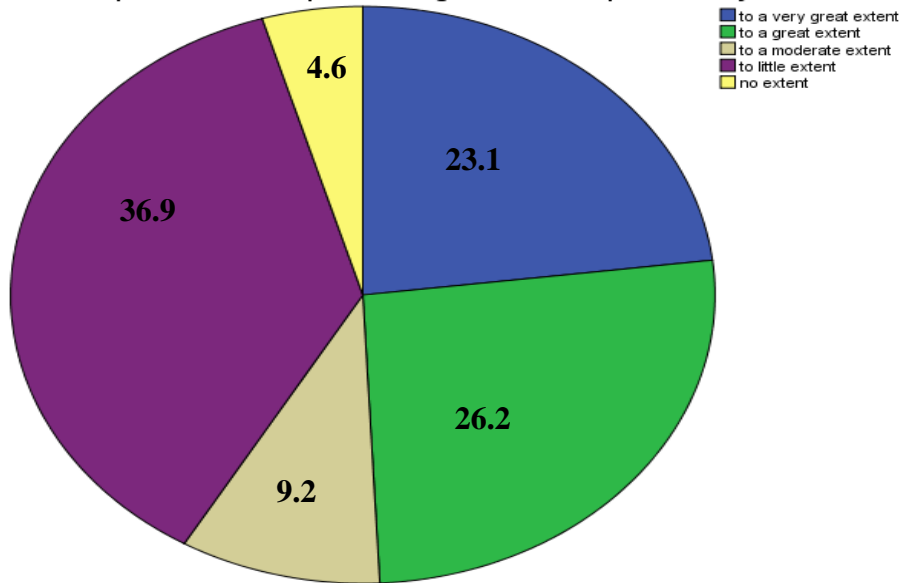
3.7. Lack of adequate training on construction management techniques	to a very great extent	12	18.5
	to a great extent	17	26.2
	to a moderate extent	13	20.0
	to a little extent	19	29.2
	no extent	4	6.2
	Total	65	100.0
3.8. Ineffective resource management	to a very great extent	17	26.2
	to a great extent	22	33.8
	to a moderate extent	12	18.5
	to a little extent	14	21.5
	Total	65	100.0
3.9. Inadequate experience of contractor	to a very great extent	12	18.5
	to a great extent	23	35.4
	to a moderate extent	7	10.8
	to a little extent	21	32.3
	no extent	2	3.1
	Total	65	100.0

Results of respondents' survey presented in the above table 4.4, demonstrate that Absence of full discipline in their firms related to Contractor on Factors Affecting URRAP Projects Completion in the study area, 32.3% of the result were, to little extent, 27.7% to a moderate extent, 20% 18.5% to a great extent while 12.3% to a very great extent and 5% no extent. The results showed that Absence of full discipline in their firms in the Contractor Related to little extent.

According to table 4.4, Respondents result presented show that Delays of sub-contractors to complete the works as Contractor Related on Factors Affecting Universal Rural Road Access Program (URRAP) Projects Completion, 32.3% to a great extent, 27.7% of the respondents result were to a very great extent, 27.7% to a moderate extent while 24.6% to little extent and 7.7 % no extent. This implies that delay of sub-contractors on URRAP Projects Completion has a great extent.

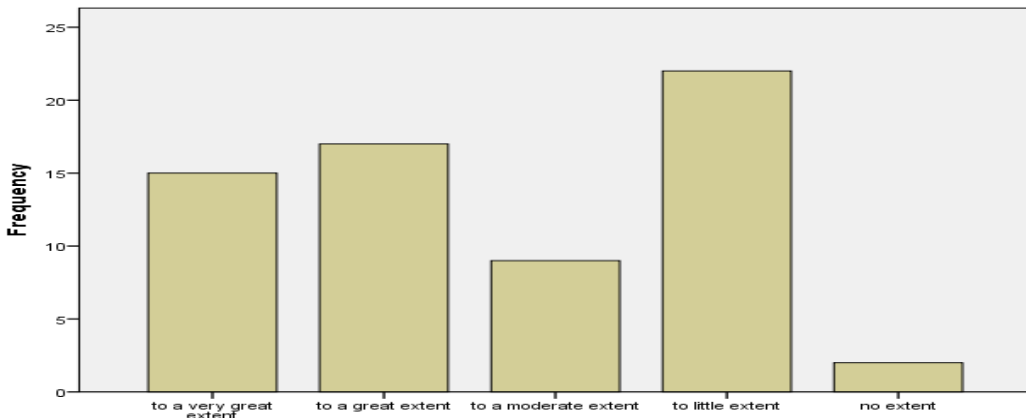
According to respondents view illustrated above, on Old techniques and methods for construction as Contractor Related on Factors Affecting URRAP Projects Completion in the study area, 38 % of the respondents were, to little extent, 29.2% to a great extent, 20% to a very great extent while 12.3% to a moderate extent and 4.6% no extent. The results showed that Old techniques and methods of construction as Contractor Related were, to little extent.

According to the findings, the respondents result indicated that inadequate management and supervision by the contractor 36.9 %, to little extent, 26.2% to a great extent, 23.1% to a very great extent while 4.6% to a moderate extent and 4.6% no extent. The results showed that inadequate management and supervision by the contractor as Contractor were, to little extent.



**Figure: 4.8. Supervision and in adequate management**

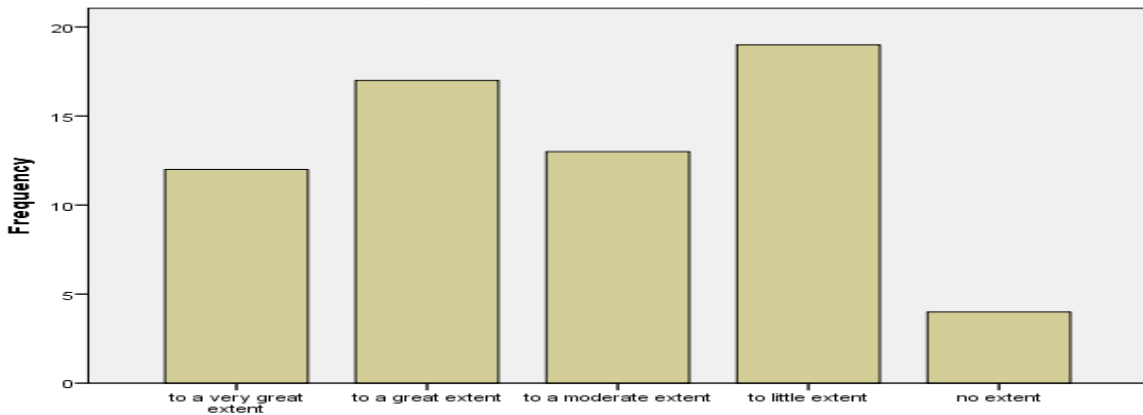
The findings show that 33.8% of the respondents were, to little extent, 26.2% to a great extent, to 23.1% a very great extent, 13% to a moderate extent while 3.1% to no extent. The outcomes showed that Rework due to faults during construction have impact to a very great extent.



**Figure: 4.9 Reworks due to faults during construction**

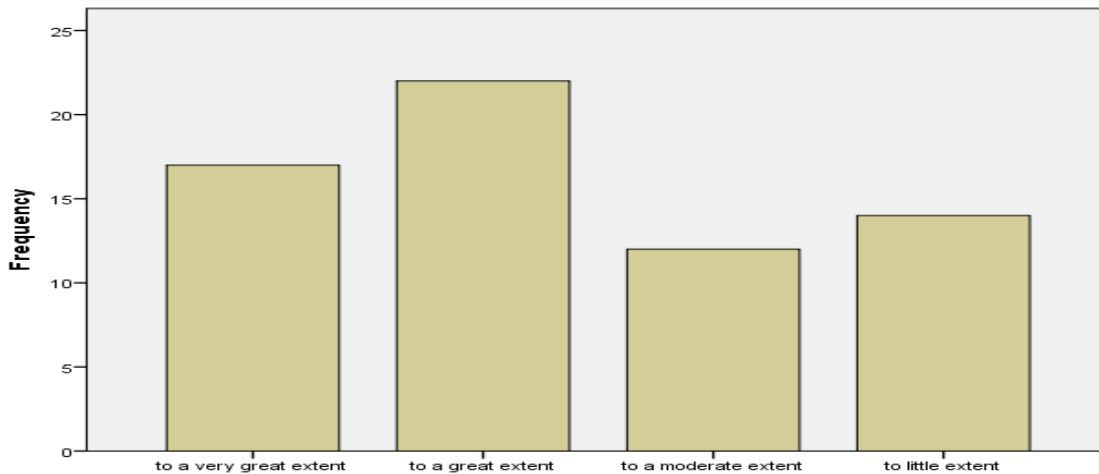
The findings showed that most contractors were incorrect construction as Contractor Related Factors Affecting Universal Rural Road Access Program (URRAP) Projects Completion that, 33.8% of the result were, to little extent, 26.2% to a great extent, to 23.1% a very great extent, 13% to a moderate extent while 3.1% to no extent. The outcomes showed that Rework due to faults during construction as Contractor Related, to a very great extent.

According to the findings Lack of adequate training on construction management for Contractor’s staffs show 29.2 % of the respondents were, to little extent, 26.2% to a great extent, 18.5% to a very great extent while 20% to a moderate extent and 6.2% no extent. The results showed that Lack of adequate training on construction management for Contractor’s staffs as Contractor Related were, to little extent at the study area.



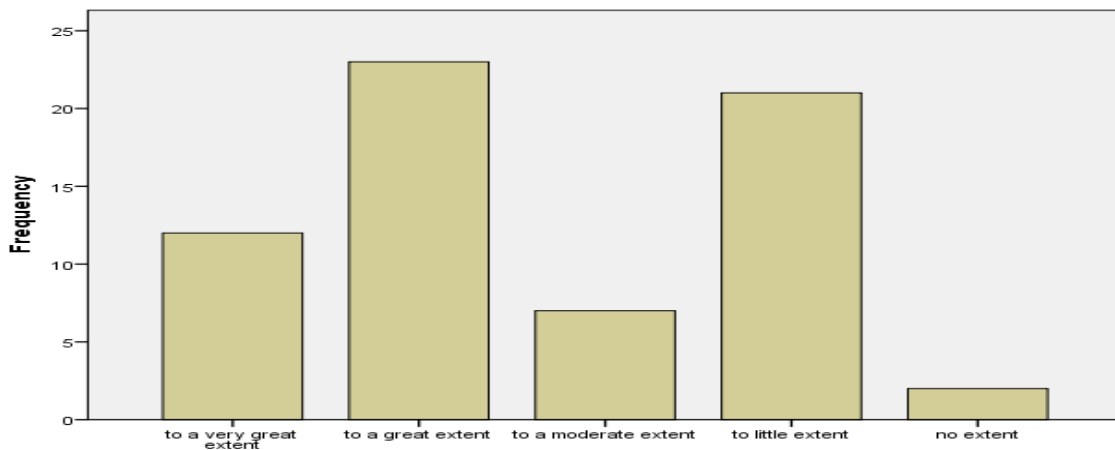
**Figure: 4.10 Lack of adequate training on construction management techniques**

From the findings, the respondents result indicated that Ineffective resource management as Contractor Related 33.8 % of the result were, to a great extent, 33.8% to a very great extent, 21.5% to little extent while 18.5% to a moderate extent and 0% no extent. The results showed that Ineffective resource management as Contractor Related was, to a great extent.



**Figure: 4.11 Ineffective resource management**

Respondents result presented in the above table 4.4, show that Inadequate experience of contractor as Contractor Related on Factors Affecting Universal Rural Road Access Program (URRAP) Projects Completion 35.5% of the respondents were, to a great extent 32.3%, to little extent, 18.5% to a very great extent 10.8% to a moderate extent and 4.6% no extent. The results showed that inadequate experience of contractor as Contractor Related on Factors Affecting Universal Rural Road Access Program (URRAP) Projects Completion has impact.



**Figure: 4.12 inadequate experience of contractor**

As summarized above table 4.4, the most nine Factors Affecting Universal Rural Road Access Program (URRAP) Projects Completion in the study area, related to Contractor are identified as a top Factors Affecting URRAP project completion presented. Accordingly, the most Factors affecting in the overall results are indicated in boldface to a great extent. “ Delays of sub-

contractors to complete the works , Rework due to faults during construction , Incorrect construction , Ineffective resource management , Inadequate experience ” was identified as the top Factors of completion of project in the study area related to contractor. This shows that Contractor must improve the system of construction and Factors Affecting Universal Rural Road Access Program (URRAP) Projects Completion at different level. It further enhances ownership and sustainability which is one of the key aspects from Contractor in monitoring and evaluation of projects to complete.

**4.6. Factors Affecting URRAP Projects Completion Related to Material and Equipment**

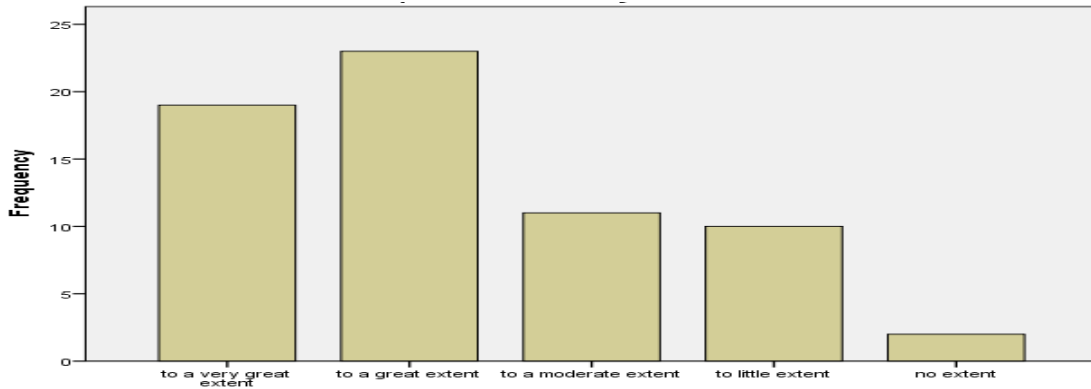
The overall result of the section of this study shows Factors Affecting URRAP Projects Completion. The respondents were asked to state the extent of Factors Affecting URRAP Projects Completion to which the below individuals readiness qualities affecting the Projects Completion in the study area. A five point scale was used to rate the responses where: 1-To a very great extent, 2-To a great extent, 3-To a moderate extent, 4-To a little extent, 5- No extent Information related to the respondents working in organization that they are currently working or were working for helps to determine in which Affecting URRAP Projects Completion to identify the overall result of the study shows the Related.

**Table: 4.5, Factors Affecting URRAP Projects Completion Related to Material and Equipment Related**

No	Material and Equipment Related	Response/Extent	Frequency	Percent
4	4.1. Quality of material i	to a very great extent	19	29.2
		to a great extent	23	35.4
		to a moderate extent	11	16.9
		to a little extent	10	15.4
		no extent	2	3.1
		Total	65	100.0
	4.2. Shortage of construction materials	to a very great extent	15	23.1
		to a great extent	24	36.9
		to a moderate extent	12	18.5

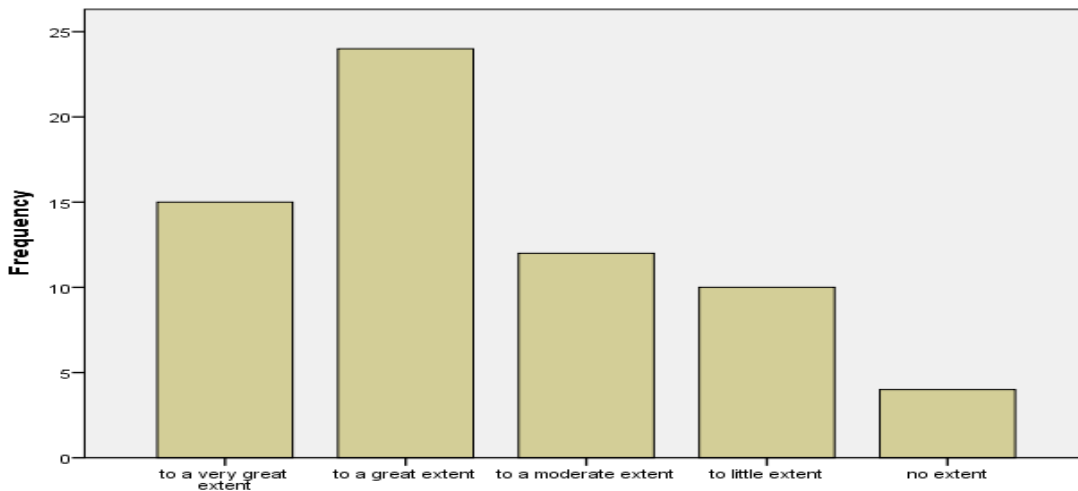
	to a little extent	10	15.4
	no extent	4	6.2
	Total	65	100.0
4.3. Using improperly sophisticated equipment	to a very great extent	18	27.7
	to a great extent	25	38.5
	to a moderate extent	10	15.4
	to a little extent	9	13.8
	no extent	3	4.6
	Total	65	100.0
4.4. Escalation of the materials price	to a very great extent	16	24.6
	to a great extent	30	46.2
	to a moderate extent	10	15.4
	to a little extent	5	7.7
	no extent	4	6.2
	Total	65	100.0
4.5. insufficient machinery lease given to contractor	to a very great extent	22	33.8
	to a great extent	25	38.5
	to a moderate extent	8	12.3
	to a little extent	8	12.3
	no extent	2	3.1
	Total	65	100.0

The study sought to determine the extent to which Material and Equipment Related from the findings and it was noted that majority of the respondents 35.4% were, to a great extent, 29.2% to a very great extent, 16.9% to a moderate extent, 15.4%, to little extent and 3.1 % no extent. The results showed that Material and Equipment Related affect Universal Rural Road Access Program (URRAP) Projects Completion.



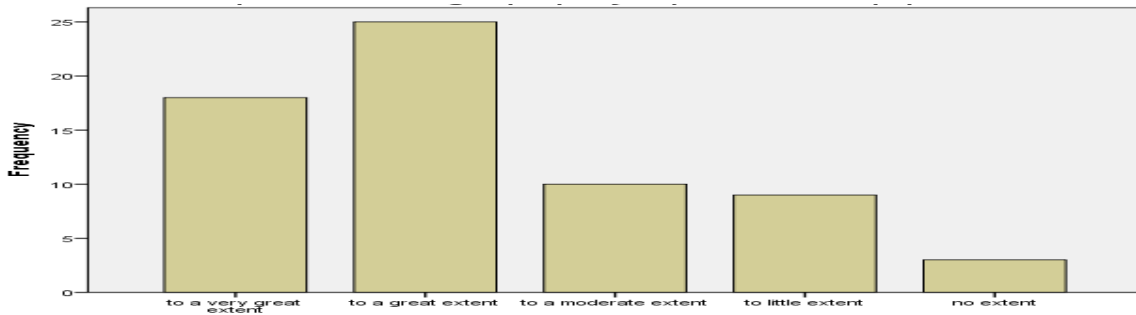
**Figure: 4.13 Quality of material as Material and Equipment Related**

As seen from the table (4.5) above, the respondents result indicated that Shortage of construction materials relative to Material and Equipment shows 36.9 % of the respondents were, to a great extent, 23.1% to a very great extent, 18.5% to a moderate extent ,15.4% to little extent and6.2% no extent. The results indicated that Shortage of construction materials were, to a great extent by the study.



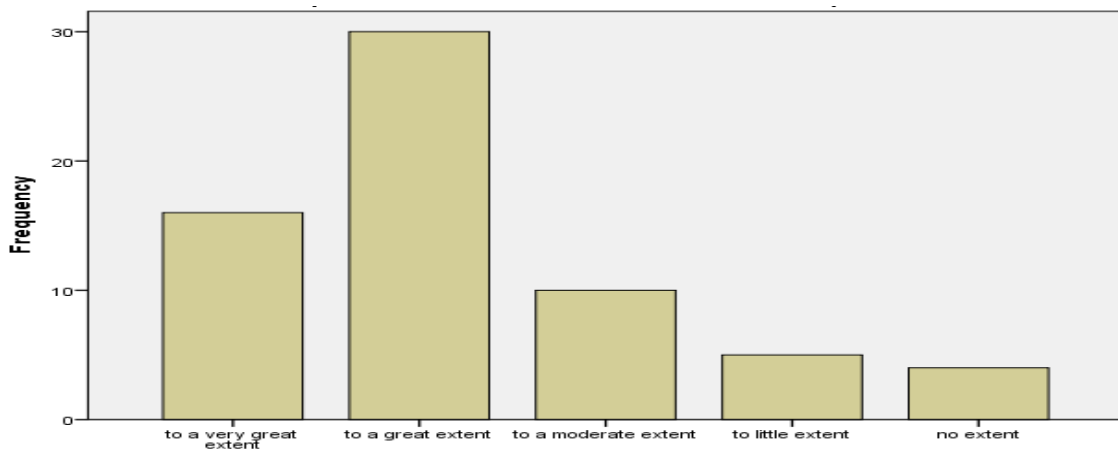
**Figure: 4.14 Shortage of construction materials in the Material & Equipment Related**

According to the findings, the respondents result indicated that Using improperly and sophisticated equipment and Material related shows 38.5 % of the respondents were to a great extent, 27.7% to a very great extent, 15.4% to a moderate extent while 13.8 % to little extent and 4.6% no extent. The results showed that Lack of construction material and Equipment were, to little extent by the study.



**Figure: 4.15 Using improperly sophisticated equipment**

From the findings, the respondents indicated that Escalation of the materials price as Material and Equipment Related 46.2 % of the respondents were to a great extent, 24.6% to a very great extent, 15.4% to a moderate extent while 7.7 % to little extent and 6.2% no extent. The results showed that Escalation of the materials price as Material and Equipment Related were, to a great extent by the study.



**Figure 4.16 Escalation of the materials price**

From the findings, the respondent result show that incapable machinery lease given to contractor by client as Material and Equipment Related show 38.5 % of the respondents were to a great extent, 33.8 % to a very great extent, 12.3% to a moderate extent , 12.3 % to little extent respectively and 3.1% no extent. The respondents agreed that insufficient machinery lease given to contractor by client as Material and Equipment Related had Affecting URRAP projects completion was to a great extent

Based on the above table 4.5, results of the questionnaire survey, information gathered from the five Factors Affecting Universal Rural Road Access Program (URRAP) Projects

Completion in the study area, as Material and Equipment Related. The following, finding have been drawn as a top Factors Affecting Projects Completion. Accordingly, the most Factors are indicated in boldface, Material and equipment to a great extent were: “Quality of material, Shortage of construction materials, using improperly and incapable equipment, Escalation of the materials price, insufficient machinery lease given to contractor” among the top 5 Factors Affecting Projects Completion as Material and equipment related respectively. The funding draws that Material and Equipment Related Factors Affecting Projects Completion in the study area to a great extent.

There for the client must give sufficient equipment or machinery lease to the contractor and the contractor should rent or deliver sophisticated machinery and quality of material needed should supply by contractor and attentively followed by the supervisor.

#### 4.7. Factors Affecting URRAP Projects Completion Related to External

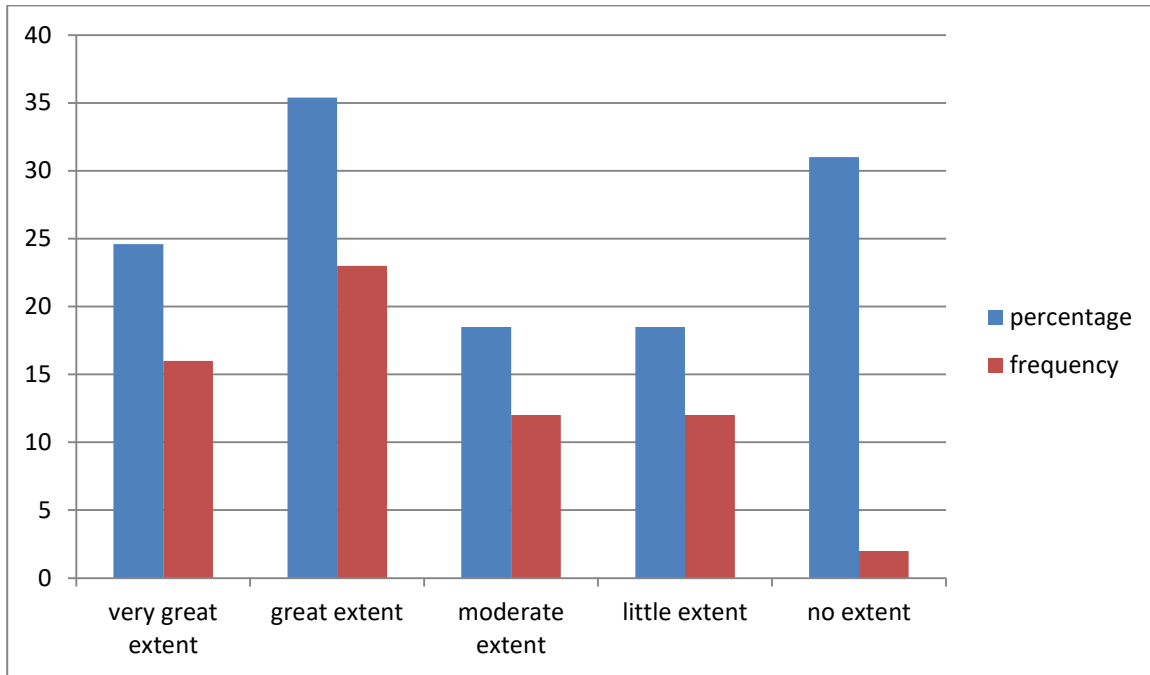
**Table: 4.6. Factors Affecting URRAP Projects Completion Related External**

No	External Related	Response/Extent	Frequency	Percent
	5.1. unforeseen site conditions	to a very great extent	16	24.6
		to a great extent	23	35.4
		to a moderate extent	12	18.5
		to a little extent	12	18.5
		no extent	2	31
		Total	65	100
	5.2. Natural disasters	to a very great extent	14	21.5
		to a great extent	17	26.2
		to a moderate extent	11	16.9
		to a little extent	17	26.2
		no extent	6	9.2
		Total	65	100.0
	5.3. Bureaucracy and changes of government regulations	to a very great extent	17	26.2
		to a great extent	20	30.8

5		to a moderate extent	8	12.3
		to a little extent	14	21.5
		no extent	6	9.2
		Total	65	100.0
	5.4. Effect of local community	to a very great extent	14	21.5
		to a great extent	18	27.7
		to a moderate extent	9	13.8
		to a little extent	18	27.7
		no extent	6	9.2
		Total	65	100.0
	5.5. Shortage of foreign currency for importation of materials	to a very great extent	21	32.3
		to a great extent	30	46.2
		to a moderate extent	8	12.3
		to a little extent	4	6.2
		no extent	2	3.1
		Total	65	100
	5.6.	to a very great extent	21	32.3
		to a great extent	26	40
		to a moderate extent	8	12.3
		to a little extent	6	9.2
	no extent	4	6.2	
	Total	65	100	

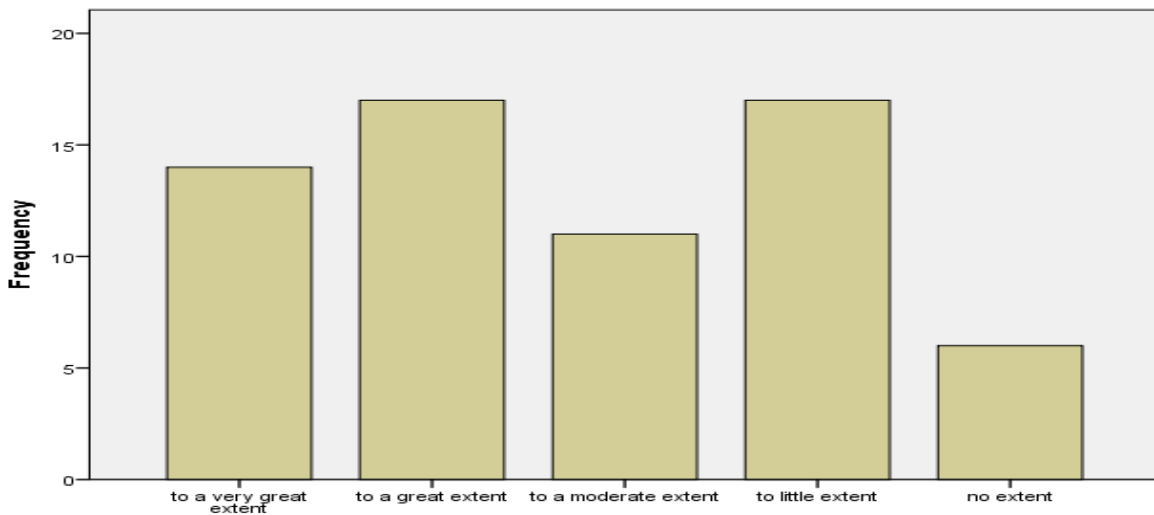
As seen from the table (4.6) above, the respondents result indicate that unforeseen site conditions as External Related 35.4 % of the result were to a great extent, 24.6 % to a very great extent, 18.5% to a moderate extent , 18.5 % to little extent respectively and 3.1% no extent. However unforeseen site conditions as External Related affect projects Completion. It

agreed that unforeseen site conditions as External Related had Affecting URRAP projects in the study area to a great extent.



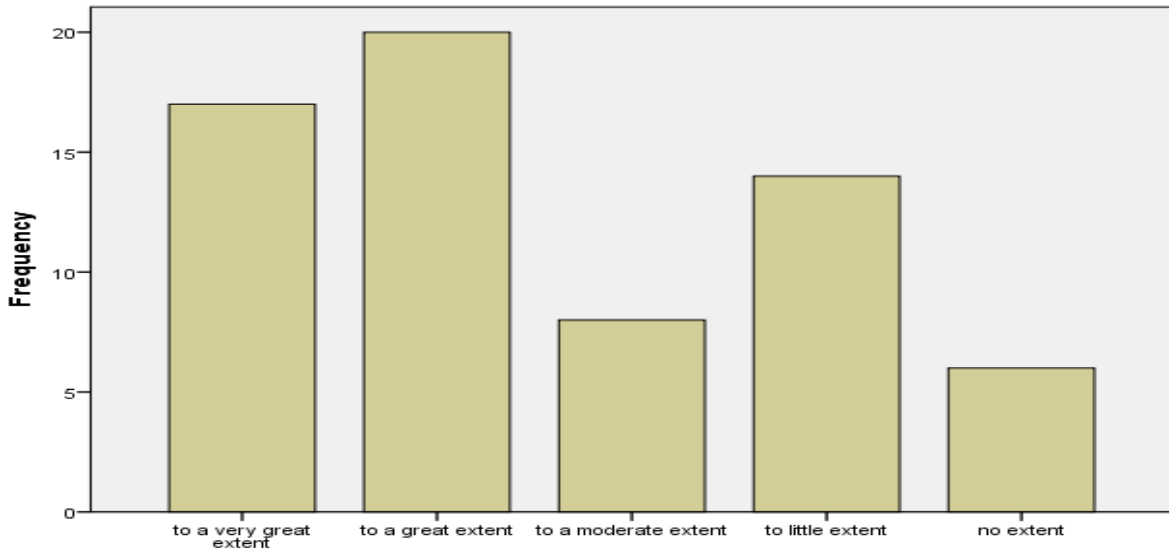
**Figure: 4.17 unforeseen site conditions external related**

The respondents result indicated that Natural disasters as External Related 26.2 % of the respondents were to a great extent, 26.2% to little extent respectively, 21.5 % to a very great extent, 16.9% to a moderate extent and 9.2% no extent. The respondents agreed Natural disasters as External Related had Affecting URRAP projects in the study area to a great extent and to little extent respectively



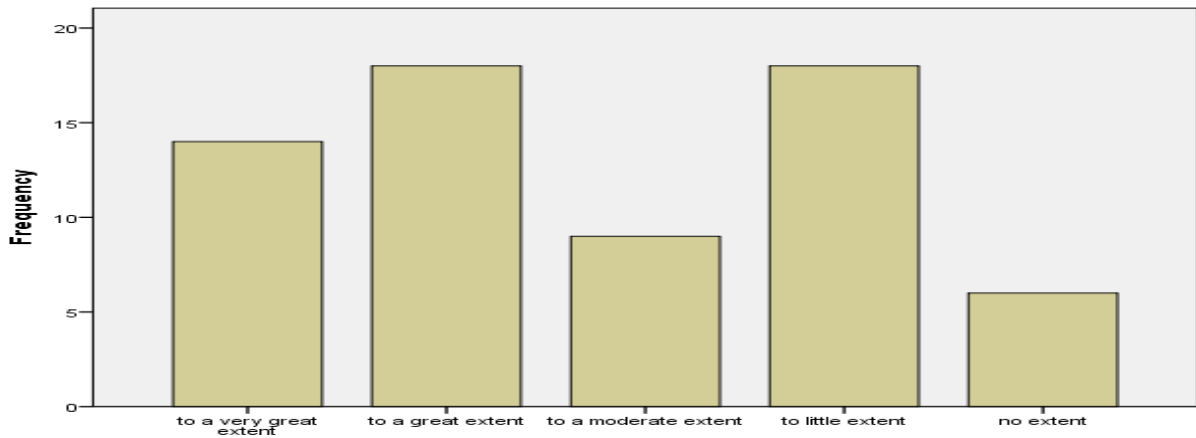
**Figure: 4.18 Natural disasters External Related**

From the findings in Table 4.6, above, majority of the respondents indicated that Bureaucracy and changes of government regulations as External Related 30.8 % of the respondents were to a great extent, 26.2 % to a very great extent, 21.5 % to little extent, 12.3% to a moderate extent and 9.2% no extent. This implies that Bureaucracy and changes of government regulations as External Related Factors Affecting URRAP Projects Completion to a great extent in the study area.



**Figure: 4.19 Bureaucracy and changes of government regulations**

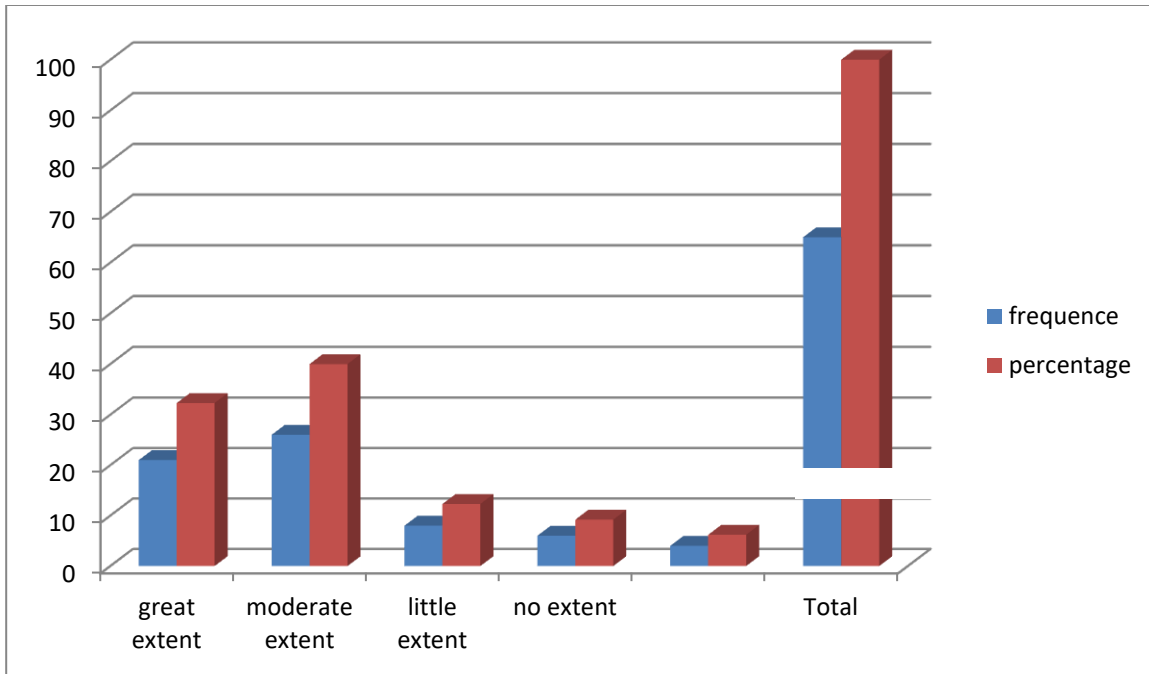
According to the findings, the respondents indicated result that Effect of local community as External Related 27.7 % were to a great extent, 27.7% to little extent respectively, 21.5 % to a very great extent, 13.8% to a moderate extent and 9.2% no extent. It agreed Effect of local community as External Related had Affecting URRAP projects in the study area to a great extent and to little extent respectively.



**Figure: 4.20 Effect of local community**

The findings show that in Table 4.6, above, majority of the respondents indicated that Shortage of foreign currency for importation of materials as External Related 46.2 % of the respondents were to a great extent, 32.3 % to a very great extent, while 12.3% to a moderate extent, 6.2 % to little extent and 3.1% no extent. This implies that Shortage of foreign currency for importation of materials as External Related affect URRAP Projects Completion to a great extent in the study area.

As seen from the table (4.6) above, majority of the respondents indicated that political instability as External Related 40 % of the respondents were to a great extent, 32.3 % to a very great extent, while 12.3% to a moderate extent, 9.2 % to little extent and 6.2% no extent. It shows that political instability as External Related had Affect URRAP projects in the study area to a great extent.



**Figure: 4.21 Political instability as External Related**

As summarized on above table 4.6, Factors Affecting URRAP Projects Completion as External Related in the study area, by respondents and presented, accordingly, the most Factors affecting in the overall results are indicated as “Unforeseen site conditions, Natural disasters, Bureaucracy and changes of government regulations, Effect of local community, Shortage of foreign currency for importation of materials, political instability” among the top 6 Factors Affecting Projects Completion as External Related Factors Affecting Projects Completion in the study area to a great extent. so from the result indicated the government should select the site on the save area or alignment with the integration with community elders.

The study revealed that it is important to come up factors affecting URRAP Project Completion in view with client related which are top factors, Absence of performance guaranty bond and advance guaranty bond in agreement made between the parties, none compensation of society property, Bureaucracy and Problem of funding. So if the client does not know what the project critical success, how much fund is allocated but error in agreement (like bonds) and society property did not compensate on time poor project completion happened. As summarized in above finding the top factors which are related to supervisor are listed and to show their strong relationship and impact one on another. From the factors Late in revising and approving design documents can affect accomplishment of project but how

much the design and documents approved on time without exact estimation and without supervisor staff on site the project do not completed. Also the factors related to contractors are known and Delays of sub-contractors to complete the works can affect the project completion but without inadequate experience and effective management the project does not succeed.

Based on the study under Material and Equipment to describe their relationship how much there is no shortage of material without quality and capable equipment the project do not finished on time given so one factor depend on other. Also to show the relationship of factors related to external how much foreign currency is good without political stability the project do not complete on a given time. Generally how much client fill all gaps without commitment of supervisor and good performance of contractor URRAP project poor completion will occur.

## CHAPTER FIVE

### CONCLUSION AND RECOMMENDATION

#### 5.1. Introduction

This chapter includes conclusions and recommendations that on the Assessment on Factors Affecting Universal Rural Road Access Program (URRAP) Projects Completion, in the study area. The chapter draws the study conclusion and recommendations and gives suggestion for further studies.

#### 5.2. Conclusion

Conclusion of this study can be made based on the result and discussion. The study has been done in order to meet the basic objective of the study, which are Assessing the factors affecting URRAP project completion. The relevant data was obtained using close-ended questionnaires comprising the five scale points 1-To a very great extent, 2-To a great extent, 3-To a moderate extent, 4-To a little extent, 5- No extent rating scale ranging was used which was developed to get the perceptions of the responsible respondents involved in the URRAP project in the study area namely, the client, Supervisor, contractor, Woredas Leaders.

According to result and discussion of the study the following conclusion has been made based on top Factors in the study area:-

- ❖ Client related: Absence of performance guaranty bond and advance guaranty bond in the agreement, none compensation of society property, Bureaucracy, Problem of funding, was identified as the top in the study area as Factors of completion of project respectively.
- ❖ Supervisor related: Late in revising and approving design documents, under estimating the cost of project, Non-availability of consultant's staff on site was identified as the top factors.
- ❖ Contractor Related: Delays of sub-contractors Rework due to faults, incorrect construction, Ineffective resource management and inadequate experience of contractor was identified as the top Factors in the study area.

- ❖ Material and Equipment Related: Quality of material, Shortage of construction materials, using improper equipment, Escalation of the materials price and insufficient machinery lease given to contractor among the top 5 Factors respectively.
- ❖ External Related: Unforeseen site conditions, Natural disasters, Bureaucracy and changes of government regulations, Shortage of foreign currency for importation of materials and political instability” among the top 6 Factors.

### **5.3. Recommendations of the study**

On the basis of the conclusion drawn from the finding of the data analysis, constructive recommendations forwarded as possible actions that can help manage the factors affecting Universal Rural Road Access Program (URRAP) Projects completion in the study area.

- ❖ Based on the findings and conclusions, the study recommends that factors affecting URRAP project completion related to client should redesign the URRAP program, and also it should modify contract agreements by involving or by making performance guaranty bond and advance guaranty bond as a parts of agreement to enforce the contractor to accomplish the projects on the time allocated in the contract and to achieve URRAP programm.
- ❖ The client should resolve the non-compensation of society property issues before the commencement of the project since it is time taking to discuss with society found along the proposed project. Therefore, the compensation payments have to be made before the handing over of the project to the contractor to accomplish project in the area.
- ❖ The organization must apply the strategy and policy that documented in the office through integrating the whole stake holders in order to reduce the bureaucracy to achieve the project completion on good manner.
- ❖ Client related that on the problem of Project Funds from different sources is better to be on one line source of funds to get the budget on time that can minimize URRAP project Completion problems
- ❖ Supervisor should revise and approve the design documents on time and clients also shall make a timely and rapid decision.

- ❖ The supervisor must estimate the exact project cost during the estimation stage, the organization must follow estimated cost and the staff of the supervisor must follow up by project closely.
- ❖ Delay of sub-contractor related contractor: closely follow up and supervision of sub contract is crucial for the timely completion of the project.
- ❖ In case of contractor related on rework faults the contractor should give more attention on design and all documents given by the supervisor of the organization.
- ❖ Contractor should have to improve his experience by giving more attention and effective site management, labor management and resource management to improve experience of contractor.
- ❖ Quality, Shortage of construction and machinery lease related to material and equipment: it is important to improve the quality of material by conducting needed tests, equipment needed to accomplish project and also it is important to give standardize machinery lease to the contractor which is much with the scope of works with availability of construction materials that is necessary for the URRAP project completion.
- ❖ Unforeseen site condition and natural disaster to external related: the concerned body (client, contractor and supervisor) should take reactions before signing the contract.
- ❖ Shortage of foreign currency for importation of material: the availability of hard currency has made it difficult to import different construction materials which are found to be among the top causes of completion based on the study. Therefore, the responsible sector of the government has to find a way to make the exchange process easier for the URRAP Projects.

Finally integrated planning, programming and strategy improvement will mandatory for the study

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## **Annex**

WOLLEGA UNIVERSITY

SCHOOL OF GRADUATE STUDIES COLLEGE OF ENGINEERING AND  
TECHNOLOGY

DEPARTMENT OF CONSTRUCTION TECHNOLOGY AND MANAGEMENT

### ***ASSESSMENT ON FACTORS AFFECTING UNIVERSAL RURAL ROAD ACCESS PROGRAM (URRAP) PROJECTS COMPLETION, IN CASE OF EAST WOLLEGA ZONE***

***Dear Respondent***

My name is Desalegn Oli Muleta. I am currently doing my MSc in Construction Technology and Management at Wollega University School of graduate studies. I am conducting a research about Assessment on Factors Affecting Universal Rural Road Access Program (URRAP) Projects Completion, In Case Of East Wollega Zone. I believe that your experience and knowledge related to Universal Rural Road Access Program (URRAP) Projects will help me acquire valuable information on the Factors Affecting Universal Rural Road Access Program (URRAP) Projects Completion. I kindly invite you to help me in completing the attached questionnaire as honestly as possible. I guarantee that your identity will be kept confidential and the information will only be used for academic purposes. Your kind assistance in this aspect is highly appreciated. Thank you for sharing your precious time.

***Note: Writing your name is not necessary.***

Yours  
sincerely

Desalegn Oli Muleta

Graduate Student, Construction Technology and Management

Tel: +251911043584

Advisor: Dr. LUCY FELEKE

### **SECTION A: DEMOGRAPHIC INFORMATION**

1) Kindly indicate your gender

a) Male ( )

b) Female ( )

2) What is your age?

a) Below 18-25 years ( )

b) 26-35 years ( )

c) 36-45 years ( )

d) 45yrs and above ( )

3) What is your highest level of education?

a) Primary ( )

b) Secondary ( )

c) Certificate ( )

d) Diploma ( )

e) Undergraduate ( )

f) Postgraduate ( )

4) Indicate the position that you hold in the area of working

a) Client from Woredas ( ) b) contractors ( ) c) supervisor ( ) d) Leaders from Woredas ( )

e) Any other specify\_\_\_\_\_

5. Relevant working Experience (years)

a) 1-5 years ( )

b) 6-10 years ( )

c) 11-15 years ( )

d) Above 16 years ( )

## SECTION B: Factors Affecting Universal Rural Road Access Program (URRAP) Projects Completion

Please rank the Factors Affecting Universal Rural Road Access Program (URRAP) Projects Completion.

Category	To a very great extent	To a great extent	To a moderate extent	To a little extent	No extent
Rating	1	2	3	4	5

Please indicate on boxes using the following criteria

Factors Affecting Universal Rural Road Access Program (URRAP) Projects Completion		Frequency				
		1	2	3	4	5
<b>1. Client Related</b>	1 .Absence of performance guaranty bond and advance guaranty bond in the					
	2. Slow and late payments by the clients contract					
	3.Change orders (changes about design or working process					
	4.None compensation of society property					
	5. Lack of sufficient cash for project implementation					
	6.Bureaucracy in client organization					
	7.Unite price or unite rate					
	8. Slow decision making					
	9.Problem of funding					
<b>2. supervisor Related</b>	1.Late in revising and approving design documents					
	2. under estimating the cost of project					
	3.preparation of in adequate design and contract document error					
	4. Waiting in approval of contractor documents					
	5.Non-availability of consultant's staff on site					
	6. Improper project planning and scheduling					
	7. Inaccurate initial project scope estimate					
	8. Insufficient data collection and survey before design.					

	9. Inadequate experience of consultants						
<b>3. Contractor Related</b>	1. Absence of full discipline in their firms						
	2. Delays of sub-contractors to complete the works						
	3. Old techniques and methods for construction						
	4. Inadequate management and supervision by the contractor						
	5. Rework due to faults during construction						
	6. Incorrect construction methods followed by the contractor						
	7. Lack of adequate training on construction management techniques for Contractor's staffs						
	8. Ineffective resource management						
	9. Inadequate experience of contractor						
<b>4. Material and Equipment Related</b>	1. Quality of material						
	2. Shortage of construction materials						
	3. Using improperly sophisticated equipment						
	4. Escalation of the materials price						
	5. Insufficient machinery lease given to contractor by client						
<b>5. External Related</b>	1. Unforeseen site conditions						
	2. Natural disasters						
	3. Bureaucracy and changes of government regulations						
	4. Effect of local community						
	5. Shortage of foreign currency for importation of materials						
	6. political instability						

If you have any comments or suggestion regarding the Factors Affecting Universal Rural Road Access Program (URRAP) Projects Completion, In Case Of East Wollega Zone in Oromia, Ethiopia, please specify here \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

