# DETERMINANTS OF EFFECTIVE PUBLIC PROJECT IMPLEMENTATION IN CASE OF GURAGE ZONE

**MBA THESIS**

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# DETERMINANTS OF EFFECTIVE PUBLIC PROJECT IMPLEMENTATION IN CASE OF GURAGE ZONE

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## STATEMENT OF DECLARATION

I hereby declare that this thesis MBA dissertation is my original work and has not been presented for degree in any other university, and all sources of material used for this thesis/ dissertation have been duly acknowledged.

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As members of the board of examiners of the final master's degree open defense, we certify that we have read and evaluate thesis prepared by **Haymanot Atnafu** under the title "**Determinants of effective public project implementation in case of Gurage zone**" and recommend that it be accepted as fulfilling the thesis requirement for the degree of Master of Business Administration.

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# ABBREVIATIONS

| | |
|---|---|
| BOFED | Bureau of Finance and Economic Development |
| CSF | Critical success Factors |
| CSR | Corporate Social Responsibility |
| GDP | Gross Domestic Product |
| ME | Monitoring and Evaluation |
| PERT | Program Evaluation Review Technique |
| PMBOK | Project Management Body of Knowledge |
| PIP | Project Implementation Profile |
| PMI | Project Management |
| SNNPR | South Nations Nationalities Peoples Region |
| SPSS | Statistical Package for Social Science |

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## *Abstract*

*A project is a temporary group of activity with a defined beginning and end in time, scope and resources designed to produce a unique product, service or result. The performance of a project towards meeting its intended objectives is dictated by diverse factors. The objective of this research is to investigate and identify the determinants of effective public project implementation. The target population of the research involves 60 employees and contractors; this study was use census survey method because the total population of the study is 60. They are directly involved in the implementation of public projects in the case area and able to complete the questionnaires for this study. The study uses primary data where the data is collect from questionnaire. The collected data was analyzed by using descriptive statistics and inferential statistical tools with the aid of SPSS version 23 to test correlation and regression of the study variables. In addition to this multiple regression is use to determine the effect of independent variables on dependent variable. All dependent and independent variables are measure using 5 Likert scale questionnaire that related to the variable. The descriptive analysis of the independent variable result indicated that Project management and team related factors (mean= 3.9375 SD= 0.74315) and Organizational structure factor (mean= 3.48, SD= 1.0212) are highly influenced the effective public project implementation and remain independent variable, Project Related Factors (mean= 3.068, SD 1.0058), Stakeholders level of involvement related factors (mean= 2.887 SD= 0.9233) and Project environment related factors (mean= 2.622 SD= 0.91895), are minimally affect the effective public project implementation. Multiple regression result indicated that Project environment related factors has positive and statically significant effect on the effectiveness of public project implementation. Stakeholder's level of involvement has negative significant effect on the effectiveness of public project implementation. On the other hand Project related factors have negative insignificant effect and also organizational structure factor and Project management and team factors has positive insignificant effect on the public project implementation.*



***Key words: Determinants, effective, public project, project implementation***

# CHAPTER ONE

# 1. INTRODUCTION

This part of the paper will include background information on subject of research and covers statement of the problem, research objectives, research questions, and significance of the study. This chapter also covers other sections including limitations of the study and the scope. In the background of the study the study reviews the key concepts and how they relate to one another.

## 1.1. Background of the Study

The proper implementation of project is equally important to both societies and organizations and also indirectly to countries. New and growing organizations are generally well rewarded by the marketing the form of higher stakeholder confidence and share prices when projects are delivered on budget and on schedule. Consequently, organizations place huge emphasis on getting it right the first time and at the publicly disclosed price for completion of projects. Failure to get it right the first time results in rework, cost increases, schedule changes, and severe penalties from shareholders and other stakeholders. (Lutchman, 2011).

Project implementation is the Process whereby "project inputs are converted to project outputs". May be looked at as putting in action the activities of the project, putting into practice what was proposed in the project document (i.e. transforming the project proposal into the actual project.) or Management of the project or executing the project intentions. Project success is an important project management issue. According to Jeffrey K. (1998), to successfully implement a project is usually difficult and complex. The project manager has to devote more time on human, financial and technical variables as key to the realization of project implementation. From available literatures it is apparent that the following determinants are capable of affecting project implementation in the states in review of not handled with care. This in-exhaustive list includes: escalation of project cost due to inflation, contractors performance below standard and expectation, change in the original design, poor planning by architects, specification of costly and imported materials, insufficient budget.

According to Jekale (2004) has summarized that "Poor support infrastructures, low level of technology, low capacity of implementing institutions, unreliable communication, poor and

protracted documentation, high turnover of leadership and workmen, low level or absence of accountability and transparency, and long and tedious formal decision-making procedures are typical conditions in developing countries which complicate project management". Projects in developing countries are highly influenced by their external environment (Jekale, 2004).

The inability to complete projects on schedule or to cost projections has sometimes led to total project abandonment. The question then is, "why are more and more projects failing?" And, what can the project manager do about the menace? The reasons for failure are numerous. They could range from technical problems associated with poor project conceptualization and design, to economic problem associated with their implementation. Others include political, environmental, cultural factors, etc. As credible and unpredictable as these reasons are, the truth is that professional project management can go a long way in envisaging the barriers to project success and curtailing them. Above that, professional project management can ensure that all relevant factors needed for successful project implementations are identified, factored in, and responsible, in order to ensure successful delivery.

According to the information obtained from DBE's Annual Performance Report of 2012, only 29% of the projects financed by DBE are categorized as successful while the remaining 71% are in the failure category. Similarly, the annual performance report of the Bank (2013), the percentage of successfully operating project of the Bank as at June 30, 2013 is stood at 31% and it falls down to 28% at the Corporate Credit Process of the Bank which is the main credit processing unit of the Bank and through which more than 75% of the total annual lending amount of the Bank is granted to borrowers (Yilkal, 2013).

The project failure attributed to whatever source, it will increase the sunk cost of the country since fixed investments of the projects are specific to intended purpose and difficult to liquidate or require high switching cost. Moreover, it depletes the fund available for loan that the Bank could finance other projects that may have significant importance for economic growth of the country. To be able to respond to both internal and external variables /factors in a project environment that have affect project implementation, it was necessary to investigate, identify and understand these variables /factors and establish to what extent they individually or collectively contributed to project implementation, i.e. success failure.

Project implementation delay is a major problem facing public projects in Ethiopia and also Gurage zone administration. Hence assessing the significant determinants that hinder effective implementation of public projects financed by government is paramount importance to tackle the challenges in their respective degree of severity.

The delay in implementation of projects financed by government is associated with various factors and has negative social, political and economic results. In view of this, this study will assess the determinants of effective public project implementation in Gurage zone administration.

## 1.2.Statement of the Problem

The implementation phase is where you and your project team actually do the project work to produce the deliverables. The implementation phase involves putting the project plan into action. It's here that the project manager will coordinate and direct project resources to meet the objectives of the project plan.

According to David and Michael (2007), personal characteristics of the consultant and of the client (e.g. lack of skills), technical shortcomings (e.g. ineffective project management), and an unstable or bad consultant–client (e.g. lack of communication), and/or sociopolitical aspects of the client organization (e.g. hidden agendas; uneasiness for/resistance to change) etc, hinders proper implementation of projects in general. According to PMI (2014), time and quality were mentioned as main challenges of proper management of projects.

In the last decades, the construction sector of Ethiopia has witnessed a remarkable growth. The sector accounted 7.5% of GDP and employment creation. However, most projects were not successful, delayed or failed. In support of this a study by Tesfaye and Asteray (2011) most of Ethiopian higher education projects have faced time and cost overrun in execution and implementation.

Project failure or delayed is a common problem to many areas of Ethiopia, the problem is more severe in Gurage zone. Beginning from 2020-2022, there are a total of 72 projects planned to operate in the construction of various sectors such as hospital, school, government office construction, road, irrigation, market center, water construction projects(Gurage zone urban development and construction office,2022). From the total projects only 17 projects are completed as per schedule. The average performance of

projects in the zone is 23.6%. The financial and physical performance of projects in the zone is delayed compared to the schedule and the financial plan.

From the very beginning the researcher undertakes personal observation and preliminary assessment regarding considerable delays in completion of different public projects in Gurage zone administration. Even if they are completed within the set time limit, the projects will be useless due to quality problems without getting the services that the beneficiaries want and the government has planned to provide to the people, which will create socio-economic and political problems, many researches were made on different areas of project management. But research related to project implementation is still very limited which requires further analysis. As preliminary review made on implementation phase of different public projects in the study area indicates many projects phase difficulty during implementation which is really needs scientific and systematic information through efficient analysis on the issue there by to make proper decision on the issue and intends to fill the gap in the area and forward scientific evidence for concerned stakeholders. Towards this end, a survey conduct to establish what are the determinants collectively and significantly contributed to poor public project implementation by Gurage zone administration that affect in success of public project implementation .

## 1.3. Research Questions

The study has answer the following research questions

- ✓ What is the level of stakeholders involvement in project cycle management
- ✓ What are the factors which affects the implementation of public projects?
- ✓ To what extent organizational structure that hinder the effective implementation of public projects?
- ✓ How project management and team related factors affect the public projects performance?
- ✓ To what extent public project environment related barriers affects the implementation of public project

## 1.4. Objective of the Study

### 1.4.1. General Objective of the Study

The general objective of this study is to investigate and identify the determinants of effective public project implementation in Gurage zone administration.

### 1.4.2. Specific Objectives of the Study

The specific objectives of this study are:

- To identify project related factors affecting the implementation of public project
- To assess organizational structure factors that hinder the effective implementation of public projects
- To identify project management and team related factors affecting the projects performance
- To assess project environment related barriers that are related to the projects
- To assess stakeholder's level of involvement in project cycle management

## 1.5. Significance of the study

In line with objectives of the study will believed that the research is important because many projects fail without delivering the expected outcomes and many projects are not meeting their goal in accomplishment as kindly planned in the project document earlier. It is important to know why projects implemented by public project have not yet impacted and transformed the beneficiary of that project particularly. To know these factors and give possible solutions, it is become necessary to prepare this research.

This study is important for several stakeholders including the management of the organization, government construction sector, future researchers and academicians. For the management of the organization, the findings of this study will important in understanding of the determinants of effective public project implementation hence inform them on necessary correction strategies to mitigate on their effects. It will inform their future planning and strategy development as far as the operations of the government and the concerned body. To the government construction sector, this study will important in the development of policies governing the public project in the country besides clarifying the challenges that public project implementation. For future researchers and academicians, the study will important in areas requiring further research to build on the topic of determinants of effective public project implementation among the government organization. In addition, the findings of this study will important source of reference for future scholars and researchers.

## 1.6. Scope of the study

This study was undertaken at Gurage zone, situated in the northern part of central Ethiopia regional state, it is bounded by Silte zone in the southeast, and Hadiya zone and Yem special woreda in the south and southwest direction, respectively. The zone has ten (10) woredas and five (5) administrative towns. The seat of the zone is wolkite town which is 155 km far from Addis Ababa on the main road to Jimma.

In this study, both descriptive and explanatory survey design was employed. This study emphasize on "determinants of effective public Project implementation". The study covered the time period from 2020-2022, which is intended to identifying the implementation practices of Project Related Factors, Organizational Structure Factors, Project management and Team Related Factors, Project Environment Related Factors, Stakeholders level of involvement use as independent variables. While dependent variable is the project success measure by schedule, cost and quality.

## 1.7. Organization of the Study

The study was organize into five chapters. The first chapter includes the introduction and background of the study, statement of the problem, Objectives of the study, Research Questions, Scope and Significance of the study. The second chapter was discuss related Theoretical and empirical literature review regarding the study. The third chapter of the study was present the research methodology. The fourth chapter involves presentation, analysis and discussion of gathered primary data. The final chapter was deal with summary of findings, conclusions and recommendations.

# Definition of term

**Project:** is an assignment that has to be undertaken and completed within a set time, budget, resources and performance specification designed to meet the needs of stakeholders and beneficiaries (Kerzner, 2003).

**A public project:** is a project carried out primarily for public benefit (Gasik, 2016).

**Project implementation**: is the activity based phase of the project life cycle, and this involves putting the plan into action (Watt, 2014).

# CHAPTER TWO

# 2. LITERATURE REVIEW

## 2.1. Introduction

This chapter focuses on reviewing different literatures in the area of project implementation and mainly it focuses on factors that determine effective implementation of public Projects. It presents the related literatures on the study, which enable us to have a sort of clear understanding with respect to the research topic.

## 2.2. Theoretical concept of the study

### 2.2.1. An overview of Project

Project has developed over the past couple decades as researchers and practitioners have attempted to identify different definition to the term. As noted by Ambaw (2017) project is a temporary endeavor (that has definite beginning and end time) undertaken following specific cycle of initiation, definition, planning, execution and close to create a unique product, service, or result through novel organization and coordination of human, material and financial resources. A project is a group of tasks, performed in a definable time period, in order to meet a specific set of objectives. As project has the following characteristic, it is likely to be a one-time program , it has a life cycle with a specific start and end date, it has budget and likely to require the use of multiple resources, most of which may be scarce and have to be shared among others. It may require the establishment of a special organization or the crossing of traditional organizational boundaries (Harvey, 1999). Akarakiri (2006) defines project as any scheme, or part of a scheme for investing recourse which can reasonably be analyzed and evaluated as independent unit. In the same way Kerzner (2003) further define project as an assignment that has to be undertaken and completed within a set time, budget, resources and performance specification designed to meet the needs of stakeholders and beneficiaries. A project can be defined in a number of ways. Some commonly used definitions of a project is that a project is a temporary endeavor designed to produce a unique product, service or result with a defined beginning and end, usually have time, budget or resources constraints, undertaken to meet unique goals and objectives(PMI, 2012). Wysocki (2013) also defined the project as “a sequence of unique, complex, and related tasks, having a common goal, to be carried out within a

given deadline without exceeding the budget set in accordance with the assumed requirements.

A project is a complex, non-routine, one-time effort limited by time, budget, resources, and performance specifications design to meet customer needs (Gray, and Larson, 2008.) Project management is a set of tools, techniques, and knowledge that, when applied, helps to achieve the three main constraints of scope, cost and time. However, based on different literatures, 52.7% of projects were not able to complete on time and over cost, and 31.1% not fulfilled the scope [Charvat, J., 2003 and Clancy, T., 2008]. The growth in new knowledge has increased the complexity of projects because projects encompass the latest advances. Today, many companies focus on project management, as it focuses on achieving project objectives. It is important as it applies managerial process and has its tools that give managers a good opportunity to succeed in achieving objectives. A project manager can perform everything right from a project management perspective but the project can still fail depending on its success criteria to help to ensure project success. Project managers can use different techniques and tools that are useful to manage projects efficiently. These include network activity diagram, bar charts, macro and micro cost estimation approaches and resource scheduling techniques. The use of these techniques and tools could lead to better chance of project success. Today, emphasis on an integrated project management process is the focus of all project effort towards the strategic plan of an organization, and reinforces control of both the project management techniques and tools, and the interpersonal skills necessary to orchestrate successful project completion (Clancy, 2008)

### 2.2.2. The Project Cycle

The process of planning and managing projects follows a logical, continuous cycle. Each phase of the project leads to the next phases. (PMBOK Guide, 2004).

The identify stage includes a needs assessment process to determine the needs and problems in a community. The design phase includes the actual planning and design of a project. The implementation stage refers to the implementation of the project, whether it is a single year or multi-year implementation period. The evaluation of project results occurs at the end of a project and involves determining whether the project's goal and objectives were achieved. Project monitoring occurs throughout all stages allowing for small

adjustments in the project's planning, design, and implementation in order to ensure the project's success.

### 2.2.3. An Overview of Project Planning

Project planning involves a series of steps that determine how to achieve a particular community or organizational goal or set of related goals. This goal can be identified in a community plan or a strategic plan. Project plans can also be based on community goals or action strategies developed through community meetings and gatherings, tribal council or board meetings, or other planning processes.

#### *2.2.3.1. Project Development steps*

When planning for and designing a new project, it is suggested using the following steps of project development for proper implementation:- Identify the Long Range Goals and Assess Available Resources. Conduct a Community Assessment to Identify the Problem. Determine the Project Goal , Select a Project Approach/Strategy , Develop Project Objectives and Activities , Identify Potential Challenges and Develop a Contingency Plan ,Develop a Project Evaluation Plan and Sustainability Strategy ,Develop a Project Cost Estimate ,Write the Project Summary (PINTO, 2007).

### 2.2.4. Concepts of Project Implementation.

After projects have carefully planned, the project implementation phase will follow, the third phase of the project management life cycle. The implementation phase involves putting the project plan into action. It's here that the project manager will coordinate and direct project resources to meet the objectives of the project plan. As the project unfolds, it's the project manager's job to direct and manage each activity, every step of the way. That's what happens in the implementation phase of the project life cycle: you follow the plan you've put together and handle any problems that come up. The implementation phase is where you and your project team actually do the project work to produce the deliverables.

The implementation phase keeps the project plan on track with careful monitoring and control processes to ensure the final deliverable meets the acceptance criteria set by the customer. This phase is typically where approved changes are implemented. Most often, changes are identified by looking at performance and quality control data. Routine

performance and quality control measurements should be evaluated on a regular basis throughout the implementation phase. Gathering reports on those measurements will help you determine where the problem is and recommend changes to fix it.

The process of project implementation, involving the successful development and introduction of projects in the organization, presents an ongoing challenge for managers. The project implementation process is complex, usually requiring simultaneous attention to a wide variety of human, budgetary, and technical variables. Projects are often initiated in the context of a turbulent, unpredictable, and dynamic environment. Consequently, the project manager would be well served by more information about those ' specific factors critical to project success.

Typically, this is the longest phase of the project management lifecycle, where most resources are applied. According to Guy (2009) The activities that are needed to be accomplished includes: Delegating work, Procuring materials and services, Controlling the scope of the project, Monitoring risk events, Monitoring and controlling the project budget, Monitoring and controlling the project schedule, Forecasting final project cost and delivery date, Finding ways to make up time or reduce final cost.

Project implementation has been defined many ways to include a large variety of criteria. However, in its simplest terms, project implementation can be thought of as incorporating four basic facts. A project is generally considered to be successfully implemented if it comes in on schedule (time criterion), comes in on-budget (monetary criterion), achieves basically all the goals originally set for it (effectiveness criterion), and is accepted and used by the clients for whom the project was intended (client satisfaction criterion). By its basic definition, a project comprises a defined time frame to completion, a limited budget, and a specified set of performance characteristics (Schultz and Slevin, 2009).

The famous Project Implementation Profile (PIP) is a set of factors developed by Pinto et al (2010). They came up with 10 CSFs to assist in identifying and measuring successfully implemented projects. These are project mission (clarity of goals and general direction), top management support (ability and willingness to provide resources, authority and influence), project schedule (a detailed specification and schedules for project implementation), client consultation (adequate communication, consultation and active listening to and with the client),personnel (recruitment, selection and training), technical

tasks (availability of required technology and expertise), client acceptance (final project was sold to end-users), monitoring and feedback (provision of comprehensive information at each implementation stage),communication and trouble-shooting (ability to handle crisis and deviation from plan). In a later study Pinto et al (2010) showed that the relative importance of the several CSFs changes significantly based on the life cycle stages. Pinto et al (2010) highlighted those CSFs identification will help the project teams minimize firefighting, intuitive and ad-hoc approach in managing uncertainties and changes encountered during project implementation.

#### *2.2.4.1. Project Implementation Process.*

The Project Implementation Process details the process for the development and delivery of projects. Key features of the Project implementation phases are:

- **Ensuring** that projects meet service delivery needs consistent with the Government's strategic directions, agency business objectives and the business case agreed under the Strategic Plan.
- **Requiring** the project to have strong leadership from the Top management taking responsibility for its progress from inception to handover and final completion;
- **Ensuring** project has procurement managed by appropriate party and strategic input from different department.
- **Selecting and assigning appropriate professional** expertise to develop the approved concept, undertake design, manage risk, calculate cost and program times during the procurement process and to manage the implementation phase.
- **Establishing** good project governance and clear lines of accountability for all phases of the project with documentation to provide an audit trail;
- **Adhering** to the required gateway approvals process and the relevant legislative and policy framework; and
- **Providing** a holistic approach that rigorously considers 'whole of life' costs, ecologically sustainable development initiatives and design options consistent with the triple bottom line of economic, environmental and social out comes. (Bardach,, 1977).

### 2.2.5. Public Project

A public project is a project carried out primarily for public benefit. A public project is defined as a project that is undertaken, managed or supervised by one or more publicly

funded organizations. Public organizations are those that are owned by the state, funded by the state and are subject to public scrutiny exclusively by the state (Gasik, 2016).The whole community benefits directly or indirectly by the effects of public investments because they are designed to improve infrastructure, relationships, and services, all of them being available to all citizens. Strategies, represented by the goals of the public projects, are a need for local authorities which have the possibility to implement investment projects. Public investment projects provide a direct correlation between the fundamental objectives, which take the form of capital expenditure, which in their turn, lead to producing public assets (Philip, 2007).

### 2.2.6. Project management

Project management is defined as an application of knowledge, skills, tools and techniques to project activities to meet project requirements. Project Management is accomplished through the application and integration of the project management processes of initiation, planning, executing, monitoring and controlling and closing (PMI, 2013).

Project management is also articulated as a professional's capability to deliver, with due diligence, a project product that fulfills a given mission, by organizing a dedicated project team, effectively combining the most appropriate technical and managerial methods and techniques and devising the most efficient and effective breakdown and implementation routes (Ohara, 2005). Cleland and Ireland (2007) stated that the concept of project management has existed for more than 60 years however the history of project management practices goes back to antiquity. It is confirmed by the large projects of the past such as numerous canals, great pyramids, bridges and other infrastructures. Project management is a wide field and it has a rich history but it is still entered as an independent variable with its own theoretical framework.

### 2.2.7. Stakeholders Involvement in Project Management

the role of stakeholder management as a central project management process has strengthened, and today even the concept of project management is defined through stakeholders as "the process of adapting the specifications, plans, and approaches to the different concerns and expectations of the various stakeholders" (PMI,2008). Despite the acknowledged importance of stakeholder management, project research still lacks both theoretical knowledge and empirical evidence of various project stakeholder related phenomena (Achterkamp and Vos, 2008). Until today, existing scarce research has

primarily focused on the conceptual development of stakeholder management tools and frameworks in order to better manage stakeholders (Winch and Bonke, 2002).

The importance of stakeholder concept is growing in management literature. Stakeholder management is the process of managing the expectation of anyone that has an interest in a project or was effected by its deliverables or outputs. The application of stakeholder in the public sector seems to be in accordance with the wave new public management (Osborne and Gaebler, 1993). Stakeholder theory and empirical research (Clarkson 1995) indicate that companies do explicitly manage their relationships with different stakeholder groups. Donaldson & Preston 1995, point out that although this is descriptively true, companies appear to manage stakeholders for both instrumental (i.e., performance based) reasons and, at the core, normative reasons. Building on the work of others, Clarkson (1995) defines primary stakeholders as those "without whose continuing participation, the corporation cannot survive as a going concern, suggesting that these relationships are characterized by mutual interdependence. He includes here shareholders or owners, employees, customers, and suppliers, as well as government and communities. The "web of life" view (Capra 1995) envisions corporations as fundamentally relational, that is, as a "system of primary stakeholder groups, a complex set of relationships between and among interest groups with different rights, objectives, expectations and responsibilities" (Clarkson, 1995).

Developing initiatives that are capable of achieving all stakeholder goals and objectives may be difficult, if not impossible (Wood & Jones, 1995). This may be the case in certain circumstances, because the interests of all parties are not given equal consideration, with broader social and environmental goals being traded off against economic concerns (Huang & Stewart, 1996). Ford (1980) suggests that companies pursue relationships with other companies to obtain the benefits associated with reducing their costs or increasing their revenues. By entering into relationships, organizations hope to gain stakeholder satisfaction and loyalty while stakeholders look for quality (Evans & Laskin, 1994). Kakabadse (2005) in the extensive review on the stakeholder approach expressed that corporate social responsibility (CSR) and stakeholders' interests are partly related to each other. In line with this, Hillman (2001) noted that a firm has relationships with constituent (stakeholders) groups and the processes and outcomes associated with these relationships depend on the interest. The interests of all legitimate stakeholders have value and the focus

of stakeholder theory is on managerial decision making". Kakabadse et. al. (2005), therefore, concluded that managers should pay attention to stakeholders.

A study carried out by Mitchell, (1997) in stake holder identification and salience, it was found that one interesting characteristic of the stakeholder concept is the dynamics of stakeholders. Over time, the mix of stakeholders may change. New stakeholders may join and wish to be included in any considerations, while others may drop out, through no longer being involved in the process. The concept of the dynamics of stakeholders was acknowledged by Freeman, and according to him, in reality stakeholders' change over time, and their stakes change depending on the strategic issue under consideration. Alkhafaji also contributed to the understanding of this concept. To explain the dynamics, he defined stakeholders as the "groups to whom the corporation is responsible". They proposed that classes of stakeholders can be identified by the possession or attributed possession of one or more of three relationship attributes: power, legitimacy and urgency. The influence of the stakeholder in the project depends on the relationship attributes and may affect both timeliness and level of funding.

### 2.2.8. Project Success

What is project success? How do we define project success and design performance measures that allow us to recognize the degree of success attained? There has been a great deal written over the years about project success, project management success and performance management to deliver success. A number of papers relating to critical success factors emerged during the late1980's—for example (Pinto and Slevin, 1987) and de Wit (1988) who viewed success as being judged by the degree to which project objectives have been met. These views centered on success of project management delivery processes and also acknowledged that project success is also a matter of the project stakeholder's perception of the value (in their terms) of what was delivered.

A review of the literature further reveals that there is, in fact, a high level of agreement with the definition provided by Baker et al., (1988), that project success is a matter of perception and that a project will be most likely to be perceived to be an "overall success" if: the project meets the technical performance specifications and/or mission to be performed, and if there is a high level of satisfaction concerning the project outcome among key people on the project team, and key users or clientele of the project effort.

There is also a general agreement that although schedule and budget performance alone are considered inadequate as measures of project success, they are still important components of the overall construct. Quality is intertwined with issues of technical performance, specifications, and achievement of functional objectives and it is achievement against these criteria that will be most subject to variation in perception by multiple project stakeholders.

The concept of 'Critical Success Factor (CSF) was originally developed by Ronald Daniel of Mc Kinsey and Company in the Sixties, but was popularized by Jack F. Rokart of Sloan School of Management (Robert, 2007). Jugdev and Muller (2005) mentioned that success factors are the factors to achieve established goals and objectives. Further, Jugdev and Muller's (2005) retrospective study of the concept of success factors indicated that during the 1960's and the 1980's, the literature on success factors is largely limited to time, cost, specification and some extent client satisfaction. During 1980-90's the stress was much on a project being a success or failure. Mid 90's saw some publications involving stakeholder satisfaction. During 1990's- 2000's, there are contributions in the form of integrated frameworks. Now during 21st century, the concept took a rationale on the agreement on CSF's before start of the work and empowerment of the project manager to achieve goals (Jugdev and Muller, 2005).

According to Belassi and Tukel (1996) sensible works to group critical success factors according to; those related to the project, those related to the project manager and the team members, those related to the organization and those related to the external environment. They further cite that factors which relate to the project include the "urgency" of a project. They identify that "projects which start after natural disasters are typical examples and that in these situations, not enough time is allocated for planning and scheduling projects". They further identify that in relation to factors related to external environment, a number of environmental factors such as political, economic, and social, as well as factors related to the advances in technology or even factors related to nature affect project performance.

The views on project success have evolved over the years from simple definitions that were limited to the implementation phase of the project life cycle to definitions that reflect an appreciation of success over the entire project and product life cycle (Judgev&Muller, 2005).

#### 2.2.8.1. *Project Success Criteria*

According to Kerzner (2009) the definition of project success today has been modified to include completion: Within the allocated time period, within the budgeted cost, at the proper performance or specification level, with acceptance by the customer/user, with minimum or mutually agreed Upon scope changes, without disturbing the main work flow of the organization and without changing the corporate culture.

According to Donato (2022) 8 factors lead to successful projects. Clear projects goals and objectives , Diligent research and data gathering ,Grounded estimates and plans ,Optimized work flow and systems, Real-time progress and resource tracking ,Scope, change and priority management ,Healthy team culture , Documentation and knowledge management.

#### *2.2.8.2. How to measure success of Projects?*

Ibrahim M., (2013), indicated that time, cost and quality have their proven importance as a prime measures for project success. Project requirements are commonly assumed to be time, quality and cost of a project. Success and failure of any project will be measured by these three requirements. According to Jason, (2006) project is commonly acknowledged as successful when it is completed on time, within budget, in accordance with specifications. Moreover, 'Success is determined by how well it performed against the defined objectives and conformed to the management processes outlined in the planning phase. According to the PMBOK Guide, (2004) since projects are temporary in nature, the success of the project should be measured in terms of completing the project within the constraints of scope, time, cost, quality, resources, and risk as approved between the project managers and senior management. A successful project is one that is delivered on time and managed within the budget. The traditional view of project success is to accomplish.

### 2.2.9. Effective project management implementation practice

#### *2.2.9.1. Project time management*

Project time management describes the processes required to ensure timely completion of projects. It consists of activity definition, schedule sequencing activity duration estimating, schedule development and schedule control (PMBOK 2000). The process of activity resource estimation involves determining what resources and what quantity of each

resource that will be used in the project. Required resources can be personnel, equipment and material. This process also includes determining when each resource will be available to the project (PMBOK, 2004). Scheduling project work is an essential element of project management.

A project schedule makes it clear to all participants when work is expected to be completed. It also shows the time related dependencies between different project tasks. Schedule management is the process of ensuring that the project schedule is base lined, maintained, and managed accordingly. According to Schwalbe (2014), project time management involves the processes required to ensure timely completion of a project. Seven main processes are involved in project time management: Planning schedule management which involves determining the policies, procedures, and Documentation that will be used for planning, executing, and controlling the project schedule. Defining activities which involve identifying the specific activities that the project team members and stakeholders must perform to produce the project deliverables. An activity or task is an element of work normally found on the work breakdown structure that has expected duration, cost, and resource requirements. Defining activities involves identifying the specific actions that will produce the project deliverables in enough detail to determine resource and schedule estimates. Milestones are significant accomplishments that typically are the culmination of a series of tasks. A milestone on a project is a significant event that normally has no duration. It often takes several activities and a lot of work to complete a milestone, but the milestone itself is like a marker to help in identifying necessary activities. Milestones are also useful tools for setting schedule goals and monitoring project progress. Sequencing activities involves identifying and documenting the relationships between projects Activities. The sequencing process involves evaluating the reasons for dependencies and the different types of dependencies. A dependency or relationship pertains to the sequencing of project activities or tasks. Estimating activity resources involves estimating how many resources; people, equipment, and materials that a project team should use to perform project activities. Before you can estimate the duration for each activity, you must have a good idea of the quantity and type of resources (people, equipment, and materials) that will be assigned to each activity. The nature of the project and the organization will affect resource estimates. Estimating activity durations involve estimating the number of work periods that are needed to complete individual activities. It

is important to note that duration includes the actual amount of time worked on an activity plus elapsed time. Developing the schedule involves analyzing activity sequences, activity resource estimates, and activity duration estimates to create the project schedule. Schedule development uses the results of all the preceding project time management processes to determine the start and end dates of the project and its activities. The ultimate goal of developing a realistic project schedule is to provide a basis for monitoring project progress for the time dimension of the project. Several tools and techniques assist in schedule development:

- A Gantt chart is a common tool for displaying project schedule information.
- Critical path analysis is a very important tool for developing and controlling project schedules.
- Critical chain scheduling is a technique that focuses on limited resources when creating a project schedule.
- PERT analysis is a means for considering schedule risk on projects.

The final process in project time management is controlling the schedule. Controlling the schedule involves controlling and managing changes to the project schedule. The goal of schedule control is to know the status of the schedule, influence the factors that cause schedule changes, determine that the schedule has changed, and manage changes when they occur.

#### *2.2.9.2. Project cost management*

Project cost management includes the processes of cost estimating, cost budgeting and cost control. The main objective of cost management is to complete the project within the approved budget (PMBOK, 2004). Project cost management describes the process required to ensure timely completion of project. It consists of resources planning, cost estimating, budgeting and cost control (PMBOK 1996). The organization will need to determine the types of labor, materials, equipment, and other cost elements required to perform the services and the cost for each.

#### *2.2.9.3. Project quality management*

Project quality management involves all processes and activities in the project organization to determine quality policies and control that the performed work is of a satisfying quality. The major processes in quality management are quality planning, quality assurance and

quality control (PMBOK, 2004). Project quality management includes the processes required to ensure that the project will satisfy the need for which it was under taken. It consists of quality planning, quality assurance and quality control. (PMBOK 1996).

### 2.2.10. Challenges of Project Management

Related literatures shows that, most projects failed due to: increased competition, shorter product and service life cycles, tighter budgets, unfamiliar and more complex applications, globally distributed and multicultural project teams .Lack of feedback from previous projects, miss communication between members of the project team among themselves and different stakeholders, absence of planning and non-adoption of clear methodology lead to the questionability of project success. In contrast, several trends are making project management easier: better project management training, publication of best practices information, and better software support Non-participation of concerned stakeholders, weather condition, and absence of transparency during implementation is among the hindering factor for managing projects. Even though it is very difficult to generalize and put project management challenges in common terms due to the fact that each and every obstacle to project management were different according to nature of the project and the application employed to particular project setup. (Getayawkal, 2016)

### 2.2.11. Delay in project Implementation.

Project implementation Delay and cost overrun in project could be as a result of scope change. Scope is the term that defines the entire deliverables that is expected at the end of a project. Therefore, logically, it can be said that all project plans, estimation, schedule, quality and base lines are usually designed based on the initial project scope (Amankwa. 2003). Delay as an event that causes extended time to complete all or part of a project. Delay may also be defined as the time overrun, either beyond the date for completion specified by the contract or schedule or beyond the extended contract period where an extension of time has been granted. Project implementation delay is a major phenomenon affecting not only the parties involved in the project but also the overall economy of countries as well. (Sambasivan, 2007).

## 2.3. Empirical Review of the Literature

There is wide divergence of opinions in this field; the only agreement seems to be the disagreement on what constitutes ‘project success. (Murphy et al., 1974; Pinto & Slevin

1988; Gemuenden & Lechler, 1997 and Shenhar et al., 1997). De Wit (1988) and other writers distinguish between project success (measured against the overall objectives of the project) and project management success (measured against the widespread and traditional measures of performance against cost, time and quality). The second distinction is also important it is the difference between success criteria (the measures by which success or failure of a project or business will be judged) and success factors (those inputs to the management system that lead directly or indirectly to the success of the project or business). Rockart (1979) developed a three step procedure for determining which factors contribute to meeting organizational goals. His study reveals that many executives tend to link in terms of "what does it take to be successful" in their business rather than in terms of purposes, objectives, and goals.

Pinto & Slevin (1988) after sampling over 650 project managers, the researchers concluded that "project success" is something much more complex than simply meeting cost, schedule, and performance specifications. In fact client satisfaction with the final result has a great deal to do with the perceived success or failure of projects. Baker et al. (1988) concluded that "In the long run, what really matters is whether the parties associated with, and affected by, a project are satisfied. Good schedule and cost performance means very little in the face of a poor performing end product." In the words of Baker et al.(1983): "instead of using time, cost and performance as measures for project success, perceived performance should be the measure." Clarke (1999) also stated that by targeting the main problems and issues using the key success factors as a focus could make a significant difference to the effectiveness of project management. In order to ensure that a project is completed successfully, project plans need to be updated regularly. He continues to profess that success will be measured more easily when the objectives are clearly stated at the outset of the project. Ward (1995) opines that: "scope and objectives are the guiding principles that direct the efforts of the project team and they will determine a project's success or failure".

According to Radolph & Posner (1994), having a few key objectives focuses the team on the target and creates commitment and agreement about the project goals. Richardson (1995) & King (1996) think that none of the key success factors described in the literature is responsible, on their own, for ensuring a project's success- they are all inter-dependent and require a holistic approach to be taken. Groups of success factors and their interactions

are of prime importance in determining a project's success or failure. Belassi and Tukel (1996) grouped the success factors listed in the literature and described the impact of these factors on project performance. They grouped the factors into four areas: Factors related to the project, Factors related to the project managers and the team members, Factors related to the organization, and Factors related to the external environment. In their second part of the research with a total of 57 responses, many project managers' related factors have been found to be critical. In contrast with a previous finding using 91 responses, a noticeable shift in ranking from organizational factors towards factors related to project managers and team members was witnessed with project managers' related factors dominating over the organizational factors. They came out with some important relationships as well. For example, when time is used to measure project success, then a project manager's skills and communication between the team members become critical. "In previous studies it was assumed that if a project's completion time exceeds its due date, or expenses overrun the budget, or outcomes did not satisfy a company's predetermined performance criteria, the project was assumed to be a failure. Today we know that determining whether a project is a success or failure is far more complex." To come up with all possible critical factors that might affect outcome is impossible because of the diversity of projects. But to identify the groups to which the critical factors belong would be sufficient for better evaluation of projects.

A study by Dong et al. (2004) covers most of the concerns of Chinese information systems' project managers, for which they reviewed extensive literature. The most commonly cited set of CSFs are: Effective communication, Top management support, User involvement, Project manager and team members, Project definition, Project planning, Project control and change management, and Technology support. Therefore, a major concern of the field of project management and a recurring theme in the literature is that of project success. The factors that contribute to the success of projects are known as success factors and the success on projects is judged by success criteria. On one hand, the competence of the project manager is in itself a factor in successful delivery of projects and on the other hand, the project manager needs to have competence in those areas that have the most impact on successful outcomes.

Murphy et al. (1974) used a sample of 650 completed aerospace, constructions, and other projects with data provided primarily by project managers on the factors contributing to

project success. Theirs have been the most cited, used; extensive and authoritative research in the area of project success factors. They found ten factors that were found to be strongly linearly related to perceived success and perceived failure of projects, while twenty-three project management characteristics were identified as being necessary but not sufficient conditions for perceived success Baker et al (1988). Pinto and Slevin (1987, 1988) and Morris and Hough (1986, 1987) also did an important work on project success factors in the 1980s. While Morris and Hough (1986, 1987) drew primarily on literature and case study analysis of major projects, Pinto and Slevin (1987, 1988) based their findings on the opinions of a usable sample of 418 PMI members responding to questions asking them to rate the relevance to project implementation success of ten critical success factors and four additional external factors (Slevin & Pinto 1986). Therefore, one can conclude that there are large numbers of factors that may have a bearing on project success.

Different researchers have undertaken different types of projects and identified different factors affecting successful implementation of projects. The Factors that affect the projects' performance vary with the various project success dimensions. The sections below presented various factors contributing for project delays and challenges to effective implementation of projects as identified by number of studies made in various areas.

The findings of the study made by Tadele (2017) on the title of challenges in project implementation and possible remedial actions: case study of projects under carried by talent youth association revealed that lack of top management commitment, uncontrolled change to baseline requirement, lack of communication, inadequate tracking and directing of project activities, lack of Monitoring and Evaluation (M&E) system, high uncertainty, lack of accountability & completion criteria, schedule pressure, being kept uninformed, unclear expectation, none collaborating functional areas, and staff turnover were the serious challenges during project implementation.

The major factors affecting project delays were found to be poor coordination with stakeholders, Delays in administration of right way of obstruction removal, delay in provision of resources and machineries and design and scope changes.Poor coordination between stakeholders resulting Reworks and misalignment and inadequate planning and scope changes.

Besides, the study has revealed that though projects undertaken in the study area are mostly subjected to scope and design changes, there is no strategy towards change management and this result in costly way of incorporating changes. (Tena, 2017).

The study of Teferra (2017), on the title of Major causes of project implementation delay: the case of Development Bank of Ethiopia financed projects conclude the top ten influencing factors in causing project delay arranged in descending order of importance as Shortage of foreign currency, Failure to contribute equity contribution in time, Plan (scope) change by clients or client initiated variations, Governments failure to avail the required infrastructures like road, water, power on time, Lack of cooperation and insufficient communication among different stakeholder government organizations), Fluctuation in foreign currency, Fluctuation of prices of materials and increase in total cost of projects, Diversion of funds for unintended purpose by promoters, Existence of missed items & long time taken to incorporate them through additional loan, Under estimation of complexity of projects by promoters.

The Project Organizational structure, Project Leadership and Governance and Project Human Resources are noted as the factors affecting effective implementation of project. These factors were not addressed appropriately so that they could significantly contribute to the success of the project implementation. (Tamene, 2017).

According to the study of Demisse (2017), on the title of Assessment on practices and challenges of consultancy project management: the case of Ethiopian management institute Lack of required resources, lack of client commitment, and lack of competency of consultants, weak contractual administration, lack of strong monitoring and evaluation system, client needs fluctuations, poor incentive mechanism and lack of commitment of consultants are the major challenges that faces consultancy project management process.

## 2.4. Conceptual Framework for the Study

The study was used the following conceptual framework that shows the interactions of the key study variables. There are internal and external factors which affects the implementation of projects. Internal factors that is controllable environment are: Project Related Factors (Mission/Goal statement, Schedule/Plan, Communication), Organizational Structure Factors (Functional, Dedicated Team, Matrix), Project management and Team Related Factors (Project team, Managerial Skills, Staff cohesion), Stakeholders level of

involvement (Client consultation, Client acceptance). External factors that is uncontrollable environment Project Environment Related Factors (Socio-economic and Financial, Political environment, Legal environment, Social and Cultural), all the above stated variables are independent variables. While dependent variable is the project success measured by schedule, cost and quality. The researcher assumed that those variables affect project implementation from different dimensions. It is hypothesized that these independent variables will have significant influence on project success. Structural representation of this model is illustrated below

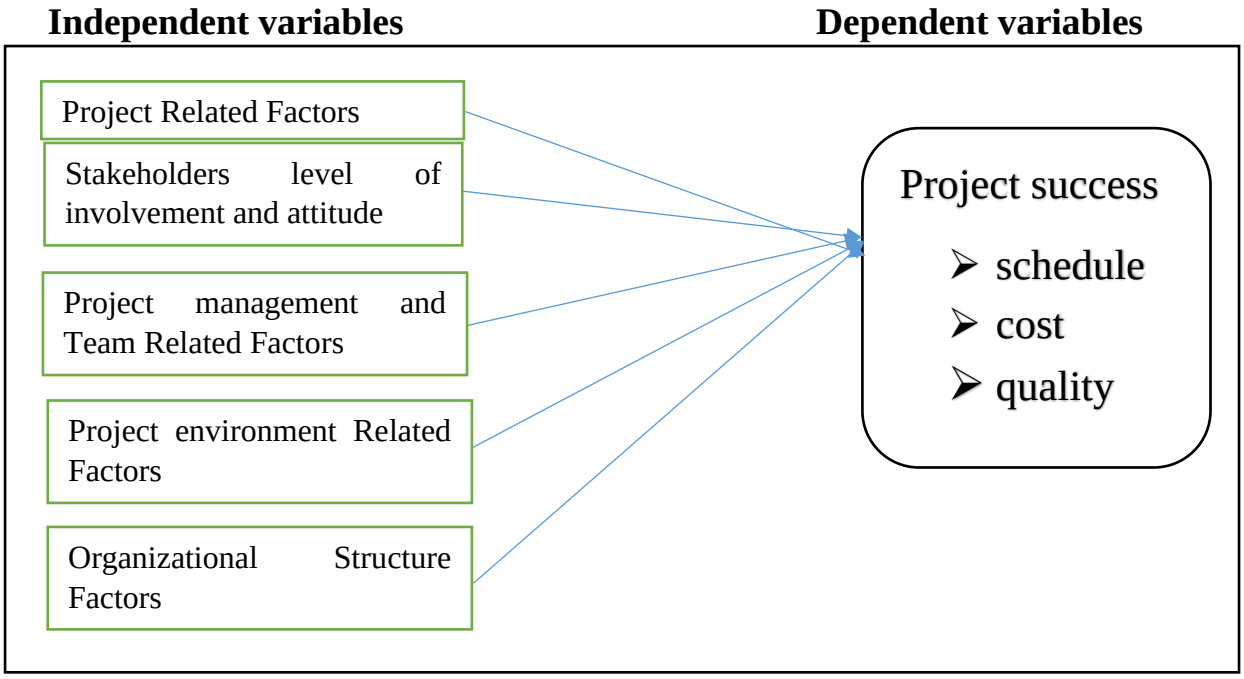



*Figure 2-1:-* ***Conceptual frame work from different literature***

# CHAPTER THREE

# 3. RESEARCH METHODOLOGY

## 3.1. Introduction

This section deals with methods of Research design, data sources, target population, data collection, sample size, data processing and Data analysis techniques.

## 3.2. Research Design and Approaches

Research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedures (Kothari, 2004).

In this study, both descriptive and explanatory survey design were employed, since it enables to describe, explain facts and opinions of the key respondents regarding determinant of effective public project implementation in Gurage zone Construction office. A mixed methods approach was chosen as it increases the likelihood that research generates more accurate results than is the case if a single method was adopted.

As noted in Creswell (2009) mixed research is an approach that combines or associates both qualitative and quantitative research methods. It is also more than simply collecting and analyzing both kinds of data, it involves the use of both approaches so that the overall strength of a study is greater than either qualitative or quantitative research. As a result, mixed methods provide a more accurate picture of the phenomena being investigated. The method employed structured document reviews to collect valid and reliable data under the study.

## 3.3. Target population and Sampling Technique

To address the research questions and to meet the objectives of the study, the target populations are the employees and contractors that directly involved in the implementation of public projects in the case area.

The projects that are selected were operational for the year (2020-2022) and completed. Projects that have been operational for the year 2020-2022 were considered because it is important to assess some of the causes of project failure/success within the years. In this 3 years 17 projects are completed, the population of the study was 62 project directors, project coordinators, project officers, project team members and contractors that directly

involve and participate on the project implementation phase of public projects in the area. Because of the small size of the study population, all of them are part of the study. So, the study adopted a census approach and collected data from 17 implemented and completed projects. The remaining 55 projects are not completed by schedule, cost and quality. Only 60 respondents return the questioners and used for the study findings

**Table 3-1:- list of respondent**

| No | List of population | Respondent |
|---|---|---|
| 1 | Workers in construction office | 20 |
| 2 | Workers in plan and commission | 5 |
| 3 | Workers in BoFED | 8 |
| 4 | Leaders and coordinators | 10 |
| 5 | Contractors | 17 |
| | Total | 60 |

### 3.4. Sources of Data

The source of the data for this study was both primary and secondary sources. Primary data was collected from the respondents under study through questionnaire from project coordinators, staff members, management officer's leaders and also contractors of the project from selected case area, and interview selected project coordinators, and management officer's. Whereas secondary data as a source of some information require is use to the require standard to make the research more viable. Secondary data was gathered from plans and reports of construction office in the case area, books, articles, and journals relevant to the issue under study for documentation purpose.

### 3.5. Methods of Data collection

Primary data was collected through questionnaire which is developed based on the research questions and the literature review from employees working in selected areas construction office, plan and commission and BoFED, project coordinators, staff members, management officer's leaders and also contractors of the project from case area and interview selected project coordinators, and management officer's. The study was survey questionnaire to acquire relevant information from respondents. The data was collected by preparing 5 Likert's scale measurement and open ended questions. Those questionnaires

first construct in English and then translate into Amharic with similar meanings for respondents' better understanding. After copying, the questionnaire disseminate to respondents by hand so that threat of getting low response rate is eliminate. The secondary data was collected from completed government funded project documentations such as implementation reports, correspondence letters, interim payment certificates and project completion certificates with the view of identifying the effective implementation of projects and annual report stated that in 2020-2022.

## 3.6. Data Analysis methods

### 3.6.1. Data processing

At the time of collection of data design for questionnaire from respondent counter check is done for respondent's addressing all the questions. After collection of questionnaire, it was code classify, organize and tabulate as designed. The data was categorized according to quantitative and qualitative type of analysis. Qualitative research is especially important where the aim is to discover the underlying human behavior to find out the factors determine effective public project implementation. Qualitative approach to research is concern with subjective assessment of attitudes to assessment, and behavior (Kothari, 2004). Finally, tabulation was used to summarize the raw data and display in the form of statistical table for further analysis by using statistical package for social science (SPSS) software version.

The collected data was analyze by using Statistical tool which is Statistical Package for Social Science (SPSS V.23). Both descriptive and inferential statistics was used for quantitative data analysis. Descriptive statistics such as frequency distribution, percentage, averages mean, and standard deviations was used to describe and interpret the results of the study. From inferential statistics both correlation and regression analysis was applied. Correlation analysis more specifically Pearson correlation coefficient was measured the degree of association between public project implementation aspects and effective project implementation and from regression especially multiple regression analysis was used to test the significance of cause and effect relationship between project implementation aspects and effective project implementation practice. The qualitative data collected from key informant interviews sources analyzed thematically. Results of the thematic analysis was then use to complement findings of the quantitative analysis.

### 3.6.2. Linear Regression Analysis

Linear regression is a method of estimating or predicting a value on some dependent variable given the values of one or more independent variables. Like correlations, statistical regression examines the association or relationship between variables. Unlike correlations, however, the primary purpose of regression is prediction (Geoffrey M. et al., 2005:224-225). In this study multiple regressions will employed. Multiple regression analysis takes into account the inter-correlations among all variables involved. This method also takes into account the correlations among the predictor scores (John Adams, et al., 2007:198). They added multiple regression analysis, which means more than one predictor is jointly regressed against the criterion variable. This method is used to determine if the independent variables was explained the variance in dependent variable.

The equation of regressions on this study is generally constructed around two sets of variables, namely dependent variable effective public project implementation and independent variables Project Related Factors, Organizational Structure Factors, Project management and Team Related Factors, Project Environment Related Factors, and Stakeholders level of involvement Based on related literatures and observation researcher focuses on the above independent variables. The basic objective of using regression equation on this study is to make the study more effective at describing, understanding and predicting the stated variables.

**Regress Performance on Selected Variables**

$$\boldsymbol{Yi = \beta 0 + \beta 1 X1 + \beta 2 X2 + \beta 3 X3 + \beta 4 X4 + \beta 5 X5}$$

Where: Y-is the response or dependent variable performance

$X_1$= Project Related Factors

$X_2$= Organizational Structure Factors

$X_3$= Project management and Team Related Factors

$X_4$= Project Environment Related Factors,

$X_5$= Stakeholders level of involvement

$\beta_0$ is the intercept term-constant which is equal to the mean if all slope coefficients are $\beta 0$, $\beta 1$, $\beta 2$, $\beta 3$, $\beta 4$ and $\beta 5$ are the coefficients associated with each independent variable which measures the change in the mean value of Y, per unit change in their respective independent variables. Accordingly, this statistical technique explain the following relationships. Regress performance (as dependent variable) on the selected linear

combination of the independent variables uses multiple regressions. All dependent and independent variables are measure using 5 Likert scale questioner that related to the variable.

## 3.7. Description of variables

According to Mugenda and Mugenda (2003) conceptual framework is a diagrammatic presentation of the relationship between dependent and independent variables. Researchers who focus on causal relations usually begin with an effect, and then search for its causes. The cause variable, or the one that identifies forces or conditions that act on something else, is the independent variable. The variable that is the effect or is the result or outcome of another variable is the dependent variable (also referred to as outcome variable or effect variable).

A. **Dependent variable**

Public project implementation measure of the project schedule, cost and quality of the specific project. Public project implementation was measured using a 5 point Likert scale (5 = strongly agree, 4 = agree, 3 = undecided, 2 = disagree and 1= strongly disagree) to identify the overall level of respondents performance.

B. **Independent variables**

The following are the independent variables used in this study: The independent variables are Project Related Factors, Organizational Structure Factor, Project management and Team Related Factors, Project Environment Related Factors, Stakeholders level of involvement. All independent variables will be measured using five point Likert scale (5 = strongly agree, 4 = agree, 3 = undecided (Neutral), 2 = disagree and 1= strongly disagree).

## 3.8. Reliability and validity

The sample size of the collected data also was evaluated based on the statistical packages. Constructed validity test was conducted to assure the quality of the data. The data was also undergone reliability test for measuring the stability and consistency of the results. Later on the correlation analysis of the determinants of effective public project implementation was followed in depth. And also advanced level analysis was employed such as regression to measure the extent of effect on dependent variable.

Reliability is the degree to which a test, experiment or any measuring procedure produces the same results in the repetitive judgments and can therefore be generalized. The tendency towards yielding similar results in repetitive judgments or measurements is its consistency.

Validity, on the other hand, is the degree to which the constructs are able to measure what it is supposed to measure (APA, 2014). Most importantly the clarity of the instruments were checked and commented by the advisors. This was done before and after the pre-test (pilot test) was conducted.

In order to measure (check) the internal consistency of the study instruments, the study was use the Cronbach alpha (α) which measures how well items in a set are correlated to each other (Cronbach, 1951). The value of alpha varies from zero to 1 since it is a ratio of two variances. As a rule, an alpha value between 0.70-1.00 is considered an adequate measure of internal consistency (reliability) among the theories was tested and validity test was performed by correlation and regression analysis. However, George and Mallery (2003) provided more detailed categories of reliability values such as $0.9 \leq \alpha < 1$ as "Excellent"; $0.8 \leq \alpha < 9$ as "Good"; $0.7 \leq \alpha < 0.8$ as "acceptable"; $0.6 \leq \alpha < 0.7$ as "questionable"; $0.5 \leq \alpha < 0.6$ as "poor" and $< 0.5$ as unacceptable.

***Table 3-2: The Reliability Test Results of the Variables***

| no | Variable | Description | Cronbach's Alpha | Number of items |
|---|---|---|---|---|
| 1 | Independent variable | Project Related Factors | .794 | 16 |
| | | Organizational Structure Factors | .718 | 4 |
| | | Project management and Team Related Factors | .733 | 20 |
| | | Project Environment Related Factors | .707 | 14 |
| | | Stakeholders level of involvement | .755 | 9 |
| 2 | Dependent variable | Public project implementation | .741 | 4 |
| The overall reliability results | | | .736 | 67 |

From the above Table the least Cronbach alpha value is .736 which is above .700; this implies that the values are in the acceptable ranges.

**Table 3-3:- Expected sign of independent variable over dependent variable**

| **Variable** | **Expected sign** |
|---|---|
| **Dependent variable** | Public project implementation |
| **Independent variable** | |
| Project Related Factors | Positively affect public project implementation |
| Organizational Structure Factors | Positively affect public project implementation |
| Project management and Team Related Factors | Positively affect public project implementation |
| Project Environment Related Factors | Negatively affect public project implementation |
| Stakeholders level of involvement | Positively affect public project implementation |

## 3.9. Ethical consideration

Ethical issues are very important in research these days. Ethical emerged from value conflicts. In research, these conflicts are expressed in many ways: individual's rights to privacy versus the undesirability of manipulation, openness and replication versus confidentiality, future welfare versus immediate relief, and others. Each decision made in research involves a potential compromise of one value for another. Researchers must try to minimize risks to participants, colleagues and society while attempting to maximize the quality of information they produce (David F. Gillespie, 1989). In favor of this study the researcher is familiar with the ethical issues of research. Thus, the researcher was observe the principles of ethical issues like confidentially and dignity of the participants, integrity, on no account plagiarism, and never fabricating and destroying data.

# CHAPTER FOUR

# 4. RESULTS AND DISCUSSION

## 4.1. Introduction

To facilitate ease in conducting the empirical analysis, the result was analysis by using descriptive analyses and inferential analysis. The purpose of this study is to investigate and identify the determinants of effective public project implementation in Gurage zone administration. Data were collected from 62 project directors, project coordinators, project officers, project team members and contractors that directly involve and participate on the 17 completed Projects that have been operational for the year 2020-2022 were considered.

The researcher was able to back 60 out of the 62 questionnaires administered to the project directors, project coordinators, project officers, project team members and contractures of sample 17 completed Projects giving a 96.8% response rate. Of the 62 questionnaires distributed, 2 questionnaires were not returned at all and thus not included in the analysis.

## 4.2. Demographic information of respondents

These aspects of the analysis deals with the basic data on the respondents of the questionnaires sent to them. The basic data comprise of the respondents sex, age, educational level and type of occupation in the 17 completed Projects.`

**Table 4-1 Demographic Character of the Respondent**

| Parameters | | Frequency | Percent |
|---|---|---|---|
| Sex of respondent | Male | 42 | 70 |
| | Female | 18 | 30 |
| | Total | 60 | 100.0 |
| Education Background | Diploma | 4 | 6.7 |
| | Bachelor degree | 41 | 68.3 |
| | MSc. | 15 | 25 |
| | PhD. | 0 | 0 |
| | Total | 60 | 100.0 |
| Age of the respondent | 20-30 | 17 | 28.3 |
| | 31-40 | 36 | 60 |
| | 41-50 | 7 | 11.7 |

| | | | |
|---|---|---|---|
| | Above 51 | 0 | 0 |
| | Total | 60 | 100.0 |
| Job description | Workers in construction office | 20 | 15.3 |
| | Workers in plan commission | 5 | 11.7 |
| | Workers in BoFED | 8 | 19.8 |
| | Leaders and coordinators | 10 | 32.4 |
| | Contractors | 17 | 20.7 |
| | Total | 60 | 100.0 |
| Year of experience on project related works | Less than 5 year | 19 | 31.7 |
| | 6-10 year | 36 | 60 |
| | 11-15 year | 4 | 6.7 |
| | Above 15 year | 1 | 1.7 |
| | Total | 60 | 100 |

*Source: researcher's computation using SPSS-2023*

The above table 4-2 shows that age distribution of the respondents as 17 (28.3%) were between the age of 20-30 years, 36(60%) were between age 31-40 years, 7 (11.7%) were between Age 41-50 years and there is no respondent that found above age 51 years. This implies that largest number 36 (60%) of age of the respondents was between 31-40 years.

Regarding sex distribution of the respondents, in the above table shows that, 42 (70%) were male and 18(30%) were female. respondents that indicated majority of the study respondents are male. This indicates comparatively male respondents are greater than female respondents.

The respondents' Education background statistical result indicate that in the above table 4 (6.7%) have diploma , 41 (68.3%) have Bachelor degree, 15(25) have master's degree which indicated that respondents are eligible and professionally relevant to deeply understand the constructs of study, value the concern of the researcher and can appropriately address the issue of the study. Work experience of respondents show that 19 (31.7%) of respondents have work experience below 5 years, 36(60%) have work experience between 6-10 years, 4 (6.7%) have work experience between 11-15 years, 1 (1.7%) have work experience above 15 years overall the work experience of the respondent indicate that 60 % of the respondent have work experience between 6-10 years..

## 4.3. Descriptive analysis of data

This part presents the descriptive analysis of the determinant of effective implementation of public project aspects like: - Project Related Factors (PRF), Organizational Structure Factors (OSF), Project management and Team Related Factors (PMTF), Project Environment Related Factors (PEF), and Stakeholders level of involvement (SLI) and effects of public project implementation practice (cost, time and quality) by using the mean value, standard deviations and percentiles.

The independent variable constructs of Project Related Factors (PRF), Organizational Structure Factors (OSF), Project management and Team Related Factors (PMTF), Project Environment Related Factors (PEF), and Stakeholders level of involvement (PLI) and measures of effective public project implementation practice are analyzed and results of the analysis finding are summarized, investigated for significance and described to attribute meaning to their implication.

According to Zaidaton & Bagheri (2009) comparison bases of mean of score of five point Likert scale instrument interpreted as mean score below 3.39 as low, mean score from 3.4 to 3.79 as moderate and mean score above 3.8 high score as presented in table 3 below.

***Table 4-2:- interpretation of mean value***

| No | Mean value | Description |
|---|---|---|
| 1 | Below 3.39 | Low |
| 2 | Between 3.4 to 3.79 | Moderate |
| 3 | Above 3.8 | High |

Source: Zaidaton & Bagheri (2

### 4.3.1. Project Related Factors

***Table 4-3:- Descriptive statistics for Project Related Factors***

| | Descriptive Statistics | | | | | |
|---|---|---|---|---|---|---|
| No | Description | N | Minimum | Maximum | Mean | Std. |
| 1 | The goals of the project were in line with the general goals of the organization. | 60 | 1 | 5 | 2.92 | .671 |
| 2 | The basic goals of the project were made clear to the project team | 60 | 1 | 4 | 2.48 | .792 |
| 3 | The project goals are developed in a way that contribute to the missions of the parent organization. | 60 | 1 | 4 | 2.60 | .694 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 4 | The beneficial consequences of the project to the organization's success are clear. | 60 | 1 | 5 | 2.50 | .770 |
| 5 | We know which activities contain slack time of slack resources which can be utilized in other area during emergencies. | 60 | 1 | 4 | 2.40 | .669 |
| 6 | There was a detailed plan (including time, schedules, milestones, manpower requirements, etc.) for the completion of the project. | 60 | 1 | 5 | 3.47 | 1.440 |
| 7 | There was a detailed budget for the project. | 60 | 1 | 4 | 2.50 | 1.242 |
| 8 | Key personnel needs (who, when) were specified in the project plan. | 60 | 1 | 5 | 2.48 | 1.308 |
| 9 | The logical framework approach was adopted in identifying activities, and measureable objectives in the preparation of project plans | 60 | 1 | 5 | 3.42 | 1.403 |
| 10 | Risks were sufficiently identified and mitigation strategies included as part of the project plan | 60 | 1 | 5 | 3.17 | 1.440 |
| 11 | The Gantt chart was used in developing activity plans | 60 | 1 | 4 | 3.50 | 1.242 |
| 12 | The results (decisions made, information received and needed | 60 | 1 | 5 | 3.48 | 1.308 |
| 13 | Individuals/groups supplying input | 60 | 1 | 5 | 2.22 | 1.403 |
| 14 | All groups affected by the project | 60 | 1 | 5 | 4.38 | .993 |
| 15 | Plans were clearly communicated to the project team | 60 | 1 | 5 | 3.42 | 1.394 |
| 16 | The project adopted a formal communication | 60 | 3 | 5 | 4.15 | .727 |
| | **Grand Mean & Standard Deviation** | | | | **3.068** | **1.0058** |

*Source: researcher's computation using SPSS-2023*

The descriptive analysis of these project related factors is presented in table 4-3 the result of the analysis indicated that the mean value of the goals of the project were in line with the general goals of the organization was (mean = 2.92, standard deviation = 0.671) which implies that the goals of the project were in line with the general goals of the organization was poorly/inadequately/ applied in public project implementation.

The basic goals of the project were made clear to the project team result indicated that (mean=2.48, standard deviation =0.792) basic goals of the project is poor applied in public project implementation in the study area. There was a detailed plan (including time, schedules, milestones, manpower requirements, etc.) for the completion of the project

result indicated that (mean=2.3.47, standard deviation =0.1.44) there has detailed plan including time, schedules, milestones, manpower requirements, etc to implement the project in the study area.

The result in the table (mean=3.47, standard deviation =1.440) indicated that the project related factors that the risks were sufficiently identified and mitigation strategies included as part of the implemented project plan in the study area for study time.

The descriptive analysis of these project related factors is presented in table 4-3 the result of the analysis indicated that the mean value of the logical framework approach was adopted in identifying activities, and measureable objectives in the preparation of project plans was (mean=3.42, standard deviation =1.403) which implies that the logical framework approach was adopted in identifying activities, and measureable objectives in the preparation of project plans was moderately applied in public project implementation.

The descriptive analysis of these project related factors is presented in table 4-3 the result of the analysis indicated that the mean value of Plans were clearly communicated to the project team members and to stakeholders was (mean=3.42, standard deviation =1.394) which implies that the Plans were clearly communicated to the project team members and to stakeholders was moderately applied in public project implementation.

The descriptive analysis of these project related factors is presented in table 4-3 the result of the analysis indicated that the mean value of the project adopted a formal communication channel to direct work orders and to receive feedbacks was (mean=4.15, standard deviation =0.727) which implies that the project adopted a formal communication channel to direct work orders and to receive feedbacks was highly applied in public project implementation.

From the above project related factor indicators conclude that all indicators mean value shows that project related factors are minimally affect the project implementation in the study area at the study time.

### 4.3.2. Organizational structure factor

## 4.3.3. Project management and team related factors

***Table 4-5:- Descriptive statistics for Project management and team related factors***

| Descriptive Statistics | | | | | |
|---|---|---|---|---|---|
| | N | Minimum | Maximum | Mean | Std. Deviation |
| The project management was responsive to the requests | 60 | 2 | 5 | 3.57 | .981 |
| The project management team agreed and accepted | 60 | 2 | 5 | 3.52 | 1.157 |
| The project management team has granted us the necessary | 60 | 2 | 5 | 2.95 | .999 |
| The project management team was responsive to the requests | 60 | 2 | 5 | 3.03 | .974 |
| The project manager agreed with the project team on his/her level of authority | 60 | 2 | 5 | 4.52 | .770 |
| The project leader possessed adequate technical/conceptual skills | 60 | 1 | 5 | 3.93 | 1.087 |
| The project leader possessed adequate interpersonal | 60 | 3 | 5 | 4.15 | .727 |
| The project leader possessed adequate leadership skills | 60 | 2 | 5 | 4.45 | .811 |
| The project leader has the ability to motivate team | 60 | 1 | 5 | 3.57 | 1.280 |
| The project leader maintained a high profile | 60 | 3 | 5 | 4.15 | .727 |
| The project manager has a team building skill | 60 | 2 | 5 | 4.43 | .851 |
| The project manager has skills of conflict resolution | 60 | 2 | 5 | 3.85 | 1.022 |
| The project manager has a negotiation skill | 60 | 3 | 5 | 4.15 | .727 |
| The project manager is endowed with decision making skills | 60 | 2 | 5 | 4.50 | .770 |
| There was sufficient (both quality and quantity) human power | 60 | 1 | 5 | 3.73 | 1.103 |
| Project team personnel understood their role on the project | 60 | 3 | 5 | 4.15 | .727 |
| Adequate technical and /or managerial training (and time for training | 60 | 2 | 5 | 4.50 | .770 |
| Job description for team members have been written | 60 | 1 | 5 | 3.82 | 1.049 |
| The personnel on the project team understood | 60 | 3 | 5 | 4.15 | .727 |
| Project team members are motivated | 60 | 2 | 5 | 3.63 | .974 |
| **Grand Mean & Standard Deviation** | | | | **3.9375** | **0.74315** |

*Source: researcher's computation using SPSS-2024*

The finding of the study indicated that project management and team related factors have great influence for the successful implementation and achievement of project goals. This was shown by respondent's response of he project manager agreed with the project team on his/her level of authority a mean of 4.52, the project leader possessed adequate technical/conceptual skills a mean of 3.93, the project leader possessed adequate interpersonal (communication) skills, The project manager has skills of conflict resolution mean of 3.85, The project manager has a negotiation skill mean of 4.15, Project team personnel understood their role on the project mean of 4.15, Adequate technical and /or managerial training (and time for training was available for members of the project team a mean value of 4.50, the personnel on the project team understood how their performance will be evaluated mean value is 4.15. Based on the responses collected from questionnaire project management and team related factors has great (highly) influence on the implementation of the project.

### 4.3.4. Project environment related factors

*Table 4-6**:- Descriptive statistics for Project environment related factors***

| Descriptive Statistics | | | | | |
|---|---|---|---|---|---|
| | N | Minimum | Maximum | Mean | Std. Deviation |
| While the project was being implemented inflation occurred | 60 | 2 | 4 | 2.85 | .577 |
| While the project was being implemented | 60 | 2 | 5 | 2.68 | .725 |
| While the project was being implemented the opportunity | 60 | 2 | 5 | 3.00 | .991 |
| While the project was being implemented currency | 60 | 2 | 5 | 3.37 | 1.221 |
| There was political instability while the project was being implemented | 60 | 2 | 5 | 3.18 | 1.228 |
| The project was implemented in a governance structure | 60 | 2 | 5 | 2.87 | .947 |
| The project is situated in a politically sensitive environment | 60 | 2 | 5 | 3.52 | 1.282 |
| There was election while the project was implemented | 60 | 2 | 5 | 3.70 | 1.078 |
| Change control (change in contract terms) | 60 | 2 | 5 | 3.83 | 1.028 |

| | | | | | |
|---|---|---|---|---|---|
| Project contract/drafting of the project contract | 60 | 2 | 5 | 3.70 | .850 |
| The project is implemented in a cultural setting | 60 | 2 | 5 | 3.98 | .965 |
| The literacy level of the local community was enabling the implementation of the project | 60 | 1 | 5 | 3.45 | 1.111 |
| There was adequate access to social amenities (e.g. med-care) | 60 | 2 | 5 | 3.75 | 1.052 |
| There was hidden obstruction that affected the project implementation | 60 | 2 | 5 | 3.73 | .800 |
| **Grand Mean & Standard Deviation** | | | | **2.622** | **0.9189** |

*Source: researcher's computation using SPSS-2024*

The descriptive analysis of these Project environment related factors is presented in table 4-6 the result of the analysis indicated that the mean value of economic and financial environment, Political environment, Legal environment and Social and cultural factors over all minimally influenced the implementation of the project.

### 4.3.5. Stakeholders level of involvement related factors

*Table 4-7:- Descriptive statistics for stakeholders level of involvement related factors*

| Descriptive Statistics | | | | | |
|---|---|---|---|---|---|
| | N | Minimum | Maximum | Mean | Std. Deviation |
| The clients were given the opportunity | 60 | 1 | 4 | 2.67 | .837 |
| The value of the project has been discussed with the beneficiaries/clien | 60 | 1 | 5 | 2.35 | 1.005 |
| The clients (intended users/beneficiaries) were kept informed of the project's progress | 60 | 1 | 5 | 2.63 | .956 |
| The clients were told whether or not their input was assimilated into the project plan | 60 | 1 | 5 | 2.53 | .812 |
| The purpose of the project has been discussed | 60 | 1 | 4 | 2.83 | .615 |
| There was adequate documentation of the project | 60 | 1 | 4 | 2.45 | .790 |
| Potential clients have been contacted about the usefulness of the project | 60 | 1 | 5 | 3.35 | 1.176 |
| Clients knew who to contact when problems or questions arise | 60 | 1 | 5 | 3.50 | 1.186 |
| Adequate advanced preparation has been done to determine | 60 | 1 | 5 | 3.67 | .933 |
| **Grand Mean & Standard Deviation** | | | | **2.887** | **0.9233** |

*Source: researcher's computation using SPSS-2024*

### 4.3.6. Descriptive analysis of effective public project implementation

***Table 4-8:- Descriptive statistics for public Project implementation***

**Descriptive Statistics**

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| Public Projects meets quality implementation practice | 60 | 1 | 4 | 2.45 | .790 |
| Project are completed at the time schedule prepared | 60 | 1 | 4 | 2.62 | .691 |
| Projects are implemented at the cost already allocated | 60 | 1 | 5 | 2.48 | .748 |
| Projects are implemented according to cost break down | 60 | 1 | 4 | 2.42 | .645 |
| **Grand Mean & Standard Deviation** | | | | 2.4925 | 0.7185 |

*Source: researcher's computation using SPSS-2024*

In this section effective public project implementation practice measures were analyzed and presented in detail. The project implementation in terms of time, cost and quality was described and given meaning using the mean value, standard deviation and frequency distribution. As public project implementation was the target of the study, in order to investigate the independent variable on the target of the study it is important to measure the level of public project implementation practice using these factors and signify the result to understand the level of determinants of project implementation aspects. Public project implementation practice is measured in terms of time, cost and quality. Literatures also emphasize to measuring public project implementation practice in these terms (factors). The mean value and standard deviation of the descriptive statistical analysis were used to measure project implementation and the analysis was presented above in table 4-8.

The result of the descriptive analysis indicate lower mean value that projects are complete on time (M =2.62 and SD =0.691) which indicates that project run out of schedule (time). The analysis for project completion with in the Projects were implemented at the cost already allocated and according to cost break down for each activity as developed indicate that the projects fail to be completed with the planned cost and resulted in cost overruns (M = 2.48 and SD = 0.748).

The descriptive analysis for projects quality implementation signifies that project failed to meet quality implementation practice (M = 2.45 and SD = 0.79). Accordingly, the

frequency analyses imply that few projects implemented meet public project quality and the rest of the projects resulted in failed to meet quality/ poor quality. The summated value analysis of the constructs to measure the public project implementation practice indicated that the projects' implementation was poor (M = 2.42 and SD = 0.645). The descriptive analysis for the measures (factors) of project implementation and the summated factors analysis indicated that public project implementation practice in Guraghe zone finance and economic development in the area was poor.

Finally the descriptive analysis of the independent variable result indicated that Project management and team related factors (mean= 3.9375 SD= 0.74315) and Organizational structure factor (mean= 3.48, SD= 1.0212) are highly influenced the effective public project implementation and the rest Project Related Factors (mean= 3.068, SD 1.0058), Stakeholders level of involvement related factors (mean= 2.887 SD= 0.9233) and Project environment related factors (mean = 2.622 SD = 0.91895), are minimally affect the effective public project implementation.

## 4.4. Results of Inferential Statistics

In this section, the results of inferential statistics are presented. For the purpose of assessing the objectives of the study, Correlation Coefficient and regression analyses were performed. With the aid of these statistical techniques, conclusions are drawn with regard to the sample and decisions are made with respect to the research hypothesis.

### 4.4.1. Correlation analysis

Correlation analysis was carried out to consider the relationship between the variables/constructs/. Any correlation coefficient(r) that is positive indicates a direct or positive relationship between two measured variables. Negative "r" indicates indirect or inverse relationship. The analysis of each variable is indicated in Table 4-9. According to A. Field (2009), correlation coefficient value of ± .1 37 represent small effects, ± .3 represent Medium (moderate) effect, and ± .5 and above represents large effect.

**Table 4-9:- correlation description**

| No | Correlation | Description |
|---|---|---|
| 1 | <.1 | Weak |
| 2 | .1<r<.3 | Low (significant) |
| 3 | .3<r<.5 | Moderate |
| 4 | >.5 | High |

*Source: A. Field (2009*

***Table 4-10:- correlations of the variables***

**Correlations**

| | | PUBLIC PROJECT IMPLEMENTATION | Project related factors | Organizational structure factor | Project management and team factors | Project environment related factors | Stakeholders level of involvement |
|---|---|---|---|---|---|---|---|
| PUBLIC PROJECT IMPLEMENTATION | Pearson Correlation | 1.000 | | | | | |
| Project related factors | Pearson Correlation | -.016 | 1.000 | | | | |
| Organizational structure factor | Pearson Correlation | .098 | -.042 | 1.000 | | | |
| Project management and team factors | Pearson Correlation | .294* | -.014 | .084 | 1.000 | | |
| Project environment related factors | Pearson Correlation | .554** | -.035 | .087 | .363** | 1.000 | |
| Stakeholders level of involvement | Pearson Correlation | -.022 | -.124 | .113 | .462** | .259* | 1.000 |

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

*Source: researcher's computation using SPSS-2024*

As indicated on the correlation matrix in table 4-10 above, almost all correlations that have occurred among explanatory variables are weak correlations and Low (significant) correlation; this indicates there is no existence of a multicollinearity problem in the study. Even if, a relatively high positive correlation existed between Project environment related factors PEF and Public Project Implementation PPI (0.554), Stakeholders level of involvement (SLI) and Project management and team factors (PMTF) (0.462) has moderate correlation this also the researcher ignored this moderate correlation.

From the above finding emphasized that the nature of association of independent variable Project Related Factors, Organizational Structure Factors, Project management and Team Related Factors, Project Environment Related Factors and Stakeholders level of involvement factors with Effective Public project Implementation and that their relationship should be considered adequately during project implementation. The correlation analysis result indicates that Project Environment Related Factors and Project management and Team Related Factors has a significant relationship with its dependent variable and other variable has a strong positive relation between independent and dependent variable that is project implementation practice.

### 4.4.2. Regressions Analysis

For the purposes of determining the extent to which the independent variables explain the variance in the dependent variable, regression analysis was employed. The results of such analysis are narrated as follows.

Analysis of Variance table 4-11 below tells about the story of how the regression equation accounts for variability in the response variable, which is the dependent variable effective public project implementation (PPI) for this thesis due to a change in the independent variables (Project Related Factors, Organizational Structure Factors, Project management and Team Related Factors, Project Environment Related Factors and Stakeholders level of involvement factors).

***Table 4-11:- ANOVA (Analysis of Variance)***

**ANOVA[b]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 6.290 | 5 | 1.258 | 6.505 | .000[a] |
| | Residual | 10.443 | 54 | .193 | | |
| | Total | 16.733 | 59 | | | |

a. Predictors: (Constant), Stakeholders level of involvement, Organizational structure factor, Project related factors, Project environment related factors , Project management and team factors

b. Dependent Variable: PUBLIC PROJECT IMPLEMENTATION

*Source: researcher's computation using SPSS-23*

From the ANOVA table 4-11 indicate the regression model the value of F-statistic is 6.505 and Sig. value is **0.000**. The result reflects there was a statistically significant correlation between dependent variable and independent variables at 5% significant level, which means the independent variables (Project Related Factors, Organizational Structure Factors, Project management and Team Related Factors, Project Environment Related Factors and Stakeholders level of involvement factors) have great contribution on the effective implementation of public projects on Gurage zone.

***Table 4-12 Regress implementation of public projects using multiple regressions***

**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|---|---|---|---|---|---|
| 1 | .613[a] | .376 | .318 | .440 | 1.921 |

a. Predictors: (Constant), Stakeholders level of involvement, Organizational structure factor, Project related factors, Project environment related factors , Project management and team factors

b. Dependent Variable: PUBLIC PROJECT IMPLEMENTATION

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 1.058 | .498 | | 2.125 | .038 |
| | Project related factors | -.025 | .109 | -.025 | -.234 | .816 |
| | Organizational structure factor | .049 | .084 | .062 | .575 | .567 |
| | Project management and team factors | .188 | .109 | .219 | 1.726 | .090 |
| | Project environment related factors | .591 | .127 | .539 | 4.640 | .000 |
| | Stakeholders level of involvement | -.233 | .105 | -.273 | -2.213 | .031 |

a. Dependent Variable: PUBLIC PROJECT IMPLEMENTATION

*Source: researcher's computation using SPSS-20*

Table 4-12 above displays the estimates of the multiple regression of effective implementation of public project against its independent variables Guraghe zone 17 completed project as a samples that affect the public project implementation in the selected completed project.

As shown from the above table 4-12 the $R^2$ and Adjusted $R^2$ values of the model was of 0.376 and 0.318 respectively the result indicates that about 31.8 % of the variability in the dependent variable is explained by the independent variables used in the model. That is Project Related Factors, Organizational Structure Factors, Project management and Team Related Factors, Project Environment Related Factors and Stakeholders level of involvement factors are jointly explaining 31.8% of the change in the public project implementation.

The remaining 68.2 % of the variability in the dependent variable is left unexplained by the independent variables used in the study. This means that the remaining 68.2 % of the changes were explained by other variables that are not included in the model.

The unstandardized coefficients β column, gives us the coefficients of the independent variables in the regression equation including all the independent variables as indicated below.

$$\boldsymbol{Yi = \beta 0 + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 4X4 + \beta 5X5 + \beta 6X6}$$

$$\boldsymbol{Yi = 1.058 - \ 0.025\ PRF + 0.049\ OSF + 0.188PMTF + 0.591PEF - 0.233\ SLI}$$

Above table 4-12 table shows that, the explanatory variable like Project related factors and Organizational structure factor in this study can significantly explain at 99% confidence level to the variation on the dependent variable. The standardized beta coefficient column shows the contribution that an individual variable makes to the model. The beta weight is the average amount the dependent variable increases when the independent variable increases by one standard deviation (all other independent variables are held constant).

The multiple regression result in the above table 4-12 shows that; coefficient intercept ($\beta_0$) is 1.058. This means, when all explanatory variables took a value of zero, the average value of effective project implementation on selected projects would be taking 1.058 units and statistically significant at 5% level of significance which probability value is .038.

- ✓ The Project related factors of effective project implementation was found to be statistically insignificant (p-value 0.816) at 5% significance level and was

negatively related with the effective public project implementation. Other things being constant, a unit increases in Project related factors leads to decrease in effectiveness of public project implementation by a factor of -0.025 units, (birr) on average.

- ✓ The Organizational structure factor was found to be statistically insignificant (p-value 0.567) at 5% significance level and was positively related with the effective public project implementation. Other things being constant, a unit increases in Organizational structure factor leads to increase in effectiveness of public project implementation by 0.049 units (birr) on average.
- ✓ The Project management and team factors was found to be statistically insignificant (p-value 0.090) at 5% significance level and was positively related with the effective public project implementation. Other things being constant, a unit increases in Project management and team factors leads to increase in effectiveness of public project implementation by a factor of 0.188 units, (birr) on average.
- ✓ The Project environment related factors was found to be statistically significant (p-value 0.000) at 5% significance level and was positively related with the effective public project implementation. Other things being constant, a unit increases in Project environment related factors leads to increase in effectiveness of public project implementation by a factor of 0.591 units, (birr) on average.
- ✓ The Stakeholders level of involvement was found to be statistically significant (p-value 0.031) at 5% significance level and was negatively related with the effective public project implementation. Other things being constant, a unit increases in Stakeholders level of involvement factors leads to decrees in effectiveness of public project implementation by a factor of -0.233 units, (birr) on average.

Finally conclude that multiple regression result indicated that Project environment related factors has positive and statically significant effect on the effectiveness of public project implementation. Stakeholder's level of involvement has negative significant effect on the effectiveness of public project implementation. On the other hand Project related factors have negative insignificant effect and also organizational structure factor and Project management and team factors has positive insignificant effect on the public project implementation.

# CHAPTER FIVE

# 5. CONCLUSIONS AND RECOMMENDATIONS

## 5.1. INTRODUCTION

In this chapter the conclusions and recommendations are discussed. For clarity purpose, the conclusions are based on the research objectives of the study. Based on the findings of the study recommendations are made to government bodies, and other concerned bodies and suggestion for other researchers.

## 5.2. CONCLUSIONS

This research was conducted in Guraghe zone selected 17 completed project from operational for the year 2020-2022 with the major intent of critically determinants of effective public project implementation involved directors, project coordinators, project officers , project team members and contractors that directly involve and participate on the project implementation phase of public projects in the area.

Finally , conclude that multiple regression result indicated that,

- Stakeholder's level of involvement has negative significant effect on the effectiveness of public project implementation
- Project related factors have negative insignificant effect on the effectiveness of public project implementation
- organizational structure factor have negative insignificant effect on the effectiveness of public project implementation
- Project management and team factor has positive insignificant effect on the public project implementation in Guragh zone.
- Project environment related factor has positive and statically significant effect on the effectiveness of public project implementation.

## 5.3. Recommendations

Based on the major findings of the study, the researcher would like to forward the following suggestions to improve the effective implementation of public project.

- Public project implementing organization Guraghe zone construction sector, plan commission, BoFED have a clear Policy to define the problem that initiated with budget, transparency, accountability, progressive report, monitoring and evaluation and project management methods on issues of public project implementation practice in the zone.
- Planning phase of formulating projects is a basic stage for its success. So, the study recommends that there should be clear and specific schedule (plan) in order to improve the projects quality performance
- The study Recommendes that Gurage zone construction sector, plan commission, BoFED have proper project management training (training which is based on need assessment and appropriate time frame for the contractors.
- The study recommendes Guraghe zone construction sector, plan commission, BoFED give high emphasis for the community and other major stakeholders because their influence will have impact on successful project implantation parameters of time, cost and quality of design.
- The study recommendes Guraghe zone construction sector, plan commission, BoFED increase their concern on management of equipment's because the costs of equipment's are expensive to afford.
- To improve cost effectiveness of the projects, the researcher recommends that reviewing the previous projects, assess the current market, and improve staff members and stakeholder's communication.

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Appendix-**A Questionnaire**

# WOLKITE UNIVERSITY

## COLLEGE OF BUSINESS AND ECONOMICS

## DEPARTMENT OF MANAGMENT

## A Questionnaire to be filed by managers, employees and contractors

Dear respondent: - First of all I would like to appreciate your willingness to support my effort by responding to this questionnaire. This questionnaire is designed to get genuine information on determinants of effective public project implementation in case of Gurage zone. Your genuine response to the questions will be pretty important to assure the quality and reliability of the research.

The main aim of this questionnaire is to collect data as input for the study titled as "**determinants of effective public project implementation in case of Gurage zone",** whose sole purpose is to qualify the requirement for obtaining the Master's Degree of Business Management, from Wolkite University. Therefore, thanking in advance for your co- operation, I assure you that all information obtained from you will be used only for the research purpose and remain confidential except for the purpose pointed out here above. You need not to write your name. Thank you very much.

Project name_____

Project type_____

Project year_____

General background of respondents

Age ----------

Sex ----------

Educational background ----------

Job description on the project----------

Year of experience on project related works----------

**Part 1: project related factors**

Please rate the following statements considering the selected project you participated in based on the following rating scales

1= Strongly disagree, 2= disagree, 3= neutral, 4= agree , 5= strongly Agree

| No | Variables | Rating | | | | |
|---|---|---|---|---|---|---|
| | **project related: Mission/Goal** | **5** | **4** | **3** | **2** | **1** |
| 1 | The goals of the project were in line with the general goals of the organization. | | | | | |
| 2 | The basic goals of the project were made clear to the project team | | | | | |
| 3 | The project goals are developed in a way that contribute to the missions of the parent organization. | | | | | |
| 4 | The beneficial consequences of the project to the organization's success are clear. | | | | | |
| | **Project related: Project Schedule / Plan** | | | | | |
| 1 | We know which activities contain slack time of slack resources which can be utilized in other area during emergencies. | | | | | |
| 2 | There was a detailed plan (including time, schedules, milestones, manpower requirements, etc.) for the completion of the project. | | | | | |
| 3 | There was a detailed budget for the project. | | | | | |
| 4 | Key personnel needs (who, when) were specified in the project plan. | | | | | |
| 5 | The logical framework approach was adopted in identifying activities, and measureable objectives in the preparation of project plans | | | | | |
| 6 | Risks were sufficiently identified and mitigation strategies included as part of the project plan | | | | | |
| 7 | The Gantt chart was used in developing activity plans | | | | | |
| | **Project related: Communication** | | | | | |
| 1 | The results (decisions made, information received and needed, etc.) of planning meetings were published and distributed to applicable personnel. | | | | | |
| 2 | Individuals/groups supplying input have received feedback on the acceptance or rejection of their input. | | | | | |
| 3 | All groups affected by the project know how to make problems known to the project team. | | | | | |
| 4 | Plans were clearly communicated to the project team members and to stakeholders | | | | | |
| 5 | The project adopted a formal communication channel to direct work orders and to receive feedbacks | | | | | |

**Part 2: Factors related to organizational structure**

| No | Variables | Options | | | | |
|---|---|---|---|---|---|---|
| | **Organizational structure factor used for the project.** | 5 | 4 | 3 | 2 | 1 |
| 1 | Communication within our organization flows | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | efficiently through various channels, enabling timely and effective exchange of information. | | | | | |
| 2 | The organizational hierarchy in our company is clearly defined, with distinct levels of authority and responsibility | | | | | |
| 3 | Decision-making processes in our organization are transparent, involving input from relevant stakeholders and promoting accountability | | | | | |
| 4 | Collaborative teamwork is encouraged and valued within our organization, fostering a positive and productive working environment | | | | | |

**Part 3: Project management and team related factors**

| **No** | **Variables** | **Rating** | | | | |
|---|---|---|---|---|---|---|
| | **Project management and team related factors** | **5** | **4** | **3** | **2** | **1** |
| 1 | The project management was responsive to the requests for additional expertise, when the need arises. The upper management shared responsibilities with project team for ensuring the project's success. | | | | | |
| 2 | The project management team agreed and accepted the project manager's authority and responsibility. Upper management supported in a crisis. | | | | | |
| 3 | The project management team has granted us the necessary authority and has accepted the decisions concerning the project. | | | | | |
| 4 | The project management team was responsive to the requests for additional activities, when the need arises. | | | | | |
| 5 | The project manager agreed with the project team on his/her level of authority and responsibility for the project. Upper management supported the project manager during times/period of crisis. | | | | | |
| | **Managerial Skills** | | | | | |
| 1 | The project leader possessed adequate technical/conceptual skills. | | | | | |
| 2 | The project leader possessed adequate interpersonal (communication) skills | | | | | |
| 3 | The project leader possessed adequate leadership skills. | | | | | |
| 4 | The project leader has the ability to motivate team members and maintain a cohesive project team. | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 5 | The project leader maintained a high profile (is visible and involved) on the project team | | | | | |
| 6 | The project manager has a team building skill | | | | | |
| 7 | The project manager has skills of conflict resolution | | | | | |
| 8 | The project manager has a negotiation skill | | | | | |
| 9 | The project manager is endowed with decision making skills | | | | | |
| | **Staff/team** | | | | | |
| 1 | There was sufficient (both quality and quantity) human power to complete the project | | | | | |
| 2 | Project team personnel understood their role on the project | | | | | |
| 3 | Adequate technical and /or managerial training (and time for training) was available for members of the project team. | | | | | |
| 4 | Job description for team members have been written and distributed and were understood | | | | | |
| 5 | The personnel on the project team understood how their performance will be evaluated. | | | | | |
| 6 | Project team members are motivated | | | | | |
| 7 | Project team members work as a cohesive group | | | | | |

**Part 4: Project environment related factors**

Considering the time that the selected project were undertaking, please rate the existence of the following environmental related factors based on the ranks provided

| No | Variables | Rating | | | | |
|---|---|---|---|---|---|---|
| | **Project environment related factors** | 5 | 4 | 3 | 2 | 1 |
| | **economic and Financial environment** | | | | | |
| 1 | While the project was being implemented inflation occurred | | | | | |
| 2 | While the project was being implemented there was a change in economic policy and/or regulation that affected the project performance | | | | | |
| 3 | While the project was being implemented the opportunity to get access to capital and technology changed | | | | | |
| 4 | While the project was being implemented currency devaluation occurred | | | | | |
| | **Political environment** | | | | | |
| 1 | There was political instability while the project was being implemented | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 2 | The project was implemented in a governance structure which was too inhibiting | | | | | |
| 3 | The project is situated in a politically sensitive environment | | | | | |
| 4 | There was election while the project was implemented | | | | | |
| | **Legal environment** | | | | | |
| 1 | Change control (change in contract terms) | | | | | |
| 2 | Project contract/drafting of the project contract | | | | | |
| | **Social and cultural** | | | | | |
| 1 | The project is implemented in a cultural setting that don't accept new thing | | | | | |
| 2 | The literacy level of the local community was enabling the implementation of the project | | | | | |
| 3 | There was adequate access to social amenities (e.g. med-care) | | | | | |
| 4 | There was hidden obstruction that affected the project implementation | | | | | |

**Part 5: Stakeholders level of involvement**

| No | Variables | Ratings | | | | |
|---|---|---|---|---|---|---|
| | **Stakeholders level of involvement** | 5 | 4 | 3 | 2 | 1 |
| | **Client Consultation** | | | | | |
| 1 | The clients were given the opportunity to provide input early in the project development stage. | | | | | |
| 2 | The value of the project has been discussed with the beneficiaries/clients. | | | | | |
| 3 | The clients (intended users/beneficiaries) were kept informed of the project's progress. | | | | | |
| 4 | The clients were told whether or not their input was assimilated into the project plan | | | | | |
| 5 | The purpose of the project has been discussed with the clients and what the project is not designed to do was made clear. | | | | | |
| | **Client Acceptance** | | | | | |
| 1 | There was adequate documentation of the project to allow easy use by the clients (instructions, etc.). | | | | | |
| 2 | Potential clients have been contacted about the usefulness of the project | | | | | |
| 3 | Clients knew who to contact when problems or questions arise. | | | | | |
| 4 | Adequate advanced preparation has been done to determine how best to "sell" the project to clients | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | **PART THREE: EFFECTS OF PUBLIC PROJECT IMPLEMENTATION PRACTICE** | | | | | |
| 1 | Public Projects meets quality implementation practice | | | | | |
| 2 | Project are completed at the time schedule prepared | | | | | |
| 3 | 3. Projects are implemented at the cost already allocated | | | | | |
| 4 | 4. Projects are implemented according to cost break down | | | | | |

**Interview**

1. Do you think there were enough financial and human resources available to execute the project successfully?
2. Do you think the project aligns with the community's needs?
3. What strengths and weaknesses were observed throughout the project, and how were challenges addressed from inception to completion?
4. Could you include insights on the support received from stakeholders, political leaders and society for the project?
5. How do you understand the total loss (from the government, the public and the entity that manages the project) on projects that are not implemented according to the contract?
6. What lessons can stakeholders overseeing incomplete projects glean from the project you led?
7. Could you share any overall opinions or insights you have regarding the project that haven't been covered in the previous questions?

Appendix-B Correlations

| Correlations | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | PUBLIC PROJECT IMPLEMENTATION | Project related factors | Organizational structure factor | Project management and team factors | Project environment related factors | Stakeholders level of involvement |
| PUBLIC PROJECT IMPLEMENTATION | Pearson Correlation | 1.000 | -.016 | .098 | .294* | .554** | -.022 |
| | Sig. (2-tailed) | | .904 | .458 | .023 | .000 | .867 |
| | N | 60 | 60 | 60 | 60 | 60 | 60 |
| Project related factors | Pearson Correlation | -.016 | 1.000 | -.042 | -.014 | -.035 | -.124 |
| | Sig. (2-tailed) | .904 | | .751 | .917 | .791 | .345 |
| | N | 60 | 60 | 60 | 60 | 60 | 60 |
| Organizational structure factor | Pearson Correlation | .098 | -.042 | 1.000 | .084 | .087 | .113 |
| | Sig. (2-tailed) | .458 | .751 | | .525 | .511 | .390 |
| | N | 60 | 60 | 60 | 60 | 60 | 60 |
| Project management and team factors | Pearson Correlation | .294* | -.014 | .084 | 1.000 | .363** | .462** |
| | Sig. (2-tailed) | .023 | .917 | .525 | | .004 | .000 |
| | N | 60 | 60 | 60 | 60 | 60 | 60 |
| Project environment related factors | Pearson Correlation | .554** | -.035 | .087 | .363** | 1.000 | .259* |
| | Sig. (2-tailed) | .000 | .791 | .511 | .004 | | .046 |
| | N | 60 | 60 | 60 | 60 | 60 | 60 |
| Stakeholders level of involvement | Pearson Correlation | -.022 | -.124 | .113 | .462** | .259* | 1.000 |
| | Sig. (2-tailed) | .867 | .345 | .390 | .000 | .046 | |
| | N | 60 | 60 | 60 | 60 | 60 | 60 |
| *. Correlation is significant at the 0.05 level (2-tailed). | | | | | | | |
| **. Correlation is significant at the 0.01 level (2-tailed). | | | | | | | |

Appendix-C **Model Summary**

**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|---|---|---|---|---|---|
| 1 | .613[a] | .376 | .318 | .440 | 1.921 |

a. Predictors: (Constant), Stakeholders level of involvement, Organizational structure factor, Project related factors, Project environment related factors , Project management and team factors

b. Dependent Variable: PUBLIC PROJECT IMPLEMENTATION

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 1.058 | .498 | | 2.125 | .038 |
| | Project related factors | -.025 | .109 | -.025 | -.234 | .816 |
| | Organizational structure factor | .049 | .084 | .062 | .575 | .567 |
| | Project management and team factors | .188 | .109 | .219 | 1.726 | .090 |
| | Project environment related factors | .591 | .127 | .539 | 4.640 | .000 |
| | Stakeholders level of involvement | -.233 | .105 | -.273 | -2.213 | .031 |

a. Dependent Variable: PUBLIC PROJECT IMPLEMENTATION