

Jimma University



College of Business and Economics

Department of Management

***Assessment on Causes of Public Project Failure: The
case of Jimma Zone, Ethiopia***

**A Thesis Submitted in Partial Fulfillment of the Requirements
for the Degree of Masters In Business Administration**

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Jimma, Ethiopia

December 2020

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DECLARATION

I the undersigned declare that this research study entitled “*Assessment on Causes of Public Project Failure: The case of Jimma Zone, Ethiopia*” is my original idea and has not presented for a degree in any university.

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Approval

This research study has been evaluated and given approval for the student to follow it up with the main thesis.

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Acknowledgement

First of all glory be to the almighty God for his tremendous and uncountable favor. I would like to express my heartfelt gratitude to my advisor Chalchissa A. (PhD, Ass.Prof) for his support and constructive and useful comments, remarks, and engagement through the entire process of this study. Next, the Management of my company deserves a lot of thanks for facilitating and allowing me to have a chance to advance my academic status besides my office duties. Finally my gratitude goes to my family for their daily support and being with me in each of my steps and strengthening me while I was consuming the precious time that I should have given them.

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Abstract

This study tried to assess causes for failure of public projects in Ethiopia particularly in Jimma Zone. The study used descriptive research design and qualitative research approach and simple random sampling in determining the representative sample size of the target population. The data was collected from the respondents through questionnaire and semi-structured interview and analyzed using descriptive statistics and frequencies and also Pearson correlations utilized to examine the association among the variables. The study identified five categories of factors as administrative, political, natural, technical and economical factors which might have a significant contribution to the failure of public projects in Jimma Zone. Five major factors were assessed such as corruption, political interference, weather change, design change and change in economic environment and these independent variables were examined and identified as major findings of the study. The results were discussed and interpreted and finally the study recommended to the concerned government organs as, making the bid competition free from corruption and transparent and strengthening accountability, making selection criteria based on competency and also adding previous performance to the criteria to win another project, establishing project committee by their project related profession rather than political position considering harsh seasons while setting project time schedule, closely evaluating the design of the project by different professionals and developing long lasting design before implementation and to reduce the economic impact, establishing public shops which can supply raw materials with minimum price to public projects.

Key words: Public projects, project failure, factors

CHAPTER ONE

Introduction

1.1 Background of the Study

A project is a sequence of unique, complex, and connected activities that have one goal or purpose and that must be completed by a specific time, within budget, and according to specification (Robert K. Wysocki, Ph.D.2009). A project comprises a number of activities that must be completed in some specified order, or sequence. The output of one activity or set of activities becomes the input to another activity or set of activities.

Projects can be considered as “public” if they are owned by a public entity and financed with public funds (NZIER, 2000). They are projects undertaken by public-sector organizations operating to serve the broader public.

Project management is the process of guiding a project from its beginning through its performance to its closure (Harvey Maylor. 2010). In recent years, project management has become an important part of any organization (Maylor et al., 2006). This is as a result of the changing nature of managing organizations due to technological advancement, and a complex, competitive global marketplace (Maylor et al., 2006; Panayides et al., 2015; Ramazani & Jergeas, 2015; Klein et al., 2015; Nguyen et al., 2015).

According to Project Management institute (PMI, ,2013) guide to project management body of knowledge (PMBOK Guide), project as a temporary endeavor undertaken to create a unique product, service, or result. According to it, the temporary nature of projects indicates that a project has a definite beginning and end while unique means that the product, service or result is different in some distinguishing way from all other products, services or results due to the different location, different design, different circumstances and situations, different stakeholders, and so on. Hence, a project should have definite starting and ending points (time), a budget (cost), a clearly defined scope or magnitude of work to be done, and specific performance requirements that must be met. Projects are the concrete manifestations of the development plans

and programs in a specific place and time. One can think of projects as subunits and bricks of programs, which constitute a component of or the entire national plan. They can be implemented either by public organization or private establishment. Projects are financed from two major sources – Equity and Debt. In project financing, the debt-equity-ratio is varying with the magnitude of flexibility, risk, and income and tax generation capacity according to him. Project financing is the raising of funds on a limited-recourse or non-recourse basis to finance economically separable capital investment project in which the providers of fund look primarily to the cash flow from the project as the source of funds to service their loan (Zinat, 2010).

In this study the researcher has tried to assess the factors for public project failure in Ethiopia particularly in Jimma Zone as there is a project failure in terms of delay in time schedule, cost budget, scope, societies accruing benefits from a given projects and most projects in the area under study face major problems as of projects in most developing countries. Thus this study assessed variables such as administrative factors, political factors, natural factors, technical factors and economic factors.

1.2. Statements of the Problem

In their quest for development, developing countries engage in projects such as building of roads, dams, plants, pipes, industries, theatres, e-government services, telecommunication, ICT, and others. These projects, which are normally financed by the International Monetary Fund(IMF), World Bank or tax-payers, face several setbacks such as abandonment (Kumar & Best, 2006), cost deviation (Kaliba et al., 2009; Aziz, 2013), schedule deviation (Sweis et al., 2008; Fallahnejad, 2013; Marzouk & El-Rasas, 2013), scope deviation (Liu et al., 2011), and stakeholders' dissatisfaction (Ahonen & Savolainen, 2010).

Most frequently projects are considered failures when they fail to meet their targeted cost, time, or scope. However, (Ika, 2012) demonstrated that projects may be completed within their targeted time, cost and scope criteria but still be classified as failures. Therefore, it becomes necessary to consider failure beyond these criteria and include targets such as the aspiration of stakeholders, the benefits accruing to society or project organization among criteria for determining project failure. Several researchers including (Nelson, 2005) support this notion and have equally criticized defining project failure by just using cost, time, scope and other traditional indicators, arguing that value added

assessment criteria like project usefulness, value to organizations and learning potential must be considered when evaluating project failure. According to Nwachukwu, a failure of project is inability of many projects to generally satisfy the desires and aspirations of the end user (Nwachukwu, 2009). A project, irrespective of completion time or cost fitting is indeed a failed one if it does not justify its cost and the value derivable from its use. This refers to a case of a white elephant project. According to Carlos (2002), a project is considered as failed when it has not delivered what was required, in line with expectations. Therefore, in order to succeed, a project must deliver utilizing the minimum cost possible, the expected quality, and on the time scheduled, and it must deliver the benefits presented in the business case.

By reviewing those studies of different scholars the researcher has noticed that there is a gap concerning the factors for the failure and this study has taken into account what are the root causes for the failures indicator parameters stated in the above literatures corruption and unfairness in bid competition, political interference, change in design, change in weather and change in economic environment which were supposed to be the major problem in leading to project failure.

Now a day's Ethiopian government expending a lot of money from various sources of finance on several projects to boost the development of the country but most of the projects faces failure. The construction industry is the highest recipient of government budget in terms of government development programs. Consequently, public construction projects consume an average annual rate of nearly 60% of the government's capital budget as reported by Ministry of Works and Urban Development (MoWUD, 2006). Many public building construction projects in Ethiopia suffer delay, only 8.25% projects were finished on the original targeted completion date and the remaining 91.75% delayed 352% of its contractual time (Werkuand Jha, 2016). As a citizen of a country with such difficulty, it is very interesting to conduct study on this problematic area and it has a potential of reducing the problem by indicating or recommending the possible ways to the concerned stack holders to react against that was why the researcher initiated to do so. In this research paper the researcher tried to assess the factors that are causing failure to public projects in Jimma Zone.

1.3. Research questions

In line with the above problem statement, the research questions that were answered are:

- What is the administrative factor that causes failure of public projects in Jimma Zone?

- What is the political factor that causes failure of public projects in Jimma Zone?
- What is the natural factor that causes failure of public projects in Jimma Zone?
- What is the technical factor that causes failure of public projects in Jimma Zone?
- What is the economic factor that causes failure of public projects in Jimma Zone?

1.4. Objective of the study

1.4.1. General objective

The general objective of the study was to identify the major causes of project failure in public projects in Ethiopia particularly in Jimma Zone.

1.4.2. Specific objective

The study had the following specific objectives

- To identify the administrative factor that causes failure of public projects in Jimma Zone.
- To assess the political factors that causes failure of public projects in Jimma Zone.
- To assess the natural factors that causes failure of public projects in Jimma Zone.
- To assess technical factors those cause failure of public projects in Jimma Zone.
- To assess economic factors those cause failure of public projects in Jimma Zone.

1.5. Significance of the Study

Research studies regarding government financed projects/public projects in Ethiopia in general and Jimma Zone in particular have not yet studied so far. This study, therefore it will assist in identifying the major causes of failure of projects financed by government and contributes some research avenue for those researchers in project finance in addition to being a step for the researchers educational career the study have forwarded appropriate recommendations to the concerned managements of the government so as to create successful operating project which in turn benefits the country and the society and also it can be a stepping stone for further research in the area of causes of project failure.

1.6. Scope of the Study

The focus of this research study was to assess the major causes of project failure financed by government and the study considered all internal and external factors which causes a public funded

project to fail from the planned standard of quality, allocated time, allocated cost budget and society's demand perspective in Jimma Zone. This study has accommodated public projects which are planned and procured at Zone level and Wereda level such as drinking water supply projects, schools, local roads, office buildings and conference hall, bridges works etc. and the study didn't included mega projects which are planned, procured and administered by national government.

1.7 Limitation of the Study

The researcher faced some critical challenges and bottlenecks during conducting this study. One of the challenges was the occurrence of the awful pandemic disease, COVID-19 which restricted a lot of activities throughout the world. Within this situation it was difficult to move and collect all the data the study demands. However, the questionnaire distributed was collected by taking possible cares. The other is budget constraint in association with the pandemic, all materials and transportation costs were escalated. Within these constraints to distribute questionnaires and collect them, the researcher used other options such social Medias such as most responses were collected through email, telegram, Whatsapp and the interview with government officials was made through phone call.

1.8 Organization of the Research Paper

This paper comprised five chapters in which the first part illustrates the study backgrounds, statements of the problem, basic research questions, objectives, significance, scope and limitation of the study and the second chapter concerned with review of related literature and the third chapter describes research design and methodology of the study and the analysis used. Results and discussion would be discussed in the fourth chapter. Finally the last chapter deals with the research conclusion and recommendations.

CHAPTER TWO

Literature Review

2.1. Theoretical literature

Under this chapter of the research study, the available literatures on the area of the research Topic under caption are reviewed. These literatures are obtained from books, journals, government Publications and other dependable sources. Possible causes of project failure are discussed in detail using the theoretical and empirical perspectives. Before discussing causes of project failure, Concepts and definitions of some terms that are related to the research topic are explained briefly.

2.2. Concept and definition of project

Various definitions of a project are given by different scholars of the field and hence some of them are discussed below. (kerzner, 2009) defined a project can be considered to be any series of activities and tasks that have specific objective to be completed within certain specifications, defined start and endpoints.

According to project management institute (PMI, 2013) guide to project management body of Knowledge (PMBOK guide), project is a temporary endeavor undertaken to create a unique product, service, or result. According to it, the temporary nature of projects indicates that a project has a definite beginning and end while unique means that the product, service or result is different in some distinguishing way from all other products, services or results due to the different location, different design, different circumstances and situations, different stakeholders, and so on. Hence, a project should have definite starting and ending points (time), a budget (cost), a clearly defined scope or magnitude of work to be done, and specific performance requirements that must be met. Kerzner (2009) had given a similar definition for a project. According to him, a project can be considered to be any series of activities and tasks that have specific objective to be completed within certain specifications, defined start and end dates, funding limits (if applicable), consumed human and nonhuman resources (i.e., money, people, equipment) and are multifunctional (i.e., cut

across several functional typically a project is a one-time effort to accomplish an explicit objective by a specific time. According to (Lewis, 2002), projects are different from standard business operational activities as it has defined time boundary- which means projects clear start and ending date within which the deliverable must be produced to meet the customer's requirement, in addition it is unique in nature –projects don't involve repetitive process and every project is different from the last. Moreover, it has limited resource -at the start of a project an agreed amount of labor, equipment and materials are allocated to the project. Therefore it is expected to operate and complete within this constraints by using the allocated resources wisely.

2.3. Project finance

They are most commonly non- recourse loans, which are secured by the project assets and paid entirely from project cash flow, rather than from the general assets or creditworthiness of the project sponsors, a decision in part supported by financial modeling.

Project finance is a method of raising long-term debt for major projects and lending of them relying on the cash flows generated by the project alone for repayment (Yescombe, 2002). (World Bank, 2001) defined project finance as the “use of non-recourse or limited-recourse financing.” Further defining these two terms, “the financing of a project is said to be non-recourse when lenders are repaid only from the cash flow generated by the project, or in the event of complete failure, from the value of the projects assets. Lenders may also have limited recourse to the assets of a parent company sponsoring a project. “Raising capital through project finance has many advantages. According to Cleland and Ireland (2008), project financing is most appropriate when a large amount of capital is required and high risks are involved and hence by using the method of project finance the risk is distributed to several parties who are in the best position to control the risk factors that in turn reduces the moral hazard problem and minimizes the cost of bearing risk.

2.4. Concepts of project failure and success

The inability of many projects to generally satisfy the desires and aspirations of the end user is also an instance of failure (Nwachukwu, 2009). A project, irrespective of completion time or cost fitting is indeed a failed one if it does not justify its cost and the value derivable from its use. This refers to a case of a white elephant project. In a study (Baker, Fisher & Murphy, 2010) to gauge the value of customer satisfaction as a measure of project success, analysis of responses from project managers

caused the researchers to conclude that that project success means much more than merely meeting cost schedules and performance specifications. In fact, the level of satisfaction of the client is a very strong index of project failure or success.(Ghattas, 2001) defined project as nick graham did. They defined project failure as non-completion of or wrongly completed project. According to project management body of Knowledge (2013), project success should be referred to the last baselines approved by the authorized stakeholders and the project manager is responsible and accountable for setting realistic and achievable boundaries for the project and to accomplish the project within the approved baselines.(Mishra, 2005) had identified different project success factors. According to them, clearly defined goals, support of top management, competent project manager & team members, sufficient project resources, client involvement in defining needs and requirements, adequate communication channels, involvement of all parties in project review and corrections, consulting with users, implementing appropriate technology and control measures to keep project on track and daily trouble shooting and resolution of problems are the factors that have influences over the direction of project success.

2.4.1. Concepts of project failure

There is no commonly accepted definition for project failure. Different authors define from different perspective and context. According to Carlos (2002), a project is considered as failed when it has not delivered what was required, in line with expectations. Therefore, in order to succeed, a project must deliver utilizing the minimum cost possible, the expected quality, and on the time scheduled, and it must deliver the benefits presented in the business case.

Even if a project has delivered everything that was in the detailed project designs, it may still be considered a failure if it did not include vital elements that the key stakeholders needed (Carlos, 2002). According to him, project success and failure is not just about the facts, nor is it simply about what was delivered. It is also, crucially, about how the project is perceived. Mcconnell(2010) expanded the definition of project failure more than expectation.

According to him, project failure is a situation when a given project, which consumes human, material and financial resources, fails to deliver an acceptable return on investment, so it is in most of the cases, the types of financing covered by project financing is large complex and expensive installation that might include power plants, chemical processing plants, mines, transportation infrastructures, telecommunication infrastructures, etc(committee, 2001). The project is considered

“failed” when it does not produce results as proposed, exceeds its budget and time, and does not meet specifications.

2.4.2. Concept of project success

In the past twenty years, project success was defined as the completion of an activity within the constraints of time, cost, and performance (kerzner, 2009). Today, the definition of project success 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 (ibid).

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 (to ensure realization of benefits for the undertaken project, a test period such as soft launch in services can be part of the total project time before handing it over to the permanent operations), cost, quality, resources, and risk as approved between the project managers and senior management (project management body of knowledge, 2013). According to project management body of knowledge (PMI, 2013), project success should be referred to the last baselines approved by the authorized stakeholders and the project manager is responsible and accountable for setting realistic and achievable boundaries for the project and to accomplish the project within the approved baselines.

For a project to be completed successfully great effort should be exerted on project success factors.

Mishra and Soota (2005) had identified different project success factors. According to them, clearly defined goals, support of top management, competent project manager & team members,

Sufficient project resources, client involvement in defining needs and requirements, adequate communication channels, involvement of all parties in project review and corrections, consulting with users, implementing appropriate technology and control measures to keep project on track and daily trouble shooting and resolution of problems are the factors that have influences over the direction of project success.

2.5. Cause of public project failure

After having discussed about the concept of success and failure of the projects, the causes for the failure were discussed hereunder.

2.5.1 Administrative factors

2.5.1.1 Corruption

Isaac Sakyi Damoah, Cynthia A Akwei, Isaac, Oduro Amoako ,David Botchie 49(3),17-33 ,2018 a study conducted in Ghana explored that how corruption causes failure in government projects in developing countries with evidence from Ghanaian context. The study solicits the perceptions of project management practitioners (14), contractors (6), government officials (clients;5), and the general public(5) on the subject. The finding of the study shows that corruption influences failure at two different levels: project management and product phase. At the project management level, corruption has direct influence, while at the product phase level, the influence is indirect.

Public procurement is prone to corruption, which in the global construction market alone accounts for an estimated USD 340 billion per year. There is a growing need to fight corruption and improve the effectiveness, efficiency, fairness and transparency of public procurement (S.Tabish,2011). Corruption is one of major impediments to further improve the quality of life in developed countries (Loosemore and Lim, 2015, Tabish and jha, 2011, Treisman, 2007).Scholars e.g. (Akbar and Vjic,2014, Auti and Skitmore, 2008), agree that corruption might be eradicated by enhancing education and “increasing the benefits of being honest, increasing the probability of detection and punishment, and increasing penalties levied on those caught. According to (Rose- Ackerman, 1996), government policies can reduce corruption with cultural changes leading to a better government capable of producing policies tackling this issue. Farooq et al. (2013) identified corruption as the factor that impedes economic growth in developing countries. A cross-country study of corruption by Saha & Gounder (2013) found that countries with low levels of income tend to be more corrupt than their counterparts who have high levels of income. Similarly, Treisman (2000) assessed the causes of corruption using different countries corruption perception index from Transparency International and identified the same trend.

2.5.2 Political interference

In the public sector, consensus has to be reached on the purpose, outcome and scope of project. Depending on the public laws, regulations and processes involved, stakeholders such as elected politicians, individual citizens or interest group have various ways of influencing the project- for example by electing their desired representatives, participating in expert groups, committees and commissions or raising objections (NIER, 2000). In addition, public projects often monitored closely by media, which may influence behavior and the opinions of stakeholders. A study by Damoah et al. (2015) ranked political interference third out of ten biggest causes of failure of government projects in Ghana. The study also ranked change government as fourth major causes of project failures in Ghana while a focus group study by Zoufa and Ocheing (2014) blamed project failures in Nigeria on change of government.

2.5.3 Natural Factors

2.5.3.1 Weather change

The construction industry serves as a fundamental pillar for the economic and social development of a country (Ballestreros-perez et al., 2010) and usually reflected by its sensible contribution to the gross domestic product (GDP).

Susceptibility of construction processes to adverse weather conditions may result in appreciable time (Choo et al., 1999) and financial losses (Alaghbari et al., 2007; Pewdum et al., 2009). Thus, unexpected adverse weather conditions can slow down or stop work (Dytczak et al., 2013; Mahamid, 2013).

The statements “climate conditions are very difficult to anticipate and plan for in advance” (Sun and Meng, 2009), “weather predictions are plagued by uncertainty” (Jones, 2001) or even “Delays due to weather conditions are significant risk factors in the contract delivery process, but construction managers are often unable to reliably predict delays as a result of them” (Thorpe and Karan, 2008) are familiar to many contractors. Therefore, it should not seem strange that climate and weather conditions are often reported as one of the main causes of project delays and unscheduled changes (El-Rayes and Moselhi, 2001; Orangi et al., 2011) and serve as a pretext (sometimes justified and sometimes not) for contractor claims (Yogeswaran et al., 1998). Thus, a recent paper by Nguyen et al. (2010) classified seven factors that usually cause disputes between

the contractor and the contracting authority in projects that suffer delays due to adverse weather conditions. These seven factors include the definition of normal weather, weather thresholds, the type of work, the number of lingering days, criteria for lost days, the lost days equivalent due to lost productivity and the number of work days lost vs the number of calendar days lost. However, the same authors claimed that “future research may provide an appropriate mechanism for analyzing equivalent lost days to account for lost productivity” (Nguyen et al., 2010), which justifies the aim of this paper. In contrast, the climatic agents that are most commonly cited as sources of significant project deviations from the baseline schedule include extreme cold, precipitation, heat and wind (Budell, 2006; Choi and Hartley, 1996; David et al., 2010; Rogalska et al., 2006; Shahin et al., 2011, 2014). Paradoxically, these climatic agents are continuously connected to other resource-intensive activities, such as agriculture (Block et al., 2008; Fowler and Kilsby, 2007; Jones and Thornton, 2013) and shipbuilding (Jang et al., 2008), or are analyzed when assessing Zone vulnerability (Ekstrom et al., 2007; Persson et al., 2007), the resilience of construction to natural disasters (Bosher, 2014), or future climate change (Guan, 2009; Hallegatte, 2009; Nik et al., 2012). However, the effects of climatic agents on project delays are generally left out of mainstream climate and construction research.

2.5.4 Technical factor

2.5.4.1 Design change

A design change is a form of change that will deviate the way the work was planned, budgeted or scheduled. Almost all building projects undergo various degrees of design changes through the project lifecycle. Changes in construction projects are inevitable in most construction projects to correct or modify original design or scope of work (Alnuaimi et al., 2010). Design changes in building projects are common (Mohamad et al., 2012) where in many circumstances, these changes lead to excessive claims and disputes (Howick et al., 2009). Therefore, complex and dynamic nature of construction project poses uncertainties and risks (Zhao et al., 2010). Changes usually occur at any stage of a project due various causes from different sources and have considerable impacts (Motawa, Anumba, Lee, & Pena-Mora, 2007). Naoum (1994) emphasized that lack of timely and effective communication, lack of integration, uncertainty, a changing environment and increasing project complexity are the drivers of project change. Additionally, these changes in project can cause substantial adjustment to the contract duration, time, total direct and indirect cost

or both (Ibbs, Lee, & Li, 1998). The sooner the changes are identified and resolved, the lesser impact it will have on the project. According to Hwang and Low (2012), conflict over project changes can be minimized when the problem is found at the earlier phase of the project. Therefore, one of project management best practices is to implement design change management to construction projects. Design change often results from these terms: quality deviation, nonconformance, quality failure, defects or mistakes (Burati et al., 1992). Design changes need to be constantly monitored to avoid escalation (Olawale& Sun, 2015).

2.5.5 Economical Factor

2.5.5.1 Change in economic environment

Continuous rise of product price, raw materials price and wages, sudden change in economic policies contribute to the increase in project cost

2.5.6 Project specific factors includes

Poor implementation/time overrun, management problem, poor governance, cost overrun, size of the project, technical failure, market and marketing problem, quality of manpower, missing of objective missing stockholder's requirement, losses because of uninsured items damage, financial insolvency of the promoter absence of change control system.

Scholars dwelling on project in general identified various causes for project failure. In 2005, the office of government commerce (OGC), part of the efficiency and reform group within the cabinet office in England, identified the following eight common management causes which lead to project failure.

- clear linkage problems between the project and the organization's strategic priorities;
- absence of clear demarcation among senior management, ownership and leadership;
- unclear and ineffective engagement among stakeholders;
- skills and knowledge gap about project and risk management;
- too little attention to breaking development and implementation into manageable steps;
- appraisal of project proposals using current price rather than long-term money value;
- low understanding and weak relation with the supply industry; and
- lack of effective project team integration

Mishra and Soota (2005) have identified many factors that have an influence over the direction of project failure. Inadequate skills, unsupportive top management, a project manager who cannot cope up with the demands of project, ignoring the systematic nature of projects with hardware, software, and other resources handled precisely in an independent manner, inadequate communication in the project, failure to involve the user, inadequate project planning, insufficient project definition, improper estimation of time and resources, incorrect scheduling and handling of resources, enormous changes during the last implementation phase, inadequate control and poorly planned project termination are the possible causes of project failure.

Therefore causes of public project failure, according to the above review, can be summarized in to four categories. These factors are corruption, political interference, weather change, design change and change in economic environment.

- Corruption: while outsourcing public projects through bid competition, most project committees deal with contractors who compete to win the bid in wrong and unfair way. This may lead to the project failure because of using the project budget unlawfully.
- Political interference: elected politicians, individual citizens or interest group have various ways of influencing the project- for example by electing their desired representatives, participating in expert groups, committees and commissions or raising objections.
- Weather change: change in climatic conditions lead to late completion or slow down the operation or stops work and this leads to addition cost or financial loss.
- Change in economic environment: change in economic policies, the mismatch and change in exchange rate, increases in energy prices and economic growth and inflation rate.
- Project specific factors includes: Poor implementation/time overrun, management problem, poor governance, cost overrun, size of the project, technical failure, market and marketing problem, quality of manpower, missing of objective missing stockholder's requirement, losses because of uninsured items damage, financial insolvency of the promoter absence of change control system.

2.6. Empirical results and facts

Indices of ICT projects in the Nigerian public sector, (Akinyoku, 2009) disclosed that failures in it project were still common in Nigeria. Their study attributed the failures to poor planning, lack of top management support, inadequate skill and expertise of it project managers.(Ubani, 2010) study

on variation factors of project plans and their contributions to project failure in Nigeria identified design errors, management problems and resource delivery constraints as the significant variation factors that significantly contribute to project failure in Nigeria. On the perceived lack of professionalism, inexperienced project managers and team members; granted that certain participants disclosed that project teams in Nigeria may comprise of personnel with high Educational qualifications and project management skills while others may not (Odedairo, 2011), Igbokwe-Ibeto (2012) examined issues and challenges affecting local government projects and concluded that corruption, inappropriate timing of budget releases, untimely payment of performance certificates, community and labor problems, contractor's default and inaccurate assessment of the project environment have been responsible for failures in most local government sponsored projects in Nigeria. Finally, Ubaniet al. (2010) study on variation factors of project plans and their contributions to project failure in Nigeria identified design errors, management problems and resource delivery constraints as the significant variation factors that significantly contribute to project failure in Nigeria.

On the perceived lack of professionalism, inexperienced project managers and team members; granted that certain participants disclosed that project teams in Nigeria may comprise of personnel with high educational qualifications and project management skills while others may not. Odedairo, Oke and Oyalowo (2011) suggested that project management as a professional career path still remains unrecognized and largely unpatronized in Nigeria. This can also lead to a debate that there may also be gaps between what providers of project management learning are offering and what is needed to deal with the main issues affecting the generic project environment in Nigeria. Nonetheless, the need for sagacity in the deployment of project management skills can never be overemphasized during any project.

For this and other reasons, (David, 2006) maintained that it is critical for all project team members to have an understanding of the fundamental project requirements and requisite project management skills. These requirements include project planning, risk management, organizing, motivating, directing and controlling as well as maintaining a positive attitude.

Inadequate budgetary allocation was another debatable factor identified as being contributory to project failure in Nigeria.

The Bull survey (1998), the French computer manufacturer and systems integrator, Bull, requested an independent research company, Spikescavell, to conduct a survey in the UK to identify the major causes of project failure in the finance sector. The survey carried out on its projects identified missed deadlines (75%), exceeded budget (55%) and inability to meet project requirements (37%) as causes of project failure. The key findings of the survey reveal that the major causes of project failure during the lifecycle of the project are a breakdown in communications (57%), a lack of planning (39%) and poor quality control (35%).

The chaos report (1995) the scope and approach of this landmark survey had been conducted among 365 IT managers from companies of various sizes and in various economic sectors. The project evaluation criteria had considered cost overruns, time overruns and content deficiencies.

The KPMG Canada survey (1997) this study has been conducted by KPMG Canada. The key findings of the study identified the followings as the main causes of project failure:

1. Poor project planning: specifically, inadequate risk management and a weak project plan. Risk management becomes more important as the organization gets bigger, so larger organizations need to pay more attention to this area.
2. Weak business case: the need for the system should be justified in ways that relate directly to the organization's business needs.
3. Lack of top management involvement and support: this often dooms the project to failure before it starts.

Securing buy-in from the top, often by a strong business case backed up with a realistic project plan, is an essential step.

The Bull survey (1998) in 1998, the French computer manufacturer and systems integrator, Bull, requested an independent research company, Spikes Cavell to conduct a survey in the UK to identify the major causes of project failure in the finance sector.

A total of 203 telephone interviews were conducted with IT and project managers from the finance, utilities, manufacturing, business services, telecoms and IT services sectors in UK. All the managers

interviewed had previously taken the lead in integrating large systems within organizations in the times top 100.

The main IT project failure criteria identified by the IT and project managers were missed deadlines (75%), exceeded budget (55%), poor communications (40%), inability to meet project requirements (37%).

On the other hand, the main success criteria identified were meeting milestones (51%), maintaining the required quality levels (32%) and meeting the budget (31%). The key findings of the survey reveals that the major causes of project failure during the lifecycle of the project are a breakdown in communications (57%), a lack of planning (39%) and poor quality control (35%).

Mubila et al. (2000) had worked more or less the same study on African development bank. They used project size, implementation delay, investment cost overrun, economic rate of return of the project and human development index as measure project specific success or failure determinant in their study. In this model, they have used project specific explanatory variables such as total project cost (to proxy project size), cost overrun in percent, time overrun in percent and dummies for economic sector.

Moreover, they considered macroeconomic performance of the country, such as increases in energy prices, GDP, inflation rate, and domestic and regional politics as important influencing determinant in the study. Variables to capture the domestic economic environment.

The average growth rate of the economy, the size of the population as well as dummies for regional distribution of customers included for the implementation period 1974 to 1994 to find if these variables have any relation to project success.

Isaac Sakyi Damoah, 2018 a study conducted in Ghana explored that how corruption causes failure in government projects in developing countries with evidence from Ghanaian context. The study solicits the perceptions of project management practitioners (14), contractors (6), government officials (clients;5), and the general public(5) on the subject. The finding of the study shows that corruption influences failure at two different levels: project management and product phase. At the project management level, corruption has direct influence, while at the product phase level, the influence is indirect. In Ethiopia, construction industry is the highest recipient of government

budget in terms of government development programs. Consequently, public construction projects consume an average annual rate of nearly 60% of the government's capital budget as reported by Ministry of Works and Urban Development (MoWUD, 2006). Many public building construction projects in Ethiopia suffer delay, only 8.25% projects were finished on the original targeted completion date and the remaining 91.75% delayed 352% of its contractual time (Werkuand Jha, 2016).

2.7 Conceptual Framework

The main objective of this study is to identify cause of project failure in government projects in Ethiopia the case of Jimma Zone. Based on the objective of the study, the following conceptual model is framed. Even though literature is not extensively found upon causes of failures of government projects, as previously discussed in the related literature review parts and a few studies mentioned under, project failure is caused by political interference, corruption, weather change, design change and change in economic environment.

So based on theoretical and empirical literature, conceptual framework is developed as follows

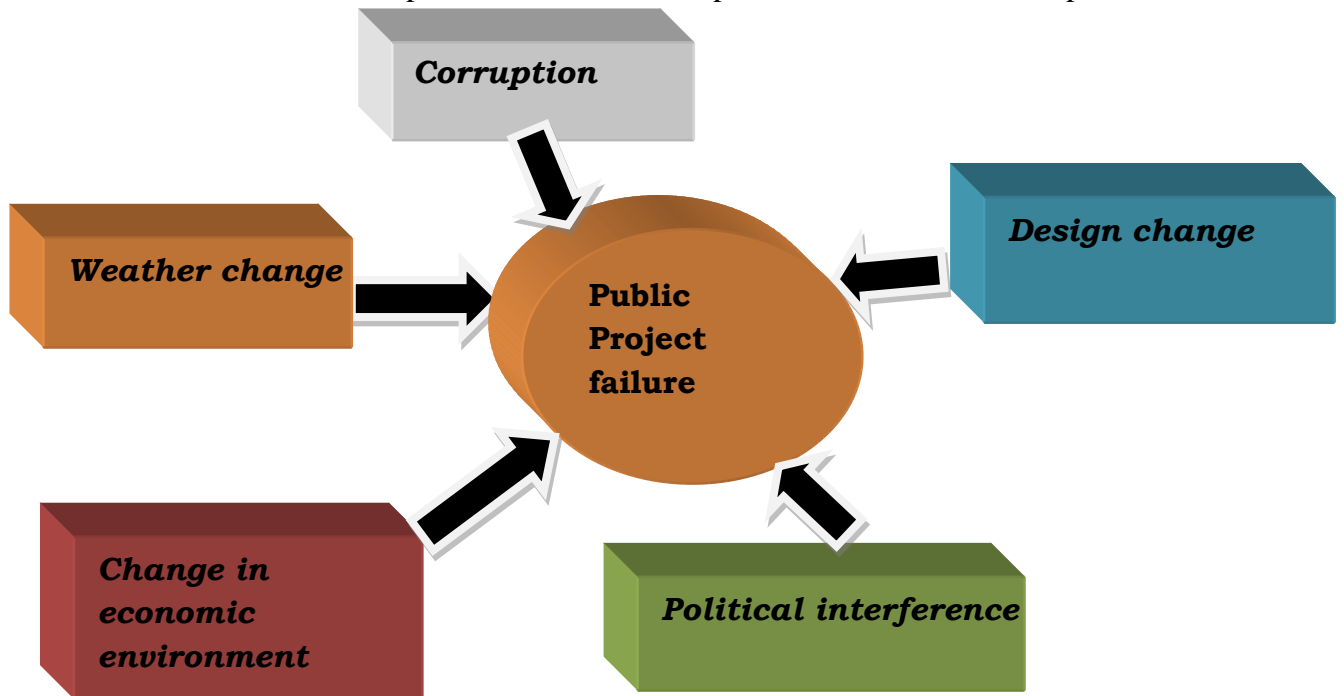


Figure 1: conceptual framework

Source: developed by the researcher

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

This section describes the various methodologies that were used in collecting information, the sampling strategies, techniques that were used in analyzing and the presentation of data collected. The chapter focuses on the study design, population, sample design and data collection and analyses that will be applied during the study.

3.1. Research Design

This study has utilized descriptive research method and qualitative research approach to investigate factors that cause failure in public projects. Descriptive research includes surveys and fact-finding enquiries of different kinds. The major purpose of descriptive research is description of the state of affairs as it exists at present. Descriptive research studies are those studies which are concerned with describing the characteristics of a particular individual, or of a group or a situation.

3.2. Population and Sampling Techniques

Population determining the appropriate sample starts with identifying the population. A population is a group of individuals who have the same characteristics and is further defined in quantitative research as a group of individuals with some common defining characteristics that the research can identify and study (Creswell, 2012). The populations of this study are project contractors, project staffs and concerned government officers from Jimma Zone Administration. This study has accommodated public projects which are planned and procured at Zone level and Wereda level such as drinking water supply projects, schools, local roads, office buildings and conference hall, bridges works etc. and the study didn't included mega projects which are planned, procured and administered by national government. This research has adopted a probability sampling which is simple random sampling method to determine the representative sample of the population. Thus the researcher included Weredas and city administrations in Jimma Zone where ongoing projects and contractors exist. A representative sample size with 95% confidence level and an error limit of 5% will be calculated based on the sample frame provided by the project and based on the work of Yamane (1967). The formula used by Yamane (1967) is illustrated below:

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

Where:

n = sample (required responses)

e = acceptable sampling error

N = population size

By using the above formula, 57 representatives of construction micro-enterprises were selected from total of 65 enterprises and 36 general contractors were selected from total of 40 general contractors of Jimma Zone.

3.3. Types of Data and Tools for Data Collection

The study use questionnaire and interview as instruments to collect data in this study. A questionnaire is a form used in the survey design that participants in the study complete and return to the researcher. The basic objective of a questionnaire is to obtain facts and opinions or beliefs about a phenomenon from people who involve on the particular issue. The aim of using a questionnaire is often to survey a representative sample of the population so that one can make generalization from responses of the respondents. Questionnaires will be structured to ensure that each respondent is asked the same simple, clear, concise and precise questions and to ensure that the responses made to those questions/issues are also simple, clear, concise and precise. Accordingly, the researcher has designed and distributed questionnaires to respondents who had participated in the study based on the above sampling procedure.

The Questionnaires provide a high degree of data standardization and adoption of generalized information amongst any population (Chandran 2003). Chandran explains that they are useful in a descriptive survey study where there is need to quickly and easily get information from people in a non-threatening way. The study has used both primary data and secondary data. The primary data was collected from respondents feeling and perceptions through questionnaire and semi-structured interview whereas secondary data was collected from different studies of the past and other related

literatures concerning the problem. This study used structured questionnaires to collect data in order to investigate factors that cause failure in government funded projects in Jimma Zone.

3.4. Procedures for Data Collection

A structured questionnaire and interview are the instruments which were used for data collection in this study. Questionnaires were distributed to a sampled project contractors, construction micro-enterprise representatives and project staffs. Further, an interview was conducted to get information and opinions from concerned government officials responsible for implementation and follow-up of public projects in the area under study.

3.5. Method of Data Analysis

The descriptive statistics was used to aid in analyzing the data and frequencies were used in expressing the results in tables and also **Pearson correlations** used to examine the association between variables and identifying the importance of different factors that cause failure in government funded projects. In order to measure the feeling of the respondents, likert scale was used.

3.6. Validity and Reliability

3.6.1 Validity

Validity is about whether a research instruments such as a questionnaires or interview actually measures what it was intended to measure or whether its scores have meaning for a participant (Kouzes& Posner, 1995; Saunders et al., 2012). Saunders at al. (2012) call this measurement validity. Leedy and Omrod (2004, p.98) define research validity as “the extent to which the instrument measures what it is supposed to measure”.

To ensure the research findings are valid, the researcher used the literature review as a guide. As discussed in the literature review, the reviewed literature is directly related to the research objectives and therefore using this as a guide helped obtain the necessary data from the respondents. This ensures that the research instruments being used are appropriate for this study and that the semi-structured interview and questionnaire questions reflect the topic under study (Saunders et al., 2012).

3.6.2 Reliability

Reliability means the degree to which a result can repeat itself over time. In other words reliability refers to consistency (Saunders et al., 2012; Bryan, 2012). It is the extent to which results are consistent over time and an accurate representation of the total population under study and if the results of a study can be reproduced under a similar methodology, then the research instrument is considered to be reliable (Golafshani, 2003, p.1). To measure the reliability of the data collection instruments, pilot test was undertaken on a group of 10 respondents in different time and the analysis of pilot survey made using Cronbach alpha. The result obtained from the analysis was 0.71. As a general rule, a coefficient greater than or equal to 0.7 is considered acceptable and a good indication of reliability (Nunnally, 1978).

3.7. Ethical Considerations

The purpose of study is to assess the causes of project failure in public projects in Jimma Zone and agreement was secured before data collection is launched. The purpose of the data to be collected was made clear to participants and the information obtained from them would not be disclosed to any party and solely used for academic purpose. To ensure that privacy of the respondent, name and other identifying information were not used in the study. Participants were asked to take part willingly and responded on their own accord.

CHAPTER FOUR

4.1 Data analysis and presentation

This chapter deals with presentation, analysis and interpretation of the data obtained through questionnaire and interview. The results are depicted in the form of tables and interpreted in terms of frequency and percentages using descriptive statistics.

4.1 Background of the respondents

4.1.1 Age of the respondents

Table 4.1 Age of the respondents

Age	Frequency	Percent
20-30	45	48.4
31-40	30	32.3
Valid 41-50	10	10.8
above 50	8	8.6
Total	93	100.0

As the above table shows 48.4% of the respondents aged 20 up to 30 years where as 32.3% of them are 31 up to 40 years old and 10.8% of them are aged 41 up to 50 years and the remaining 8.6% are aged above 50 years. As we see the percentage of the age distribution of the respondents more of them are aged between 20 up to 30 years and some of them i.e 32.3% are aged between 31 up to 40 years and others 10.8 % are between 41 up to 50 years and 8.6% of them are above 50 which implies that most of the respondents are youngsters.

4.1.2 Gender of the respondents

Table 4.2 Gender of the respondents

Gender	Frequency	Percent
Male	80	86.0
Valid Female	13	14.0
Total	93	100.0

From the table above we can see that 86% of the respondents are males and 14% of them are females which the participation of males in project area in Jimma Zone is higher than females.

4.1.3 Educational background of respondents

Table 4.3 Educational background of respondents

What is your highest educational qualification?	Frequency	Percent
High school	10	10.8
TVET	25	26.9
Valid Bachelor degree	45	48.4
MSC/MA	13	14.0
Total	93	100.0

When we look at the educational background of the respondents, 48.4% of them are bachelor degree holders while 26.9% of them are TVET graduates and 14% of them are MSC/MA graduates and the rest 18.8% are from high school. It implies that the higher numbers of the respondents are bachelor degree graduates.

4.1.4 Job position of respondents

Table 4.4 Job position of respondents

Which job category describes you?	Frequency	Percent
Contractor	30	32.3
Valid project manager	50	53.8
project staff	13	14.0
Total	93	100.0

The table above shows that 53.8% of the respondents are project managers whereas 32.3% of them are contractors and the remaining 13% are project staffs which implies that the higher number of the respondents are project managers.

4.1.5 Work experience of the respondents

Table 4.5 work experience of respondents

How many years of experience do you have?	Frequency	Percent
Valid 1-5 years	45	48.4
6-10 years	15	16.1
11-15 years	15	16.1
16-20 years	10	10.8
21-25 years	8	8.6
Total	93	100.0

As the above information shows 48.4% of the respondents have 1-5 years of experience in their job career while 16.1% of them have 6-10 years' experience and other 16.1% of them have 11-15 years career and 10.8% of the respondents have 16-20 years and the rest 8.6% have 21-25 years career. The above information indicates that most of the respondents are youngsters who are involving in the project area in Jimma Zone.

4.1.6 Work sector of the respondents

Table 4.6 work sector of respondents

Which do you work in?	Frequency	Percent
Valid private sector	93	100.0

Regarding the work sector of the respondents, all of the respondents work in private sector and most of them work in construction microenterprises.

4.1.7 Work industry of respondents

Table 4.7 Work industry of respondents

Which industry does your company operates in?	Frequency	Percent
Construction Sector	80	86.0
Valid Service Sector	13	14.0
Total	93	100.0

From the above table we can understand that 86% of the respondents work in construction sector whereas 14% of them work in service which indicates that there is small number of workers in service sector and most are in construction sector.

4.2 CAUSES OF PUBLIC PROJECT FAILURE

4.2.1 Administrative factors

Corruption

To what extent do you agree that the following factors contribute to the failure of public/government projects? (Please tick (√)).

Table 4.8 level of perception of respondents about the effect of corruption to project failure

Do you think corruption causes project failure?	Frequency	Percent
Strongly disagree	2	2.2
Disagree	3	3.2
Neutral	5	5.4
Agree	63	67.7
Strongly agree	20	21.5
Total	93	100.0

It is ensured by 89.2% of the respondents that corruption can contribute for the failure of public projects i.e out of 93 respondents, 83 of them agreed by the effect of corruption on public projects. Also different studies support that corruption leads to failure in public projects. (Isaac

SakyiDamoah,2018) a study conducted in Ghana explored that how corruption contributes to failure in government projects in developing countries with evidence from Ghanaian context. The finding of the study shows that corruption influences failure at two different levels: project management and product phase. At the project management level, corruption has direct influence, while at the product phase level, the influence is indirect.

Table 4.9 Response regarding the fairness Bid competition for public projects in Jimma Zone.

Is the Bid competition for public projects in Jimma Zone fair?	Frequency	Percent
Valid Yes	21	22.6
No	72	77.4
Total	93	100.0

As the table above shows regarding the fairness of bid competition during project procurement, 77.4% of the respondents replied that is not fair whereas 22.6% of them replied that the bid competition is fair. This implies that there is lack of fairness during project outsourcing. A Fordham law review says that the actions of governmental agencies are subject to public scrutiny. Government agencies who evaluate bids and award contracts should not personally benefit from the award process; contractors who bid on contracts must do so without collusion; and, those who are awarded must perform as promised (Fordham L.Rev.1075,1996).

Table 4.10 Responses regarding the Criteria by which the contractors win the bid.

By what Criteria do the contractors win the bid?	Frequency	percent
By competency	22	23.7
By dealing with project committee	52	55.9
By "Son of soil"	19	20.4
Total	93	100

Table 4.10 indicates about the criteria by which the project contactors win the bid, 55.9% of the respondents ensured that the project contractors win the project by dealing with the project committee for personal benefits while 23.7% of them replied that contractors win by competency and 20.4% of them replied as contractors win projects by being “son of soil” or native to the society of the district. The results of the study conducted by Isaac Sakyi Damoah (PhD)(2015)

indicates that in developing countries, payment of some percent of the contract money by contractors to government officials has become the norm, and that it is extremely difficult or impossible for a contractor who decides not to pay to still win a contract. In this survey also it is shown that 55.9% of the respondents confirmed that public projects are awarded to contractors by dealing for benefits from contracts. This study further indicates that there are “unofficial middlemen” between government officials and contractors during the award of contracts. These men take money from contractors and government officials to link them up to make a contract deal.

Table 4.11 Response regarding the existence of corruption in public projects in Jimma Zone

Is there corruption in public projects in Jimma Zone?	Frequency	Percent
Yes	72	77.4
No	21	22.6
Total	93	100

Accordingly, as table 4.11 shows when we proceed to the question about whether there is corruption in public projects in Jimma Zone, 77.4% of the respondents replied that there is corruption in the project area whereas 22.6% of them disprove the existence of corruption. As stated on the commentary by Professor Alemayehu G.mariyam (2013) Ethiopian construction commonly encountered corruption risks in the trending and procurement process include sale of inside bidding information by corrupt officials to prospective bidders to enhance the prospects for submitting a successful bid.

Table 4.12 Responses regarding the type of corruption prevalent in public projects

What Type of corruption exists in public projects?	Frequency	Percent
Nepotism	20	21.5
Bribery	55	59.1
Embezzlement	18	19.4
Total	93	100

In connection to the type of corruption, 59.1% of the respondents ensured that there is bribery type corruption in public project in Jimma Zone while 21.5% of them replied that there is nepotism type of corruption and also the rest 19.4% of them ensure that there is embezzlement type of corruption in the area. According to the commentary of Professor Alemayehu G. Mariyam (2013), the Ethiopian construction could also involve “collusion between contractors in the form of price fixing and intimidation of aspiring new entrants, unofficial quota system for the award of contracts on the basis of political affiliation of the companies involved and bribery.” In Ethiopia, the list of corrupt practices in the trending and procurement process is mindboggling. In addition to the “general lack of transparency in procurement processes,” the “government” “shortlists companies known to be poor performers or lacking requisite experience or capability,” excludes “capable companies”, inconsistently applies procurement standards, imposes unfair selective restriction of access to advance information about bidding opportunities and distorts the bidding process to benefit favored bidders, among others. Also the finding of the study conducted by Isaac Damoah(PhD)(2015) in Ghana revealed that an unofficial payment of 10% of project funds to government officials has become an acceptable norm in the awarding of Ghanaian government projects.

4.2.2 Political factors

Political interference

Table 4.13 level of perception of respondents about the effect of political interference on project failure.

Do you agree that political interference can affect public projects?	Frequency	Percent
Strongly disagree	10	10.8
Disagree	15	16.1
Neutral	10	10.8
Agree	40	43.0
Strongly agree	18	19.4
Total	93	100.0

As the table above indicates, 62.4% of the respondents ensure that political interference can affect the public projects whereas 26.9% of them disprove it and the rest 10.8% remain neutral.

Also different studies conducted by different scholars found that political interference have a negative impact on the performance of projects.

Depending on the public laws, regulations and processes involved, stakeholders such as elected politicians, individual citizens or interest group have various ways of influencing the project- for example by electing their desired representatives, participating in expert groups, committees and commissions or raising objections (NIER, 2000).A study by Damoah et al. (2015) ranked political interference third out of ten biggest causes of failure of government projects in Ghana. The study also ranked change government as fourth major causes of project failures in Ghana while a focus group study by Zoufa and Ocheing (2014) blamed project failures in Nigeria on change of government.

Table 4.14 Responses regarding the project committees’ profession

Do you think Project committees have an expertise in Project management?	Frequency	Percent
Yes	78	83.9
Valid Not sure	15	16.1
Total	93	100.0

As the above table shows, regarding the project related knowledge or expertise of the project committee in public projects in Jimma Zone 83.9% of the respondents replied that there is a political interference in public project area whereas 16.1% of them are not sure about the project related knowledge of the committee. It is critical that project evaluation committee formation needs to be from professionals who have an expertise or adequate knowledge about specific projects in order to award such project to the right contractor.

Table 4.15 Responses regarding the formation of project committee.

How do Project committee appointed/assigned?	Frequency	Percent
Valid Due to political demand	68	73.1
Due to their project related knowledge	15	16.1
Not Sure	10	10.8
Total	93	100.0

When we proceed to how project committees are assigned, 73.1% of the respondents believe that the assignment of the project committee is based on the political demand and position of the officials rather than their project related profession. As other literatures evidence, stakeholders such as elected politicians, individual citizens or interest group have various ways of influencing the project- for example by electing their desired representatives, participating in expert groups, committees and commissions or raising objections (NIER, 2000).

4.2.3 Natural factors

Weather change

Table 4.16 level of perception of respondents about the effect of weather change on project failure.

Do you agree that weather change can affect public projects?	Frequency	Percent
Valid Strongly disagree	1	1.1
Disagree	1	1.1
Neutral	3	3.2
Agree	23	24.7
Strongly agree	65	69.9
Total	93	100.0

The above table shows about the degree of perception of the respondents on how they believe that weather change can affect projects and accordingly 94.6% of them agree about the negative impact of weather change on project performance whereas 3.2% of them remain neutral and

2.2% of them disagree about the issue. Also several studies verify that climate change have significant impact on the performance of projects.

Susceptibility of construction processes to adverse weather conditions may lead to appreciable time (Choo et al., 1999) and financial losses (Alaghbari et al., 2007; Pewdum et al., 2009). Thus, unexpected adverse weather conditions can slow down or stop work (Dytczak et al., 2013; Mahamid, 2013). The statements “climate conditions are very difficult to predict and plan for in advance” (Sun and Meng, 2009), “weather predictions are plagued by uncertainty” (Jones, 2001) or even “Delays as a result of weather conditions are significant risk factors in the contract delivery process, but construction managers are often unable to reliably predict delays as a result of them” (Thorpe and Karan, 2008) are familiar to many contractors.

Table 4.17 responses regarding the effect of weather change on public projects in Jimma Zone.

Do Public projects in Jimma Zone affected by weather change?	Frequency	Percent
Yes	85	91.4
Valid No	8	8.6
Total	93	100.0

Table 4.17 shows, the highest ratio is 91.4% of the respondents confirms that public projects in Jimma Zone are affected by weather change whereas 8.6% of them disprove it. It implies that weather change is significantly affecting public projects in Jimma Zone. As studies show, change in weather conditions leads to project delays, and abandonment of projects altogether due to natural events such as floods, heavy rain and hot temperatures. In some parts of the country, the weather can be very hot in some seasons and therefore worker productivity declines (Isaac Sakyi Damoah, 2018). Also according to Baldwin et al. (1971), the most important causes of delay in the United States are weather conditions.

Table 4.18 Responses regarding the favorable seasons for project construction.

Which seasons are favorable for project construction?	Frequency	Percent
Dry seasons	33	35.5
Rainy seasons	5	5.4
Semi-rainy seasons	55	59.1
Total	93	100.0

Table 4.18 is about seasons favorable to project construction. As the result shows, about 59.1% of the respondents replied that semi-rainy seasons are favorable for construction of projects while 35.5% of them believe that dry seasons are favorable and the rest 5.4% replied as rainy seasons favorable.

Table 4.19 responses regarding the outcomes of weather change on public projects.

What are the outcomes of weather change on public projects?	Frequency	Percent
Delay/late completion	32	34.4
Stopping operation	20	21.5
Additional cost	41	44.1
Total	93	100.0

Table 4.19 is about the outcomes that public projects in Jimma Zone are facing and as the information found shows 44.1% of the respondents confirm that changes in weather is causing to incur additional cost letting the projects consume more money than the budgeted cost and 34.4% of them confirm that weather changes are causing delay in completion of public projects rather than within the allocated time period. Also 21.5% of them confirm that weather changes are causing stopping of operation. Studies evidence weather change leads to project delays, and abandonment of projects altogether due to natural events such as floods, heavy rain and hot temperatures (Isaac Sakyi Damoah, 2018).

4.2.4 Technical factor

Design change

Table 4.20 level of perception of the respondents about the effect of technical factors on project failure

Do you agree that design change can affect public projects?	Frequency	Percent
Strongly disagree	2	2.2
Disagree	2	2.2
Neutral	3	3.2
Agree	61	65.6
Strongly agree	25	26.9
Total	93	100.0

The above table indicates the degree of perception of the respondents regarding the influence of design change on project performance. As shown in the table 92.5% of the respondents agree that design change can affect project performance while 3.2% of them remain neutral and 4.4% of them disagree. Besides this, also various studies have confirmed that design change have significant impact on the project.

Almost all building projects undergo various degrees of design changes through the project lifecycle. Changes in construction projects are inevitable in most construction projects to correct or modify original design or scope of work (Alnuaimi et al., 2010). Design changes in building projects are common (Mohamad et al., 2012) where in many circumstances, these changes lead to excessive claims and disputes (Howick et al., 2009). Therefore, complex and dynamic nature of construction project poses uncertainties and risks (Zhao et al., 2010). Changes usually occur at any stage of a project due various causes from different sources and have considerable impacts (Motawa, Anumba, Lee, & Pena-Mora, 2007). Naoum (1994) emphasized that lack of timely and effective communication, lack of integration, uncertainty, a changing environment and increasing project complexity are the drivers of project change. Additionally, these changes in project can cause substantial adjustment to the contract duration, time, total direct and indirect cost or both (Ibbs, Lee, & Li, 1998).

Table 4.21 Responses regarding the actual design and the planned design of public projects.

Do actual designs of public projects in Jimma Zone match the proposed design?	Frequency	Percent
Valid Yes	21	22.6
No	72	77.4
Total	93	100.0

Table 4.21 show whether the actual design of public projects in Jimma Zone matches to the planned design. As the result indicates that 77.4% of the respondents replied as the actual design do not match to the planned design whereas 22.6% of them confirm that actual design match to the proposed design. As discussed in the above paragraph, different studies confirm the effect of design change on projects there is similar thing in Jimma as well as in Ethiopia that change of design is common in most projects.

Table 4.22 Responses regarding problems that occur in connection with design of public projects.

What are the problems that occur regarding design?	Frequency	Percent
Valid Measurement variation	37	39.8
Scope variation	35	37.6
No variation	21	22.6
Total	93	100.0

Table 4.22 is about the problems that may occur due to design change and as the results show 77.4% of the respondents verify that it causes variations in the project as 39.8% among them said it causes measurement variations and 37.6% said it causes scope variations whereas 22.6% of them replied that no variation exist.

Table 4.23 Responses regarding the outcome of the variation

What would be the outcome of the deviation?	Frequency	Percent
Increase project cost	39	41.9
Delay in completion	32	34.4
Entering into Additional/supplementary contracts	22	23.7
Valid		
Total	93	100.0

Table 4.23 is about the outcome of the design change on projects. As the results indicate 41.9% of the respondents confirm the variation caused by design change results in increase of project cost and 34.4% of them confirm that it results in delay in completion and the rest 23.7% of them verify that the variation caused by design change lets to enter additional or supplementary contract. As findings of a study conducted by Zelalem Tsegaye (2018) indicate due to change of design, the cost overrun and delay in project completion were the outcomes.

4.2.5 Economic factors

Change in Economic environment

Table 4.23 degree of perception of respondents about the effect of change in economic environment on project failure

Do you agree that change economic environment can affect public projects?	Frequency	Percent
Strongly disagree	5	5.4
Disagree	5	5.4
Neutral	3	3.2
Agree	50	53.8
Strongly agree	30	32.3
Valid		
Total	93	100.0

The above table shows the level of perception of the respondents towards the effect of change in economic environment on project performance. As the results show that about 86.1% of the

respondents agree that change in economic environment can affect the project performance while 3.2% of them are neutral about the effect and 10.4% of them disagree.

Tables below show about whether public projects in Jimma Zone are affected by change in economic environment and what are the effects of change in economic environment on public projects.

Table 4.24 Responses regarding the effect of change in economic environment on public project in Jimma Zone.

Do you think public projects in Jimma Zone affected by change in economic environment?	Frequency	Percent
Valid Yes	68	73.1
No	25	26.9
Total	93	100.0

As shown on table 4.24, 73.1% of the respondents think that public projects in Jimma Zone are affected by the change in economic environment whereas 26.9% of them don't think public projects in Jimma Zone are affected by change in economic environment.

Table 4.25 Responses regarding the outcomes of change in economic environment on public projects.

What are the effects of change in economic environment on projects?	Frequency	Percent
Valid Increase in project cost	30	32.3
Increase in material cost	34	36.6
Financial loss	29	31.2
Total	93	100.0

Table 4.25 is about the effects of change in economic environment on public projects' performance and as the results indicate 32.3% of the respondents replied it causes increase in project cost and 36.6% of them replied that it causes material cost and the rest 31.2% of them confirm that change in economic environment causes financial loss. Most of the time the price of

construction materials increasing at increasing rate and the money budgeted for public projects is limited as it is collected from the society or from different aids become insufficient to complete the projects. This also leads to failure in meeting the time schedule of the projects.

Correlation

Descriptive Statistics

	Mean	Std. Deviation	N
Corruption	4.0323	.77251	93
Political interference	3.4409	1.27230	93
Weather change	4.6129	.70760	93
Design change	4.1290	.75507	93
Change in Economic environment	4.0215	1.03187	93

Table 4.26 Results of bivariate Pearson correlation analysis of factors of failure of public projects.

Correlations between variables		Corruption	Political interference	Weather change	Design change	Change in Economic environment
Corruption	Pearson Correlation	1				
Political interference	Pearson Correlation	.782**	1			
Weather change	Pearson Correlation	.779**	.807**	1		

Design change	Pearson Correlation	.925**	.721**	.766**	1	
Change in Economic environment	Pearson Correlation	.899**	.829**	.786**	.861**	1

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

Bivariate Pearson correlation was used to examine the association between the factors of failure of public projects. As the correlation results indicate, there is strong positive association between design change and corruption ($r=0.925$) where 'r' is nearer to +1 and also there is high degree of positive correlation between corruption and change in economic environment ($r=0.899$), between design change and change in economic environment ($r=0.861$), between political interference and change in economic environment ($r=0.829$), between weather change and political interference ($r=0.807$), between change in economic environment and weather change ($r=0.786$), between corruption and political interference ($r=0.782$), between corruption and weather change ($r=0.779$) and all the correlation results indicate significant positive association.

4.3 Analysis of Interview questions

The researcher conducted semi-structured interview and raised questions to the head of Jimma Zone finance and economy cooperation office regarding the causes of failure of public projects in Jimma Zone and as he mentioned, failure of contractors to deliver the projects within the allocated time and by the planned standard of quality due to the incompetency of contractors. For this, he raised one of the challenge which is currently most projects are being given to small construction micro-enterprises which are established by young and recent graduate members who have low career in the sector but on the other hand to reduce the unemployment rate in Jimma Zone. He also raised the budget deficiency as one of the causes for public project failure. The other factor raised by the official was climate change that is during summer season, most of the projects forced to stop the operation.

Secondly we have raised the question about project management practices that hinder the success of public projects in Jimma Zone and the official explained lack of close supervision, misuse of the allocated budget, wastage of raw materials during the operation are the most management practice problems causing failure of public projects.

CHAPTER FIVE

Summary of major findings, Conclusion and Recommendations

5.1 Summary of major Findings

As it has been stated in chapter one, the general objective of this study was to identify the factors that cause failure to public projects in Jimma Zone.

The factors that have been identified by this study were categorized in to five such as administrative factors, political factors, natural factors, technical factors and economic factors. Under these categories of factors there are some critical variables prioritized as they have significant effect on public projects which are evidenced by several past studies and different literatures were corruption from administrative category, political interference from political factors category, weather change from natural factors category, design change from technical factors category and change in economic environment from economic factors.

As the survey results indicates that the highest portion of the respondents confirmed that the public projects in Jimma Zone are exposed to administrative problems such as corruption and the project committees are biased while evaluating and selecting the bid competition for projects. As the responses of the respondents implies during the time when contractors or small construction micro enterprises compete for projects most win the project by dealing with the project committee while some others confirm that they win the project by being native to the society.

The study tried to identify the political factor s in public projects in Jimma Zone and as the result of the study shows there is political interference in the area of public projects i.e project evaluating and selecting committee formation is based on the political position and desire that individuals have rather than professional qualification.

Regarding the natural factors that affect public projects in Jimma Zone, the results of the study indicates that public projects are suffering from natural factors such as weather change and this factor letting the projects to failure in terms of time allocated and budget allocated.

According to the result of the study, most of the respondents confirm that public projects in Jimma Zone are affected by technical factors such as design change and which has been leading them to cost overrun and failure to meet the scheduled time.

The other is economic factor that has been confirmed by most of the respondents as a cause for failure of public projects in Jimma Zone in terms of project cost i.e it cause an increment in project cost needs additional budget and leads financial loss.

5.2 Conclusion

The main aim of this study was to identify the factors that cause failure in public projects in Ethiopia particularly in Jimma Zone and factors related to administrative problems, political, natural, technical and economic factors were identified.

As different literatures has shown, corruption, political interference, weather change, design change and change in economic environment are amongst the most factors affecting projects in several areas of the world. According to the results of this study, weather change is ranked first evidenced by 94.6% of the respondents agreed that it has significantly affecting public projects in Jimma Zone whereas design change ranked second which is confirmed by 92.5% of the respondents and corruption was ranked third evidenced by 89.2% of the respondents for its negative effect on public projects and change in economic environment ranked fourth while political interference ranked last i.e fifth confirmed by 62.4% of the respondents. Also the findings in addition to different literatures supports these factors are the most ones. But it cannot be generalized as these factors examined by this study are the only factors that affect public projects.

5.3 Recommendations

Aligned with the above conclusion, the researcher proposes the following corrective measures that should be considered by concerned stake holders in order to reduce project failure regarding public projects.

Regarding the administrative factors such as corruption during the bid competition, the concerned government body must take and implement possible controlling mechanisms to make the bid competition for projects free from corruption and strengthening the accountability the corrupt officials. On the other hand, sometimes those contactors with poor performance in the previous projects again win a new project and in order to reduce this act, the concerned government body should record the performance trend of the project contractors and adding previous performance as one of the selection criteria is an important remedy to improve the incompetency on the side the contractors. In addition, giving two or more projects simultaneously to the contractors with limited capacity also hinders the performance and this needs to be considered while outsourcing projects.

While forming the project committee which evaluates and select the project contacting agent, it is necessary to take into account the professional background of the members the committee rather than their political position which is related to project they are going to procure.

At the time of setting time schedule for a project, scanning deeply the climate condition of the specific area where the project is to be constructed according to the nature of the project is a possible measure to reduce the variation in time schedule of a project since it causes the failure to meet the schedule. Therefore the concerned body should effectively use the metrological information of the place where the project is to be built to allocate a time schedule for project.

Design of the project is a critical part of a certain project and needs to be closely evaluated by different professionals before implementation and should be long lasting. To overcome such technical problems the concerned government body should establish project design department which consists of different professionals from different disciplines or fields of study.

Economic impacts such as inflation on construction materials is one the bottlenecks in public projects which have a significant impact on project and it is advisable to the concerned body

establishing public construction materials shop which can supply project construction materials with minimum profit margin than private merchant shops.

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Appendix 1
Jimma University School of Graduate Studies
Master of Business Administration Program

Questionnaire

Dear Respondents,

I am MBA student of Jimma University College of Business and Economics. I am carrying out a research thesis on: “*Assessment on Causes of Public Project Failure: The case of Jimma Zone, Ethiopia*”. I would be grateful if you could help me by responding to the questionnaire below. I assure you that information you provide shall be treated confidentially. By completing this questionnaire, it implies that you consent to participate in this research. Thanks for your anticipated co-operation.

Yours sincerely,

DEMOGRAPHIC

INFORMATION

Date.....

Please tick (✓) as appropriate

1. Age: (a) Below 20 (b) 20 – 30 (c) 31 – 40 (d) 41-50 (e) Above 50

2. Sex: Male Female

3. What is your highest educational qualification or nearest equivalent?(a) High school (b)

TVET (c) Bachelor (d) Master’s degree (f)

PhD (g) Others

6. Which of these categories best describe you? (Please tick only 1)

(a) Contractor (b) Project manager (c) project staff

7. How many years of work experience do you have?

	Work experience
Less than 1 year	
1-5 years	
6-10 years	
11 -15 years	
16-20 years	
21-25 years	
26-30 years	
31 -35 years	
36-40 years	
..... Other years	

8. What sector do you work in? (1) Public (2) Private (3) NGO (4) Not working (5) Others (please specify).....

9. Which industry does your company operate in? (a) Retail/Wholesale (b) Manufacturing
(c) Construction (d) Service (e) Agriculture (f) Mining
(g) Others (Please specify).....

CAUSES OF PUBLIC PROJECT FAILURE

Degree of perception

To what extent do you agree that the following factors contribute to the failure of public/government projects in JimmaZone? (Please tick (√)).

Causes	Strongly disagree(1)	Disagree(2)	Neutral (3)	Agree(4)	Strongly agree(5)
1. Corruption					
2. Poor Supervision					
3. Scope change					
4. Climate change					
5. Design change					
6. Political interference					
7. Change in economic environment.					
8. unskilled Labor					
9. Incompetency construction companies					
10. Delays in payments					
11. Bureaucracy					

Effect of corruption

1. Do you think that the bid competition for public projects in Jimma Zone is fair?

A. Yes B. No

2. By what criteria do project contractors win the bid?

- A. By competency
- B. By dealing with government officials/project committee
- C. By 'Son of Soil'
- D. others specify.....

3. Do you think that there is corruption in public projects?

A. Yes B. No

4. What type of corruption exist in public projects in Jimma Zone?

- A. working for relatives(Nepotism)
- B. taking money (Bribery)
- C. Embezzlement

5. When does the corruption takes place?

- A. During Bid competition
- B. During Fund release
- C. At the end of the project
- D. others.....



Effect of political interference

- 1. Do you think that project evaluators/committee have an expertise in project management?
A. Yes B. No
- 2. How do project evaluator officials/committee are appointed in Jimma Zone?
A. Because of political demand C others
B. Because of their project related knowledge

Effect of weather change

- 1. Do you think that public projects in Jimma Zone are being affected by climate change?
A. Yes B. No
- 2. Which seasons are preferable for project construction?
A. Sunny seasons
B. Rainy seasons
C. Others
- 3. What do you think the effect of climate change on project performance?
A. Delay/late completion
B. Stopping the operation
C. Additional cost

Effect of design change

- 1. Do you think that the actual design of projects matches the proposed design?
A. Yes B. No
- 2. What are the problems occur in projects regarding design?
A. Measurement variation
B. Scope variation
C. Others specify.....
- 3. What would be the result of the deviations?
A. Increase in project cost
B. Delay
C. Entering Supplementary contract
D. Others.....

Effect Of Change In Economic Environment

1. Do you think that change in economic environment can affect projects?
A. Yes B. No
2. What are the effects of change in economic environment on the project performance?
 - A. Increase in wage expense
 - B. Increase in material cost
 - C. Financial loss

APPENDIX 2

Semi-structured Interview Guide

(B) CAUSES OF GOVERNMENT PROJECT FAILURE IN JIMMAZONE

1. What are the causes of government project failures in Jimma Zone?
2. Identify government project management practices that hinder the success of projects in Jimma Zone?