ASSESSMENT OF PROJECT IMPLEMENTATION AND CHALLENGES ON BUILDING CONSTRUCTIONS IN ADAMA CITY ETHIOPIA

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Assessment of Project Implementation and Challenges on Building Constructions in Adama City Ethiopia

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DECLARATION

I declare that this thesis entitled “Assessment of Project Implementation and Challenges on Building Constructions in Adama City Ethiopia” is my own work and has not been submitted to any university for similar purpose. The references used in this thesis are duly recognized by proper citations.

Bilisuma Debisa _____ _____

Name of student Signature Date

RECOMMENDATION

I the principal advisor/supervisor of his thesis, hereby certify that I have closely advised/supervised the student while developing this thesis and read the daft thesis entitled “Assessment of Project Implementation and Challenges on Building Constructions in Adama City Ethiopia” prepared under my guidance by Bilisuma Debisa . Therefore, I recommend submitting the thesis to the department for further review and evaluation.

Bahiru Bewket (PhD.) _____ _____

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We, the undersigned, members of the Board of Reviewers of the thesis open defense by Bilisuma Debisa have read and evaluated the thesis/dissertation thesis entitled "Assessment of Project Implementation and Challenges on Building Constructions in Adama City Ethiopia" and assessed the understanding of the candidate about the proposed research. This is, therefore, to certify that the thesis is accepted and we recommend the implementation of the thesis.

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ABSTRACT

In construction projects, failures are due to project management implementation process problems as well as poor construction performance and many others related factors. This study aims at assessing project management Implementation process, and challenges that appear in the course of the construction of the building construction projects in Adama City, Ethiopia. The study employed a research design of a descriptive approach. The data was collected using a structured and semi-structured questionnaire from 67 respondents who are key stakeholders in building construction including clients, contractors and consultants using total census method. The data was analyzed by using RII and descriptive statistics using SPSS v. 23 and Microsoft Excel 2013. The findings of the study revealed that there is a poor implementation process of the project management. The mean value of the respondents for the executing process i.e. core, administrative, and public regulatory process was 2.8, 2.69, and 2.88 respectively. While from the monitoring and controlling the average RII value of 2.5, 2.67, and 2.7 were recorded for the core, administrative and public regulatory processes. The most underlining challenges affecting the construction performance in the study area includes the cost overrun (RII= 0.8; 80% agreement), followed by the scarcity of the construction materials (RII= 0.73; 67.16% agreement). Political and social unrest has been recorded to be the least factor affection the construction performance (RII= 0.57; 38.81% agreement). The majority (67.16%) of the respondents confirmed that there is the failure of the project completion on the planned project schedule. Generally, from the present study, it is concluded that most of the construction projects exhibited poor project performance. Therefore, the project manager and team leaders should take the proper project management implementation process into account to enhance the overall performance. The planning process management and impact of the project manager's competencies on the project management should be the next research priorities in the study area.

Keywords: Challenge, Execution, Management process, Monitoring and Controlling, Project management

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LIST OF ABBREVIATION

ACA - Adama Construction Authority

FGD - Focus Group Discussion

PM- Project management

PMBOK- Project Management Body of Knowledge

PMIP- Construction Management implementation Process

RII - Relative Importance Index

SPSS- Statistical package for social science

TQM -Total Quality Management

CHAPTER ONE – INTRODUCTION

1.1. Background and Justification

Project management process plays a major role in effective and efficient management of the project. The prosperity and well-being of a country therefore depend on buildings, because national building stock depends on the amount of time and maintaining the cost overrun in the building projects. Since most construction project problems arise during construction can be avoided by improving the construction implementation process. The ultimate purpose of implementing project management process and practices is to achieve consistency in project success. The construction industry is essentially a service industry whose responsibility is to convert plans and specifications in to a finished product through implementation process (Dinku, 2003).

It is exceedingly complex and unique in character and plays a leading role in the national economy. This is mainly because developing countries are considerably dependent on the growth and development of their physical infrastructures; because it's linkage to both their economic and social sectors are very significant. The project management needs to manage coordinating people, equipment, materials, money and schedules to complete a specified project on time and within approved cost. Whereas, project management need a manager by whom the principles and techniques of project management are to be applied.

Project managing begin with the conceptual phase by the owner, though coordination of design and construction, to project completion, experienced project managements agree that the procedures used for project management vary from company to company and even among individuals with in a company. Although each manager develops his or her own style of management and each project is unique, managing a project needs to follow the basic principles and sequenced phases which begin with conceptual development to completion, project management requires team work among the concerned bodies or principal contracting parties: the owner, designer and contractor.

Therefore, this study assesses the implementation process, identifies the challenges that affect the application and the performance of building construction projects as part of the Implementation /Executing- Monitoring and controlling/ and based on the assessment of the

current practices.

So, the research is intended to assess these processes together with their impacts for successful project performance. The level of proper project implementation process during construction is associated with success of any project and improved capacity and competitiveness of the different parties and stakeholders in the industry. In this regard, Government of Ethiopia, in its construction industry development policy, has identified capacity building as one of the major area of concern for construction industry development. Each dimension of competitiveness needs detailed study to prioritize the improvement actions (Mengistu and Mahesh, 2019). The assessment of this study describe that the implementation practice of project management, challenges and their implication on project management success by applying appropriate statistical method.

1.2. Statement of the Problem

Construction projects are very expensive and their failure results loss of huge amount of money and resource. The success of any construction related project largely depends on the implementation process problems and poor construction performance. In addition to these, there are many reasons and factors which are attributed to such problems. The prosperity and well-being of a country depend on buildings, because national building stock depends on the amount of time and maintaining the cost overrun in the building projects. Since most construction project problems arise during construction can be avoided by improving the construction implementation process. Nowadays construction projects in Ethiopia have faced many difficulties due to fragmented project implementation process. The construction industry is facing challenges of delay, poor quality, cost overrun, poor engagement and low satisfaction of stakeholder (Garomsa, 2019). This is no exception to Adama city.

In Adama city, there are different public and private buildings under the supervision and regulation of Adama city construction Authority. In these building projects, there are different problems that need due consideration. To this end, there is no any study data or empirical information on the topic in the study area. Hence this study focused on the assessment of project management implementation process, major challenges in the construction projects during construction of building projects to give informed recommendations and the study was

enabling real estate owners and construction project managers to focus on their management methodology which critically affects the success of their projects.

1.3. Objective of the Study

1.3.1. General Objective

The general objective of this study is to assess the project management implementation process and the challenges that occur during construction of public and private building construction.

1.3.2. Specific Objectives

The specific objectives of the study are

- To assess the project management implementation process
- To assess, the major challenges of construction firms during construction
- To examine the project management performances of Adama city building projects

1.4. Research Questions

This study is meant to draw attention to those who participate in Adama Construction Authority (ACA) Employees: The study helps in modern and updated construction project regulation mechanisms that lead a project to success. More specifically, the study attempts to address the following basic questions.

It seeks to answer the following research questions.

- What are the major project management implementation process practices?
- What are the challenges of construction projects which appear during construction?
- What is the project management performances in building construction sites in Adama City?

1.5. Significance of the Study

The organizational practice of project management will benefit from this study. It is very important to have understanding about project management organizations, especially regarding team performance. Additionally, this study will help project managers and team leaders comprehend the elements that go into creating a good project performance and achieving project goals. Teams contributing some effort to the significance of the readily available matrices for projects improvement areas based on the project assessment elements, the tools and methodologies developed to assess project management implementation processes groups in the building construction project. From a managerial standpoint, this study will benefit top management and project managers by enhancing their understanding of the connections between team performance and team effectiveness as they relate to various project management process groups.

On the other hand, it is anticipated that this study will motivate future research into the effects of effective project management practices on the productivity of project teams. It will also serve as a resource for people interested in this subject. As a result, this discovery can serve as a starting point for future studies in the subject.

1.6. The Scope of the Study

This study is being conducted in the case of Adama City in the Central Rift Valley of Ethiopia. Adama Construction Authority and Municipality are in charge of overseeing the construction of buildings, and the study's sole focus is on reducing the poor implementation process, challenges, and performance of building projects.

1.7. Limitation of the Study

Finding variables to use as a baseline for comparison became challenging due to the lack of prior studies or research that had been done on the Assessment of Project Implementation and Challenges on Building Constructions in Adama city under Adama Construction Authority (ACA). Only under the Adama Construction Authority was the study's primary focus on the construction management process. Only the construction projects in Adama city were the

subject of the investigation.

1.8. Organization of the Study

This particular study is organized into five chapters. Namely;

Chapter One: - Provides an introduction to the study including a background of the study, statement of the problem, basic research questions, and objectives of the study, significance of the study, and scope and limitations of the study.

Chapter Two: - Comprises literature review on the assessment of current practices, challenges, and application of construction management overall process system. Here, the theoretical, empirical, and practical aspects in the global, national, and study area contexts are synthesized, and all the features, approaches, and methods of the construction management process.

Chapter Three: - Discussing the research methodology adopted for the study and relevant justifications given for the choice of the methodology as well. It will also be outlining the research methodology and design for carrying out the primary and secondary data collections and how the results will be analyzed.

Chapter Four: - Presenting the findings of the research and will also be laying out the analysis of the organizational responses to the current practices, challenges, and application of the construction management overall process system.

Chapter Five: - According to the implications of the findings, and recommendations for practical utilization of the findings and laying some significant suggestions for future research too.

Finally, the research includes, references, an annex includes questioner and a legal paper from Adama Construction Authority (ACA) as testimony papers are parts of the document.

CHAPTER TWO-LITERATURE REVIEW

2.1. Introduction

This chapter seeks to present a review of related literature in relation to the research questions being analyzed. The purpose of this study is to assess the project management implementation process group practices, challenges of the implementation process, and their implication on project performance. This section will elaborate on and describe executing process groups, monitoring and controlling process groups, and project management success criteria to evaluate project performance. The Construction Management implementation Process (PMIP) is defining the different phases of the construction process from its execution to its completion, so that identifying these phases will help to properly launch and review the scope of works and services in construction projects and develop the construction execution, monitoring and controlling appropriately (Reiss, 2006). This research focuses on the general framework of the construction implementation process groups which covers implementation process practices.

2.2. Project Management

Project management, is the application of knowledge, skills and techniques to execute projects effectively and efficiently (Nguyen, 2007). It's a strategic competency for organizations, enabling them to tie project results to business goals and thus, better compete in their markets. More specifically, a project is a temporary group activity designed to produce a unique product, service or result.

A project is temporary in that it has a defined beginning and end in time, and therefore defined scope and resources. And a project is unique in that it is not a routine operation, but a specific set of operations designed to accomplish a singular goal. So a project team often includes people who don't usually work together, sometimes from different organizations and across multiple geographies. According to project management guide book, (2015), "Project management is the skills, tools and management processes required to undertake a project successfully." Project management comprises:-

a) A set of skills: - specialist knowledge, skills and experience are required to reduce the level of risk within a project and thereby enhance its likelihood of success.

b) A suite of tools: - various types of tools are used by project managers to improve their chances of success. For example include document templates, registers, planning software, audit checklists and review forms.

c) A series of processes: - varies management techniques and processes are required to monitor and control time, cost quality and scope on projects.

Mengesha, (2004) in every construction process, project management (PM) is the basic and most important of all tasks, for the successful completion of the project. PM is also described as ensemble of activities (such as tasks) concerned with successfully achieving a set of goals. This includes planning, scheduling and maintaining progress of the activities that comprise the project. Reduced to its simplest project management is the discipline of maintaining the risk of failure at as low a value as necessary over the lifetime of the project. Risk of failure arises primarily from the presence of uncertainty at all stages of a project. An alternate point of view is that project management is the discipline of defining and achieving targets while optimizing the use of resources (time, money, people, space, etc.). The management of construction projects requires knowledge of modern management as well as understanding of the design and construction process. Construction projects have a specific set of objectives and constraints such as a required time frame for completion, while the relevant technology, institutional arrangements or processes will differ. The management of such projects has much in common with the management of similar types of projects in other specialty or technology domains.

Project management institute global standard PMBOK guide (2015), defined Project management is the art of directing and coordinating human and material resources throughout the life of a project by using modern management techniques to achieve predetermined objectives of scope, cost, time, and quality and participation satisfaction. Generally, project management is distinguished from the general management of corporations by the mission-oriented nature of a project. A project organization will generally be terminated when the

mission is accomplished. General managing of Construction Management Process encompasses planning, organizing, staffing, executing, and controlling the operation of an ongoing enterprise and also includes supporting disciplines such as law, strategic planning, logistics, and human resource.

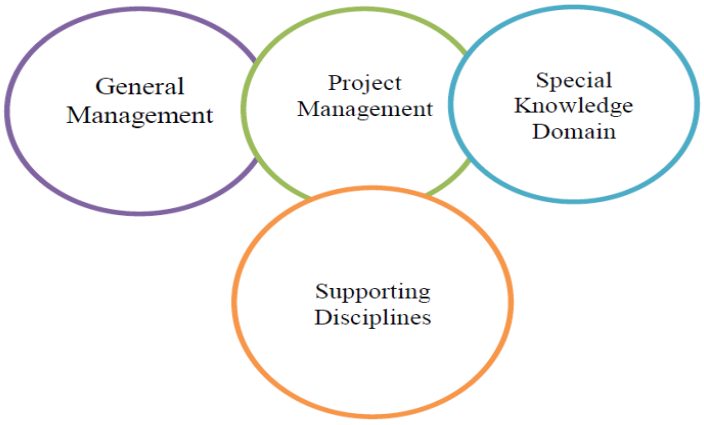

Figure 1.1: Basic Ingredients in Project Management (Source: Capone, P. *et al*., 2014)

Specifically, project management in construction encompasses a set of objectives which may be accomplished by implementing a series of operations subject to resource constraints. There are potential conflicts between the stated objectives with regard to scope, cost, time and quality, and the constraints imposed on human material and financial resources. These conflicts should be resolved at the onset of a project by making the necessary tradeoffs or creating new alternatives.

Subsequently, the functions of project management for construction generally include the following:-

1. Specification of project objectives and plans including delineation of scope, budgeting, scheduling, setting performance requirements, and selecting project participants.

2. Maximization of efficient resource utilization through procurement of labor, materials and equipment according to the prescribed schedule and plan.

3. Implementation of various operations through proper coordination and control of planning, design, estimating, contracting and construction in the entire process.

4. Development of effective communications and mechanisms for resolving conflicts among the various participants.

The principal objectives of every project manager should be to complete the project on time and within budget, he or she has a number of other important responsibilities, these include safety, worker moral, public and professional relations, productivity improvement, innovation, and improvement of technology. The following table illustrates the way to manage the construction process.

2.3. Project Management Process Life Cycle

Project management institute global standard PMBOK guide, (2015) describes the project life cycle which serves to define the beginning and the end of a project. The project life cycle definition will determine whether the feasibility study is treated as the first project phase or as a separate, standalone project. In this manner, the project life cycle definition can be used to link the project to the ongoing operations of the performing organization. From the preceding phase are usually approved before work starts on the next phase (Dunmade *et al*., 2018). However, a subsequent phase is sometimes begun prior to approval of the previous phase deliverables when the risks involved are deemed acceptable. For all operations the project life cycle emphasizes four common principles: -

Programming phase: - it is the stage in the project cycle that produces the strategic program.

Identification phase: - is a stage where prefeasibility study will be conducted to determine whether the major constraints identified in the project during the programming stage and help to identify needs and interests of the different stockholders and analyze them to determine what further and detailed study required for project formulation and design.

Implementation phase: is the process by which the actual work is executed with proper organization system together with monitoring quality, time and cost of the works. The Implementation phase of the Project Management Process puts the project into action. The Implementation phase consists of sub phases: Execution and Monitoring & Control.

Evaluation phase: - The gap between what was intended and what is actually happening and looking at operational and strategic options to make changes.

Decision making criteria and procedures are defined at each phase (Including key information requirements and quality assessment criteria).

The phases in the cycle are progressive and in each phase should be completed for the next to be tackled with success; and New programming and project identification draws on the results of monitoring and evaluation as part of a structured process of feedback and institutional learning.

Although some participants may separate out in one stage, the other moves on the next one. The project manager is the key participant in all these stages and act as a catalyst who motivates the participant for achieving the stage objectives. Most projects life cycle descriptions share a number of common characteristics Cost and staffing levels are low at the start, higher towards the end, and drop rapidly as the project draws to a conclusion, the probability of successfully completing is lowest, and hence risk and uncertainty are highest, at the start of the project. The probability of successful completion generally gets progressively higher as the project continues, The ability of the stakeholders to influence the final characteristics of the project's product and the final cost of the project is highest at the start and gets progressively lower at the project continues (Dunmade *et al*., 2018). A major contributor to this phenomenon is that the cost of changes and error connection generally increases as the project continues.

In addition, it has been noted that, owing to the different characteristics of projects or industries, the phases of project life cycle are different from each other. As a result, it has been proposed that the available life cycle phases of Conceptual, Planning, Testing, Implementation and Closure should be applied to projects. (Kerzner, 2001).

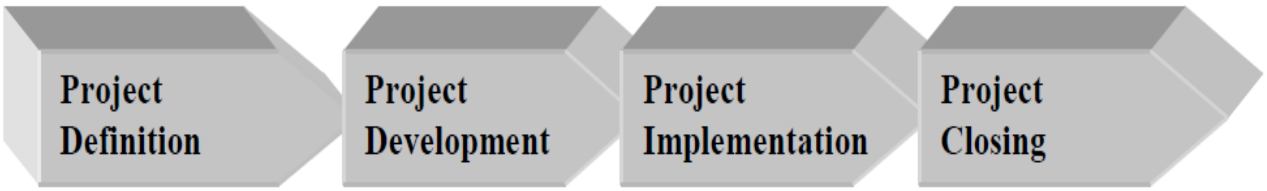

Figure 2.2: Project process cycle

Source: Mengesha, (2004), Performances for Public Construction Projects in developed countries

2.4. Project Management Process

Construction projects as it possess its unique characteristics from other projects, its project cycle exhibited contextual phases. The Project Management Process, which guides towards or is a presupposition for the planned construction works. This means that the Project Management Process groups as a concept covers sub processes having different characteristics. These sub processes can be grouped under three major classifications: Core processes, Administrative processes and Public regulatory processes. These processes are termed Project Processes. (Federal Transit Administration, 2015; Czuchry, 2003).

Core processes sometimes also key processes or main processes are those processes and activities of an organization that are concerned with producing Products or providing customer service (Management Mania, 2020). Some planning processes have clear dependencies that require them to be performed in essentially the same order on most projects. For example, activities must be defined before they scheduled or budgeted. These core planning processes may be iterated several times during any one phase of a project (PMI 200).

Administrative processes are the office tasks that are required to keep a company humming along. Administrative processes include human resources, marketing, and accounting. Basically, anything that entails managing the information that supports a business is an administrative process.

The public regulatory process establishes minimum standards to be achieved in the construction of buildings. They are supported by a series of approved documents that provide guidance about how the building regulations can be satisfied in common building situations, and these in turn are supported by a wide range of reference documents. These sub processes can be grouped under three major classifications: Core processes, Administrative processes and Public regulatory processes. These processes are termed Project Processes (Kwak, *et al*., 2002)

2.5. Project Management Process Groups

Humphreys, (2000), A Process is defined as a series of action bringing a result; in general, a process uses resources to transform inputs in to out puts. Project Management Process is a process which is applied to any goal oriented construction activities which recognizes the construction project life cycle and construction project management process nature of the project. Barrie and Paulson (2013), Management theory identifies four essential management processes that must be accomplished in any successful organization. Organizations can be designed to best perform these according to the needs of a specific project (Mustaro and Rossi, 2013).

2.3.1 Scoping process: - Clearly define desired project objectives. Scoping involves establishing realistic and specific objectives which establish in advance the desired results. Objectives must be stated in definite and measureable terms which cover costs, schedules and quality or performance requirements.

2.3.2 Planning process: - Predetermine a course of action to achieve project objectives. Planning activities include programming, costing and scheduling. For most projects these activities are highly interrelated and are developed in overlapping phases rather than sequentially, planning for most projects will evolve from a high level plan in the early stages to a very detailed implementation plan during the performance phase. An integrated plan will involve a work breakdown structure of codes for estimating scheduling, and costing direct and indirect work activities.

2.3.3 Executing process:- Integrate individual, consultant and contractor efforts in to an effective team Organization is the process used by managers to relate tasks to people, other firms, regulatory agencies and other interested groups in order to achieve an economical and timely performance. In developing an efficient organization, the manager must deal with the design of the structure, delegation of responsibility, working relationships between individuals and groups, and creation of a communications program designed to keep everyone fully informed.

2.3.4 Monitoring and Controlling process: - Monitor, influence, and direct achievement of project objectives throughout the performance phase. Control requires an awareness of the current status of cost, schedule and quality performance compared to project goals. Control can be achieved through frequent personal inspection of the operation by a knowledgeable person in order to judge whether or not the work is being properly performed.

2.6. Project Management Implementation Process

2.6.1. Executing Process

The Executing process group consists of those processes performed to complete the work defined in the project management plan to satisfy the project specifications (PMBOK, Guide, 5th Ed). The overall goal of the Executing process group is to set the teams in place to get the work done efficiently and effectively so that the project stays on target with the scope and previously agreed upon goals. One significant factor contributing to the success of projects is having the right people engaged in the process (Kerzner, 2003).

The Executing process group includes all processes related to recruiting and organizing the team and establishing the team operating rules (Jayne, and Dipboye, 2004). Many people with different skill sets and experiences are required throughout the life of a project to see it through to successful completion. Assignment of the right people to a project at the right time, as needed, is critical for the project's success and the effective utilization of the resources (De Korvin *et al*, 2002). The project teams are established as soon as they enter into a new project. However, the project can fail if the teams fall short of the selection of the right tools and techniques for managing the project in construction (Mamoon, 2015).

The Project team is responsible for executing tasks and producing deliverables as outlined in the project management plan (PMP). Teams are set in place to complete work according to stakeholder specifications. Lowe (2009) stated that the performance of the team can be increased by ensuring the basic teamwork principles in the construction. Teams can expand the outputs of individuals through collaboration. Employees who are working in teams become the standard for the organization (Alie, Beam and Carey, 1998). Project managers are assigning team projects to employees with opportunities to strengthen their knowledge and develop their skills for project success (Hartenian, 2003). A project team is a collection of individuals who are interdependent on the tasks and who share responsibility for the project's success (Cohen and Bailey, 1999).

Teams enable people to cooperate, enhance individual skills and provide constructive feedback without any conflict between individuals, and resolve problems (Jones *et al*., 2007). Team members enhance their skills, knowledge, and abilities while working in teams for project success (Froebel and Marchington, 2005). Grater teamwork increases the chances of project success and extra effort (Brainin, E, Shamir, 2000). At this stage in the work cycle, any areas of risk or concern are mitigated and change requests are addressed. So, the execution process involves coordinating people and resources, as well as integrating and performing the activities of the project by the project plan (Xie, and Zhang, 2013). The executing process group includes the following sub processes:

2.6.1.1. Core, Administrative and Public regulatory Processes

Core presses in the Execution phase include Project Plan Execution and written document about work packages. Administrative process in the execution phases include Recruiting the project team, contract administration body, Establishing team operating rules, Establishing the scope verification and change management process, Managing team communications finalizing the project schedule, Establishing regular communications between all parties. Public regulatory process in Execution phase includes Changes and variation handling guidelines, Public health and safety regulation follow up permits.

2.6.2. Monitoring and Controlling Process Group

The monitoring and Control process is an important process for providing an understanding of the project's progress so that when the project deviates significantly from the plan appropriate corrective actions can be taken. Project monitoring and controlling is a disparate set of processes to review, analyze and report the progress and performance of a project to the baseline plan as well as ensure compliance (Jalote, 2000). Project monitoring and control are critical to detect deviations from the project plan and take appropriate actions when needed. However, determining the action which should be taken is not an easy task. There will be an emphasis on monitoring and control of the project against the planned progress. There is a need for project managers to evaluate the application being developed according to an appropriate management approach (Mc Bride *et al*., 2007).

The monitoring and controlling process group address the skills needed to review progress and document benchmarks, keeping stakeholders up to date on progress and team performance through reports and ongoing documentation contributes to project success (Schwalbe, 2009).

The monitoring and controlling process group consists of those processes required to track and review the progress and performance of a project (PMBOK, Guide, 5^{th} Ed). Project monitoring and controlling process group activities help to keep the project on track.

Project monitoring and controlling, unlike the other process groups, is done from the beginning until the end of the project. These project monitoring and controlling process activities check whether the project is going as planned and whether there are any deviations from the baseline. The monitoring and controlling process group includes all processes Related to answering the question, "How will you know you did it? "The monitoring and controlling process group includes all processes related to the ongoing work of the project. These processes are as follows (Mc Bride *et al*., 2007).

2.6.2.1. Core, Administrative and Public regulatory Processes

Core Process in Monitoring & Controlling Phase includes establishing the project performance and reporting system. Administrative Process In Monitoring & Controlling Phase includes

Monitoring project performance, Monitoring risk, Reporting project status and Processing scope change requests. Public Regulatory Process In Monitoring & Controlling Phase and Checking Sustainability requirement performance report. It occupies the project manager with activities internal to the project team itself and with activities external to the project team and dealing with the client, the sponsor, and senior management.

2.7. Challenges of Project Management Process

Davidson, (1987) identified that requirements-related problems are one of the principal sources of time and cost overruns. He identified three major causes of these factors; incorrectly specified requirements, Specified Ambiguous requirements, and Changes in requirements as projects proceeds. He stated that such factors can be due to the Inability to identify user needs, and the inability to specify requirements adequately. This often resulted in several interruptions during project implementations

Samset, 1998 considered operational and contextual factors and concluded that operational uncertainties which were believed within the responsibility of the project management caused major problems.

Major challenges are operational and contextual factors were declared as the major causal factors. While he classified management weaknesses, inadequate project design, staff qualification and experience and funding problems as operational factors; he used also User's response, Environmental and Availability of resources, Institutional responses, Price changes, Political and social unrest and Government support as contextual factors (Shenhar and Dvir, 2007).

Odeh and Battaineh (2002) the main causes of delay in traditional contracts, they categorized eight major groups; however here six categories were formed by combining his three categories. They conducted an empirical study on Contractors and Consultants and indicated that client, contractor, contract, resources (material, labour and equipment) factors were most related to causal relationships for low performances. Lim and Mohamed (1999) identified four was declared new and considered here. This included factors which were believed to surface due to the root causes of the conceptual development so far in Project Management. The new

factors were, Management did not care; inherited problems from earlier phases along the management processes.

Though there are no scientific research-based studies found on causal factors for projects in Ethiopia Teferra (1996); identified causal factors as problems and constraints He indicated the following Causal factors: - Failure on amicable agreements leading to disputes and arbitration; Low capacity of domestic construction industry; Overrun completion and expenditures; frequent scarcity of construction materials and fuel; emergencies such as war and civil unrest; Critical shortage of skilled and professional personnel, risk sharing of contract conditions and tax rates together with customs procedures along his evolution of the construction industry.

A detailed literature on the management practices of construction projects in Ethiopia is difficult to find. As a result, research works in such industry is difficult or mystified (Jekale, 2004). Despite this, this review has tried to summarize existing literature on the subject area. Like any developing country the construction industry in Ethiopia plays major role and contributes highly to the development of the economy of the country including provides largest employment opportunities as governmental reports showed.

Developing countries like Ethiopia, spend substantial amount of their budgets in infrastructure development that involve significant construction works in projects such as construction of roads, buildings, water works, hydropower projects etc.FDRE Minister of Finance and Economic Development (2006) state the construction industry is still in the infancy stage, growing unfortunately, slowly both technically and financially. Like the industry in other developing countries, the construction industry in Ethiopia is plagued by many problems. The description of the current state of the industry given in various studies is summarized here under: Generally, the current state of the industry is characterized by an inadequate capital bases, Old and limited numbers of equipment and low levels of availability and utilization, Severe shortage of construction materials, most notably cement, Low level of management, especially project management knowledge and practice (Low level of Contract administration, Project planning and Project monitoring capabilities), Deficiencies in technical, financial management and entrepreneurial skills, Small-scale local contractors which lack experience in

construction management, Limited experience and participation of the private sector in large Outdated technology (insufficient and ineffective labour-based construction technology), Inadequate and inappropriate project organization structures, which lead to problems of authority, responsibility, communication and coordination, etc .

Jekale (2004) identify there is not enough construction and management capacity in the country. The companies are less experienced in project management. As Jekale has stated the management of construction project is highly influenced by the utilization of scarce financial and physical resource with controlling activities limited to cost and time monitoring dimensions only. Contractors cannot properly administer contract, most of them are not properly trained to prepare cost and schedule reports, quality records, safety reports, change order records, claims records, progress reports, payment requisition, etc.

2.8. Project Management Process Success

The ultimate purpose of implementing project management process and practices is to achieve consistency in project success. Yet the definition of success is so broad that its meaning varies across the different communities or cultures. There is no agreed definition of project success (Salleh, 2009).Many authors proposed different project success dimensions.

Baccarini (1999) discussed the logical framework method, defining project success as the combination of project management success and product success. The author suggested that time-cost-performance can be used as criteria for project management success while the goal and purpose of the projects (e.g. customer satisfaction and profit) should be used to measure product success. Which implies the quality and impact of the end product to the end user (in terms of satisfaction of user(s) needs, meeting strategic organizational objectives, satisfaction of stakeholder's need) when a project execution is finished.

PMBOK 4th Ed (2008) stated that a project is successful if it achieves the triple objective outcome of within time, scope, and quality. This is the traditional view of project management as used by Munns and Bjeirmi (1996). It implies the successful achievement of time, cost and quality objectives, as well as the quality of the project process. Ashley *et al* (1987) defined project success as the results much better than expected or normally observed in terms of cost,

schedule, quality, safety and participant satisfaction. Baker *et al* (1988) defined project success to include technical performance and satisfaction among various key people on the project to clients, project team and users. Power and Dickson (1973) mentioned in their work on managing information systems projects that time, cost and user satisfaction.

Lim and Mohamed (1999) cautioned that project managers should not only look at project success as the achievement of some predetermined project goals, like time, cost, performance, quality and safety, but also consider the users who do not have similar pre-determined goals regarding the project at all. Hence, the expectation on the outcome of the project and the perception of project success or failure will be different for everyone. In the late 1980s, after the introduction of TQM, a project was considered to be a success by not only meeting the internal performance measures of time, cost and technical specifications but also making sure that the project is accepted by the customer and resulted in customers allowing the contractor to use them as a reference. Atkinson (1999) separates success criteria into delivery and post-delivery stages and provides a "square route" to understanding success criteria: iron triangle, information system, benefit (organizational) and benefit (stakeholder community).

The iron triangle has cost, time and quality as its criteria (for the delivery stage). The post-delivery stages comprise: (i) the information system with such criteria as maintainability, reliability, validity, information quality use; (ii) benefit (organizational) such improved efficiency, improved effectiveness, increased profits, strategic goals, organizational learning and reduced waste, (iii) benefit (stakeholder community) includes satisfied users, social and environmental impact, personal development, professional learning, contractors profits, capital suppliers, content project team and economic impact to surrounding community. Lim and Mohamed (1999) describe as project success measurement into „micro viewpoint means completion time, completion cost, completion quality, completion performance and completion safety and macro-view point's includes completion time, completion satisfaction, completion utility and completion operation. Patanakul and Milosevic (2003) describe the project success criteria's they are grouped in to three: (i) criteria from organizational perspective: resource productivity and organizational learning, (ii) criteria from project perspective: time to market and customer satisfaction and (iii) criteria from personal

perspective: personal growth and personal satisfaction. Steinfort (2011) conclusion that "success needs to be investigated from the perspective of active project team stakeholders as well as from that of their client/benefit recipients and in the theoretical and empirical/practical review of critical success criteria and factors on any project.

As project success depends more on the perceptions of the stakeholders, probably there is no 'absolute success' in project management, but simply a "Perceived success" (Baker BN, Fisher D.1998). However, many authors agree on the inclusion of the triple constraint, in an attempt to define the achievement or attainment of project objectives the project success definition has been studied and developed from the simple attainment of cost, time and quality criteria, also known as the "iron triangle", or "triple constraint". These criteria are part of a multi-dimensional variable, which includes factors involving not only the project results, but also the customer's satisfaction. According to view of traditionally project management success, the three dimensions indicate the degree of the efficiency of project execution (Pinkerton 2003). Also called iron triangle.

Furthermore, a project may not be regarded as a successful endeavor until it satisfies the cost, time, and quality limitations applied to it (El-Maaty *et al*., 2017). Over the last 50 years, quality, time, and cost have become inextricably linked with measuring the success of project management. This is perhaps not surprising, since over the same period these criteria have usually been included in the description of project management process.

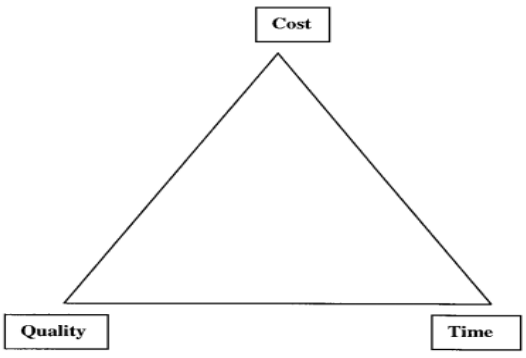

Figure2.3: The Iron Triangle for measuring project management process (Atkinson, 1999)

The three dimensions of time, budget and quality feature in many definitions of project management success. However, time, budget and quality are not sufficient to measure project management success as dimensions. Pinto & Slevin (1988) after sampling over 650 project managers, they 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. Satisfaction of the project stakeholder's expectations also needs to judge the project success (Baccarini 1999). Therefore, extending the traditional triangle (figure 2.3) with stakeholder's satisfaction (figure 2.4) provides a more complete view of project management success.

Figure2.4: Project management successes - extended traditional view

(Source: Atkinson, 1999)

2.8.1. Project Management Success Criteria

Success criteria for project management are those base values, on which project performance can be measured and evaluated (Görög, 2013).The criteria of project management success have been a variable in numerous studies. There is no mutual agreement on what should be used as the dimensions of project success. I have summarized the literature review of project success criteria in the following table.

Table 2.1: Project management success criteria's found in literature

Name	Title	Year	Success criteria
Ashleyet	Determinants of construction project success.	1998	Schedule, cost, quality, safety and stakeholder satisfaction.
Atkinson	Project Management: Cost, Time and Quality, Two Best Guesses and A Phenomenon, It's Time to Accept Other Success Criteria.	1999	Time, cost, quality, maintainability, reliably, Profit, Satisfaction of stakeholder, social and environmental impact.
Baccarini	Professional project management: a shift towards learning and a knowledge creating structure	1999	time, cost and quality
Baker,*et.al*	Factors affecting project success.	1988	Technical performance, stakeholder and client satisfaction.
Lim and Mohaed	Criteria of project success	1999	Time, cost performance, safety, meeting strategic goal and stakeholder satisfaction.
Munns and Bjeirmi	The role of project management in achieving project success	1996	Time ,cost ,quality and user satisfaction
Patanakul and Milosevic	Assigning new product projects to multiple-project managers	2006	Time ,cost ,quality and user satisfaction

PMBOK 4th ed	Project Management Body of Knowledge (PMBOK	2008	Time, cost, stakeholder satisfaction, Productivity and organizational learning
Power and Dickson	project management: Myths, opinions and realities	1973	Time. Cost, performance, profit and customer satisfaction

CHAPTER THREE- RESEARCH METHODOLOGY

3.1. Introduction

This part of the study attempts to describe the methods through which the research questions can be answered. Accordingly, it states about the research design, population and sampling procedures, data gathering methods, validity, reliability of the study and way of data presentation.

3.2. The study area

Adama, formerly Nazareth, is a city in central Oromia region of Ethiopia. Located in the East shoa zone 99 km (62mi) southeast of the capital, Addis Ababa, the city sits between the base of an escarpment to the west, and the Great Rift Valley to the east. Adama forms a special zone of Oromia and is surrounded by east shoa zone. It is located at 8.54 N 39.27 E at an elevation of 1712 meters. Adama is has different commercial building and a busy transportation center. The city is situated along the road that connects Addis Ababa with Dire Dawa (Alain G., 2003).

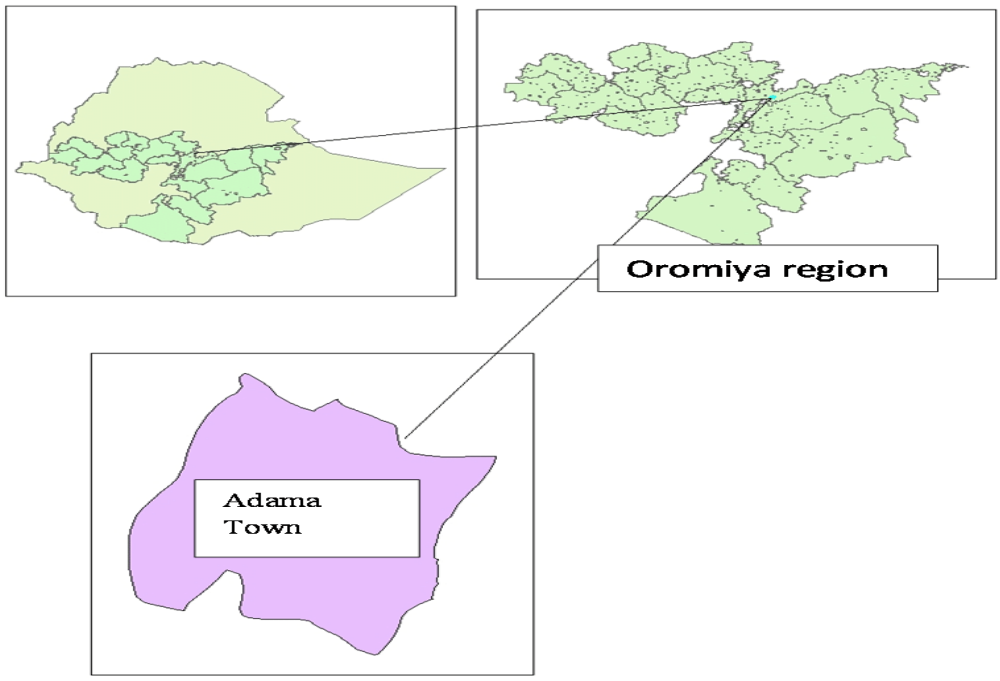

Figure 3.1 Map of the study area (Source: Temesgen and Hameed, 2015).

3.3. Research Design

This study is a type of descriptive research. The researcher used structured questioners and open-ended interviews for collecting quantitative and qualitative data respectively, in order to analyses the assessment and challenges confronting project management implementation process for the success of building projects in ACP. For this particular study, descriptive research, the so called explanatory research where survey and fact finding enquires to achieve the research objectives was utilized. The descriptive research is most suitably selected. The purpose of employing this method is to assess and describe the project implementation process, challenges of evaluates performance of the organization.

3.4. Population and Sampling

The population of the study was 34 building projects in Adama city construction under the supervision of construction authority. Since the population of the study was manageable in terms of cost and time, the whole population was considered as the sample unit.

3.5. Data Source and Types

In order to answer the research questions of the study, both primary and secondary data sources were used. The primary data was obtained from semi- structured interview and close ended questionnaire. The structured questionnaire and interview questions were adopted from various relevant literatures and books. The secondary data was gathered from project management books, reliable literatures, company brushers, project reports and company's website about the subject area.

3.6. Data Collection Procedure

The data collecting instruments being used for obtaining the primary data (semi- structured interview and close ended questionnaires) was prepared on the concern of assessment on project implementation process and challenges of construction projects in ACBP and project success criteria from various relevant literatures. The data to be collected through interviews

and questionnaire responses can provide the right information about the subject matter of the study because the sample population was selected from among the main project participants in the different tasks of the building project in ACBP.

Among the different data collection method, questionnaire was selected and to be used mainly due to reaching the sample population easily and economically whereas interview was selected to obtain more detailed information about the subject matter.

All selected sample population was requested to participate for the interview and questionnaire. The qualitative data procedure was scheduled based on the convenience of the interviewees. The interviewees were being briefed about the study orally by a researcher at the beginning of the interview. Participants were informed about the voluntary character of participation and the possibility to skip the question if they had no clear information about the issues to be raised by the researcher. The participants were guaranteed anonymity. In addition to the oral briefing, participants had obtained written information about the problem statement of the study. All participates were interviewed within 5 days and all the relevant documents were gathered and reviewed within two weeks. The quantitative data procedure was done through in person; it was collected back within even to fifteen days' time. The researcher had tried to clarify about the questionnaire to the participants.

3.7. Data Analysis and Presentation Method

For the purpose of this study, the descriptive survey method was adopted and data was obtained by means of using questionnaires and interviews.

The totals of seventy four questionnaires were distributed and sixty seven of them were properly filled and returned. The tables were used to display the results. All the collected data were analyzed using Statistical Package for Social Science (SPSS) software version 23 and MS –office excel 13.The data was coded and interpreted to make it simple for SPSS analysis. Descriptive statistics was used for ranking 5-point Likert Scale questionnaire format with a 1 for strongly disagree to 5 for strongly agree about the project implementation process practices and success criteria. The existing major challenges were ranked by the participants. The

Relative Importance Index (RII) was used mainly for comparing the contribution of each variable relative to others.

3.8. Validity and Reliability

The validity and reliability of the study were considered. The researcher had given care for the research data, research process and analysis and result of the research. For the purpose of this research the researcher had used different data collection techniques in order to ensure validity and reliability of data. The researcher personally evaluated the validity of data measuring instruments are accurate and the advisor was involved in consulting and reviewing the validity of the questions used for questionnaire and interviews. The respondents selected for the interviews and questionnaires were also closely familiar with the areas to be studied.

To test the reliability of the instruments, Cronbach's alpha was used as a measure of internal scale consistency using SPSS software. A scale is said to have good reliability, if Cronbach's higher than 0.7, then the research is considered to be reliable (Churchill and Brown, 2004).

Cornbrash's Alpha for each item is shown on the table (table 2). Cornbrash's Alpha value is 0.764, 0.756, 0.738 and 0.714 for the executing, monitoring and controlling, challenges and project management success respectively.

Table 3.1: Reliability Test

Items	Cronbach's Alpha	N of items	Overall Cronbach's Alpha
EP	0.764	11	0.924
MCP	0.756	10	
CCP	0.738	8	
PMS	0.714	6	

Source: survey data (SPSS result, 2022)

The value of Cronbach's alpha for each item is above 0.7. It is acceptable for research purposes (Nunnally, 1978). So, all values confirm the reliability of the measures.

3.9. Ethical Consideration

According to Creswell (2014) in addition to conceptualizing the writing process for a proposal, researchers need to anticipate the ethical issues that may arise during their studies. Research involves collecting data from people, about people. The researcher has followed ethical research procedures throughout the research process, respondents were clearly aware about the aim of the study, the data was collected with the full willingness of the participants and their confidentiality and secrecy of the respondents kept guaranteed. And also, all information and data from the company were used confidentially without any disclosing to public.

CHAPTER FOUR-RESULT AND DISCUSSION

4.1. Introduction

This chapter presents research analysis and discussion of the assessment of project management implementation process, challenges and project management success at Public and private construction projects by analyzing the data from questionnaires and interviews. The data was analyzed based on the research objectives and questionnaire items using a statistical tool to generate frequency distribution, means, percent and RII presented in tabular form. This chapter is organized into back ground of the study participants, analysis of the distribution of responses of respondents, executing process, Monitoring and controlling processes, challenges and project management performance.

4.2. Response Rate and Respondent background

4.2.1. Response Rate

Table 4.1: Response rate

Respondents	Sent out	Returned	Percentage
Clients	14	14	100%
Consultant	11	8	73%
Contractors	49	45	91.80%
Total	74	67	91%

The response rate is the extent to which the final set of data includes sample members and is calculated from the number of people filled and returned the questionnaires divided by the total number of people in the entire Sample, including those refused to participate and those were unavailable (Koltler, 1997). The studies targeted were 74 participants; however, 7 respondents were not returned the paper Only 67 participants correctly filled and returned the questionnaires.

The response rate equals 91%. According to Mugenda (1999) stipulation that a response rate of 50% is adequate for analysis and reporting; a rate of 60% is good and a response rate of 70% and above is excellent, this response was considered excellent for analysis and reporting.

4.2.2. Respondent background

Table 4.2: Educational level of respondents

	Category	N	%	Mean	STD.	X^2-Value
Educational level	Certificate	0	0	2.96	0.56	39.613[b]
	Diploma	12	17.9			
	Degree	46	68.7			
	Second Degree	9	13.4			
	PhD. and above	0	0			
	Total	67	100			

Table 4.2 above presents that majority of the respondents 46(68.7%) holds first degree, 12(17.9%) had college diploma and the remaining 9(13.4%) had second degree. from scholastic point of view almost all of the respondents were educated holding degrees. So that, the researcher was able to easily communicate and got the right information in the right manner.

4.2.3. Occupation of Respondents

Table 4.3: Job Position of respondents

	Category	N	%	Mean	STD.	X^2-Value
Job Position	Project Manager	7	10.4	3.49	1.71	11.161[b]
	Site Engineer	21	31.3			
	Contract Administrator	5	7.5			

	Construction Forman	12	17.9			
	Surveyor	10	14.9			
	Office Engineer	12	17.9			
	Total	67	100			

From table 4.3 above 7(10.4%) were project managers, 21(31.3%) were site engineers, 5(7.5%) were contract administrator, 12(17.9%) were construction Forman and 10(14.9%) surveyor and the remaining are 12(17.9%) were office engineer. As the data indicate that all of the respondents are professionals, so that the forwarding information was genuine and valuable.

4.2.4. Work Experience of Respondents

Table 4.4: Service year of the respondents

	Category	N	%	Mean	STD.	X^2-Value
Service Year	0-5 years	11	16.4			
	6-10years	32	47.8			
	11-20years	24	35.8			
	21years&above	0	0			
	Total	67	100	2.19	0.7	10.677[b]

Table 4.4 above describes 11(16.4%) of the respondents had a work experience between 0-5 years, 32(47.8%) between 6-10 years and the remaining 24(35.8%) were between 11-20 years' work experience. Here, it means that almost above 80% of the respondents were had above 5 years experienced so that they were assumed to be input this particular study.

4.3. Project Management Implementation Process, Challenges and Project Management Performance

4.3.1. Implementation Practices of Executing Process

As illustrated in the table 4.5 below, the study participants were given their opinions on a 5 Likert scale (1= Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5= Strongly Agree) to

assess the executing process implementation practices at Adama City Building Construction project

Table 4.5: Core Process of Executing process

Core process under Execution	SD	D	N	A	SA	Total	W	RII	Mean
Presence of Execution plan	13.43	28.36	29.85	17.91	10.45	67	190	0.567	2.836
Work packages.	14.93	31.34	17.91	23.88	11.94	67	192	0.573	2.866

From the core process under execution group, both the above mentioned practices exhibited comparable impact on the construction performance in study area. The majority of the respondent supposed the project don't have an execution plan which is every activity performed according to the plan were rarely applicable. Among the respondents, 9 (13.4%) strongly disagreed, and 19 (28.4%) disagreed with having an appropriate project execution plan. While the remaining 20 (29.9%) were neutral, 12(17.9%) agreed and 7(10.4%) strongly agreed.

Study participants were also gave their replies about the existence of written documents on work packages. The response of the respondents that disagreed is about 31(46.3%), 12(17.9%) neutral and the remaining 24(35.8%) were agreed. The mean value of this statement was 2.87 and the standard deviation was 1.27. This means is that most of the respondents were disagreed and this process practice does not apply to most of the projects in the study area. But one of the first things the project manager will want to do is make sure every team member has the same understanding of what the project is all about and should be documented (Salleh, 2009).

Table 4.6: Administrative Process

Administrative process under Execution	SD	D	N	A	SA	Total	W	RII	Mean
Proper selection and recruiting of the project team.	19.40	29.85	20.90	16.42	13.43	67	184	0.549	2.746

Contract administration body	16.42	34.33	22.39	17.91	8.96	67	180	0.537	2.687
Team operating rules in a place	14.93	28.36	26.87	17.91	11.94	67	190	0.567	2.836
Scope Verification process	16.42	29.85	25.37	23.88	4.48	67	181	0.540	2.701
Effective team communications	23.88	28.36	19.40	16.42	11.94	67	177	0.528	2.642
Finalized project schedule	20.90	37.31	28.36	7.46	5.97	67	161	0.481	2.403
Clear and regular communications	13.43	26.87	28.36	23.88	7.46	67	191	0.570	2.851

From table 4.6, the agreed response of the respondents for project managers following proper selection and recruiting of the project team is about 20 (29.9%), neutral 14(20.9%), and disagree 33(49.3%). Most of the respondent's opinions for this item were disagree. The mean value of this item was 2.75 and the standard deviation was 1.31. This finding shows that project managers did not follow the proper selection procedure for recruiting the project team. From the literature, effectively selecting and assigning the right people to a project at the right time, as needed, is critical for the project's success and the effective utilization of the resources. Study participants also gave their views about a contract administration body who assigned for administrative planning and control. The response of the respondents that disagreed was 34 (50.7%), neutral 15 (22.4%), and agreed 18 (26.7%). The mean value of this statement was 2.69 with the standard deviation of 1.20. This means most of the respondents have disagreed. But contract administration planning and controlling was the basic and facilitative for every activity of the project (De Korvin *et al*., 2002).

Study participants also gave their views about written project description documents in a place. The response of the respondents that disagreed was 34 (50.7%), neutral 15 (22.4%), and agreed 18 (26.7%). The mean value of this statement was 2.69 with the standard deviation of 1.20. This means most of the respondents have disagreed. But one of the first things the project manager will want to do is make sure every team member has the same understanding of what the project is all about (Schwalbe, 2009).

Also, the researcher has assessed team operating rules. The agreed responses for study respondents regarding the team operating rules was 20 (29.9%), neutral 18 (26.7%), and disagree 29 (43.3%). The mean value of this item was 2.84 with the standard deviation of

1.23. This finding shows that there is no adequate team operating rules. The ability of project managers to manage teams and stakeholder was low. However, during the implementation of the project, team operation rules should be in place for problem-solving, decision making, conflict resolution, and consensus building (Keil *et al*., 2013). The study assessed the scope change management process is established and there is in place. For this item, 31 (46.3%) of respondents disagreed, 17 (25.4%) were neutrals and 19 (28.4%) agreed. The majority of the respondents disagreed. The mean value of this item was 2.70 with the standard deviation of 1.13. This indicates that there is no scope change management process in place. According to the project management body of knowledge (PMI, 2008), the scope management process is one of the knowledge areas for effective project management. The research study also reviewed the communication ways of project teams. In the response of respondents for this item, 35 (52.2%) respondents disagreed, 13 (19.4%) were neutral and 19 (28.4%) respondents agreed. The mean value of all respondents for this item was 2.64 with a standard deviation value of 1.32. So, as shown in the result, there are no effective communication ways. From qualitative data, even the three project organizations met once per month to exchange information about the project status. About the Project has finalized project schedule to deliver the project activities have been assessed. From the table 4.6, the number of respondents that were agreed was 9 (13.4%), the number of respondents that kept neutral were 19 (28.4%) and the number of respondents that were disagreed 39 (58.2%). The mean value of this item was 2.40 with a standard deviation of 1.08. This result implies that the activity of the project was not delivered according to their schedule. This implies that project has faced the time overrun problem.

Finally, the researcher has critiqued that the project has clear and regular communications between all parties. From table 4.6, 27 (40.3%) respondents were not agreed, 19 (28.4%) were neutral and 21 (31.3%) agreed. The mean value of all respondents for this item was 2.85 with a standard deviation value of 1.15.The result indicates there is no regular communication between project parties. As the result of interviews, due to a lack of full stakeholder identification and improper selection criteria of project implementing teams, there was a great conflict. Most of the project has not been documented the team operating rules. This may lead to lose of time, compromise quality and result in cost overrun.

Table 4.7: Result data of Public Regulatory Process

Public Regulatory process under execution	SD	D	N	A	SA	Total	W	RII	Mean
Scope, time and cost change and variation orders	19.40	25.37	20.90	16.42	17.91	67.00	193.00	0.58	2.88
Health and Safety regulations	17.91	25.37	22.39	17.91	16.42	67.00	194.00	0.58	2.90

Study participants also given their views about scope, time and cost change, and variation orders are available and in place for this item, 13 (19.4%) and 17 (25.4%) strongly disagree and disagree respectively 14 (20.9%) were neutral 11 (16.4%) agreed and 12(17.9%) strongly agreed. The mean value is 2.88 and the standard deviation is 1.38. So that, the Scope, time, and cost change and variation orders are available and in-place practice is rare. Most of the projects have not accepted scope changes (design changes) came from stakeholders. This may lead to lose of time, compromise quality and result in cost overrun.

About the Project has Health and Safety regulations applied throughout the project activities have been assessed. From the frequency table 4.7, the number of respondents that agreed is 23 (34.3%), the number of respondents that were kept neutral is 15 (22.4%) and the number of respondents that disagreed is 29 (43.3%). The mean value of this item is 2.90 with a standard deviation is 1.34. This result implies the majority of projects did not have project Health and Safety regulations.

4.3.2. Implementation Practices of Monitoring and Controlling Process at Adama City Building Construction

The respondent's responses to implementing practices of monitoring and controlling activities at the Adama City Building Construction project. Result data of Monitoring and controlling process

Table 4.8: Result data of Core process

Core process under M and C	SD	D	N	A	SA	Total	W	RII	Mean
Project has clearly established project system	25.37	31.34	19.40	16.42	7.46	67.00	167.00	0.50	2.49
Forecasting future progress	17.91	37.31	23.88	14.93	5.97	67.00	170.00	0.51	2.54

The study analyzed weather the project has established project performance and reporting system. In the respondent's responses for this item, 38 (56.7%) respondents were not agreed, 13 (19.4%) respondents kept neutral and 16 (23.9%) respondents agreed. The perceptions of most of the respondents were disagreed. The mean value of this item was 2.49 with a standard deviation value of 1.24. The finding shows that there was no established project performance and reporting system in most of the projects. The absence of this process may compromise the overall quality, time and cost. This can result in discourage the success of the project. To make sure that the project has proceeded according to plan, a clear project performance and reporting system are necessary.

Table 4.9: Result data of Administrative Process

Administrative process under M & C	SD	D	N	A	SA	Total	W	RII	Mean
Regular monitoring and review.	13.4	31.3	28.4	17.9	9.0	67.0	186.0	0.6	2.8
Accurate status reports	17.9	28.4	23.9	19.4	10.4	67.0	185.0	0.6	2.8
Ongoing process in place to monitor and control project risks.	25.4	29.9	20.9	13.4	10.4	67.0	170.0	0.5	2.5

Review and process scope, schedule and cost control, and change requests.	19.4	28.4	23.9	22.4	6.0	67.0	179.0	0.5	2.7
Project manager consulted with the client	16.4	32.8	26.9	14.9	9.0	67.0	179.0	0.5	2.7
Contractor implemented remedial action	20.9	31.3	23.9	14.9	9.0	67.0	174.0	0.5	2.6

The study participants also reflect their views on wreathing regular and careful progress (time, scope, and cost) monitoring and reviewing throughout the project practices implemented or not. From table 4.9, 30(44.8%) respondents disagreed, 19(28.3%) respondents were kept neutral and 18(26.9%) agreed with the statement. The mean value of this item from table 4.9 is 2.78 with a standard deviation of 1.16. This result indicated that the project has no regular and careful progress (time, scope, and cost) monitoring and review throughout the project. But researchers recommend that regular and careful progress (time, scope, and cost) monitoring and review throughout the project life help to keep the project on track.

The views of the respondents about the item of the project have accurate status reports and clear reporting lines have been analyzed. The number of respondents that disagreed is 31(46.3%), the number of respondents that were kept neutral is 16(23.9%) and the remaining 20(29.9%) respondents agreed with the statement. The mean value of all respondents for this item is 2.76 with a standard deviation value of 1.25. This implies that the project did not have accurate status reports and clear reporting lines.

The study research analyzed that the project has There is an ongoing process in place to monitor and control project risks. In the respondent's responses for this item, 37(55.2%) respondents were not agreed, 14(20.9%) respondents kept neutral and 16(23.9%) respondents agreed. The perceptions of most of the respondents disagreed.

The mean value of this item is 2.54 with a standard deviation value of 1.29. The finding shows that there is no There is an ongoing process in place to monitor and control project risks. To make sure that the project has proceeded according to plan, a clear project risk control mechanism is necessary.

The opinion of respondents about review and processing scope change requests has analyzed from the frequency table, 32(47.8%) respondents disagreed, 16(23.9%) were kept neutral and 19(28.4%) respondents were agreed with the statement. But most of the respondents disagreed. The mean value is 2.67 and the standard deviation is 1.19. This indicated that there is no accepted and processed scope change request. However, changes may happen in projects but they must be integrated into the existing project scope statement by referring to a defined change process (Kerzner, 2013). The opinion of the study participants regarding the project manager consulted with the client on discovering and problem-solving issues have been assessed. The number of respondents that disagreed is 33(49.3%), 18(26.7%) were kept neutral and 16(23.9%) respondents agreed with the statement. The mean value of this item is 2.67 with a standard deviation is 1.18. From the result, most of the respondents disagreed. The project manager was not consulted with the client on discovering and problem-solving issues.

The research study also assessed the views of respondents about the contractor implementing remedial action by the approved remedial action plan, rules, and applicable program guidance. From the frequency table result, the number of respondents was not agreed on the item is 35 (52.2%), the number of respondents who were kept neutral is 16 (23.9%) and the number of respondents that were agreed is 16 (23.9%). The mean value of this item is 2.60 with a standard deviation of 1.22. This result indicated that contractors were not implementing remedial action by the approved remedial action plan, rules, and applicable program guidance.

The aggregated mean value of monitoring and controlling is 2.64 with a standard deviation of 1.22 this value is less than 3 (neutral). So, the majority of respondents' responses are disagreeing. From the interview result, the project has not had regular and careful progress (time, scope, cost quality, and satisfaction of stakeholders) monitoring and review throughout the project. There is no on-going process in place to monitor and control the system of project risks and to process scope change requests. This implies that monitoring and controlling

activities were not performed effectively and can be one of the factors that affect the project that cannot complete within planned time, cost, quality, and stakeholder requirements. But monitoring and controlling the process for the project must start at the beginning (initiation) step and it is continuous up to the closing of the project. Effectively implementing the monitoring and Control process is an important success factor for providing an understanding of the project's progress and taking appropriate corrective actions to ensure compliance (Mahmoud. K, 2013).

Table 4.10: Result data of Public regulatory

Public regulatory process under M & C	SD	D	N	A	SA	Total	W	RII	Mean
Sustainability requirement	23.9	28.4	20.9	14.9	11.9	67.0	176.0	0.5	2.6
Renewal of permit	20.9	26.9	17.9	22.4	11.9	67.0	186.0	0.6	2.8

The research study also assessed the views of respondents about their sustainability requirement for performance checking reports From the frequency table result, the number of respondents was not agreed on the item is 35 (52.2%), and the number of respondents who were kept neutral is 14 (20.9%) and the number of respondents that were agreed is 18 (26.9%). The mean value of this item is 2.64 with a standard deviation of 1.32. This result indicated that the majority of the projects do not have sustainability requirement performance checking reports.

4.4. Assessment the Project Management Challenges of Building Construction Projects of Adama City Relative importance RII and Rank

Table 4.11: Challenges facing the building contraction projects

	SD	D	N	A	SA	Total	W	RII	Mean
Cost overrun	4.48	5.97	8.96	46.27	34.33	67.00	268.00	0.80	4.00
Scarcity of construction materials	7.46	10.45	14.93	41.79	25.37	67.00	246.00	0.73	3.67

Shortage of skilled man power	10.45	16.42	20.90	28.36	23.88	67.00	227.00	0.68	3.39
Political and social unrest	23.88	22.39	14.93	20.90	17.91	67.00	192.00	0.57	2.87
Risky contract condition	14.93	16.42	20.90	25.37	22.39	67.00	217.00	0.65	3.24
Agreement related disputes	14.93	17.91	14.93	26.87	25.37	67.00	221.00	0.66	3.30
Funding problem	13.43	16.42	17.91	31.34	20.90	67.00	221.00	0.66	3.30
Labor negligence	16.42	19.40	11.94	28.36	23.88	67.00	217.00	0.65	3.24

The 80.6% of the respondents revealed that Cost overrun is the major factor affecting the overall project followed by Scarcity of construction materials in the country with an RII vale of 0.8 and 0.73 respectively. Where, the shortage of skilled man power, political and social unrest, risky contract condition, agreement related disputes, funding problem, labor negligence were the major factors recorded to be the challenges with different RII values as indicated in the above table. This result is in line with different authors in the context of Ethiopia and other countries. For instance Teferra (1996); identified causal factors as problems and constraints. He indicated the following Causal factors: Overrun completion and expenditures; frequent scarcity of construction materials and fuel; emergencies such as war and civil unrest; Critical shortage of skilled and professional personnel, risk sharing of contract conditions and tax rates together with customs procedures along his evolution of the construction industry. While Knut Samset, (1998) and Odeh and Battaineh, (2002) considered operational and contextual factors material, labour and equipment factors were most related to causal relationships for low performances. Institutional responses, Price changes, Political and social unrest and Government support as contextual factors.

4.5. Assessment the Project Management Performances of Building Construction Projects of Adama City

The study research has assessed the project management performance based on project management success criteria (time, cost, quality, and stakeholder satisfaction). The result as

shown in Table 16

Table 4.12: Result data of project management performances of Building Construction Projects

Success factors	SD	D	N	A	SA	Total	W	RII	Mean
Project completion on time or faster	31.34	35.82	16.42	10.45	5.97	67.00	150.00	0.45	2.24
Project completion under or on budget	26.87	35.82	23.88	8.96	4.48	67.00	153.00	0.46	2.28
Project met quality standards	17.91	26.87	17.91	22.39	14.93	67.00	194.00	0.58	2.90
Project outcome met the stakeholder's requirements	22.39	28.36	19.40	17.91	11.94	67.00	180.00	0.54	2.69
Stakeholders satisfaction	26.87	34.33	22.39	10.45	5.97	67.00	157.00	0.47	2.34
Project overall success	26.87	31.34	22.39	11.94	7.46	67.00	162.00	0.48	2.42

The highest relative importance index was exhibited for the failure of the project outcome to meet quality standards (RII = 0.579). From the finding, table 14, the majority 45 (67.2%) of respondents for these success criteria have disagreed, and the mean value and standard deviation of 2.24 and 1.17 respectively. Most of the Projects were not completed on a schedule. When assessing the project's cost, most of them were not on budget. From the data results, 42 (62.7%) study respondents disagreed regarding whether the project is on budget.

The respondents also evaluate whether the Project met all specification requirements based on quality standards. As shown in Table 14, 30 (44.8%) of the respondents were not agreed, the mean value was 2.9 with a standard deviation value of 1.34. This indicated that the project didn't meet quality standards and did not meet the stakeholder requirements.

The respondents also gave their opinion regarding the stakeholders of the project and weather ultimately satisfied with the outcomes of this project due to completion on planned time and planned cost as well as quality specification. The mean value of all project success criteria was 2.48 with a standard deviation of 1.21.

From the qualitative results, the project management implementation process (executing, monitoring, and controlling) were not documented and updated; the project has not been documented and dynamic project management process strategies. As a result of interviews, the projects were not on schedule, on budget, and not meeting the quality standards, hence, not satisfying the clients. The finding shows that the project management performance at the Adama City Building Construction project is low. The cause of the projects those were not completed on planned time, cost, and specified quality is poor project management process executing and monitoring, and controlling (Pinto and Mantel, 1990).

Generally, the overall data analysis implies that the whole process i.e. the core, administrative, and public regulatory processes in each implementation group were not properly applicable. For instance, the majority of project that has been done by project implementers (contractors) and consultants who had low project management process knowledge and skills and they did not use formal project implementation process and practices.

CHAPTER FIVE- CONCLUSION AND RECOMMENDATIONS

5.1. Introduction

This chapter presents the summary of findings in relation to the evaluation of the research objectives/questions. It also gives the conclusion derived from the summary of findings and proposed recommendations about what should be improved in the area of this research of project management implementation process practices. Finally, gives recommendations on the topics for further studies.

5.2. Conclusions

From the overall finding, the following major conclusions were drawn

- The whole execution process group the sub processes including the core (plan execution and project description document), administrative (Proper selection and recruiting of the project team etc.), and public regulatory (scope, time and cost change and variation orders Health and Safety regulations), were not properly applicable.

- From the monitoring and controlling process group i.e. existence of a clearly established project system and so on have not been properly exist or applied in most of the projects.

- Cost overrun, Scarcity of construction materials, Shortage of skilled man power, Political and social unrest, Risky contract condition, Agreement related disputes, Funding problem, and Labor negligence were recorded to be the most underlying challenges the Adama city construction projects are facing.

The success of project management is indicated by its performance in the achievement of project time, cost, quality, and customer specification. Project success is typically generated when the stakeholders and constituents express their collective satisfaction according to the degree of their involvement. Also, projects are nowadays far more complicated than ever before, they involve large capital investments and several disciplines, widely dispersed project

participants, tighter schedules, and stringent quality standards.

Since project management needs quality information, discipline, and goal orientation requires steam working skills, continuous stakeholder involvement, dynamic project execution plan, dynamic project risk management, and so on rather than rigid functional divisions and the creative concept of project implementing process management practices is needed.

About the overall performance of the project, it is generally concluded that the success factors were not met. I.e. the Project overall success was poor; the Project outcome didn't met the stakeholder's requirements and the overall quality standards.

5.3 Recommendation

Based on the findings explored, the study recommended that,

- The executing, monitoring and controlling process groups should be undertaken in a scientific manner rather than in an intuitive manner.
- The authority is expected to have the technical capacity of how to execute, monitor and control, so as to prevent and even to take remedial solution once it happens
- In order to manage project properly with a good implementation process, project managers should have a project management capability (technical, human and project related capabilities).
- Project managers should encouraged to possess professional project management certifications and to apply comprehensive set of project management methodology including its tools, techniques, capabilities, processes and knowledge areas for a greater project success.
- There should be a risk management system and plan to prevent the adverse conditions with scientific and cautious manner.
- Practical networking with the concerned stakeholders should be in place for effective

implementation project management process and to manage the distress.

- The project should have a clear and regular communications between all project parties in ordered to implement project process group.

- To come up with the challenges, providing trainings about project management knowledge areas, project management processes, organizational standards, project management tools such as earned value analysis, Gantt chart and Microsoft Project Management software, to the client project management teams in order to develop project management knowledge and project management methodology, to improve the performance of the construction projects implementation.

- Project implementation performance should be monitored and evaluated regularly and mitigation measures need to be done on time.

Generally, the Project managers should adopt the project management competence in order to lead their projects successfully through the appropriate project management knowledge, skills, tools and techniques.

5.4. Suggested Area for Further Studies

The researcher has tried to assess the implementation process practices of the project management process at the implementation stage in the case of the Adama City Building Construction project. The scope of this study is limited to only one city building project. Hence, the researcher recommends the following topics that can be studied in the project management process to other researchers.

1. Assessment Planning process practices of project management process
2. Assess the impact of the project manager's competencies on the project management process for project success.
3. Assess the integration impact of project management knowledge area with implementation process practices on project management performance success.

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APPENDICES

Appendix A- Questionnaire Survey Questionnaire for Survey

Project Title:-Assessment on Construction Project Implementation Process. The Case of Adama City Construction Authority Projects

Dear Respondent:

I would like to express my appreciation and thanks for your time and effort in competing for this questionnaire. This questionnaire is prepared to collect necessary data for academic research entitled Assessment on Construction Project Implementation Process in the Case of Adama City Construction Authority Projects" which is being conducted as partial fulfillment of the Master's degree in construction engineering and management at Adama Science and Technology University.

All information in the questionnaire will be used only for academic research and will be strictly confidential. Therefore, I kindly request that you indicate your answer to each questionnaire by filling in the space provided with the correct answer.

Detail of the researcher

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Part one: Demographics

Instruction: Please indicate your response by ticking on the box provided.

No	Questions	Answer/Choices of Respondents	Remark
1	Gender	1.Male ☐ 2.Female ☐	
2	Age Group	1.Below25years ☐ 2.25-30-years ☐ 3.31-35 years ☐	

		4.36-40-years ☐ 5.Above40years ☐	
3	Highest Level of Education	Below diploma ☐ Diploma ☐ Degree ☐ Masters ☐ Doctorate ☐	
4	Occupation of respondents in the project.	Manager ☐ consultant ☐ Client representative ☐ Other ☐	
5	Work experience	Lessthan1year ☐ [1–2)years ☐ [2–3)years ☐ 3years ☐ And above ☐	

Part b: Assessment the Implementation practices Executing and Monitoring and Controlling Process Group and Project Management performances at ACBP.

This questionnaire is designed to help you critique your project management implementation process practices, challenges and project management performances. Please tick (√) the appropriate number to each of the following statements about your project. Indicate the degree to which you agree or disagree with the statement by marking one response for each item, with each statement. 1= Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5= Strongly Agree.

No	Executing Process		1	2	3	4	5
	Core Process						
EPC1	Presence of Execution plan						
EPC2	Work packages						
	Administrative Process						
EPA1	Project managers follow proper selection and recruiting of the project team members.						
EPA2	There is a written project description document.						
EPA3	There is an established team operating rules in a place.						
EPA4	Scope change management process is established and there is no place.						
EPA5	Project managers able to manage team communications with effectively.						
EPA6	Project has finalized project schedule.						
EPA7	There is written document about work packages.						
EPA8	The project has clear and regular communications between all parties.						
	Public Regulatory						
EPP1	Scope, time and cost change and variation orders						

EPP2	Health and Safety regulations					
	Monitoring and Controlling Process					
	Core Process					
MCPC1	Project has clearly established project performance and reporting system.					
MCPC2	Forecasting future progress					
	Administrative Process					
MCPA1	There is regular and careful progress (time, scope, and cost) monitoring					
MCPA2	The project has accuracy status reports and has clear reporting lines.					
MCPA3	There is an on-going process in place to monitor and control project risks.					
MCPA4	Review and processing scope change requests.					
MCPA5	Project manager consulted with client on discovering and problem					

MCPA6	The contractor implemented remedial action in accordance with the						
	Public Regulatory						
MCPP1	Scope, time and cost change and variation orders						
MCPP2	Health and Safety regulations						
	Challenges						
C1	Cost overrun						
C2	Scarcity of construction materials						
C3	Shortage of skilled man power						
C4	Political and social unrest						
C5	Risky contract condition						
C6	Agreement related disputes						
C7	Funding problem						
C8	Labor negligence						
	Project management success measured criteria's						
	Success	Success measures					
PS1	Time	Project was completed on time or faster.					
PS2	Cost	Project was complete under budget or on budge.					

PS3	Quality	Project met all specification requirement based on					
PS4	Stakeholder Satisfaction	The outcomes of the project were meets the Stakeholder's requirements.					
		The stakeholders of the project were ultimately satisfied with the outcomes of this project due to complete on planed time and planed cost as well as quality Specification.					
PS5	Overall	Overall, this project can be considered a successful					

Appendix B- Interview Questionnaires.

Dear interviewees,

This interview question is design for assessing the implementation process practice of project management process in your project organization. The following questionnaire has been developed to help the researcher gather information which is necessary to answer the research questions of the study by interviewing your project manager's .I am not published your name in final research document. So, I will hopeful to give the necessary information based on below interview equations.

1. Educational background and level.
2. Work experience.
3. Name of project contractor, consultant and project sponsor.
4. How are your delivery methods and organization structures that define a framework of contractual and communication links among project team members.
5. Do all staff members know the implementation process practices?
6. Is your project has, Executing and monitoring & controlling process?
7. What are the challenges of implementation practice in your project organizations
8. Did all implementation process have defined, documented and updated?
9. How to measure your project management success?
10. What do you say about the project implementation process practice?
11. Is your project meets the planned time, cost, and quality and satisfy the stakeholders? If no, why?
12. Do you have any issue of your project implementation process practice management and project management success?