

Addis Ababa University

School Of Commerce

College of Business and Economics

Department of Project Management



**PRACTICE AND CHALLENGES OF PROJECT PLANNING: THE CASE
OF SATCON CONSTRUCTION COMPANY HEAD OFFICE IN ADDIS
ABABA ETHIOPIA**

By:

Endalkachew Tadesse

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June, 2018

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**A Thesis Submitted for Partial Fulfillment of the Requirement for
the Award of Masters of Arts Degree in Project Management**

Advisor:

Teklegiorgis Assefa (Asst. Prof.)

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ETHIOPIA**

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Declaration

I, the undersigned, declare that this research project work titled the practice and challenges of project planning: A Case of Satcon Construction Company, is my original work, and has not been presented for the award of Degree or Diploma Program in this or any other institution. All sources of materials used for the project have been accordingly acknowledged.

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Abstract

This thesis was conducted in Satcon Construction Company Head Office, Addis Ababa with the aim of assessing the practice and challenges of project planning. Data was collected from project managers of the company, Sponsors' representatives, a few randomly selected clients and Project team members. A total of 40 respondents were included in the study. Both the qualitative and quantitative methods were applied in collecting and analyzing the data. The samples were selected using stratified sampling and then simple random sampling technique. Two sets of questionnaire were used in collecting data sets. Key informant interview and secondary data were also used to support survey report results. The study has identified the actual project planning practices of the company as well as the major challenges of the project planning process. The major challenges identified by this study include lack of awareness, lack of coordination and absence of sufficient data and resources for the project planning process. The project planning process does not involve the clients and the entire project team to the required level – in decision making and benefits of the process in general. Thus concerned bodies should provide awareness creation training, advice and support to project managers and project team members as well as allocate sufficient resource and gather adequate data before the actual project planning process commences. The entire stakeholders should also take part in the project planning processes so that they would be eager to realize it since they feel it is their own plan.

Key Words: construction project planning, challenges of project planning, project team participation, sufficient data and resources

Table of Contents

Contents	Page
Acknowledgement	i
Abstract	ii
Table of Contents	iii
List of Tables	iv
List of Figures	v
LIST OF ACRONYMS	vi
CHAPTER ONE	
1. INTRODUCTION	1
1.1 Background of the Study	1
1.2 Background of the Target Organization	2
1.3 Statement of the Problem	3
1.4 Research Questions	4
1.5 Objectives of the Research	4
1.5.1 General Objectives	4
1.5.2 Specific Objectives	4
1.6 Scope of the Study	5
1.7 Limitation of the Study	5
1.8 Significance of the Study	5
1.9 Organization of the Study	6
CHAPTER TWO	
2. REVIEW OF RELATED LITERATURE	
2.1 Definition and Concepts of Project Planning	7
2.1.1 What is a project?	7

2.1.2 What is Planning?	7
2.1.3 Project Planning	8
2.2 Elements of a Project Plan	9
2.2.1 Project Scope Planning	9
2.2.2 Delivery Schedule Planning	10
2.2.3 Human Resource Planning	10
2.2.4 Project Cost Planning	10
2.2.5 Project Communication Planning	11
2.2.6 Project Quality Planning	11
2.3 Benefits of Developing a Project Plan	11
2.4 Challenges of Project Planning in Construction Projects	12
2.5 Project Management Process	13
2.6 Project Planning Techniques	15
2.7 Conceptual Framework	15
CHAPTER THREE	
3. RESEARCH DESIGN AND METHODOLOGY	
3.1 Research Design	17
3.2 Population	18
3.3 Data Collection Instruments	18
3.4 Data Type and Source.....	18
3.5 Sampling Technique and Sample Size	18
3.6 Method of Data Analysis	19
3.7 Ethical Issues	19
3.8 Reliability and Validity	19

CHAPTER FOUR

4, DATA PRESENTATION ANALYSIS AND DISCUSSION

4.1 Characteristics of the Respondents	20
4.2 Knowledge Interest and Attitude Assessment of Project Managers	22
4.3 Assessment of the Level of Support from the Government	25
4.4 Sponsors' View on the Project Plans of the Company	26
4.5 The Feeling of Sponsors when Invited for Planning Activities	28
4.6 Sponsors' View on the Relation of Project Plans and Deliverables' Quality	29
4.7 The Major Challenges in the Project Planning Processes	32

CHAPTER FIVE

5. CONCLUSION AND RECOMMENDATION

5.1 Findings	34
5.2 Conclusion	36
5.3 Recommendation	37

References

APPENDICES

List of Tables

Tables	Page
Table 4-1. Characteristics of the Respondents	20
Table 4-2. Frequency and percentage distribution of project managers and Sponsors	21
Table 4-3. Knowledge, Interest and Attitude Assessments of Project Managers	22
Table 4-4. Level of Government Support	25
Table 4-5. The extent of agreement or disagreement on construction project plan	26
Table 4-6. Feelings of Project Sponsors on the project plans	28
Table 4-7. Sponsors' View on the Relation of Planning and Project Outcomes	29

List of Figures

Figures	Page
Figure 1. Elements of Project Planning	9
Figure 2. Project Planning Process	14
Figure 3. Conceptual Framework	16

LIST OF ACRONYMS

ADM	Arrow Diagramming Method
AOA	Activity on Arrow
AON	Activity on Node
IT	Information Technology
PDM	Precedence Diagramming Method
PERT	Program Evaluation and Review Technique
PMBok	Project Management Body of Knowledge
SPSS	Statistical Package for Social Sciences
WBS	Work Breakdown Structure

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Ethiopian economy has enjoyed a high rate of economic growth for the past decade. In order to maintain its achievement for continual growth, Ethiopia seeks to provide more electricity, more roads and expansion of sanitation facilities, telecommunication networks, as well as large scale investment to expand its infrastructure.

Numerous projects have turned around Ethiopia's economic decline, particularly in the city of Addis Ababa. Currently, the country forms the heart of Africa's economic evolution due to high demands in the construction sub-sectors. The wave of construction in Addis Ababa has extended into other Ethiopian cities, causing investors to take serious measures in expanding their business in the country (Badiru, A.B. 1996).

A famous military adage from the British army goes; Proper Planning and Preparation Prevents Poor Performance. Planning in construction is no exception. Planning is one of those aspects that affect the outcome of so many different things in life (Kerzner, H. 1998).

Bearing in mind that there are so many different personnel (professionals) involved in the construction process, one has to ensure that each of these is duly included in the planning process. The planning in construction phase entails determining the resources required for the project and should not only focus financial planning but also time, materials, suppliers as well as human resource i.e. labour. The equipment needed for the project is also determined at this phase. It will also help to manage project team to deliver project on time. For the effectiveness of project success these processes should be properly planned. The result of the project planning, the project plan, will be an approved, comprehensive document that allows a project team to begin and complete the work necessary to achieve the project goals and objectives.

When it comes to the actual construction works on the project, failure to undertake planning in construction well results into tasks getting neglected or unsatisfactorily done because one is in a hurry to move on to the next task; and as a result the structure may not achieve the desired structural strength properties (Atkinson, R. 1999).

The project plan will address how the project team will manage the project elements. It will provide a high level of confidence in the organization's ability to meet the scope, timing, cost, and quality requirements by addressing all aspects of the project. With planning comes deliverables and poor planning results in delayed project completion, cost overruns and poor quality work among other things. It is therefore important that the team in charge of the project accurately and appropriately plans prior to execution of activities to ensure smooth flow of works, value of money and timely completion. Therefore planning was identified as extremely important project management function for the successes of project outcome (Atkinson, R. 1999)

This study is particularly concerned with the practice and challenges of project planning with the focus of different projects undertaken in Satcon Construction Company, Addis Ababa, Ethiopia. After analysis and identifying the practice and problem areas of project planning in Satcon Construction Company, this thesis will recommend the essential information, activities, and procedures in a systematic way to improve the problem of project planning in the Company.

1.2 Background of the Target Organization

SATCON Construction Company was established in 1982 E.C having license grade seven with the initial capital of 5 million birr.

By improving its efficiency from time to time, it upgrades its license and becomes general contractor of grade one and thoroughly participates mainly with the construction of road, building and irrigation. At the present time, the company's annual turnover amounts over 200,000,000 birr and its capital including its fixed assets (machinery, building, etc.) amount 600,000,000 birr.

Its current man power is 1, 218 permanents, 434 contracts, and 4,221 daily laborers, total of 5,873 workers involve in the day to day operations of SATCON Construction Company.

Nowadays, the company becomes one of the companies which participate in the construction sector in Ethiopia and its participation in the fulfillment of governmental goals and strategies in the sector of infrastructure.

Having this into consideration, the intention of this study was to investigate the practice and challenges of project planning in SATCON Construction Company, Addis Ababa.

1.3 Statement of the Problem

Projects are needed to be completed within the time frame, budgeted cost and required quality. However, unfortunately many projects take longer time to complete, cost more than necessary and some projects are cancelled because of inefficient planning and related challenges directly and/or indirectly related with it (Richard A. 2012).

If the project takes longer time than anticipated, it requires additional resources, and budgets. This consequently increases labor, material, machinery and equipment cost. This affects the budget of other projects and in general, it affects the economy of the country. Similarly, due to delay in project implementation the people and the economy have to wait for the provision of public and services facility longer than necessary. Thus failure of a project limits the growth of the economy because the output provided by infrastructure, construction, manufacturing, IT projects serve as input for many other sectors of the economy (Richard A. 2012).

Project failure is also the main challenge of our country's projects. For example 79% of the executed projects fail to meet their objective. The performance problems of project (cost overrun, time delay, quality deficiency) are caused by either in selection, planning, execution or control phase of the project and other factors. However, according to Richard A. (2012) one of the main reasons of project failure in developing countries is lack of effective planning processes.

According to PMBoK, (2004), the planning processes are highly important; and project execution without proper/poor/ development of a project plan often causes delays, high costs and general execution problems in the project. The studies by Brisgone A. (2012), show that time spent on project planning activities will reduce risk and increase project success. Other researchers on the project planning activity such as Morris (1998), Thomas, Jacques, P.H.J.R (2008) show inadequate analysis and planning will lead to a failed project but the more planning there is in a project, the more successful the project will be.

Satcon Construction Company is one of the largest construction companies in Ethiopia. However, most of the projects undertaken in the company fail to meet their schedule and cost requirements. This is basically due to inefficiency of project planning that takes place in the Head Office. This inefficiency is believed to emanate from several challenges that the project planning team faces in the course of project planning activities.

Therefore, this study identified and assessed the project planning practices and problem areas in Satcon Construction Company, Addis Ababa to eventually help the company take corrective actions and prevent project failure by producing dependable project plan.

1.4 Research Questions

Particularly, the study attempted to answer the following basic questions.

1. What is the current project planning process in the Company?
2. What are the common problem areas exhibited in the planning process in Satcon Construction Company?
3. Who are the stakeholders that involve in the project planning process of the company?
4. What are the major challenges in relation to the process of project planning?

1.5 Objectives of the Research

This study was mainly conducted to attain the following general and specific objectives.

1.5.1 General Objectives

The general objective of the study was to assess the current practice and challenges of project planning in Satcon Construction Company in Addis Ababa.

1.5.2 Specific Objectives

In order to relate its purpose, the study aims at treating the following specific objectives under the shadow of the general objectives so that the research at the end would be able to:

- ❖ assess the existing project planning process in Satcon Construction Company
- ❖ identify the common problem areas exhibited in the project planning process
- ❖ Identify the stakeholders who take part in the project planning activities
- ❖ Analyze the major challenges in relation to project planning

1.6 Scope of the Study

Different studies have been conducted to assess the practice and challenges of project planning in construction industry in Ethiopia in general and from different sectors. However, this study focused on only the practice and challenges of project planning in Satcon Construction Company, Head Office in Addis Ababa.

1.7 Limitations of the Study

As mentioned above, the study was restricted only in Satcon Construction Company, Head Office in Addis Ababa. Hence, the conclusion and recommendations might not serve for the country Construction Sector in general. Moreover, being an outsider to the case organization might limit what was revealed to the student researcher. This consequently might limit the accuracy of the information that was collected.

1.8 Significance of the Study

This study attempted to analyze the practice and challenges of project planning in Satcon Construction Company. In doing so the result of the study can also be used as an input for other construction companies and other business sectors at local government and private level to articulate the right project planning practice to gear the construction sector for development and to improve the livelihood of the society.

It is straight forward that effective project planning heavily depends on the availability of relevant information. The study was expected to generate information about the project planning process of the company, factors that affect the project planning and the challenges of the company's project planning process which are the primary concerns of the project managers in the company and other stakeholders as an impute in their decision making.

Given the significance of construction sector to the economy and potential of the city, the contribution of the findings of this study can be very crucial. The findings of this research can also indicate areas of improvement for the entire company and stakeholders. This study can also be used as a reference for further studies.

1.9 Organization of the Study

This thesis has five chapters. Chapter one constitutes the introduction, which focuses mainly on the background of the study, statement of the problem, objectives, research questions, the scope and significance, and organization of the thesis. Chapter two consists of review of different literatures; theories focused mainly on what project planning is all about; the practice of construction project planning in Satcon Construction Company Head Office; and its major challenges that hamper project activities and become obstacles. Chapter Three deals with methodological approach and the research design. Chapter Four covers result and discussion. Finally, Chapter Five constitutes findings, conclusion and recommendations of the study.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Definition and Concepts of Project Planning

2.1.1 What is a Project?

According to the Project Management Body of Knowledge (PMBok), a project is a plan or proposal consisting of a sequence of unique, complex, and connected activities having one goal or purpose and that must be completed by a specific time, within budget, and according to specification. A project comprises a number of activities that must be completed in some specified order, or sequence. The activities in a project must be unique. A project has never happened before, and it will never happen again under the same conditions. Something will always be different each time the activities of a project are repeated. The activities that make up the project are not simple, repetitive acts, such as mowing the lawn, painting the house, washing the car, or loading the delivery truck. They are complex. For example, designing an intuitive user interface to an application system is a complex activity (Robert. K.).

2.1.2 What is Planning?

By definition, planning is an orderly / step by step proposal on how an end product / goal will be achieved. And when it comes to construction, this starts the day the idea to put up a structure is conceived (Jemima Nalumansi, 2015).

Planning, in general, can best be described as the function of selecting the enterprise objectives and establishing the policies, procedures, and programs necessary for achieving them. Planning is concerned with the future.

- According to Jemima Nalumansi, 2015, whether documented (as should ideally be the case) or not, a project plan should address the following areas with regard to the project;
- The scope of the project i.e. time and cost – within what time do you want to complete your construction and working within what budget?
- Objectives of the project – what kind of structure are you setting up and what will be the necessary requirements needed to be put in place to ensure that the project meets its intended objectives? Is it a hospital, road, school, mall or home?

- Milestones – what activity or stage of the project will signify substantial progress?
- A work schedule and breakdown structure – given the different tasks that make up the construction process, it is important to clearly indicate when each of these tasks will be carried out and the systematic sequence that the different tasks will follow
- Progress tracking – with respect to the schedule, one should be able to track the progress of the project based on actual output against planned output and determine whether the project is on course or lagging.

2.1.3 Project Planning

Before the commencement of any project, the first thing that we need to do is project planning. Any reasonable project manager certainly understands the importance of planning a project well.

Carefully planned project takes into account necessary aspects of a project (e.g. tasks, milestone, schedule, risks, communication, quality, etc.) and provide a plan which project team can refer during execution (PMBok, 4th edition).

According to PMBoK, a project plan expresses the objectives and requirements of the project in terms of:

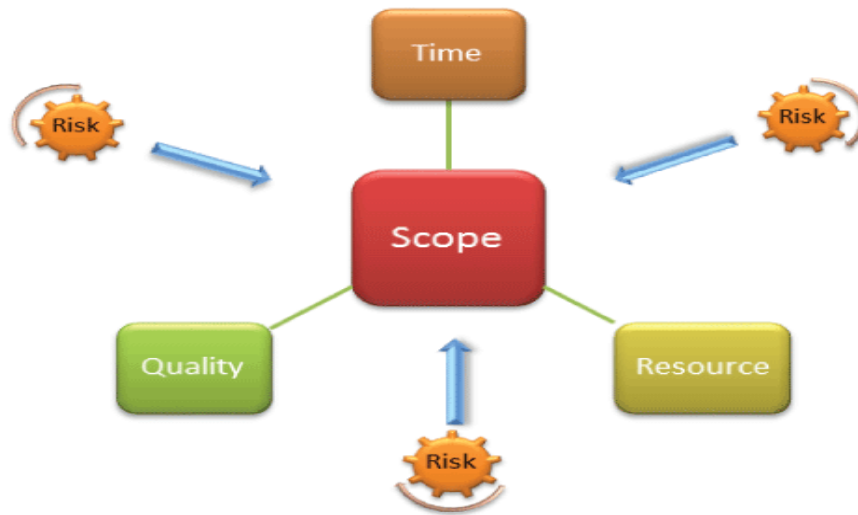
- Project Scope
- Project schedule
- Resource requirement
- Project cost estimation
- Project quality and
- Project risk management

A project planning enables project manager to translate project requirement into work breakdown Structure (WBS), tasks list, Gantt Charts, resource assignments and risk register, etc.

Therefore, in this study project planning is defined as the systematic arrangement of resources and processes of defining project objective and determining the framework to achieve project objective.

2.2 Elements of Project Plan

Fig 1. Elements of Project Planning



Source: PMBoK, Guide 4th Edition

2.2.1 Project Scope Planning

According to PMBoK, 4th edition, a project is expected to provide its stakeholders with certain outcomes, which is commonly termed as project deliverables. These project deliverables depend on the scope of the project. Essentially, project scope is the definition of what the project is expected to achieve and specify the budget of both time and cost that needs to be provisioned to create the project deliverables before the project gets closed. Without a proper project scope, project execution can go wrong.

This planning knowledge area consists of scope planning, scope definition, and creates WBS (PMBoK, 2004).

The project scope is generally constrained, with respect to the following aspects:

- Time
- Quality
- Resources

2.2.2 Delivery Schedule Planning

Once project scope is determined and work breakdown structure (WBS) is created, the next step is to create delivery timeline. For each of the deliverable work item identified in the work breakdown structure (WBS), project planner needs to identify list of activities to be performed.

The time schedule is one of the most important plans in a project. The development of time schedules should be based on the previously developed WBS. According to (Antvik & Sjöholm, 2007) in order to develop realistic and achievable schedules, it is important that activities are sequenced accurately. This process also includes determining when each resource will be available to the project (PMBOK, 2004).

2.2.3 Human Resource Planning

The human resource plan identifies and documents the staffing requirements- skillset, roles, and responsibilities and also establishes the reporting structure of the project resources. It also provides the staffing plan which specifies timeline of acquisition and release of staff (Antvik & Sjöholm, 2007).

To arrive at human resource plan, project planner needs to refer organization structure and figure out necessary changes and compliances required for project requirement.

2.2.4 Project Cost Planning

Cost planning exercise helps to baseline the overall project budget in terms of money so that project sponsors and project steering committee can agree on project delivery schedule as well as the payment schedule (Guoli, 2010).

The main objective of cost planning knowledge area is to complete the project within the approved budget (PMBOK, 2004). According to PMBoK, quite commonly, cost planning is observed to be an iterative process wherein project planner updates the cost of project based on information updates available with him/her.

2.2.5 Project Communication Planning

According to PMBoK 4th edition, projects get successfully delivery only when people work together. Project team can work together only when they know what they should do and they would know this, only when they are informed about it. That is the precise reason why organizations would have communication plan.

2.2.6 Project Quality Planning

According to PMBoK 4th edition, there are various known approaches to ensure project quality. Thses are:

- Six Sigma
- Cost of Quality
- Total Quality Management
- Failure Mode and Effect Analysis
- International Organization for Standardization 9001, etc.

Project Quality Planning involves all processes and activities in the project organization to determine quality policies and control that the performed work is of a satisfying quality. The major processes in quality management are quality planning, quality assurance and quality control (PMBoK, 2004).

2.3 Benefits of Developing a Project Plan

One of the main objectives of project planning is to completely define all work required (possibly through the development of a documented project plan) so that it will be readily identifiable to each project participant (Kerzner, Harold. 2006). According to the authors, this is a necessity in a project environment because:

- if the task is well understood prior to being performed, much of the work can be pre-planned.
- if the task is not understood, then during the actual task execution more knowledge is gained that, in turn, leads to changes in resource allocations, schedules, and priorities.
- the more uncertain the task, the greater the amount of information that must be processed in order to ensure effective performance.

According to the authors, these considerations are important in a project environment because each project can be different from the others, requiring a variety of different resources, but having to be performed under time, cost, and performance constraints with little margin for error. Careful & detailed planning help us to reduce risk and in turn uncertainty in any given project. In a well-planned project, project planner attempts to make a provision for potential occurrences of uncertainties in advance.

Meredith, J. and Mantel, S.J. 2010, on the other hand put the benefits of project planning as follows:

Planning reduces uncertainty: Even though we would never expect the project work to occur exactly as planned, planning the work allows us to consider the likely outcomes and to put the necessary corrective measures in place.

Planning increases understanding: The mere act of planning gives us a better understanding of the goals and objectives of the project. Even if we were to discard the plan, we would still benefit from having done the exercise.

Planning improves efficiency: Once we have defined the project plan and the necessary resources to carry out the plan, we can schedule the work to take advantage of resource availability. We can also schedule work in parallel; that is, we can do tasks concurrently, rather than in series. By doing tasks concurrently we can shorten the total duration of the project. We can maximize our use of resources and complete the project work in less time than by taking other approaches.

According to Annie, I. Anton (2003), project planning yields the following importance for construction projects in particular:

- Planning helps to minimize the cost by optimum utilization of available resources.
- Planning reduces irrational approaches, duplication of works and inters departmental conflicts.
- Planning encourages innovation and creativity among the construction managers.
- Planning imparts competitive strength to the enterprise.

2.4 Challenges of Project Planning Activities in Construction Projects

Project plan development is more than opening a project plan and typing tasks that need to be completed to get the job done. It requires thoughtful activity definition, sequencing, and resource estimating and their direct integration with the program's detailed development life cycle. Developing and using standard estimating models and templates aligned to the program's development life cycle is critical and one of the first steps in successfully building a plan that can provide true status of progress (Brisgone, A. 2007).

According to Brisgon, A. (2007) there are number of challenges that affect the quality of project planning and consequently the entire project performance. They are:

- Time Management
- Determining budget
- Prioritizing Project tasks
- Getting up-to-date information
- Availability of qualified personnel
- Meeting the required quality
- Identifying risks
- Coordinating the various stakeholders, etc

2.5 Project Management Process

The functions of project management include defining the requirements, establishing the extent of work, allocating the resources required, planning the execution of the work, monitoring the progress and adjusting deviations from the plan (Munns and Bjeimi, 1996). As described in Project Management Body of Knowledge Guide (PMBok), there are five phases of project management processes: initiating, planning, executing, controlling and closing (PMI, 2000). These processes are described below.

1. Initiating processes: To initiate a project or just the concept phase of a project, someone must define the business need for the project, must sponsor the project and take on the role of project manager. Initiating p

Therefore, you cannot equate process groups with project phases. Recall that there can be different project phases, but all projects will include all five process groups.

2. Planning processes: include devising and maintaining a workable scheme to ensure that the project addresses the organization's needs. There normally is no single "project plan." There are several plans, such as the scope management plan, schedule management plan, cost management plan, risk management plan, and so on, defining each knowledge area as it relates to the project at that point.

3. Executing processes: include coordinating people and other resources to carry out the various plans and produce the products, services, or results of the project or phase.

4. Monitoring and controlling processes include regularly measuring and monitoring progress to ensure that the project team meets the project objectives. The project manager and staff monitor and measure progress against the plans and take corrective action when necessary. A common monitoring and controlling process is performance reporting, where project stakeholders can identify any necessary changes that may be required to keep the project on track.

5. Closing processes: include formalizing acceptance of the project or project phase and ending it efficiently. Administrative activities are often involved in this process group, such as archiving project files, closing out contracts.

Figure 2. Project Planning Process



Source: Newton, R. 2007

2.6 Project Planning Techniques

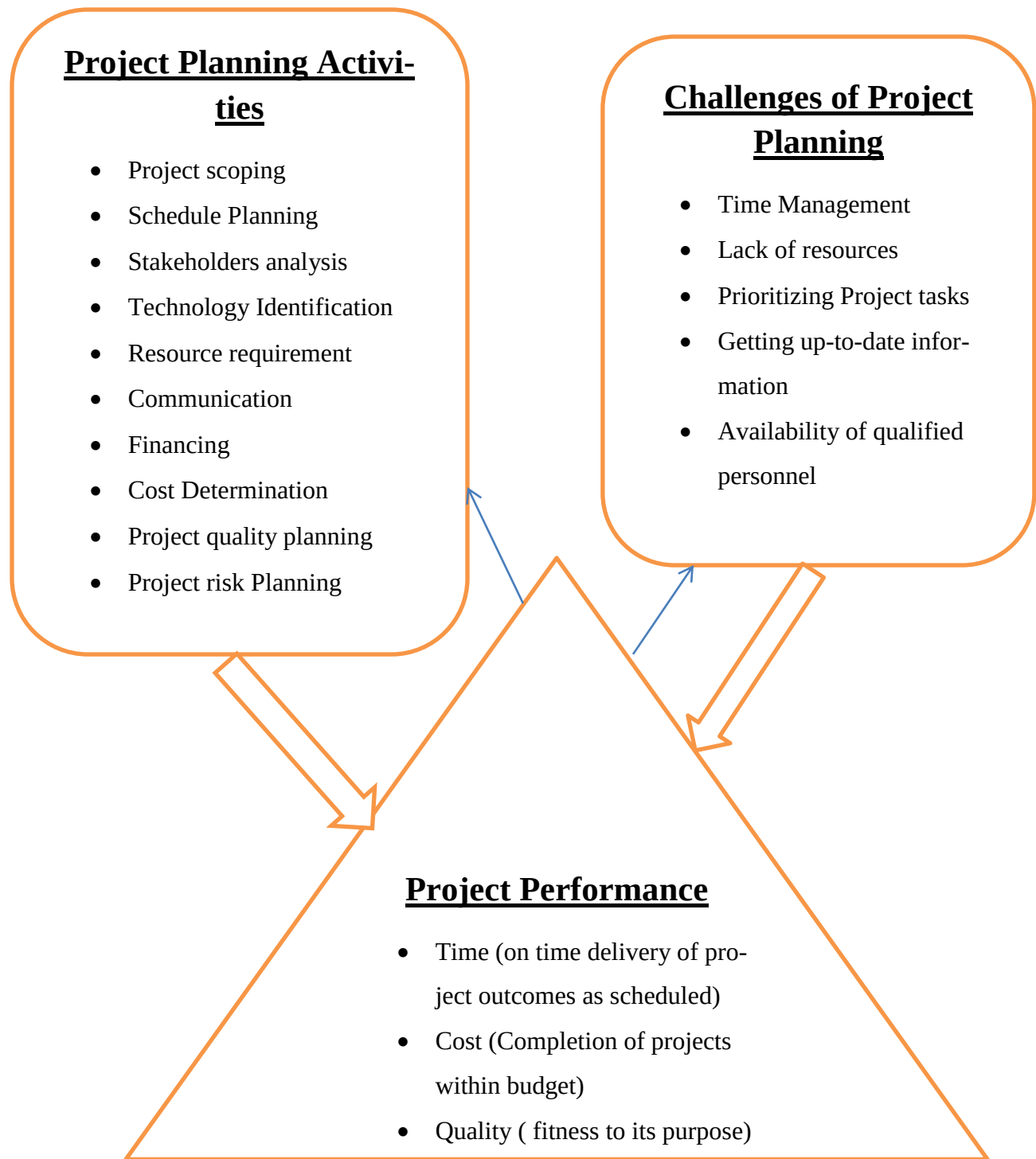
One of the most important phases of project management is the “Planning phase”, in which all work to be done is determined and defined. Planning is the most time consuming set of activities but valuable if done properly. In this phase, many different techniques are used, such as tables, work breakdown structure (WBS), charts and networks. Tables are used to present the project activities and relevant information such as the duration, dependency and cost, starting, ending, and required resources. It is used during the planning and controlling phase and can be used for implementation and monitoring.

The Gantt chart is one of the oldest and most useful techniques of planning. It is clear, simple and easy to use and understand. The interdependency between activities is not easily represented, especially in large projects, hence networks are used. Networks are a graphical display of the project activities showing their interdependency. Several network techniques have been introduced and used over the years. Mainly two types of networks can be used, depending on the type of project under consideration: deterministic and probabilistic methods. For representation, either activity-on-arrow (AOA) or activity-on-node (AON) are used to model the project. The probabilistic method is known as the program evaluation and review technique (PERT), while the deterministic method is called either the precedence diagramming method (PDM) which uses the AON method for representation, or the arrow diagramming method (ADM) which uses AOA method. All of the methods use what is known as the critical path method for determining the project duration, critical path(s), floats and other relevant data (PMBok, 2004).

2.7 Conceptual Framework

As it has been already discussed on the preceding theoretical literature, Project plan development in Ethiopia has several challenges. These challenges are directly or indirectly related to several factors which have a substantial influence on the project success. For this study, conceptual framework illustrated in figure 3 is adopted. The conceptual framework gives particular emphasis to the practice of project planning process and its challenges in Addis Ababa construction companies. The framework generally indicates how these factors are complex and how they affect project planning activities and their impacts in a given area.

Figure 3. Conceptual Framework



Source: Own source, 2018

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Research Design

The main concern of this study was to assess the practice and challenges of project planning in Satcon Construction, Head Office. Therefore, to serve this purpose descriptive research approach was used as an appropriate method to obtain reliable and relevant information about the issue under the study. Hence the design was characterized by prior formulation of specific research questions.

Descriptive method was used to collect data of a particular point in time with the intention of describing the nature of existing conditions or determining the relationship that exists between specific events. Hence, on the basis of these arguments, it was found to be convincing to employ descriptive method predominated by qualitative approach.

3.2 Population of the Study

This study used both primary and secondary sources of data. The primary sources involve; heads of the target project company, randomly selected project managers of the company, sponsors and users of the products and randomly selected project team members and stakeholders with a total of 44 stakeholders.

3.3 Data Collection Instruments

The information was collected through questionnaire and interview. An interview which comprises of a few questions was also conducted to randomly selected team members to investigate their perception regarding the planning process in the company. In addition to the questionnaire and interview and document analysis was carried out on available archives, reports, minutes held during meetings and working manuals of the above organizations. Moreover, In order to address all research objectives and research questions, exhaustive desk review of all available documentation: books and research documents were retrieved along with information from stakeholders. And the secondary source which involved books, published and unpublished materials and manuals were examined to help the analysis that were discussed under the last chapter.

3.4 Data Type and Data Sources

Data Type

Qualitative and quantitative types of data were used for this study. Both the qualitative and quantitative data were obtained through the primary sources such as questionnaire and interview. In addition to questionnaire and interview, several documents such as archives, reports, and minutes that are related to the study area were reviewed.

Data Source

Both the primary and secondary data sources were used in the study. The primary data sources included questionnaire and interview. The questionnaires were disseminated to heads of the company, project managers, project team members, and sponsors' representatives. A brief interview was also conducted to project team members, project managers, sponsors and clients.

The secondary sources such as books, journals, research documents, published and unpublished materials and annuals were also retrieved along with information from stakeholders.

3.5 Sampling Technique

The researcher selected the sample population by using Stratified Sampling Technique to partition the heterogeneous population into homogeneous groups and then applied Simple Random sampling technique in order to enable the researcher provide a chance for every member of each homogeneous group get chance to be a part of the study.

3.6 Sample Size

To determine the sample size the researcher used Raosoft sample size determination software. According to Raosoft sample size determination software, out of 44 total population size, the total number of the sample population in the study was 40 with the confidence level of 95 % and a margin of error of 5% including the randomly selected project managers to apply the interview to.

3.7 Method of Data Analysis

The analysis of research on stakeholders of Satcon Construction Company in Addis Ababa was analyzed by using theoretical and empirical evidences through questionnaires that was presented in table. The data through primary and secondary sources were analyzed using quantitative and qualitative approach as based on theories and principles, to simplify the data analysis the raw data were coded and entered into computer for processing. It is using the statistical package for social studies (SPSS). Since the research is descriptive, both qualitative and quantitative data analysis were used. This is a common approach that helps to triangulate i.e to back up one set of findings from one method of data collection underpinned by one methodology, with another very different method underpinned by another methodology. Specifically, simple statistical analysis like percentage, mean and tabulation were used in order to analyze the data and make it clearly understandable by the readers.

3.8 Ethical Issues

The researcher followed ethically and morally acceptable processes throughout the research process. The data was collected with the full consent of the participants.

3.9 Validity and Reliability

To ensure the quality of research and make it credible for the scientific community, the researcher gave due care to both validity and reliability issues of the data, the research process in general as well as the research output. The researcher used different sources of data from literature, questionnaire, interview and document review to triangulate the data. The need for triangulation arises from the ethical need to confirm the validity of the processes involved. Triangulation increases the reliability of the data and the process of gathering it.

CHAPTER FOUR

DATA PRESENTATION ANALYSIS AND DISCUSSION

This chapter discusses the study results based on the survey collected data from the survey. These results will provide the basis for the formulation of guidelines and recommendations pertaining to appropriate development of project plans, identify the factors that affect project planning process and measures to be taken to prevent projects from suffering from inappropriate conducts in preparing project plans. Interpretation of the main patterns of perception of performance impact revealed in this chapter will thus prepare the way for an appropriate course of action to ensure the effective development of project plans in every aspect of Project undertakings of the company.

4.1 Characteristics of the Respondents

From 40 sample respondents, the researcher took 8 respondents from project managers, 16 from project team members, 10 from clients and 6 from sponsors' representatives.

Table-1 Frequency distribution of respondents by sex and age

Age group	Project Managers				Project Team Members				Sponsors Representatives				Clients			
	M	F	Total	Total %	M	F	Total	Total %	M	F	Total	Total %	M	F	Total	Total %
20-30	1	-	1	12.5	1	2	3	18.75	-	-	-	-	2	3	5	50
31-40	3	1	4	50	4	2	6	37.5	1	1	2	33.3	-	1	1	10
41-50	2	1	3	37.5	2	3	5	31.25	2	-	2	33.3	2	2	4	40
51-60	-	-	-	-	2	-	2	12.5	1	1	2	33.3	-	-	-	-
>60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	6	2	8	100	9	7	16	100	4	2	6	100	4	6	10	100

Source: Own survey, 2018 M=male, F=females

From the table above, 50% of the project managers are found in 31-40 age group and majority of project managers and project team members were male; and 68.75 % of Project team members are found between 30-50 age groups. Most of the time people that were found on this age group could have a preferred level of maturity. Therefore they are expected to functionalize the principles and guidelines of the organization. From the total of 6 sample sponsor representatives, 4 (66.6%) were males whereas 2 (33.3%) were females, and from the total of 10 client respondents, 5 (50%) of them were found between 20 and 30 and 40% of the respondents were found in (41-50) age groups. And there were almost relatively equal number of male and female clients.

Table-2 Frequency and percentage distribution of project managers and Sponsors' Representatives

Education level	Sponsors		Project Managers	
	Frequency	Percent	Frequency	Percent
College diploma	4	66.6	2	25
Degree	2	33.3	5	62.5
Masters	-	-	1	12.5
PhD	-	-	-	-

Source: own survey, 2018

It is crystal clear that education is vital for any kind of development. It makes people well informed about the things that they are doing. Educated people can also understand and adopt new practices and technologies. And from the above table, 4 (66.6%) of the sponsors representatives were diploma holders and only 2 (33.3%) were degree holders. It may not be a good qualification to lead projects of the 21st century. Thus managers should upgrade themselves even in the PhD level to understand the nature of construction industry for the development of construction sector in general.

In the case of project managers, 2 (25%) were diploma holders, 5 (62.5%) were degree holders and 1(12.5%) was a master's degree holder. Therefore project managers should also upgrade their education level and also take short term trainings in order to provide qualified services for the development of the industry.

4.2. Knowledge, Interest and Attitude Assessments of Project Managers

Table-3 Knowledge, Interest and Attitude Assessments of Project Managers

No	Items	Total number of respondent = 8	
		No	%
1.	Are all the stakeholders consistently involving in project planning activities?		
	A. Yes	3	37.5
	B. No	5	62.5
2.	Which parties were included in the project planning processes?		
	A. Project managers	2	25
	B. Sponsors and project team members	1	12.5
	C. Clients	1	12.5
	D. All	4	50
3.	Are there any barriers that hinder project team members, clients and sponsors from involving in the planning activities in any way?		
	A. Yes	2	25
	B. No	6	75
4.	Do you give adequate training to the project planning team to create awareness?		
	A. Yes	1	12.5
	B. No	7	87.5
5.	Have you been involved in any type of meeting where you discussed on project planning in your organization?		
	A. Yes, many times	-	-
	B. Yes, but once or twice	6	75
	C. No, never	2	25
6.	Have you been asked about your opinion on project planning by those who facilitate the projects?		
	A. Yes, many times	2	25
	B. Yes, but once or twice	5	62.5
	C. No, never	1	12.5

Source: own source, 2018

4.2.1 The Stakeholders' involvement in the Project Planning Activities

From the total respondents, 3 (37.5%) of the project managers agreed that all the stake holders consistently take part in the project planning activities, 5 (62.5%) of them assured all stakeholders do not participate in the planning process of the company. All parties, those who affect or are affected by a project, must take part in the planning activities. But inconsistency in the participation of all stakeholders in the planning process can affect the activities and outcomes of the projects.

4.2.2 The Stakeholders that take part in the Planning Processes

From the total of 8 respondents for the question 'who are the most essential parties that usually take part in the project planning processes?' 2 (25%) of the respondents recommended project managers, 1 (12.5%) recommended Sponsors and project team members, 1 (12.5%) recommended clients, and 4 (50%) of the respondents recommended all of the above are essential parties in the development of project plan.

In case of barriers that are related to participation in the project planning activities in any way, 6 (75%) of the respondents assured that there were no barriers. But 2 (25%) of the respondents confirmed where the barriers exist to participate in project planning activities. For this matter respondents reasoned out in the following ways. *'Unnecessary rules and regulations of the organization and lack of awareness as to the importance of project plans for project success'* Therefore the concerned body should revise the rules and regulations in order to accommodate for those who were not happy by the system. Moreover awareness creation trainings should also be provided by the company concerning the vitality of project plans for project success.

Regarding provision of adequate training to the planning only 1(12.5%) respondent replied that adequate training is provided to project planning team on the regular basis. On the contrary, 7(87.5%) of the respondents that replied adequate training is not given to the planning team. All the project planning team must have a common understanding on the importance and process of the project planning. Therefore, awareness must be created among the project planning team through short term and long term trainings.

4.2.3 Involvements on Meetings for the Development of Plans

It is very important discussing the matter and finding out the strengths and weaknesses of any sector. Thus, 6 (75%) of the respondents of this study attended only once or twice in the meetings regarding construction project plan development. This implies that they are incompetent to find the weakness of the sector. And 2 (25%) of the respondents never attended the meetings which could take place for the development of construction sector. The researcher of this study recommended that every party involving in the sector including the government body should work together hand in hand to share information and other vital resources with construction companies for the development of the sector.

In the case of finding whether the participants of the meeting were asked for their opinion for the development of project plan or not, 2 (25%) of the respondents said yes and many times, 5 (62.5%) of the respondents said yes but one or two times, and finally, 1 (12.5%) of the respondents said no, never asked their opinion on the meetings for the project plan development. From the information above, most of the major participants were not asked for their opinion on the discussion of project plan development. Therefore only minorities decided and ideas passed to practice without a diverse discussion among the entire concerned bodies. So that it may create barriers in the development process of the activity.

4.3 Assessment of the Level of Support from the Government

Table-4 Level of Government Support

No	Items	Total number of respondent = 8	
		No	%
1.	Do you get sufficient support from the government?		
	A. Yes	5	62.5
	B. No	3	37.5
2.	To what extent does the government support projects in the area of your sector?		
	A. Highly	-	-
	B. Average	6	75
	C. Never	2	25
3.	What are the main obstacles of construction projects in your organization?		
	A. Lack of awareness	3	37.5
	B. Infrastructural problem	2	25.0
	C. Absence of clear cut developmental approach of construction	3	37.5
	D. Other, specify.....		

Source: own survey, 2018

4.3.1 Government's Support on the Sector of Construction Projects

Government should take the lion's share for the success of a magnificent sector like construction. Starting from the planning date to the implementation, in every movement for the development, it has to be a main actor and a good facilitator. But 6 (75%) of the respondents confirmed that the government's support was an average and 2 (25%) of the respondents asserted that the government does not sufficiently support the sector in which they involved.

On the other hand, to see the extent to which the government initiates project managers in the construction project management activities, 5 (62.5 %) of the respondents agreed that the government keeps initiating them in the construction activities, but 3 (37.5%) of the respondents showed their disagreement on the spirit of the government initiation towards the construction

activities. Since construction activities are decisive, government should work more to kick off the stakeholders in the construction process.

4.3.2 The main Obstacles to the Development of Project Plan in the Project Managers Perspective

3 (37.5%) of the respondents confirmed that the main obstacle for the development of project plans was lack of awareness, 2 (25%) of the respondents assured that the main obstacle of project plan development was the infrastructural problem, and finally 3 (37.5%) of the respondents confirmed that the problem was absence of clear cut developmental approach of construction. From the responses provided by the respondents, the concerned body should work hard in awareness creation through journals, radios, television, internet and other mechanism. In line with this, facilitating the infrastructure and clear cut developmental approach were also recommendable for the successful development of project plans and the development of the sector in general.

4.4. Sponsor's View on the Project Plans of the Company

(5= strongly agree, 4= agree, 3= neutral, 2=disagree, and 1= strongly disagree)

Table-5 the extent of agreement or disagreement on construction project plan

No	Items	Scales					Frequency mean	Standard Deviation
		1	2	3	4	5		
1	The project plans were detailed and easily understandable by every stakeholder	-	-	1	5	2	4.13	1.29
2	Sufficient resources were allocated for the project planning process.	-	-	1	6	1	4.0	0.5
3	Contingency plans were included in the project planning process	-	-	-	7	1	4.13	0.42
4	Sufficient trainings were provided for project team members and the planning team.	-	-	-		8	5.0	0
5	The project scopes were well defined in the planning phase.	-	2	1	4	1	3.5	0.64

6	There was sufficient communication among the project team members and stakeholders.	-	-	2	5	1	3.86	1.84
	Average mean= 4.1							

Source: Own survey, 2018

From the above frequency mean distribution, most of the respondents agreed on the detailed and easily understandable nature of the project plans. This question asserted by the respondent with the frequency mean of 4.13. In the other way construction projects should encourage the consideration of contingency plans in the planning stage in order to minimize the probability of the occurrence of project failure.

According to their responses, sufficient resources were allocated for the project planning processes. Because from the total of 8 respondents, 7 of them assured their agreement, and its frequency mean was 4.0.

From the above frequency mean distribution, all of the respondents agreed on the inclusion of contingency plan in the project planning process. Because, this question asserted by the respondent with the frequency mean of 4.13. In the other way construction projects should encourage the consideration of contingency plans in the planning stage in order to minimize the probability of the occurrence of project failure.

For the question about sufficient training provided for project team members, all the respondents strongly agree with the frequency mean of 5.0.

For the question the project scope was well defined in the planning phase in order to encompass all the necessary activities, 2 respondents disagreed, 1 respondent was neutral, 4 respondents agreed, and 1 respondent strongly disagreed and the mean value 3.5 tells us closer to agreement.

Again, 2(33.33%) of the respondents were neutral about sufficient communication among the project team members and stakeholders to create uniform understanding among themselves. But 5 (83.33%) of the respondents agreed and 1(16.67%) strongly disagreed on the sufficiency of communication among stakeholders. In general, the mean value for the question 3.86 implies that the respondents were closer to agree for the question.

4.5 The Feeling of Sponsors when invited for Planning Activities

Table-6 Feelings of Project Sponsors on the project plans

No	Items	Total No of respondents	
		No	%
1	Were the needs of stakeholders sufficiently analyzed?		
	A. Yes	6	100
	B. No	-	0
2	If yes, which ones?		
	A. Only on time delivery	0	0
	B. Only completion within budgeted cost	0	0
	C. Only quality	0	0
	D. All	6	100
3.	What could be your feeling if you were invited to take part in project planning process?		
	A. Happy	4	66.67
	B. Disturbed	0	0
	C. Embraced	0	0
	D. No opinion	2	33.33
4.	Have you been involved in any type of meeting where you discussed on project plan development?		
	A. Yes, many times	2	33.3
	B. Yes, but only once or twice	4	66.67
	C. No, never	0	0
5.	Have you been asked about your opinion on construction project planning by those who plan projects?		
	A. Yes, many times	1	16.67
	B. Yes, but only once or twice	3	50
	C. No, never	2	33.33

Source: Own survey, 2018

From the above table all the respondents replied that the needs of stakeholders were sufficiently analyzed. And the feelings when they were invited to take part in the planning processes, were happy because the respondents 4(66.67%) asserted and 2(33.33%) have no opinion.

4.5.1 The Feeling of Sponsors when invited for Planning Activities

From the respondents of the study, 4 (66.67%) of the respondents were happy when invited to take part in project planning activities and 2 (33.33%) of the respondents agreed that they did not have an idea when invited to participate in project planning. On the other hand all the respondents were not disturbed and embarrassed if they were invited to participate in project planning activities. It is advisable not to be disturbed when invited to participate in project planning activities because; it is difficult to provide quality service with a disturbed mood.

4.6 Sponsors' View on the Relation of Project Plans and Deliverables' Quality (5= strongly agree, 4= agree, 3= neutral, 2=disagree, and 1= strongly disagree)

Table-7 Sponsors' View on the Relation of Project Plans and Deliverables' Quality

No	Items	Measurement Scale					Frequency Mean	Standard Deviation
		1	2	3	4	5		
1	Sponsors' contribution to project planning process is important.	-	-	-	2	4	4.67	1.22
2	The outcomes of the projects meet the requirements of the customers.	-	-	1	4	1	4	0.5
3	The delivered product met all specifications in the planning stage.	-	-		4	2	4.33	0.71

4	Projects meet the expected quality	-		1	3	2	4.17	1.03
5	Projects were completed within the original schedule	-	4	1	1	-	1.53	0.73
6	The projects were completed within the planned budget	3	2	1	-	-	1.67	0.65
7	The project plans were made based on sufficient data.			1	4	1	4.8	0.85
8	There is a lot to be done in the planning activity in general.	-	-	-	5	1	4.17	0.81
9	There are different problems not to get optimum project performance.				3	3	4.5	0.77

Source: Own survey, 2018

4.6.1 Sponsors Contribution to the Development of Project Plans

The first question was to assess the sponsors' idea concerning their contribution towards the planning activities. Sampled managers from the sponsor parties were asked to rate their level of agreement for the statement 'Sponsors' contribution to the project planning process is important'. The data collected showed that all sampled sponsors strongly agreed that the sponsors' contribution to the project planning process in order to attain success is massive.

4.6.2 The Outcomes of the Projects in Relation to Requirements of the Customers

As shown in the table 7 above, 1 (16.67%) respondent was neutral, 4 (66.67%) respondents agreed, and 1 (16.67%) respondent strongly agreed to the question and the mean value (4.0) indicates that most of the respondents agreed. This implies that only few respondents are not in a position to believe that effective planning has a significant effect on project outcome. As per the data collected through interview as well as questionnaire, their perception regarding the challenges of project planning practices differs from individual to individual and also how one understands it than the other. However, most of the subjects of the study emphasized that any challenge of project planning practice has a tremendous effect on project performance.

4.6.3 Project Outcomes Meet Planned Specifications

The other issue considered was the conformance of delivered products with the planned specifications. The statement rose to be rated by respondents was ‘delivered product meet the specifications stated at planning stage.’ As shown in the Table 7 above, 33.33 % of the respondents (2 respondents) strongly agreed and the remaining which is 66.67% of the respondents (4 respondents) agreed to the above statement. Accordingly, as shown in the table, no sample sponsor’s representative disagree that their delivered products meet the planned specifications. This further explained that regardless of the cost and schedule the quality of delivered products has always been given great care so as to meet the pre-planned specification.

4.6.4 Projects were Completed within the Original Schedule

Again in the above table 7, shows the level of agreement of sample sponsor company managers to the statement ‘projects were completed within the original schedule.’ Accordingly, the data showed that 4 respondents (66.67% of the respondents) disagreed while 1 respondent (16.67% of the respondents) agreed, and 1 respondent (16.67% of the respondents) sided to neutral. As per the data collected and group discussion findings, projects often overrun their planned schedule. This ultimately leads to frequent cost overrun.

4.6.5 Projects were Completed within the Planned Budget

From the respondents, information was collected about completion of projects within the planned budget. Accordingly, respondents were asked to show their level of agreement to the statement ‘projects were completed within the planned budget.’ Thus, 5 (83.33%) of the respondents showed complete disagreement to the statement and only one respondent (16.67%) remained neutral. This clearly implies that projects frequently require additional budget for completion. As budget is the delicate part of the plan, the project managers should take due consideration in planning the cost of the project.

4.7 The Major Challenges in the Project Planning Process

The project managers and project team members forwarded their point of view on the challenges during the development of project plans. The data or information which was gathered from the survey (questioner) and focus group discussion is almost similar whereas the data gathered through interview is somewhat detailed with factual numbers. Therefore, the general challenges during the development of project plans in the company can be summarized in to three major factors: lack of coordination, lack of sufficient data and resources and lack of awareness. For details each factor is given below:

4.7.1 Lack of Coordination

The construction industry is multi discipline (multi-sector) undertakings inter related activity that requires more coordination with different sectors and actors of the sector. It involves a wide range of institution such as governmental, private investors, foreign funders and NGOs. Therefore, all the stakeholders of the sector must work hand in hand to realize the GTP of the country through the construction sector. Therefore, this is not at all a task of to be left to a single institution. However, as per the information obtained from the project managers; this kind of phenomena is common in the construction sector of Addis Ababa which the mandate is only left to the government and the particular construction company. Therefore this may become one of the challenges in the development of project plans in the Company since it hinders the free flow of information among the stakeholders.

4.7.2 Lack of Sufficient Data and Resources

As per the information obtained from project managers and project team members of the company, sufficient data were not gathered before the actual project planning activity commences. Usually the project managers merely update the plans of previous alike projects. This is due to the exhausting nature of developing a new project plan, the significant resource that a new project plan development consumes and the alike nature of the projects undertaken in the company. However, no project is identical. Therefore, plans must be prepared with fresh and sufficient information and resources so that the project will not suffer from unexpected happenings.

4.7.3 Lack of Awareness

Most of the respondents replied that the main problem for the development of the project plans is lack of awareness of the project team members. In addition to this the information which is obtained from interview and focused group discussion (FGD) elaborates this idea by saying “there is a considerable misunderstanding among almost all levels of the project team members with regard to project plans. Some people consider planning is just a formality and remains on a paper with little or no significance to the project performance. And there are also people who wrongly perceive plans as unnecessary time consuming activity. This took the project managers a substantial amount of time convincing the team members about the importance of project plan for the performance of the project.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.1 Findings

This research was set out with the objective of evaluating the practice and challenges of project planning in Satcon Construction Company, Head Office.

The results of the research explicitly show that, effective Project planning is affected a number of factors that are related to planning. These factors are related to the government, the client, the project company itself. The majority of the survey results (83.34%) from the staff and interview result from all the stakeholders who took part in the study agreed that these challenges of project planning has a significant effect on the project performance.

Particularly, the study produced the following findings:

- Most (62.5%) of the project managers were happy when clients, sponsors and all project team members take part in the planning process. They believe that all the parties who affect or are affected by the project must take part in the project planning process. The rest (37.5%) of the respondents feel otherwise. They further explained those only professionals who have the highest knowledge and experience of project planning should involve in the planning process.
- Even though 75% of the respondents of this question assured that there is no barrier that hinders the entire stakeholder to participate in the project planning process, 25% of the respondents confirmed the existence of barriers lack of awareness and unnecessary rules and regulations being the major ones.
- 75% of the respondents stated that they have attended only one or two meetings that were intended to develop the construction sector in general. The rest 25% were never been parts of this types of meetings. They further clarified that they were never asked for their personal opinion in the development of project plans. This clearly implies they are incompetent to find the strength and weakness of the planning and the construction sector in general.
- Regarding government support to the construction sector, 25% of the respondents believed that it is below average whereas the rest 75% of the respondents specified that they get an average support from the government.

- 37.5% of the respondents again specified that the government does not sufficiently initiate in the construction activities. Whereas the rest 62.5% of them were happy about the government's initiation in the construction sector. This would help the construction company and the sector in general to acquire the necessary help and resource from the concerned government body.
- With respect to the main obstacle in the development of project plan, 37.5% of the respondents indicated it is lack of awareness, 25% of the respondents stated that it is infrastructure problem, and the rest 37.5% of the respondents specified that the main obstacle in the project plan development process was absence of clear cut developmental approach of construction.
- The majority of the respondents with the frequency mean of 4.13 agree that the project plans were addressed the project plans in detailed and understandable way. The majority of the project team members and sponsors also believe that sufficient resources were allocated for the planning activities.
- The majority of the project managers and sponsors' representatives agreed that contingency plans were included in the project plans.
- Although most of the respondents (4) agreed that project scopes were clearly defined in the planning phases, a significant number of respondents (3) specified that scopes were not clearly defined in the planning phases.
- Regarding communication among stakeholders, 83.33% of the respondents agree that there is sufficient communication among the stakeholders. The rest 16.67% of the sponsors' representatives disagree to the presence of sufficient communication among the stakeholders.
- 66.67% of the respondents (sponsors' representatives) were happy when they were invited to take part in the project planning processes. The rest were neutral to the question. This implies that all the respondents were not disturbed and embarrassed if they were invited to participate in project planning activities.
- All the respondents completely agreed that Sponsors and clients have a massive contribution to the project planning process.
- Most (66.67%) of the respondents approved that the company's delivered products meet the planned specifications. This further explained regardless of the cost and schedule re-

alization, the quality of delivered products has always been given great care so as to meet the pre-planned specification.

- With respect to completing projects within the original schedules, 66.67% of the respondents specified that projects were completed later than their intended schedule.
- Regarding completion of projects within the original budget, the majority (83.33%) of the respondents clearly specified that projects frequently require additional budget for completion.
- Even though the views of the respondents vary from individual to individual, the majority (83.34%) of the respondents agreed that there are a number of challenges in the company that affect the project planning activities.
- Regarding the challenges during the planning process, all the respondents stated their views which can be summarized as: lack of coordination, lack of sufficient data and resources and lack of awareness.

5.2 Conclusion

This study has investigated the practice and challenges of project planning in Satcon Construction, Head Office. The researcher exhaustively collected the primary data and also utilized secondary sources related to the topic.

The researcher's conclusions were made on the basis of the major findings of the study.

- Not including the entire stakeholder in the planning process would cause missing out some important needs and requirements of clients and end users.
- There are barriers that prohibit stakeholders from taking part in the planning activities. These barriers are lack of awareness and unnecessary rules and regulations.
- Most project managers and project team members were not asked for their personal opinion to contribute to the planning process. The plans were just made at the highest level of the company's managerial hierarchy.
- The government does not adequately support the construction company and its specific developmental activities by providing expertise, consultation and other necessary resources.

- Lack of awareness, infrastructure problem and absence of clear cut developmental approach of construction projects were the main obstacles in the company's project planning process. Moreover, lack of coordination and lack of sufficient data and resources were the main challenges of the project planning process.
- Contingency plans were included in the project plans and the project plans were detailed and understandable by the stakeholders.
- There was no sufficient communication among the stakeholders in the project planning process.
- Project scopes were not adequately defined.
- Sponsors' representatives and clients were happy if they were invited to take part in the project planning processes since they have a substantial contribution to the process.
- The company gives a great consideration to the quality of the products delivered by the projects.
- Projects usually exceed their original completion schedule.
- Projects often require additional budget for completion.
- Challenges of project planning have a significant effect on the project performance and outcome as well.

Generally, the researcher can conclude that Project planning face a number challenges that relate to government, Sponsor, client and the particular project company which has a tremendous effect on project performance. It is full of complicated activities unless it is dealt with a great care.

5.3 Recommendation

On the basis of the conclusion drawn above, the researcher recommended the following points for better improvements of project outcomes and achieving success in project performances of the company:

- Identify each person early who will be involved in the project and project planning and assign what his role will be to make sure that no parts of a project activities fall through the cracks. The project managers should also review their initial personnel decisions immediately after they have created the project's goals, processes and timelines.
- The designated project managers should set specific outcome goals for the project based on the overall company goals. They should also make sure that every stakeholder is clear

on specific goals before they begin creating the process for development of a project plans. Knowing these specifics will help them set realistic outcome goals of the project.

- Every stakeholder should be asked for its view on different issues related to the project plan. This way all the stakeholders will be able to contribute to the project and use their maximum effort to realize it since they would feel as it is their own plan.
- The project managers should set specific deadlines for each activity. They should make sure that their project doesn't get stalled because one or more team members aren't given a deadline or deadlines. They should also update the deadlines on different phases of their project as each phase is completed. Their project might require various phases, and each component of the project should be given a deadline they can update, if necessary, after each segment is completed. This would ultimately solve the schedule and cost overrun problem.
- The company should create a reporting system that keeps everyone in the loop by including team members, clients, sponsors as well as team leaders. This could include weekly meetings, a master project document that they update and share regularly or required reports submitted by team members to the project leader at regular intervals. They should also include a status column in their group spreadsheet or software that allows the group to see where everyone is during the project. This will help them spot potential problems before they happen or become too difficult to handle.
- The company should allocate sufficient time and other necessary resources for the planning team. Since they can't plan well under pressure, the project managers should make sure that they have set aside the right amount of time they will need to address all the moving parts of their plan and not overlook or rush through one.
- The government should provide adequate support to the project company, managers and the project team especially in planning stage.

Generally, the findings of this study explicitly show the project planning process of the company, the challenges that the planning team faces and the effect of these challenges on the project successes factors (time, cost and quality). The relationship between planning activities and the challenges that affect its outcome helps the project managers to focus on the specific planning activities to get better project performance for individual successes factors. Therefore, the project team

should give a considerable attention and time during the planning phase of the projects. All the planning activities should be addressed with equal considerable attention.

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APPENDICES

Appendix-1 Questionnaire for Project Managers and Sponsors

The purpose of this questionnaire is to gather the necessary and fundamental information for my thesis research concerning the title: the role of project planning on project performance in Satcon Construction Company, Addis Ababa Ethiopia. As part of my assessment, I will ask you about several issues related to the subject of my study. I will use the information for the fulfillment of the thesis requirement only. Your name will not be mentioned and any information provided by you will be kept confidential. Therefore, I kindly request your cooperation to fill out the questionnaire accurately considering the importance of the study. I appreciate your honest and correct response to the questions listed below. So I ask you to fill the questionnaire carefully and appropriately.

Thank you for your assistance!

PART I: PERSONAL DETAILS OF THE RESPONDENT

- Gender _____
- Educational background:-_____
- Your current position/ Job title/ in the company: _____
- Your work experience/service year/ in this company: _____
- How many projects have you participated in as project managers/ leaders or? _____
- What is the name of the project site that you have recently participated in? _____

Instructions: Please refer/consider/ the recently completed project in your organization and answer the following question. For each of the questions, please **tick [x]** in the provided space which is the most suitable using the given cable. Please also answer all the questions to enhance the objectivity of the research.

No	Description	Scale				
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	All the stakeholders were included in the planning process					
2	The project plan was detailed and easily understandable by every stakeholder					
3	Sufficient resources were allocated for the planning process					
4	The project scope was well defined in the planning phase					
5	There was sufficient communication among the project team members and stakeholders					
6	There was sufficient support from executive level					
7	Project managers and Sponsors were included in the planning process					
8	Monitoring, controlling and reporting mechanisms were included in the planning stage					
9	The delivered product met all specification in the planning stage					
10	The project completed within the planned budget					
11	The project completed on the					

	original(planned) schedule					
12	Project risks were identified and risk management mechanisms were included in the planning stage					
13	Project activities were well identified and sequenced in the planning stage					
14	Are the plans made based on sufficient data					
15	The needs of stakeholders were sufficiently analyzed					
16	Sufficient trainings were provided for project team members					
17	Project Human resource needs was appropriately considered in the planning stage					
18	The outcome of the projects meet the requirements of the customers					
19	Contingency plans were included in the project planning process					
20	All resources were allocated as has been specified in the project plan					

21. Briefly explain how the project planning process is performed in your company?

22. List the major challenges of project planning in your organization?

23. What are the major factors that affect the performance of project planning?

24. What problems have you encountered in the project planning process of your company?

Appendix-2 Questionnaire for Clients and Project Team Members

PART I: PERSONAL DETAILS OF THE RESPONDENT

- Gender _____
- Educational background:-_____
- Your current Job title in your company: _____
- Your work experience/service year/ in your company: _____
- How many projects have you participated in as project manager/ leader? _____
- What is the name of the project site that you have recently participated in? _____

Instructions: Please refer/consider/ the recently completed project in your organization and answer the following question. For each of the questions, please **tick [x]** in the provided space which is the most suitable using the given scale. Please also answer all the questions to enhance the objectivity of the research.

No	Description	Scale				
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	You were invited to take part in the project planning process					
2	customers' requirements considered in the planning stages of the projects					
3	The project plan was detailed and easily understandable by every stakeholder					
4	your opinions were entertained in the company's project planning process					
5	Sufficient resources were allocated for the planning process					
6	The project scope was well defined in the planning phase					

7	There was sufficient communication among the project team members and stakeholders					
8	There was sufficient support from executive level					
9	Project managers and Sponsors were included in the planning process					
10	Monitoring, controlling and reporting mechanisms were included in the planning stage					
11	The delivered product met all specification in the planning stage					
12	The project was completed within the planned budget					

Appendix-3 Interview for project clients and project team members

1. Are customers' requirements considered in the planning stages of the projects? If yes, what benefits do you think would it have on the projects outcomes?
2. Explain the process of project planning in the company. Please include the necessary details.
3. What are the major challenges of project planning?
4. Were your opinions entertained in the company's project planning process?
5. Are there any failed projects in the company you are working? If yes, do you think the cause is in any way related to the planning process? How?
6. Are project products delivered on the planned time and cost? Explain.
7. Would you be happy if you were invited to take part in the project planning processes of the company?
8. Do the projects' outcomes meet your requirements and the pre-planned quality?
9. Do the project managers communicate the project progresses at the relevant time?
10. Does the government support the projects very well?