ADDIS ABABA UNIVERSITY
COLLEGE OF BUSINESS AND ECONOMICS
SCHOOL OF COMMERCE

THE RELATIONSHIP BETWEEN PROJECT TIME MANAGEMENT PRACTICES AND PROJECT SUCCESS

THE CASE OF IT PROJECTS IN BANK OF ABYSSINIA

BY

SAFEWORK MULUGETA HABTEGEBRIEL

A Research Project Submitted in Partial Fulfillment of the Requirement for the Award of Master of Arts Degree in Project Management

Advisor: Dr. Abraraw Chanie

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Addis Ababa

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Declaration

I, hereby, declare that this Research work entitled **"The Relationship between Project Time Management practices and project success: The case of IT projects in Bank of Abyssinia"** is original work of my own, and has not been presented by anyone for any degree in any other university. And all the sources of materials used for the thesis have been duly acknowledged.

Safework Mulugeta _____ _____

Name (Candidate) Signature Date

This is to certify that the above declaration made by the candidate is correct to the best of my knowledge.

Dr. Abraraw Chane _____ _____

Advisor Signature Date

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ABSTRACT

The relationship between project time management practices and project success has been examined by various researchers. This research could also be added to that collection. The study set out to unearth the relationship between project time management and project success, by defining both on the basis of time, cost and quality, and taking Bank of Abyssinia as the case study. Both primary and secondary data were used. The research employed quantitative research methods to realize the purpose of the study. Hence, a questionnaire, which was adopted from PMBOK, was devised and data were collected from 50 respondents out of the total distributed to 50 respondents. The data were analyzed using SPSS version 25. In addition, annual and quarter reports of result management office of the Bank of Abyssinia were scrutinized to compliment the responses (BoA, IT project team members, result management office staffs and staffs of IT Department). Project success indicators such as time, cost and quality were correlated to the respondent's ratings of the organization's project time management practices using Pearson's Correlation Coefficient. The results from the study show that there is a positive relationship between project success and project time management practices. The study enabled the researcher to conclude that the project time management practices are being practiced with relatively low level at the Bank of Abyssinia. Furthermore, developing and practicing project time management knowledge areas; devising procedures; carefully collecting, compiling and disseminating lessons learned from past project implementation; creating project management standards; and creating awareness among all stakeholders towards projects; strengthening the result management office's human and other resources; and providing trainings have been recommended as a means of improving project time management practices and attaining higher project success.

Key Words: Project, Project Time Management, Project Success

CHAPTER 1

INTRODUCTION

In this section background of the study and the organization to be studied as well as the statement of the problem are discussed. Moreover, the research question, the objectives of the study, the significance of the study and the scope and limitation of the study are dealt with.

1.1 Background of the Study

Project management is the process of the application of knowledge, skills, tools, and techniques to project activities to meet project requirements (Fahrenkrog, S. L.et al 2004). That is project management is an interrelated group of processes that enables the project team to achieve a successful project. These processes manage inputs to and produce outputs from specific activities; the progression from input to output is the nucleus of project management and requires integration and iteration. For example, a feasibility report could be an input to a design phase; the output of a design phase could be a set of plans and specifications. This progression requires project management wisdom, expertise, tools and techniques, including risk management, contingency development, and change control.

The project management process groups are initiating, planning, executing, monitoring and controlling, and closing. Initiating defines and authorizes the project or a project phase. Planning defines and refines objectives and plans the course of action required to attain the objectives and scope that the project was undertaken to address. Executing integrates people and other resources to carry out the project management plan for the project. Monitoring and controlling regularly measures and monitors progress to identify variances from the project management plan so that corrective action can be taken when necessary to meet project objectives. Closing formalizes acceptance of the product, service, or result and brings the project or a project phase to an orderly end. (Ibid, p. 41).

The breadth or range of project management is comprehensive—that is, it begins with initiating and continues through closing; these processes are coincident with the start and end of the specific project itself, respectively. Monitoring and controlling occur throughout the duration of

the project and have a range relatively similar to that of executing. Indicating a project's temporary nature and the importance of the timing of the deliverable, closing begins relatively shortly after initiating concludes. Planning and monitoring and controlling have a collective depth similar to that of executing, illustrating that these activities require a level of effort and have an implication similar to that of constructing the product, providing the service, or producing the result.

Third knowledge area is the time management which consists of several processes relating to the time and schedule management of the project. Most of the processes are required in the planning phase of the project such as activity definition, activity sequencing, activity resource and duration estimating from which the actual project schedule can be built. The final output from this knowledge area is the project schedule, which needs to be tightly monitored and controlled and corrective actions to be done when schedule baseline is not one with the actual performance. Many of the processes in the time management knowledge area are overlapping and interact directly with other knowledge areas. (PMBOK, p. 129-164, 2008)

According to Turner et al, the purpose of recording dates and times to a form of schedule are to ensure the benefits obtained at a timescale which justifies the expenditures, to coordinate the effort of resources, to enable the resources to be made available when and if required, to predict the levels of money and resources required at different times to meet a rigid end date and fulfill customer satisfaction. (Turner et al, p.183, 2008)

Many practitioners see this knowledge area as one and call it only as schedule, as in many smaller projects the project planning does not require a distinguishing between the many processes. To meet the requirements set by project management institute (PMI), the scheduling needs to get started by defining the activities to identify all specific actions to be performed to produce project deliverables. This process is followed by sequencing, estimating needed resources and duration for each activity. There are several tools that can be used to prepare the best schedule estimates such as using expert judgment, analogous, parametric or three-point estimates. Project manager needs to decide depending of the project what tools to be used. Final outcome of these processes is the project schedule which is then monitored and controlled along the project execution. There are several tools and techniques to create and monitor the project schedule such network analysis, critical path and critical chain method among the most used. Precedence diagramming is the method currently being used in nearly all of the project

management scheduling software available. Precedence diagrams can be easily recognized. The network diagram will always be shown with the activity information on the nodes instead of on the arrows of the diagram. The nodes of an activity on precedence diagram will always be shown as rectangles (Newell, p. 49, 2002, PMBOK, p. 129-164, 2008).

Project Time Management (PTM) includes a number of planning and controlling processes that are recommended for complying with requirements related to project time.

Time more than half of the references (Nguyen, et al 2004) demonstrated "Time" or "Schedule" as one of the most important project success criteria for any project. Time has been addressed as a criterion by which to evaluate a project's degree of success. It has also been mentioned as a factor, which can help the other factors/criteria be met. It is found in this study that the definition of "Time" is of great importance. "Time" as the date when a project is most likely to end can be a criteria, but "Time" as a manageable component might be considered as a factor.

In an increasingly competitive and volatile environment, projects are of growing strategic importance to the survival of any organization for the following reasons:

(i) The timing and successful implementation of projects can greatly enhance an organization's competitive situation. For example, the reduction of the time required to bring a new product to the market can contribute to the erection to prevent barriers to entry for competitors. This in the end determines the overall profitability of the project. Time and, in particular, speed of execution is increasingly considered a strategic factor that needs to be managed as any other resource.

(ii) Projects consume an organization's resources such as cash flow, people and equipment. Projects only produce a return on investment when successfully implemented; therefore, the goal of any project management system is to transfer projects into stable operations that will eventually generate liquidity. That means, to realize profitability, the capital invested needs to be recovered first.

(iii) Projects normally involve significant changes to the infrastructure (and culture) of an organization. Projects often require the destabilization of the existing order when they necessitate the re-engineering and restructuring of the internal workings of the organization. Projects are thus a source of deviation that create tension and provoke the need for change.

1.2 Background of the organization

The present-day Bank of Abyssinia was established on February 15, 1996 (90 years to the day after the first but defunct private bank was established in 1906 during Emperor Menelik II) in accordance with 1960 Ethiopian commercial code and the Licensing and Supervision of Banking Business Proclamation No. 84/1994.

Throughout its existence, BoA has crafted and successfully implemented 3 Five year Strategic plans. It is now in its 3rd year of implementing its 4th Five-Year Strategic Plan and Organizational Transformation. This new strategic plan and organizational configuration is devised to take full advantage of market opportunities and attain better growth year on year during the plan period. As a means of reaching its objectives, the bank has developed a number of initiatives (projects) with different priorities in the different areas of its operations.

Among the initiatives, 12 of them are identified to be IT Projects. To successfully implement these projects, the bank has instituted Result Management Office (RMO). This RMO is responsible for the centralized and coordinated management of the IT Projects.

RMO offices pass through a number of maturity stages before attaining excellence. RMO represents the extent to which it is capable of generating value for its customers and for the bank as a whole. To this end, the road to RMO begins with establishing the capability to create value for clients and for the whole bank; this is followed by implementing and enforcing those practices across all branches of the bank.

The study report in this paper will be aimed at assessing the use of processes related to Project Time Management (PTM) and its relation with project success regarding timely completion.

1.3 Statement of the problem

Many projects around the world keep failing, resulting in loss of millions of dollar for organizations. This persisting challenge has led many project management professionals to attempt to identify the influencing factors that need to be tackled head-on to produce a successful project management outcome. (Mortensen 2013). The banking industry is in a state of transformation and becoming ever more complex. Fast changes in the communication landscape and financial industries, resulting from technological change and the development of new services, are affecting the core business of banking operations. The industry is to refocus on emerging higher value-added services, which often require significant investment in new network technologies, and balancing this against shareholders‟ focus on shorter-term

performance. The delay of IT projects have an adverse effect on the performance of the bank, which in turn affects the profit, and market share of the bank and make it difficult to retain the existing customers and attract potential ones, the market share and the profit are below their target as the annual reports of the bank indicated. Out of the total twelve IT projects, the planned finishing periods for the six IT projects has already been elapsed of which three of them are still in ongoing status. The rest of the projects have been completed after the planned period. There exist literatures on critical success factors for specific organizational operational units, or specific country situation, and very little empirical research on influencing factors for specific industry sectors, like for banking industry projects. The study will intend to carry out preliminary research on the effect of project time management on the success of IT projects at Bank of Abyssinia Share Company. Delays have been frequently reported as the cause of several conflicts that affect the different parties involved in IT projects. Project Time Management (PTM) includes a number of planning and controlling processes that are recommended for complying with requirements related to project time. Most of the projects that attained timely completion also made a greater use of the PTM processes.

Successful project management insures the completion of project in time, within budget, and to the project specifications. Therefore, this study is significant to investigate on how time is managed on IT projects. So that the managerial staffs can get a clear understanding on time management and they will be able to prevent them early.

Table 4.1: BOARMO, progress report on the status of IT projects, 2018

No.	Name of the project	Date of commencement	Planed completion	Actual completion
1	Implement business continuity and disaster recovery plans	15-Jan-16	30-Sep-17	20-Feb-18
2	Implement new IS internal service desk	27-Feb-16	15-Jul-17	February 08,2018
3	Implement bank-wide data governance process	March 21,2018	30-Sep-17	30-Mar-17
4	Implement comprehensive IT systems change control process	January, 2017	December, 2017	Ongoing
5	Acquire and implement centralized MI solution	October, 2017	December, 2017	Ongoing
6	Acquire and implement internal audit technology solution	April, 2016	December, 2017	Ongoing

Source: BoA, Quarterly Result Management Office report, 2018

As it can be seen from the above table, all IT projects presented as a sample have failed to meet the planned completion period. In addition to that 50% of the IT projects were at status of 'ongoing' even if the planned periods have been elapsed. From this we can conclude that the projects have failed to meet its target with respect to timely completion.

1.4 Research Questions

Accurate time estimation, activity sequencing, schedule development and control are skills essential for good project time management. It is important to get **time estimates right for two main reasons:**

1. Time estimates drive the setting of deadlines for delivery and planning of projects, and hence will impact on other people's assessment of your reliability and competence as a project manager.
2. Time estimates often determine the pricing of contracts and hence the profitability of the contract/project in commercial terms.

Often people underestimate the amount of time needed to implement projects. This is true particularly when the project manager is not familiar with the task to be carried out. Unexpected events or unscheduled high priority work may not be taken into account. Project managers also often simply fail to allow for the full complexity or potential errors and stuff ups, involved with a project.

The study will try to answer the following question.

1. How does Plan Schedule Management influence the implementation of IT projects at BOA?
2. How does activity duration estimation influence the implementation of IT projects at BOA?
3. How does activity sequencing influence the implementation of IT projects at BOA?
4. How does schedule development influence the implementation of IT projects at BOA?
5. How does schedule control influence the implementation of IT projects at BOA?

6. How does activity resources estimation influence the implementation of IT projects at BOA?

7. How does activity definition influence the implementation of IT projects at BOA?

8. What is the relationship between project time management and project success in the case of IT projects at BOA?

1.5 Purpose of the Study

The purpose of this study is aimed at assessing the use of processes related to project time management and its relation with project schedule performance (i.e., timely completion).

1.6 Objectives of the study

The objective of the study is:

1. To determine how project time management practices influence the implementation of IT projects at Bank of Abyssinia Share Company.

2. To determine the relationship between project time management practices and project success at Bank of Abyssinia Share Company.

1.7 Significance of the Study

The result of the research created awareness among the top management of what kind of activities are able to contribute to project success and how the top management is able to handle their project more effectively to increases the rate of project success. Besides that, the research also enlightens the internal employees of the benefits of project time management practices and standards hence allow them to learn how to cope with these activities in the future. In term of academic, the research also further enhances the pre-existing theories and materials collected that was pre-defined by recent studies by adding in new possible theories and explanation that is beneficial to future researcher and project management student alike.

1.8 Scope of the Study.

Although bank of Abyssinia has a number of business related projects currently being executed, the study focused only on IT Projects managed by the Information Systems (IS) Project Management Office (PMO). Moreover, it focuses on project time management practices, particularly in activity duration estimating, activity sequencing, schedule development and control due to time constraints. The study only considers those staffs and project team leaders

who are /were involved in the execution of IT projects at BoA. Moreover, any findings, conclusions and recommendations are only limited to Bank of Abyssinia.

1.9 Limitation of the Study

Suspicion by the project staff can be a challenge in that they might think the researcher is out to expose their weaknesses; in this regard they did undergo some sensitization regarding the purpose of the study. The data will be collected from project staffs that are usually busy or unavailable at their offices due to the nature of their work.

1.10 Definitions of Terms

Project Time Management: This is a subset of project management that includes the processes required to ensure timely completion of the project. It consists of activity definition, activity sequencing, activity duration estimating, schedule development, and schedule control.

Activity Definition: Identifying the specific activities which must be performed in order to produce the various project deliverables.

Activity Duration: The time in calendar units between the start finish of a schedule activity. 4.

Activity Duration Estimating: Estimating the number of work periods that will be needed to complete individual activities.

Activity Resource Estimating: Estimates the type and quantities of material, people, equipment, or supplies required to perform each activity.

Activity Sequencing: Activities are arranged in a logical sequence showing the order in which these activities must be performed.

Plan Schedule Management: The aim of this process is to establish the policies, procedures, and documentation for planning, developing, managing, executing, and controlling the project schedule.

Schedule Development: It is the process of analyzing schedule activity sequences, schedule activity durations, resource requirements, and schedule constraints to create the project schedule.

Schedule Control: It is the process of controlling changes to the project schedule.

Source: project management glossary of terms (Fall. 2007)

CHAPTER TWO:

2. LITERATURE REVIEW

2.1 Introduction

This chapter will systematically identify, locate, and analyze empirical and theoretical information relating to the effect of project time management on the success of projects. This chapter reviews related literature with respect to the research objectives and also discusses the conceptual framework and the gaps in knowledge in the study.

2.2 Project Time Management

The project scope identifies the objectives of the project, what activities will be performed, and some of the activities that are not included in the project. The scope document is used to create a master schedule that identifies important dates and activities.

No two project managers or planning professionals develop identical plans or project schedules. The planning process is creative and reflects the planner's approach and style. Even though the project plan is unique to the approach and style of the planner, methods for developing the schedule and documenting the resulting plan follow certain rules. On larger and more complex projects, a planning function composed of a small team of planning and scheduling experts may be needed to develop and track the project schedule. Project planners facilitate the development of the information required to develop the project plan using templates, past or similar projects, and most importantly, the thoughts and plans of the project team leaders and members. On a smaller project, the project manager may be responsible for accomplishing this planning function. The schedule continues to evolve during the life of the project, and major revisions may be necessary in response to events both inside and outside the project that change critical dates on the schedule.

According to the Project Management Institute (PMI, 2008), project time management includes the following elements:

- Plan Schedule Management

• Define activities

• Sequence activities

• Estimate activity resources

• Estimate activity durations

• Develop schedule

• Control schedule

The list of activities, their relationship to each other, and estimates of durations and required resources comprise the work breakdown structure (WBS). The project WBS is a hierarchical classified according to criteria into successive levels—listing and grouping of the project activities required to produce the deliverables of the project. The WBS represents a breakdown of the project into components that encompass the entire scope of the project. Each level of the WBS hierarchy represents a more detailed description of the project work so that the highest level represents broad categories, and the lower levels represent increasing amounts of detail.

The size of the WBS is directly related to the amount of work on the project and how that work is divided into work packages. The WBS can be developed around the project phases or the project units or functions that will be performing the work. A WBS organized around the project phases facilitates the understanding of the amount of work required for each phase of the project. A WBS developed around the project units or functions of the project facilitates the understanding of the amount of work required for each function.

2.2.1 Plan Schedule Management

The aim of this process is to establish the policies, procedures, and documentation for planning, developing, managing, executing, and controlling the project schedule. Before the 5th Edition PMBOK® Guide, there was no time management process which covered the creation of this plan, which was done as part of the Integration Management knowledge area under the Develop Project Management Plan process. Plan Schedule Management process requires: (www.free-management-ebooks.com, p, 6-44, 2014)

Project Management Plan

The main component used is the scope baseline developed in the Project Scope Management Process. This includes the project scope statement and the work breakdown structure (WBS) details used for defining activities, duration estimation, and schedule management.

In addition, other scheduling related cost, risk, and communications decisions from the project management plan will also be needed to develop the schedule.

Project Charter

This will give the high-level time constraints and the list of critical milestones to be achieved on the project, some of which may actually be tied to project approval requirements. For example, the final delivery date may be fixed.

Enterprise Environmental Factors

The main consideration is probably going to be the project management software used to create the schedule but other factors include the organizational culture and structure, resource availability and skills that may influence schedule planning, and any productivity information that is applicable.

Organizational Process Assets

The main consideration will be the historical information on prior similar projects that can be used to help estimate the schedule, but other factors include the monitoring and reporting tools, schedule control tools, and any existing formal and informal schedule control related policies, procedures, templates and guidelines.

2.2.2. Define activities

The purpose of this process is to identify the specific tasks needed to be done in order to produce the project's deliverables. This needs to be done in sufficient detail to estimate what resources and time will be required to complete them. The main inputs are the scope baseline consisting of the approved project scope statement, the work breakdown structure, and the WBS dictionary. This process uses decomposition to take the work packages identified in the

WBS, which are nouns, and to identify the activities (which are verbs) required in order to complete them. It is essentially the bridge between the planning involved in scope management, and the planning involved in time or schedule management. Define activities process requires:

Schedule Management Plan

A key input from the schedule management plan is the prescribed level of detail necessary to manage the work.

Scope Baseline

The scope baseline is a component of the project management plan. It is made up of:

- The scope statement, which includes the products scope description of the project deliverables and defines the product user acceptance criteria.
- The work breakdown structure, which defines each deliverable and the decomposition of the deliverable into work packages.
- The WBS dictionary, which contains a detailed description of work and technical documentation for each WBS element.

Enterprise Environmental Factors

These are used as an input for many planning processes. 'Enterprise environmental factors refer to both internal and external factors that surround or influence a project's success. These factors may come from any or all of the enterprises involved in the project. Enterprise environmental factors may enhance or constrain project management options and may have a positive or negative influence on the outcome. They are considered as inputs to most planning processes.'

2.2.3. Estimation of Duration

After the project team has created the WBS, each activity is reviewed and evaluated to determine the duration (how long it will take to accomplish from beginning to end) and what resources (time, materials, facilities, and equipment) are needed. An estimate is an educated guess based on knowledge, experience, and inference—the process of deriving conclusions based on assumptions. The accuracy of the estimate is related to the quality of the knowledge and how that

knowledge is applied. The person with the most knowledge may not be the most objective person to provide duration estimates. The person responsible for the work may also want to build in extra time. Multiple inputs into the duration estimate and a more detailed WBS help reduce bias—the making of decisions based on a prejudged perspective. The unit of time used to develop the activity duration is a function of the level of detail needed by the user of the schedule. The larger and more complex the project, the greater the need for detail, which usually translates into shorter durations for activities.

Durations Process that requires the estimate of the amount of work effort required and the amount of resources to be applied for approximating the work periods needed to complete the activity (PMP, 2012).

1. Expert judgment: Expert judgment, guided by historical information, can be used whenever possible. The individual project team members may also provide duration estimate information or recommended maximum activity durations from prior similar projects.

2. Analogous estimating: Analogous duration estimating means using the actual duration of a previous, similar schedule activity as the basis for estimating the duration of a future schedule activity.

3. Parametric estimating: Estimating the basis for activity durations can be quantitatively determined by multiplying the quantity of work to be performed by the productivity rate.

4. Three-Points estimating: The accuracy of the activity duration estimate can be improved by considering the amount of risk in the original estimate. An activity duration estimate can be constructed by using an average of the three estimated durations. Project Evaluation and Review Technique (PERT) is used to estimate the activity duration by applying a weighted average of optimistic (to), pessimistic (tp), and most likely (tm) estimates, when there is uncertainty with the individual activity estimates (PMP, 2012).

5. Reserve analysis: Project teams can choose to incorporate additional time referred to as contingency reserves, time reserves or buffers, into the overall project schedule as recognition of schedule risk. The contingency reserve can be a percentage of the estimated activity duration, a

fixed number of work periods, or developed by quantitative schedule risk analysis (Line Management Institute of Training, 2012).

2.2.4 Resource Allocation and Calendars

A common resource constraint is availability. To consider the availability of team members, consultants, and key pieces of equipment, you can create a resource calendar for each that indicates which days are available and which are days off for a group, an individual, or a project asset such as a piece of important equipment. A calendar for team members from the same company could be the company calendar that shows working days, weekend days, and holidays. Individual team members can have individual calendars that show their vacation days or other days off, such as parental leave days. If major pieces of equipment are only available for certain periods of time, they can be given a resource calendar. Resource calendars become important tools when changes must be made to the schedule. When a resource calendar is applied to a duration estimate, the duration in days is distributed across the available calendar days.

The tools and techniques used in estimating activity resources are

1. Expert judgment.

2. Alternatives analysis.

3. Published estimating data.

4. Bottom-up estimating.

5. Project management software.

6. Estimate Activity

2.2.5 Activity Sequencing

Determining the schedule of a project begins by examining each activity in the WBS to determine its relationship to the other activities. The project logic is the development of the activity sequence or determining the order in which the activities will be completed. The process for developing the project logic involves identifying the predecessors—activities that come before—and successors—the activities that come after.

Tools and Techniques used for the Sequence Activity process are (PMP, 2012):

1. Precedence diagramming method (PDM): Precedence diagramming method (PDM) is used in the Critical Path Methodology (CPM) for constructing the project schedule network diagram. The Critical Path Method (CPM) is one of several related techniques for doing project planning. CPM is for projects that are made up of a number of individual "activities". If some of the activities require other activities to be finished before they can start, then the project becomes a complex web of activities (Baker, 2004).

2. Dependency determination: Dependencies of the activities on each other determine the route that the implementation can track during the project execution phase, it includes four types of dependencies or logical relationships: - Finish-to-start (FS). - Finish-to-finish (FF). - Start-to-start (SS). - Start-to-finish (SF).

3. Applying leads and lags: Lead refers to a relationship whereby the successor activity begins before the predecessor activity has completed, while lag refers to a relationship whereby the successor activity cannot start right after the end of its predecessor's (R. Sharma 2, 2013).

4. Schedule network templates: it can be used to expedite preparation of networks of project activities. It includes the entire project or only a portion of it; portions of a project schedule network diagram are referred to as a sub-network or a fragment network. Estimate Activity Resources is the process of estimating the type and quantities of material, people, equipment, or supplies required to perform each activity. The Estimate Activity Resource process is closely coordinated with the Estimate Costs process (PMP, 2012).

2.2.6 Develop schedule

The purpose of the project schedule is to provide a useful 'road map' that can be used by the project manager and the project team to assist them in completing the project successfully. The schedule becomes a dynamic tool developed by the project scheduler, with input from the project manager and project team that reflects their vision of how the project will be performed and reacts appropriately to changes in progress, scope, etc., as they are incorporated into the project schedule over the life of the project. A well developed project schedule model is a dynamic tool that can be used to predict when the project work that remains to be completed can reasonably be expected to be accomplished. Simultaneously, it allows the project team to look at the

performance of the project to date, and use that data to make more accurate projections about their intended work and actions in the future. It is important to remember we cannot manage or 'control' time; there will only ever be 24 Hrs in a day and they run sequentially! What the schedule can do is help the project team manage the use of the available time in a coordinated way. The project schedule describes what work is to be done, who will undertake the work (resources), and when it should be done. 'How' to do the work is defined by other documents in the overall project plan as defined by the project management body of knowledge guide. When developing the project schedule, it is critical to remember the schedule cannot 'control' the work of a project (and neither can the project management team), the people who 'control' the work are the workers, management can only influence the workers and the schedule should be the guide management uses to determine what influence to bring to bear on the workflow. Establishing a realistic and achievable project schedule is one of the critical initial actions in setting up a project. Equally important is the regular stat using and updating of the project schedule to support the on-going monitoring and controlling of progress as the project work is executed.

2.2.7 Schedule control

Schedule control is concerned with (a) influencing the factors which create schedule changes to ensure that changes are beneficial, (b) determining that the schedule has changed, and (c) managing the actual changes when and as they occur. Schedule control must be thoroughly integrated with the other control processes. The approved project schedule, called the schedule baseline, is a component of the overall project plan. It provides the basis for measuring and reporting schedule performance.

Performance reports provide information on schedule performance such as which planned dates have been met and which have not. Performance reports may also alert the project team to issues which may cause problems in the future.

Change requests may occur in many forms—oral or written, direct or indirect, externally or internally initiated, and legally mandated or optional. Changes may require extending the schedule or may allow accelerating it.

The schedule management plan defines how changes to the schedule will be managed. It may be formal or informal, highly detailed or broadly framed based on the needs of the project. It is a

subsidiary element of the overall project plan as defined by the project management body of knowledge guide.

2.3 Time Management Tools and Techniques for Project Management

2.3.1 Introduction

The definition of Project as a "temporary endeavor..." refers that project has to be done within a limited time. Furthermore, when it comes to the main constrains of the project we find time along with cost and scope which required careful attention throughout the whole project life cycle, during planning phase, executing and monitoring and control before closing the project. Time management process happens mainly in the planning phase, although the project duration and the milestones are already decided in the initiation phase, but it is still the project manager's responsibility to plan the project activities and to meet the set project duration within the planned budget.

2.3.2 Time Management

The Processes involved in project time management include (PMP, 2012): - Define Activities. - Sequence Activities. - Estimate Activity Resources. - Estimate Activity Durations. - Develop Schedule. We are going to present the main tools and techniques that are used in implementing these processes, as follows:

i) Define Activities

This process includes defining the activities need to be implemented to achieve the project deliverables. The main Tools and Techniques used in Defining Activities process are (PMP, 2012): - Decomposition. - Rolling wave planning. - Templates. - Expert judgment.

ii) Decomposition

Decomposition in project management means to divide the project into smaller pieces that can be easily managed and controlled. It is a technique used in Work Breakdown structure WBS creation and to define the required activities. Decomposition of project scope generally involves the following activities (B. Srinivasan, 2008): - Gather information on major project deliverables and analyze related tasks. - Start development of work breakdown structure (WBS) at the highest level. - Decompose the upper WBS levels into lower level detailed components. - Identify each work package & WBS components with unique code, and Verify if the degree of decomposition

of the work is necessary and sufficient. - Any of Levels of WBS need not be the same for all deliverables.

iii) Work breakdown structure

The work breakdown structure (WBS) is a checklist of every activity that must be performed to create the end product. This checklist becomes the foundation for the schedule, resource allocation, and budget plans (Knudson &Bitz, 1991). Create a WBS using one or more of the following methods: questionnaire, one-to-one personal interviews, or group sessions. This technique, then, requires you to plan iteratively. Essentially, when you use Rolling Wave Planning, plan until you have visibility, implement, and then re-plan. It is usually be used when you have clarity for the activities of the first months of the project. However, this method does not exempt you from organizing a milestones list and assumptions for the project as a whole (R. Sharma 1, 2013). The WBS defines the tasks logically; then the network organizes them sequentially. Every work task in the WBS must also appear in the network. The network analyzes the sequence of task execution and portrays it in a diagram to ensure that the team is in agreement about the sequence. The objective of the network is to portray visually the relationships of work activities to each other. A network demonstrates these relationships and communicates them more clearly to project team members and to managers than any other technique (Knudson & Bitz, 1991).

iv) Develop Schedule

It analyzes activity sequences, durations, resource requirements, and schedule constraints to create the project schedule. Tools and Techniques used are (MindTools, 2013):

- Schedule network analysis.

- Critical path method.

- Critical chain method.

- Resource leveling.

- What-if scenario analysis.

- Applying leads and lags.

- Schedule compression.

- Scheduling tool.

Once you have outlined the basic schedule, you need to review it to make sure that the timing for each activity is aligned with the necessary resources. Here are the tools commonly used to do this (mind Tools, 2013):

1. "What if" scenario analysis: This method compares and measures the effects of different scenarios on a project.

2. Resource leveling: Here, you rearrange the sequence of activities to address the possibility of unavailable resources, and to make sure that excessive demand is not put on resources at any point in time.

3. Critical chain method: This also addresses resource availability. You plan activities using their latest possible start and finish dates. This adds extra time between activities, which you can then use to manage work disruptions.

4. Risk multipliers: Risk is inevitable, so you need to prepare for its impact. Adding extra time to high-risk activities is one strategy. Another is to add a time multiplier to certain tasks or certain resources to offset overly optimistic time estimation.

5. After the initial schedule has been reviewed, and adjustments made, it's a good idea to have other members of the team review it as well. Include people who will be doing the work – their insights and assumptions are likely to be particularly accurate and relevant.

2.4. Project Success

A project is commonly acknowledged as successful when it is completed on time, within budget, and in accordance with specifications and to stakeholders' satisfaction. Functionally, profitability to contractors, absence of claims and court proceedings and "fitness for purpose" for occupiers has also been used as measures of project success (Takim & Akintoye, 2002).

The success of a project is also traditionally measured by time, budget, and requirements criteria. Despite the fact that this manner of measuring project success is currently subject to widespread criticism, this criteria is still often used in publications on project success in IT projects (Royal Academy of Engineering, 2004).

The criticism refers to three points, which are related to the assumptions that this definition is based on: the amount of time, the budget, and the project's requirements can be set at the beginning of the project; the project's success is the same for each project stakeholder; the project's success can be determined at the moment the project has produced its deliverables.

Setting time and budget limits and defining the requirements always take place at the beginning of the project, when uncertainty is at its maximum (Pinto, 2007), and it is practically impossible to set realistic limits and goals. According to Chandra (2002), a project is said to succeed when it's in line within the trinity of time, budget and specification constrains. Success factors in a project include among other things, proper feasibility studies, and commitment to project methodology, planning, effective monitoring and evaluation. The primary focus is on the results, with time and cost overruns and project sickness (ability or inability of the project to deliver desired results) being the major performance indicators (Block & Davidson 2001). Obviously, determining whether a project is a success or failure is intricate and ambiguous.

There are three main reasons among which Belassi and Tukel (1996) pointed out the first two. First, as mentioned by de Wit (1988) and Pinto and Slevin (1989), it is still not clear how to measure project success since project stakeholders perceive project success or failure differently. Second, lists of success or failure factors vary in numerous studies.

According to a study by Muto Performance Corp, 2010 the top 10 reasons for projects failure include; changes to project scope (scope creep); inadequate resources (excluding funding); insufficient time to complete the project; critical requirements are unspecified or missing; inadequate project testing; critical project tasks are delivered late; key team members lack adequate authority; the project sponsor is unavailable to approve strategic decisions; insufficient project funding and key team members lack critical skills. The third reason, as also remarked by de Wit (1988), is that for each project stakeholder, the objectives and their priorities are set differently throughout the project life cycle and at different levels in the management hierarchy.

It is necessary that distinctions be made between project success and project management success and between project success and project performance.

It is necessary that distinctions be made between project success and project management success and between project success and project performance. Previous studies (Munns and Bjeirmi, 1996; Cooke-Davies, 2002) clarified that project success is measured against the overall objectives of the project while project management success is measured against cost, time and quality/performance. Cooke-Davies (2002) noted that the distinction between project success - which cannot be measured until after the project is completed, and project performance - which can be measured during the life of the project is also important. However, Baccarini (1999) insists that project success is measured both in terms of product (including facilities) success and project management success.

The objectives of budget, schedule, and quality are key measures that contribute to the goal of construction project success. Chandra (1995) pointed out that project success is measured against the overall objectives of the project while project management success is measured against cost, time and quality/performance. According to Khakina (2006) the success of a project is defined by three transaction metrics: time, budget and quality. Success will not only focus on completion but completion within the time, budget and quality constrains. Chen and Chen (2007) identified different sets of success for different project objectives. He pointed out that, these factors contribute to different facets of project success. These success factors are planning effort in project designing, planning during construction, goal commitment, project team motivation, technical capabilities and scope.

2.5 Project Time Management and success of IT Projects

According to the PMBOK GUIDE (2000), project time management includes the processes required to ensure timely completion of the project. The PMBOK Guide dedicates one of ten Knowledge Areas to Project Time Management, which includes the processes required to accomplish timely completion of the project. This knowledge area includes processes such as Activity Definition, Activity Sequencing, Activity Resource Estimating, Activity Duration Estimating, Schedule Development, and Schedule Control.

The appropriateness of Project Time Management can be seen as a relevant indicator that could be used to assess contractors‟ effectiveness and capability to succeed on the 13 completion of a

project and to evaluate contractors‟ performance.(Rómel et al. 2009). These processes interact with each other and with the processes in the other knowledge areas as well. Each process may involve effort from one or more individuals or groups of individuals, based on the needs of the project. Each process generally occurs at least once in every project phase. On some projects, especially ones of a smaller scope, activity sequencing, activity duration estimating, and schedule development are so tightly linked that they are viewed as a single process that can be performed by a person over a relatively short period of time.

In any one project, there will be many parties with a legitimate interest in ensuring that the timing of the work is managed effectively. The purpose of the time - model is to indicate when in the future and in what sequence the planned work is to be performed, so that the intended work and the consequences of any changes, or departures from that intention can be predicted, communicated and managed efficiently. Because, at any one time, the time - model can only be as accurate a prediction of the future as current knowledge will allow, it must be conceived as a model which can be improved upon as information becomes available or circumstances change. In order to facilitate efficient time management, the time - model should be constructed so as to differentiate between works that can be predicted. The employer and its professional team are entitled to know what the contractor has achieved to date, and whether it is on target to complete by the various key dates and contract completion date. The working schedule is thus not just the schedule of the contractors intentions, but a fundamental management tool for the employer and the design team as it provides the essential information regarding the timing and interface of their continuing obligations and the calculating mechanism in the event that the contractor becomes entitled to an adjustment of the time to complete.

2.6 Empirical Review

The delays on the delivery of IT projects are seen as one of the most frequent problems in the information technology industry. Even though there is no previous study, in the same specific project where the present study is being carried out, the researcher observed delays were very frequent.

The aftermath of delays affects all people and organizations involved in the project. This is especially true for the owner’s business since delaying the startup of the project will impede obtaining the expected project revenue and will increase financial costs. In addition, the owner

may face several other difficulties resulting from the commitments assumed based on the delivery date established in the contract (Marzouk et al., 2008).

On the other hand, prolonging the project execution time usually results in IT projects that have to deal with cost overruns due mostly to the following causes: extra expenses on management personnel, cost escalations of materials, increase of financial cost, paying contract penalties, etc. (Singh, 2009). Moreover, given the usual competitive environment in the banking industry, banks that fail to complete IT projects on time may get their reputation harmed and become impeded to obtain new customers as well as retain existing ones. Therefore, the less time required to complete such projects the better for satisfying the social needs of the country.

In order to avoid the aforementioned incidents, project office or IT department should implement project management processes that lead to succeed on the delivery of IT projects. Project management includes a number of planning and controlling processes that should be applied to comply with the owners' requirements related to project time, cost, and quality (CIOB, 2002). In fact, project management has evolved towards a sophisticate and comprehensive process that depicts the primary approach to succeed on the delivery of any project. Since knowledge on project management has been developing over time, several professional associations around the world have issued guidelines and standards to put into practice such process.

For instance, the Project Management Institute (PMI) has issued five editions of the PMBOK (Project Management Body of Knowledge) Guide (PMI, 2013), while the Association for Project Management (APM) has so far released the sixth edition of the APM Body of Knowledge (Association for Project Management, 2012). Standardization of PM processes contributes to disseminate best practices that could support the attainment of project performance objectives (Liviu et al., 2010).

Regarding the prevention of project delays, the PMBOK Guide dedicates one of ten Knowledge Areas to the Management of Project Time, which includes the processes required to accomplish timely completion of the project (PMI, 2013). This knowledge area includes processes such as Activity Definition, Activity Sequencing, Activity Resource Estimating, Activity Duration Estimating, Schedule Development, and Schedule Control. The appropriateness of project time management can be seen as a relevant indicator that could be used to assess project manager effectiveness and capability to succeed on the completion of a project, as well as to evaluate project manager performance (Solis et al., 2009).

Schedule delay can be defined as a discrepancy where actual completion of the project exceeds the planed period according to the contract (Chabota et al., 2008). According to Larry (2002), project schedule is characterized by client urgent demand of project completion, client preference of speed over cost and quality, and the balance of project managers among project scope, budget and resource available. A study conducted in Nigeria showed severe delay in construction projects (Luka and Muhammad, 2014). Similar study conducted in Zambia road construction identified fourteen major causes of schedule variation Chabota et al. (2008).

Effective time control is challenged by different factors. According to Olawale and Sun, 2010, the top five factors inhibiting effective project time control in descending order are: design changes, inaccurate evaluation of projects time/duration, complexity of works, risk and uncertainty associated with projects and ill-performance of subcontractors and nominated suppliers. Likewise, Kasimu and Abubakar (2012) conducted delay study in the Nigerian construction industry and identified the top five factors that influence delay in ascending order as improper planning, lack of effective communication, design errors, shortage of supply like steel, concrete and slow decision making. Mengistu (2010) showed that project controlling supportive techniques and software are not applied well for the control of actual and planned activities in the Ethiopia construction sector and recommends the significance of training requirement for the concerned project staff. Similarly, Abadir (2011), found out that among the knowledge areas of project in Ethiopia, project time management is considered the critical one with only 24% projects managed well.

This study is, therefore, designed to assess the practice of project time management, to evaluate the effect of project time management practice on project success. The project time management practice in relation to IT projects in Bank of Abyssinia (BoA).

CHAPTER THREE

RESEARCH METHODOLOGY

This portion of this study is dedicated to the illustration of research methodology that has been utilized and the rationales behind them.

3.1 Research Design and Approach

The study is time bound hence cross sectional. It is also a descriptive research; in that it attempts to 'portray an accurate profile of persons, events or situations (Robson, 2002, p. 59, as cited by Saunders, Lewis and Thornhill 2009). This design has allowed the researcher to examine and describe the effect of project time management and project success in the case of IT projects in Bank of Abyssinia Share Company. The design is selected in order to collect enough information from involved parties so as to understand the relationship between project time management practices and project success.

Mixed method is the preferred research approach, as it is claimed to balance the benefits of both qualitative and quantitative research (Creswell, 2014) and allows the researcher to utilize the benefits of a questionnaire's ability to extract specific data needed as well that of an interview's openness in giving the respondent to have their say.

3.2 Population and sampling procedure

3.2.1 Population of the study

The new strategic plan and organizational configuration is devised to take full advantage of market opportunities and attain better growth year on year during the plan period. As a means of reaching its objectives, the bank has developed a number of initiatives (projects) with different priorities in the different areas of its operations.

Among the initiatives, 12 of them are identified to be IT Projects. To successfully implement these projects, the bank has instituted Result Management Office (RMO). This RMO is responsible for the centralized and coordinated management of the IT Projects.

To this end, the road to RMO begins with establishing the capability to create value for clients and for the whole bank; this is followed by implementing and enforcing those practices across all branches of the bank.

The population of this study is the project manager; project team leads, and project team members of the selected IT projects in Bank of Abyssinia; for the evident reason that they are the ones at the front line, executing the project.

3.2.2 Sampling procedure

Because of the small size of IT projects in BoA, the population for the study, who are the five team leaders, a project manager, result management office director, program manager and forty-two project team members of the organization, have all been taken. List of project participants are found from result management office of the organization.

3.3 Data Collection Procedure

The study utilized both primary and secondary sources. Primary data was collected through questionnaires from the aforementioned sample. The main research instrument that had been used for this study is the questionnaire that was adapted from the PMBOK. The questionnaire that was used for this study is divided broadly into two sections. The first section was about the background of the study participants. The 2nd section consists of questions regarding the project time management practice and project performance of the organization. Under the demographic section variables such as age of the respondent, gender, experience, and highest educational level were analyzed. The components of the project time management items were measured on a 5-point Likert scale ranging from 5 (very good) to 1 (very poor). The respondents had been asked to indicate the degree of practice as ‘very good’, ‘good’, ‘neither’, ‘poor’ or ‘very poor’.

The preference for a questionnaire was based on the fact that respondents will be able to complete it without help, anonymously, and it will be cheaper and quicker than other methods while reaching out to larger sample (Robson, 2002).

Furthermore, interview was also conducted with the project managers, team leads, program manager and some of the team members of the organization on their PTM practices and tools adopted. Complimentarily, secondary data was collected from the annual and quarter reports of the result management office of the organization to attest for the performance of IT projects on the basis time.

3.4 Data Analysis Procedure

The data obtained from the questionnaire respondents used to assess the project time management practices and IT project success of BOA was analyzed using the software Statistical

Package for Social Science (SPSS). In addition document is reviewed to attest the research findings. The scores of all 97 questions were fed to SPSS and the scores for every factor used for assessment purpose were obtained and then averaged to give the project time management practices of project staff on one of the knowledge areas of project management that relate to project success. The demographics of respondents were also analyzed using SPSS.

Correlation coefficient was used to test the relationship of independent variables (project time management practices) with the dependent variable (project success).

In analyzing the data gathered from the field (questionnaire), descriptive statistics, namely, frequencies, means, and reliability were primarily calculated using SPSS. The following analyses were carried out on the data:

1. Descriptive statistics to determine the success of projects in terms of time, budget and quality, in addition to determine project time practices by using means and standard deviations.

2. Reliability evaluation of the items used in the questionnaire.

3. Correlation analysis to explore the relationship between PTM and project success.

The results of the analysis have been presented in the form of descriptive statistics such as mean, frequency and percent.

3.5 Validity and Reliability

Creswell (2014) underlines the value of checking validity and reliability of data in attempting to acquire meaningful interpretations. Furthermore, he mentions Cronbach's alpha (α) the reliability checks for the internal consistency of the scales.

The applicability of Cronbach's alpha as highlighted by Creswell was the reason it is utilized in checking the validity and reliability of data in this study.

In efforts to check the validity, the questionnaire used face validity by having the questionnaire adopted from project management body of knowledge guide. Furthermore, the researcher was present as respondents filled out the questionnaire, in case explanation was needed.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1. Introduction

As has been mentioned in the prior chapters, the main attempt of this study is to investigate the influence of project time management practices on project success. Data was collected from primary and secondary sources in the form of questionnaires and review of annual reports respectively. Hence, this chapter presents the analysis and discussions for research findings obtained from both sources, first the questionnaire followed by the scrutiny annual reports.

This chapter commences by presenting the discussion begins with the questionnaires' response rate followed by the descriptive statistics of the respondents related questions; like gender, age, profession, roles in the organization, experience in project management, and level of education.

4.2. Demographic Profiles of Respondents

Table 4.2: Demographic Profiles of Respondents

Variables		Frequency	Percent
Gender	Male	40	80
	Female	10	20
	Total	50	100
Age	26 to 40	41	82
	41 to 55	9	18
	Total	50	100
Level of education	Bachelor Degree	34	68
	Masters Degree	16	32
	Total	50	100
Roles in the organization	Upper management	1	2
	Middle Management	12	24
	Junior Management	13	26
	Administrative staff	4	8
	Support staff	20	40
	Total	50	100
Project management experience in year	1	17	34
	2	16	32
	3	4	8
	4	5	10
	5	3	6
	6	4	8
	10	1	2
	Total	50	100

This section presents the demographic characteristics of respondents that participated in the study. As shown in the table shown above, 40 (80%) were male and 10 (20%) were female. The majority of the ages of respondents fall under the age of 26-40 (41%), and the rest fall in the age interval 41-55 (9%).

In respect to educational level, respondents who have acquired B.A. are 34, which is 68% of the total respondents. The remaining 16 or 32% of the respondents have acquired M.A. In respect to roles in the organization, one of the respondents (2%) is fall under upper management, 12 or (24%) of the respondents are fall under middle management, 13 or (26%) of the respondents are

fall under junior management, 4 or (8%) are fall under administrative staff, and the rest 20 (40%) respondent are fall under supporting staff. Regarding to the respondents experience in project management, 17 or (34%) have got one year experience in project management, 16 or (32%) have got two years of project management experience, the remaining respondents have got 3, 4, 5, 6, and 10 years of project management experience, which is 8%, 10%, 6%, 8% and 2% of the respondents respectively.

4.3 Response to research questions

In this section, the answers to research questions the study planned to answer have been addressed by using the data acquired. The objectives of this study set out to answer was, knowing what the level of project time management practices of BoA was, on the basis of the core knowledge areas of project management i.e. project time management. This was done by asking respondents to evaluate their organization's practice on those areas and answering by choosing the practices as very good (5), good (4), neither good nor poor (3), poor (2) and very poor (1) representing their answers from 1 to 5, which is they gave one for very good and 5 for very poor accordingly. Time management entails processes required to manage the timely completion of the project (PMI, 2013). To assess the project time management practices of BoA, eight major questions were asked which have been presented below along with the results discovered through the questionnaire. In addition, document was reviewed to attest the results which have been obtained through questionnaire.

Table 4.4 Average results of plan schedule management practice

Questions	Mean	Std. Deviation	Number of respondents
The practice of using Project Management Plan to prepare schedule management plan in your company	2.1	0.614	50
The practice of formulating Project Charter to prepare plan schedule management	1.88	0.594	50
The practice of assessing enterprise environmental factors before preparing plan schedule management	1.82	0.596	50
The practice of considering organizational process assets to prepare plan schedule management	1.78	0.679	50
To what extent Expert Judgment tools and techniques is used to prepare plan schedule management	2.50	0.909	50
The degree of using Analytical Techniques	2.42	0.810	50
To what extent Meetings are used as tools and techniques	2.42	0.702	50
Average	2.13		

Source: own survey, 2018

Respondents were asked seven questions regarding a plan schedule management practice, which is one of project time management practices, in their organization in the selected IT projects. As presented in table 4.3 the respondents replied that the practice of using Project Management Plan to prepare schedule management plan in your company (mean score 2.1), the practice of formulating Project Charter to prepare plan schedule management (mean score 1.88), the practice of assessing enterprise environmental factors before preparing plan schedule management (mean score 1.82), the practice of considering organizational process assets to prepare plan schedule management (mean score 1.78), to what extent Expert Judgment tools and techniques is used to prepare plan schedule management (mean score 2.50), the degree of using Analytical Techniques (mean score 2.42), to what extent Meetings are used as tools and techniques (mean score 2.42).
The average mean obtained in the practice of planning schedule management is 2.13; this implies that the practice is below average. Therefore the bank should improve this practice in future projects.

Table 4.5 Average results of activity definition practice

Questions	Mean	Std. Deviation	Number of respondents
The practice of using Schedule Management Plan to prepare activity list	1.8	0.699	50
The practice of using Schedule Management Plan to prepare milestone list	1.82	0.691	50
The content of scope statement, which includes the products scope description of the project deliverables and defines the product user acceptance criteria.	1.78	0.737	50
The content of work breakdown structure, which defines each deliverable and the decomposition of the deliverable into work packages.	1.70	0.707	50
The content of WBS dictionary, which contains a detailed description of work and technical documentation for each WBS element.	1.60	0.571	50
The practice of using Project Charter to prepare plan schedule management	1.66	0.626	50
The degree of assessment of enterprise environmental factors to prepare plan schedule management	1.70	0.647	50
The practice of considering organizational process assets to prepare plan schedule management	1.74	0.633	50
To what extent Expert Judgment is used as tools and techniques	1.72	0.671	50
The degree of using Analytical Techniques	1.68	0.621	50
To what extent Meetings are used as tools and techniques	1.90	0.707	50
Average	1.74		

Source: own survey, 2018

Respondents were asked eleven questions regarding to define activities, which is one of a project time management practices. The respondents were asked about the practice of the aforementioned time management practices in their organization in the selected IT projects. As presented in table 4.3 the respondents replied that the practice of using Schedule Management Plan to prepare activity list (mean score 1.8), the practice of using Schedule Management Plan to prepare milestone list (mean score 1.82), the content of scope statement, which includes the products scope description of the project deliverables and defines the product user acceptance

criteria (mean score 1.78), the content of work breakdown structure, which defines each deliverable and the decomposition of the deliverable into work packages (mean score 1.70), The content of WBS dictionary, which contains a detailed description of work and technical documentation for each WBS element (mean score 1.60), the practice of using Project Charter to prepare plan schedule management (mean score 1.66), the degree of assessment of enterprise environmental factors to prepare plan schedule management (mean score 1.70), the practice of considering organizational process assets to prepare plan schedule management (mean score 1.74), to what extent Expert Judgment is used as tools and techniques (mean score 1.72), the degree of using Analytical Techniques (mean score 1.68), to what extent Meetings are used as tools and techniques (1.90). The average mean obtained in the practice of defining activities is 1.74, this implies that the practice is below average. Therefore the bank should exert much effort in this practice in future projects.

Table 4.6 Average results of activity sequencing practice

Questions	Mean	Std. Deviation	Number of respondents
The practice of using schedule Management Plan to prepare project schedule network diagram	1.7	0.678	50
The practice of using activity list to prepare project documents updates	1.8	0.639	50
The practice of using activity attributes to rearrange the sequence of the activities	1.78	0.679	50
The practice of identifying and using milestone list to prepare project documents updates	1.6	0.571	50
The practice of using project scope statement to prepare project documents updates	1.68	0.587	50
The practice of applying Dependency Determination analysis for preparing project schedule network diagram	1.68	0.653	50
The degree of enterprise environmental factors assessment to prepare project schedule network diagram	1.7	0.647	50
The practice of considering organizational process assets to prepare project schedule network diagram	1.72	0.671	50
The practice of applying Precedence diagram method (PDM)	1.76	0.716	50
To what extent Dependency Determination is applied	1.72	0.64	50
The practice of using Leads and Lags	1.62	0.602	50
Average	1.71		

Source: own survey, 2018

Respondents were asked eleven questions regarding to sequence activities, which is one of a project time management components. The respondents were asked about the practice of the aforementioned time management practices in their organization in the selected IT projects. As presented in table 4.4 the respondents replied that the practice of using schedule Management Plan to prepare project schedule network diagram (mean score 1.70), the practice of using activity list to prepare project documents updates (mean score 1.80), the practice of using activity attributes to rearrange the sequence of the activities (mean score 1.78), the practice of identifying and using milestone list to prepare project documents updates (mean score 1.60), the practice of using project scope statement to prepare project documents updates (mean score 1.68), the practice of applying Dependency Determination analysis for preparing project schedule network diagram (mean score 1.68), The degree of enterprise environmental factors assessment to prepare project schedule network diagram (mean score 1.70), the practice of considering organizational process assets to prepare project schedule network diagram (mean score 1.72), the practice of applying Precedence diagram method (PDM) (mean score 1.76), to what extent Dependency Determination is applied (mean score 1.72), the practice of using Leads and Lags (mean score 1.62). The average mean obtained in the practice of activity sequencing is 1.71, this implies that the practice is below average. Therefore the bank should exert much effort in this practice in future projects.

Table 4.7 Average results of activity resource estimation practice

Questions	Mean	Std. Deviation	Number of respondents
The practice of using Schedule Management Plan to prepare activity resource requirements	1.68	0.653	50
The practice of using Activity List to prepare resource break down structure	1.68	0.621	50
The practice of using Activity Attributes to prepare project document updates	1.58	0.575	50
The practice of using Resource Calendars to prepare activity resource estimation	1.60	0.639	50
The practice of using Risk register to prepare activity resource estimation	1.72	0.701	50
The practice of using activity cost estimates to prepare activity resource estimation	1.64	0.598	50
The practice of considering organizational process assets	1.68	0.713	50
The degree of enterprise environmental factors assessment to activity resource estimation	1.68	0.683	50
To what extent Expert Judgment is used	1.70	0.707	50
The degree of using Alternative analysis	1.78	0.679	50
To what extent Published estimating data are used	1.68	0.621	50
The degree of using Bottom-up estimating	1.88	0.659	50
To what extent Project management software is used	1.82	0.691	50
Average	1.70		

Source: own survey, 2018

Respondents were asked thirteen questions regarding to activity resource estimation, which is one of a project time management components. The respondents were asked about the practice of the aforementioned time management practices in their organization in the selected IT projects. As presented in table 4.5 the respondents replied that the practice of using Schedule Management Plan to prepare activity resource requirements (mean score 1.68), the practice of using Activity List to prepare resource break down structure (mean score 1.68), the practice of using Activity Attributes to prepare project document updates (mean score 1.58), the practice of using Resource Calendars to prepare activity resource estimation (mean score 1.68), the practice of using Risk

register to prepare activity resource estimation (mean score 1.72), the practice of using activity cost estimates to prepare activity resource estimation (mean score 1.64), the practice of considering organizational process assets (mean score 1.68), the degree of enterprise environmental factors assessment to activity resource estimation (mean score 1.68), to what extent Expert Judgment is used (mean score 1.70), the degree of using Alternative analysis (mean score 1.78), to what extent Published estimating data are used (mean score 1.68), the degree of using Bottom-up estimating (mean score 1.88), to what extent Project management software is used (mean score 1.82). The average mean obtained in the practice of estimating activity resources is 1.70, this implies that the practice is below average. Therefore the bank should exert much effort to this practice in future projects.

Table 4.8 Average results of activity duration estimates practice

Questions	Mean	Std. Deviation	Number of respondents
The practice of using Schedule Management Plan to prepare activity duration estimates	1.76	0.657	50
The practice of using Activity List to prepare project document updates	1.78	0.616	50
The practice of using Activity Attributes to prepare activity duration estimates	1.86	0.670	50
The practice of using activity resource requirements to prepare activity resource estimation	1.70	0.580	50
The practice of using resource calendars to prepare activity resource estimation	1.66	0.626	50
The practice of using project scope statement to prepare activity resource estimation	1.64	0.598	50
The practice of using project resource breakdown structure to prepare activity resource estimation	1.62	0.635	50
The practice of considering organizational process assets to prepare activity duration estimates	1.74	0.633	50
The degree of enterprise environmental factors assessment to prepare activity duration estimates	1.86	0.729	50
The practice of applying Expert Judgment	1.68	0.621	50
The practice of applying Analogous Estimating	1.78	0.648	50
The practice of applying Parametric Estimating	1.58	0.609	50
The practice of applying Three-point Estimating	1.66	0.688	50
The practice of applying Group Decision Making Techniques	1.62	0.602	50
The practice of applying Reserve Analysis	1.68	0.621	50
Average	1.71		

Source: own survey, 2018

Respondents were asked fifteen questions regarding to activity duration estimates, which is one of a project time management components. The respondents were asked about the practice of the aforementioned time management practices in their organization in the selected IT projects. As presented in table 4.6 the respondents replied that the practice of using Schedule Management Plan to prepare activity duration estimates (mean score 1.76), the practice of using Activity List to prepare project document updates (mean score 1.78), The practice of using Activity Attributes to prepare activity duration estimates (mean score 1.86), the practice of using activity resource requirements to prepare activity resource estimation (mean score 1.70), the practice of using resource calendars to prepare activity resource estimation (mean score 1.66), the practice of using project scope statement to prepare activity resource estimation (mean score 1.64), the practice of using project resource breakdown structure to prepare activity resource estimation (mean score 1.62), The practice of considering organizational process assets to prepare activity duration estimates (mean score 1.74), the degree of enterprise environmental factors assessment to prepare activity duration estimates (mean score 1.86), the practice of applying Expert Judgment (mean score 1.68), The practice of applying Analogous Estimating The practice of applying Analogous Estimating (mean score 1.78), the practice of applying Parametric Estimating (mean score 1.58), The practice of applying Three-point Estimating (mean score 1.66), The practice of applying Group Decision Making Techniques (mean score 1.62), The practice of applying Reserve Analysis (mean score 1.68). The average mean obtained in the practice of estimating activity duration is 1.71, this implies that the practice is below average. Therefore the bank should exert much effort to this practice in future projects.

Table 4.9 Average results of practices on developing schedule

Questions	Mean	Std. Deviation	Number of respondents
The practice of using Schedule Management Plan to prepare schedule baseline	1.7	0.647	50
The practice of using Activity List to prepare project schedule	1.76	0.744	50
The practice of using Activity Attributes to prepare schedule data	1.64	0.598	50
The practice of using Project Schedule Network Diagrams to prepare project calendars	1.52	0.646	50
The practice of using Risk register to prepare activity resource estimation	1.62	0.697	50
The practice of using activity resource requirements to prepare project management plan updates	1.58	0.702	50
The practice of using activity resource requirements to prepare project management plan updates	1.58	0.702	50
The practice of using resource calendars to prepare project document updates	1.62	0.697	50
The practice of using duration estimate to prepare project schedule	1.62	0.725	50
The practice of using project scope statement to prepare project schedule	1.76	0.744	50
The practice of using risk register to prepare project schedule	1.66	0.626	50
The practice of using resource breakdown structure to prepare project schedule	1.66	0.626	50
The practice of considering project staff assignments	1.76	0.716	50
The practice of considering organizational process assets	1.74	0.694	50
The degree of enterprise environmental factors assessment to develop schedule	1.64	0.631	50
The practice of applying Schedule Network Analysis	1.74	0.633	50
The practice of applying Critical Path Method	1.74	0.633	50
The practice of Critical Chain Method	1.66	0.593	50
The practice of applying Resource Optimization Techniques	1.62	0.567	50
The practice of applying Modeling Techniques	1.64	0.563	50
The practice of applying Leads and Lags	1.66	0.519	50
The practice of applying Schedule Compression	1.68	0.621	50
Average	1.67		

Source: own survey, 2018

Respondents were asked twenty-four questions regarding to develop a schedule, which is one of a project time management components. The respondents were asked about the practice of the aforementioned time management practices in their organization in the selected IT projects. As presented in table 4.7 the respondents replied that the practice of using Schedule Management

Plan to prepare schedule baseline (mean score 1.70), the practice of using Activity List to prepare project schedule (mean score 1.76), the practice of using Activity Attributes to prepare schedule data (mean score 1.64), the practice of using Project Schedule Network Diagrams to prepare project calendars (mean score 1.52), the practice of using Risk register to prepare activity resource estimation (mean score 1.62), the practice of using activity resource requirements to prepare project management plan updates (mean score 1.58), the practice of using resource calendars to prepare project document updates (mean score 1.58), the practice of using duration estimate to prepare project schedule (mean score 1.62), the practice of using project scope statement to prepare project schedule (mean score 1.62), the practice of using risk register to prepare project schedule (mean score 1.76), the practice of using resource breakdown structure to prepare project schedule (mean score 1.66), the practice of considering project staff assignments (mean score 1.66), the practice of considering organizational process assets (mean score 1.76), the degree of enterprise environmental factors assessment to develop schedule (mean score 1.74), the practice of applying Schedule Network Analysis (mean score 1.64), the practice of applying Critical Path Method (mean score 1.74), the practice of Critical Chain Method (mean score 1.74), the practice of applying Resource Optimization Techniques (mean score 1.66), the practice of applying Modeling Techniques (mean score 1.62), the practice of applying Leads and Lags (mean score 1.64), the practice of applying Schedule Compression (mean score 1.66), the practice of applying Resource leveling (mean score 1.68), the practice of applying Scheduling tool (mean score 1.74). The average mean obtained in the practice of developing a schedule is 1.67, this implies that the practice is below average. Therefore the bank should exert much effort to this practice in future projects.

Table 4.10 Average results of practices on schedule control

Questions	Mean	Std. Deviation	Number of respondents
The practice of using Project Management Plan to prepare Work Performance Information	1.78	0.616	50
The practice of using project schedule to prepare schedule forecasts	1.68	0.587	50
The practice of using work performance data to accommodate change requests	1.66	0.658	50
The practice of using project calendars to prepare project management plan updates	1.62	0.635	50
The practice of using schedule data to prepare project document updates	1.68	0.683	50
The practice of considering organizational process assets to prepare organizational process assets updates	1.70	0.678	50
The practice of using Performance Reviews	1.72	0.730	50
The practice of using Project Management Software	1.58	0.609	50
The practice of using Resource Optimization Techniques	1.64	0.663	50
The practice of using Modeling Techniques	1.64	0.663	50
The practice of applying Leads and Lags	1.56	0.611	50
The practice of applying Schedule Compression	1.62	0.567	50
The practice of using Scheduling Tool	1.60	0.571	50
	1.65		

Source: own survey, 2018

Respondents were asked thirteen questions regarding to control a schedule, which is one of a project time management components. The respondents were asked about the practice of the aforementioned time management practices in their organization in the selected IT projects. As presented in table 4.8 the respondents replied that the practice of using Project Management Plan to prepare Work Performance Information (mean score 1.78), the practice of using project schedule to prepare schedule forecasts (mean score 1.68), the practice of using work performance data to accommodate change requests (mean score 1.66), The practice of using project calendars to prepare project management plan updates (mean score 1.62), The practice of using schedule data to prepare project document updates (mean score 1.68), The practice of

considering organizational process assets to prepare organizational process assets updates (mean score 1.70), The practice of using Performance Reviews (mean score 1.72), The practice of using Project Management Software (mean score 1.58), The practice of using Resource Optimization Techniques (mean score 1.64), the practice of using Modeling Techniques (mean score 1.64), The practice of applying Leads and Lags (mean score 1.56), the practice of applying Schedule Compression (mean score 1.62), the practice of using Scheduling Tool (mean score 1.56). The average mean obtained in the practice of controlling a schedule is 1.65, this implies that the practice is below average. Therefore the bank should exert much effort to this practice in future projects.

4.11 What is level of project success in the case of BoA IT projects?

Cooke-Davis (2002) explained that project management success refers to the evaluation of the performance of a project measured against the measurements of time, cost and quality. Hence this research, in an attempt of accomplishing one of its objectives, asked respondents to evaluate and rank the performance of their projects on the basis of time: compliance with schedule, cost: compliance with budget and quality: delivery the product intended. Each of these parameters was ranked by respondents on a five point scale as Very Good, Good, Neither Good nor Poor, Poor and Very poor. The results have been summarized as follows.

i. Compliance with budget

The response of respondents when asked to evaluate the performance of organization's projects, they responded as follows:

Table 4.12 Rating of project success against budget

Compliance with budget					
Rating		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Poor	7	14.0	14.0	14.0
	Poor	31	62.0	62.0	76.0
	Neither good nor poor	12	24.0	24.0	100.0
	Total	50	100.0	100.0	

When evaluating the success of projects that are handled by their organization on the basis of budget compliance 14% (7 respondents), 62% (31) rated it as very poor, and poor respectively. The rest of the respondents, i.e. 24% (12 respondents), were rated as neither good nor poor. The majority rated it as very poor and poor, putting the average compliance of IT projects to their budgets at 2.10, which translates to a performance level below 'good'.

ii. Compliance with time

Table 4.13 Rating of project success against time

Compliance with time					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Poor	12	24.0	24.0	24.0
	Poor	32	64.0	64.0	88.0
	Neither good nor poor	6	12.0	12.0	100.0
	Total	50	100.0	100.0	

When asked to rate their organizations trend in complying with deadlines and delivery dates, 88% or 44 of the respondents answered 'poor' and 'very poor'. Only six respondents (12 %) answered neither good nor poor. Consequently, the average compliance of IT projects to time stood at 1.88 out of a possible 5. This level of perceived performance is also substantiated by the annual and quarter status reports of RMO office for IT projects. According the report all IT projects selected as a sample were completed lag behind the planned period. There are some projects which are not finalized yet; however, the planned period has already been elapsed.

iii. Compliance with quality (deliver exactly the output expected).

Table 4.14 Rating of project success against quality

Compliance with quality					
Rating		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Poor	14	28.0	28.0	28.0
	Poor	31	62.0	62.0	90.0
	Neither good nor poor	5	10.0	10.0	100.0
	Total	50	100.0	100.0	

When asked to rate the trend of their organization displayed with regards to delivering a project output that is exactly what it set out to complete, respondents gave an average rating of 1.82 out of 5, with just five respondents (10 %) rating it as 'neither good nor poor' and 45 of them (90 %) rating it as 'poor' or 'very poor'.

Table 4.15 Average rating of project success

	Mean	Std. Deviation	Number of respondents
Compliance with budget	2.10	0.614	50
Compliance with quality	1.82	0.596	50
Compliance with time	1.88	0.594	50
Average	1.93		

The average mean obtained in the rating of project success of the organization is 1.93, this implies that the project success is below average which is directly associated with project time management. Therefore the bank should exert much effort to project time management practices in future projects in order to improve the rate of success of projects.

4.16 What is the relationship between project time management and project success in the case of IT projects?

Table 4.16 Correlation matrix for PTM practices and project success

	compliance with budget	compliance with time	compliance with quality	Schedule Management Plan conducted	activities defined	activities sequenced	activity resources estimated	activity durations estimated	schedule developed	control schedule
compliance with budget	1	0.54	0.441	0.666	0.262	1	0.152	0.537	0.138	0.174
compliance with time	0.537	1	0.515	0.615	0.283	0.538	0.238	1	0.037	0.164
compliance with quality	0.441	0.52	1	0.578	0.313	0.447	0.278	0.515	0.177	0.327
Schedule Management Plan conducted	0.666	0.62	0.578	1	0.096	0.669	0.104	0.615	0.085	0.043
activities defined	0.262	0.28	0.313	0.096	1	0.265	0.27	0.283	0.548	0.453
activities sequenced	1	0.54	0.447	0.669	0.265	1	0.153	0.538	0.143	0.179
activity resources estimated	0.152	0.24	0.278	0.104	0.27	0.153	1	0.238	0.161	0.211
activity durations estimated	0.537	1	0.515	0.615	0.283	0.538	0.238	1	0.037	0.164
schedule developed	0.138	0.04	0.177	0.085	0.548	0.143	0.161	0.037	1	0.501
control schedule	0.174	0.16	0.327	0.043	0.453	0.179	0.211	0.164	0.501	1

The final question this study set out to answer was to find the correlation between the project time management practices project success. To this partial correlation coefficient was utilized. Gaur and Gaur (2009) state that partial correlation allows us to examine the correlation between two variables while controlling for the effects of one or more of the additional variables without throwing out any of the data. The correlation coefficients show the extent and direction of the linear relationship between project time management variables and project success measures of the sample projects. The probability, which is shown with the correlation coefficient greater than 0.5, is very significant.

The table above demonstrates that project time management is positively and significantly correlated at 5 percent significance level with project success.

From the result shown in the above table, it can be understood that project time management has a strong association with success of projects. In efforts to ascertain the reliability of the results Cronbach's alpha (α) was calculated. In order for the result to be reliable Cronbach's alpha (α) must be 0.7 or greater. In this research it was found to be 0.844, which implies that the result is reliable.

The result obtained from interview indicated that there is poor experience for schedule management plan practice, sometimes without preparing such documents the executive management determines the project commencement date and completion date. According the interviewee, the practice of activity definition was exercised, which is contradictory with the research findings. In the other hand, the practice of sequencing activities in the project is poorly exercised. A number of activities run at time that needs to be run one after the other and hence the members in such projects would be kept idle. The practice of activity resource estimation is a big challenge for the organization which is done traditionally without considering the project management tools and techniques. On the other hand, the activity duration estimation was poorly exercised, that is, the project completion period was decided blindly by executive management. The schedule developed after the completion period of the project was declared by top management, which hinders the project manager to exercise the project time management knowledge area as required. The control schedule practice was strictly adhered to the one mentioned in the questionnaire even though it disagree with the research results. According to the information obtained from the interviewee, the project was evaluated only in terms of budget without considering project time management. Some of the interviewee concluded that, their organization lag behind with its peer groups in providing the state-of-the-art technology to its customers. As it has been mentioned above, the results of the interview portrayed that the project time management is poorly exercised by the organization.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

In efforts to unearth the effect of project time management practices on project success in Bank of Abyssinia Share Company and this study set out to answer the specific research questions mentioned in the first chapter.

In the final chapter of this study conclusion is made from the findings of the study, followed by forwarding of recommendations and indication of directions for future research.

5.1 Summary

The population of this study is the project manager; project team leads, and project team members of the selected IT projects in Bank of Abyssinia; for the evident reason that they are the ones at the front line, executing the project. The age of the respondents fall under the age interval 26 to40 years and the rest falls between 41 to 55 years. From the total respondents 20% are female and the remaining 80% are males. Out of the total respondents 32% have acquired M.A degree while the remaining 68% have acquired B.A degree. This indicates that the team members of the project have sufficient educational qualification to run the project. However, majority of the respondents, which is 66% of the total respondents have got less than two years of experience in project management. This signifies that the participants in the projects do not have sufficient experience in such activity that leads to the poor performance of the project. Out of the total respondents 26% fall under middle management and above in respect to their roles in their organization, the remaining 74% fall under junior management level and support staffs, which indicate that the projects have given a due attention by the organization even if they do not have sufficient experience in project management practices.

5.1.1 Plan schedule management

The study sought to determine the influence of plan schedule management on project success. The study found out that the average mean obtained in the practice of planning schedule management is 2.13, this implies that the practice is below average. The practice of considering organizational process assets to prepare plan schedule management, which is one of the components of planning schedule management, is the least practice of all the components that is used for preparing plan schedule management. Project execution was launched to start

without proper development of a project plan, which often causes delays, high costs and general execution problems in the project (Antvik and Sjöholm, 2007).

5.1.2 Defining Activities

The study indicated that the practice of defining activities, which is one of the components of project time management, is below average and scoring 1.74 out of five. Moreover, the practice of preparing WBS (Work Breakdown Structure dictionary) that contains a detailed description of work and technical documentation for each WBS element, which is one of the sub components of activity definition, is very low as compared to other sub components that need a due attention while defining activities in any project. Defining the activities need to be implemented to achieve the project deliverables (PMP, 2012)

5.1.3 Activity Sequencing

The study further portrayed that the average mean obtained in the practice of activity sequencing is 1.71, this implies that the practice is below average. Among other sub practices in activity sequencing, the practice of identifying and using milestone list to prepare project documents updates is very much below average of all practices in activity sequencing. Interact closely and involve the business experts from the very beginning. This is even truer in the case of project reviews. If the project involves any major complexity such as a new client or working on new technologies, then the activity dependency is even higher. Once again project management body of knowledge guide has a proven process for activity sequencing which can be used for better time management (Radhika Chittor, 2012).

5.1.4 Estimating Activity Resources

The average mean obtained in the practice of estimating activity resources is 1.70, which is below the average. Moreover, the practice of using Activity Attributes to prepare project document updates, which is one of the major inputs for estimating activity resources, is very poor that rates 1.58 out of five. Traditional wisdom is that planning and analysis are important and with planning in a project, the project will be more successful (Wang and Gibson, 2008; Dvir, Raz and Shenhar, 2003). Time spent on these activities will reduce risk and increase project success. On the other hand, inadequate analysis and planning will lead to a failed project (Morris, 1998; Thomas, Jacques, Adams and Kihneman-Woote, 2008)

5.1.5 Estimating Activity Duration

The average mean obtained in the practice of estimating activity duration is 1.71, which is below the average that is rated by respondents. In addition, the practice of using project resource breakdown structure to prepare activity resource estimation and the practice of applying Group Decision Making Techniques, which are the major inputs for estimating activity duration, are very poor and both practices rated 1.58 out of five. Taking into account conditions that must meet project definitions mentioned by most authors, it can be concluded that, the completion of any project at scheduled time and budget, without exceeding appointed resources and corresponding to the intended quality parameters is strongly associated with appropriate planning with regard to estimating activity duration (Young T.L. 2006).

5.1.6 Develop Schedule

Based on the findings of the study, the average mean obtained in the practice of developing a schedule is 1.67, this implies that the practice is below average. The practice of using Project Schedule Network Diagrams to prepare project calendars, the practice of using activity resource requirements to prepare project management plan updates and the practice of using activity resource requirements to prepare project management plan updates which are the major inputs among other sub components that need to develop a schedule. However, the aforementioned practices exhibited a score which is much below the average as compared to other sub components that need to develop a schedule. Pinto and Prescott (1988) found that a schedule or plan had a strong correlation with project success. Pinto and Prescott (1990) again found that planning factors dominate throughout the project life cycle.

5.1.7 Control Schedule

The study further portrayed that the average mean obtained in the practice of control a schedule is 1.65, this implies that the practice is below average. Among other sub practices in schedule control, the practice of using Project Management Software is very much below average of all practices in schedule control. Yu et al. (2005) discussed the timing of project evaluations which aim analyzing the success, concluding that the process is useful at any time between the first milestone until the completion of the project.

5.1.8 Rating of Project Success

The average mean obtained in the rating of project success of the organization in terms of time, budget and quality of the organization is 1.93 out of the possible rate of five, this implies that the project success is below average which is directly associated with project time management. Project success has been measured in a variety of ways. While the measurement of project success has focused on tangibles, current thinking is that ultimately, project success is best judged by the stakeholders, especially the primary sponsor, (Turner and Zolin, 2012). As Shenhar, Levy, & Dvir (1997) note, assessing success is time-dependent: "As time goes by, it matters less whether the project has met its resource constraints; in most cases, after about one year it is completely irrelevant. In contrast, after project completion the second dimension, impact on the customer and customer satisfaction, becomes more relevant." (p12).

The correlation coefficients have revealed the extent and direction of the linear relationship between project time management variables and project success measures of the sample of IT projects. Therefore, it can be understood that project time management has a strong association with success of projects.

5.2. Conclusion

Project time management is the art and science of planning, designing and managing work throughout all the phases of the project life cycle". It is also regarded as a system or process of planning, designing, scheduling, managing and controlling interconnected project activities in order to achieve specific objectives or goal within a specific time, budget and standards.

Based on the findings of the study, the average mean obtained in the practice of planning schedule management is 2.13, this implies that the practice is below average. The practice of considering organizational process assets to prepare plan schedule management, which is one of the components of planning schedule management, is the least practice of all the components that is used for preparing plan schedule management. Therefore the bank should improve this practice in future projects.

The results of study reported in this paper indicate that the practice of defining activities, which is one of the components of project time management, is below average and scoring 1.74 out of five. Moreover, the practice of preparing WBS (Work Breakdown Structure dictionary) that contains a detailed description of work and technical documentation for each WBS element, which is one of the sub components of activity definition, is very low as compared to other sub

components that need a due attention while defining activities in any project. Therefore, the bank should improve such practices while running any project.

The study further portrayed that the average mean obtained in the practice of activity sequencing is 1.71, this implies that the practice is below average. Therefore the bank should exert much effort in this practice in future projects. Among other sub practices in activity sequencing, the practice of identifying and using milestone list to prepare project documents updates is very much below average of all practices in activity sequencing.

The average mean obtained in the practice of estimating activity resources is 1.70, which is below the average. Moreover, the practice of using Activity Attributes to prepare project document updates, which is one of the major inputs for estimating activity resources, is very poor that rates 1.58 out of five. This implies that the practice is below average. Therefore the bank should exert much effort to this practice in future projects.

The average mean obtained in the practice of estimating activity duration is 1.71, which is below the average that is rated by respondents. In addition, the practice of using project resource breakdown structure to prepare activity resource estimation and the practice of applying Group Decision Making Techniques, which are the major inputs for estimating activity duration, are very poor and both practices rated 1.58 out of five. This implies that the practices are below average. Therefore the bank should exert much effort to these practices in future projects.

Based on the findings of the study, the average mean obtained in the practice of developing a schedule is 1.67, this implies that the practice is below average. The practice of using Project Schedule Network Diagrams to prepare project calendars, the practice of using activity resource requirements to prepare project management plan updates and the practice of using activity resource requirements to prepare project management plan updates which are the major inputs among other sub components that need to develop a schedule. However, the aforementioned practices exhibited a score which is much below the average as compared to other sub components that need to develop a schedule. Therefore, much has to be done in future projects.

The study further portrayed that the average mean obtained in the practice of control a schedule is 1.65, this implies that the practice is below average. Therefore the bank should exert much effort in this practice in future projects. Among other sub practices in schedule control, the practice of using Project Management Software is very much below average of all practices in schedule control. Therefore the bank should exert much effort to this practice in future projects in order to complete the projects within the required quality, budget and time.

Based on the study conducted regarding to project success against time, budget and quality the majority rated it as very poor and poor, putting the average compliance of IT projects to their budgets at 2.10, which translates to a performance level below 'good'.

Consequently, the average compliance of IT projects to time stood at 1.88 out of a possible rate of 5.The results obtained from the study with regards to delivering a project output that is exactly what it set out to complete, respondents gave an average rating of 1.82 out of 5, with just five respondents (10 %) rating it as 'neither good nor poor' and 45 of them (90 %) rated it as 'poor' or 'very poor'.

The average mean obtained in the rating of project success of the organization is 1.65, this implies that the project success is below average which is directly associated with project time management. Therefore the bank should exert much effort to project time management practices in future projects in order to improve the rate of success of projects.

The correlation coefficients have revealed the extent and direction of the linear relationship between project time management variables and project success measures of the sample IT projects. From the result shown in the above table, it can be understood that project time management has a strong association with success of projects.

The results of study reported in this paper indicate a significant effect of the use of processes related to Project Time Management on project success, especially for completing the IT projects in BOA within the original schedule. However, the results obtained from the assessment of both variables demonstrate a low level of project time management practices. Based on the findings of

the study, it is clear that the project team members including, project manager, program manager and result management office staffs have low level of knowledge on project management practices which has contributed in decreasing IT projects success rate. This study has found out that if project time management practices are well managed, there is a very high possibility of having a viable project that will guarantee a sound business success.

5.2 Recommendation

Based on the conclusion of the study it is recommended that BOA should consider the following in efforts of increasing their chance of project success:

- Effort should be exerted in the use of project time management since the timing and successful implementation of projects can greatly enhance an organization's competitive situation. As has been said in the findings portion of the study and later in the summary and conclusion parts of the study, project time management has a significant positive relationship with project success. The organization should exploit this scenario by making further efforts to enlighten the project team and top management about how project time management practices affects the timely completion of the projects, the processes and tools needed for implementing quality time management in the project, how plan schedule management will be defined, inspected and documented on the project, how sequence activities, activity resource estimation, define activities, activity duration estimation, develop schedule and control schedule processes will be checked and monitored and how changes to them will be assessed by applying PTM practices and PTM tools and techniques.

- From findings, it was obvious that effective project time management is one of the project management knowledge areas that contribute a lot for confirmatory project performance and success. Project time management has a strong association with success of projects. Thus, it is recommended that project owners should adhere strictly to effective project time management practices in order to provide quality services to their customers by offering the state-of-the-art products to its customers and hence increase market share and profitability of the organization. Nowadays, IT is the backbone of business in the financial industry. Moreover, timely completion of IT projects in relation

to new products and adopting new technologies, which are the means to attract potential customers and retain the existing ones and in turn maximize its profit and market share.

- Train the staff! The performance and success of IT projects on the basis of time is poor and below poor. Therefore, all of the staff should have a better understanding of project management tools and techniques. If all staffs including the top management are aware of such project time practice, there will not be any doubt that it will bear a positive fruits towards project success as well as organization goals.

5.3 Future Researches

Since the idea of project time management is new in Bank of Abyssinia as well as in Ethiopia, it would be valuable to conduct further research in the topic. Since this research is based on one case, further study can be conducted on many organizations and sectors. This will allow for greater reliability to provide important statistical generalizations.

Despite all its good promises, the discipline of project management has not been studied well in our nation; its application even less so. As a result future research has a lot of ground to cover in assessing the applicability of the discipline, the benefits organizations could reap from it, how they could fall into line with the project management concepts and so on. Much to do!

However, directly related to the topic of this research, i.e. project time management practices, more research needs to be conducted on the effect of project time management practices on project success since it will have direct relation with budget, quality and overall success of the organization. Future research should also make efforts to analyze the cases of organizations running projects in various other sectors.

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APPENDICES

APPENDIX I: INTRODUCTION LETTER

Safework Mulugeta,
P.O.BOX 12947
Addis Ababa 27th October, 2018

Dear Sir/Madam,

RE: REQUEST TO FILL OUT QUESTIONNAIRES

I am a student of the Addis Ababa University School of Commerce pursuing a Master of Arts degree in Project Management currently conducting a research study on the effect of project time management practices on the success of IT projects: A case in Bank of Abyssinia. You have been selected as one of the respondents to assist in providing the requisite data and information for this undertaking. I kindly request you to spare a few minutes and answer a few questions. The information obtained will strictly be used for the purpose of this study. Your identity will be anonymous and your name shall not be recorded. Kindly respond to all the questions honestly and truthfully.

Yours faithfully,

Safework Mulugeta 0920656507

APPENDIX II: QUESTIONNAIRE

A. Bio-Data: Tick (√) where appropriate.

1 Gender: Male ( ) Female ( )

2 Age: 18-25yrs ( ) 26-40yrs ( ) 41-55yrs( ) 56 or older ( )

B. Basic Information

3. What is the highest level of education you have completed?

i. High school ( ) ii. Technical school ( ) iii. College ( ) iv. Bachelors degree ( ) v. Master's degree ( ) vi. Doctoral degree ( )

4. Which of the following best describes your role in the organization?

i. Upper management ( ) ii. Middle management ( ) iii. Junior management ( ) iv. Administrative staff ( ) v. Consultant ( ) vi. Support staff vii. Intern ( )

5. Department that you are in

6. Years of project management experience_____

C. Time management practices

7. Kindly rate the organizations project time management processes with regard to successful implementation of IT projects.

7.1.1 Plan Schedule Management

	Very Good	Good	Neither poor or good	Poor	Very poor
The practice of using Project Management Plan to prepare schedule management plan in your company					
The practice of formulating Project Charter to prepare plan schedule management					
The practice of assessing enterprise environmental factors before preparing plan schedule management					
The practice of considering organizational process assets to prepare plan schedule management					

7.1.2 Tools and techniques used for Plan Schedule Management

	Very Good	Good	Neither poor or good	Poor	Very poor
To what extent Expert Judgment is used					
The degree of using Analytical Techniques					
To what extent Meetings are used as tools and techniques					

Others please specify_____

7.2.1 Define activities

	Very Good	Good	Neither poor or good	Poor	Very poor
The practice of using Schedule Management Plan to prepare activity list					
The practice of using Schedule Management Plan to prepare milestone list					
The practice of preparing scope baseline in your organization:					
i) The content of scope statement, which includes the products scope description of the project deliverables and defines the product user acceptance criteria.					
ii) The content of work breakdown structure, which defines each deliverable and the decomposition of the deliverable into work packages.					
iii) The content of WBS dictionary, which contains a detailed description of work and technical documentation for each WBS element.					
The practice of using Project Charter to prepare plan schedule management					
The degree of assessment of enterprise environmental factors to prepare plan schedule management					
The practice of considering organizational process assets to prepare plan schedule management					

7.2.2 Tools and techniques used for define activities

	Very Good	Good	Neither poor or good	Poor	Very poor
To what extent Expert Judgment is used					
The degree of using Analytical Techniques					
To what extent Meetings are used as tools and techniques					

Others please specify_____

7.3.1 Sequence activities

	Very Good	Good	Neither poor or good	Poor	Very poor
The practice of using schedule Management Plan to prepare project schedule network diagram					
The practice of using activity list to prepare project documents updates					
The practice of using activity attributes to rearrange the sequence of the activities					
The practice of identifying and using milestone list to prepare project documents updates					
The practice of using project scope statement to prepare project documents updates					
The practice of applying Dependency Determination analysis for preparing project schedule network diagram					
The degree of enterprise environmental factors assessment to prepare project schedule network diagram					
The practice of considering organizational process assets to prepare project schedule network diagram					

7.3.2 Tools and techniques used for determining the sequence of the activities

	Very Good	Good	Neither poor or good	Poor	Very poor
The practice of applying Precedence diagram method (PDM)					
To what extent Dependency Determination is applied					
The practice of using Leads and Lags					

Others please specify_____

7.4.1 Activity Resource Estimation

	Very Good	Good	Neither poor or good	Poor	Very poor
The practice of using Schedule Management Plan to prepare activity resource requirements					
The practice of using Activity List to prepare resource break down structure					
The practice of using Activity Attributes to prepare project document updates					
The practice of using Resource Calendars to prepare activity resource estimation					
The practice of using Risk register to prepare activity resource estimation					
The practice of using activity cost estimates to prepare activity resource estimation					
The practice of considering organizational process assets					
The degree of enterprise environmental factors assessment to activity resource estimation					

7.4.2 Tools and techniques used for Activity Resource Estimation

	Very Good	Good	Neither poor or good	Poor	Very poor
To what extent Expert Judgment is used					
The degree of using Alternative analysis					
To what extent Published estimating data are used					
The degree of using Bottom-up estimating					
To what extent Project management software is used					

Others please specify_____

7.5.1 Activity Duration Estimates

	Very Good	Good	Neither poor or good	Poor	Very poor
The practice of using Schedule Management Plan to prepare activity duration estimates					
The practice of using Activity List to prepare project document updates					
The practice of using Activity Attributes to prepare activity duration estimates					
The practice of using activity resource requirements to prepare activity resource estimation					
The practice of using resource calendars to prepare activity resource estimation					
The practice of using project scope statement to prepare activity resource estimation					
The practice of using project resource breakdown structure to prepare activity resource estimation					
The practice of considering organizational process assets to prepare activity duration estimates					
The degree of enterprise environmental factors assessment to prepare activity duration estimates					

7.5.2 Tools and techniques used for Activity Duration Estimates

	Very Good	Good	Neither poor or good	Poor	Very poor
The practice of applying Expert Judgment					
The practice of applying Analogous Estimating					
The practice of applying Parametric Estimating					
The practice of applying Three-point Estimating					
The practice of applying Group Decision Making Techniques					
The practice of applying Reserve Analysis					

Others please specify_____

7.6.1 Develop schedule

	Very Good	Good	Neither poor or good	Poor	Very poor
The practice of using Schedule Management Plan to prepare schedule baseline					
The practice of using Activity List to prepare project schedule					
The practice of using Activity Attributes to prepare schedule data					
The practice of using Project Schedule Network Diagrams to prepare project calendars					
The practice of using Risk register to prepare activity resource estimation					
The practice of using activity resource requirements to prepare project management plan updates					
The practice of using activity resource requirements to prepare project management plan updates					
The practice of using resource calendars to prepare project document updates					
The practice of using duration estimate to prepare project schedule					
The practice of using project scope statement to prepare project schedule					
The practice of using risk register to prepare project schedule					
The practice of using resource breakdown structure to prepare project schedule					
The practice of considering project staff assignments					
The practice of considering organizational process assets					
The degree of enterprise environmental factors assessment to develop schedule					

7.6.2 Tools and techniques used for developing schedule

	Very Good	Good	Neither poor or good	Poor	Very poor
The practice of applying Schedule Network Analysis					
The practice of applying Critical Path Method					
The practice of Critical Chain Method					
The practice of applying Resource Optimization Techniques					
The practice of applying Modeling Techniques					
The practice of applying Leads and Lags					
The practice of applying Schedule Compression					
The practice of applying Resource leveling					
The practice of applying Scheduling tool					

Others please specify_____

7.7.1 Control schedule

	Very Good	Good	Neither poor or good	Poor	Very poor
The practice of using Project Management Plan to prepare Work Performance Information					
The practice of using project schedule to prepare schedule forecasts					
The practice of using work performance data to accommodate change requests					
The practice of using project calendars to prepare project management plan updates					
The practice of using schedule data to prepare project document updates					
The practice of considering organizational process assets to prepare organizational process assets updates					

7.7.2 Tools and techniques used for control schedule

	Very Good	Good	Neither poor or good	Poor	Very poor
The practice of using Performance Reviews					
The practice of using Project Management Software					
The practice of using Resource Optimization Techniques					
The practice of using Modeling Techniques					
The practice of applying Leads and Lags					
The practice of applying Schedule Compression					
The practice of using Scheduling Tool					

Others please specify_____

Please rate your organization performance on the following parameter

		Rate				
	Measure	Very good	Good	Neither good nor poor	Good	Very good
PS1	Compliance with budget					
PS2	Compliance with time					
PS3	Compliance with quality					

Interview Guide

1. How is Schedule Management Plan conducted?
2. How is activities defined?
3. How is activities sequenced?
4. How is activity resources estimated?
5. How is activity durations estimated?
6. How is schedule developed?
7. How do you control schedule?
8. How do you evaluate the effect of project time management on project success?