



ADDIS ABABA UNIVERSITY SCHOOL OF COMMERCE

GRADUATE STUDIES

DEPARTMENT OF PROJECT MANAGEMENT

**Assessing the relationship between Project Management
Maturity and Competitiveness: The Case of Commercial
Bank of Ethiopia**

**A Research Project Work Submitted to the School of Graduate Studies of
Addis Ababa University in Partial Fulfillment for Master of Arts in Project
Management**

By: Zerithun Moges

Advisor: Mesfin Workineh (PhD)

June 2017

Addis Ababa

DECLARATION

I, the undersigned, declare that the study entitled “**Assessing the relationship between Project Management Maturity and Competitiveness: the Case of Commercial Bank of Ethiopia**” is the result of my own effort and study that all sources of materials used for the study have been dully acknowledged that has not been submitted for anywhere for any approval.

Name Zerithun Moges

Signature _____

Date _____

LETTER OF CERTIFICATION

This is to certify that Zerithun Moges has conducted this project work entitled “**Assessing the relationship between Project Management Maturity and Competitiveness: the Case of Commercial Bank of Ethiopia**” is under my supervision.

This project work is original and suitable for the submission in partial fulfillment of the requirement for the award of Master of Arts Degree in Project Management.

Mesfin Workineh (PhD)

Signature _____

Date _____

ADDIS ABABA UNIVERSITY SCHOOL OF COMMERCE

GRADUATE STUDIES

DEPARTMENT OF PROJECT MANAGEMENT

**Assessing the relationship between Project Management
Maturity and Competitiveness: The Case of Commercial
Bank of Ethiopia**

By: Zerithun Moges

Approved by:

Advisor

Signature

Internal Examiner

Signature

External Examiner

Signature

JUNE, 2017

ACKNOWLEDGEMENT

First and for most, I would like to thank the Almighty God. Following I would like to express my sincere gratitude to my advisor Dr. Mesfin Workineh for his guidance and suggestion throughout the process. Then I would like to thank all the respondent participants who gave their time to fill the questioners. Finally, I would like to thank my friends and family who helped and support me to complete the study.

Abbreviation and Acronyms

PMM	Project Management Maturity
PMMM	Project Management Maturity Model
PMO	Program management office
CBE	Commercial Bank of Ethiopia
CM	Competitiveness
PIM	Project integration Management
PSM	Project stakeholder Management
PTM	Project time Management
PCM	Project cost Management
PQM	Project quality Management
PHR	Project Human resource management
PCO	Project Communication Management
PRM	Project Risk management
PPRM	Project Procurement Management
PST	Project stakeholder management

List of Figures

Figure 1: The five levels of PMM	12
Figure 2: Conceptual framework	22
Figure 3: Distribution of the respondents by gender	28
Figure 4: Distribution of the respondents by age bracket	29
Figure 5 : Distribution of the respondents by duration of service in the bank.....	30
Figure 6: Distribution of respondents' attendance of project management training or course.....	31
Figure 7: Homoscedasticity test for PMM and CM scatter plot	37
Figure 8 :Linearity test for PMM and CM scatter plot	36
Figure 9: Normality test for CM histogram	52
Figure 10: Normality test for PPM histogram	52
Figure 11: Normality test for CM Q-Q plot	53
Figure 12: Normality test for PMM Q-Q plot.....	53

List of Tables

Table 1 Mean Scores and standard deviation of project management knowledge areas.....	32
Table 2 Means Scores of the banks competitive advantage.....	33
Table 3: Normality test for CM and PMM.....	34
Table 4 Correlation analysis of project management maturity and organizational competitive advantage.....	36
Table 5: Correlation analysis of project management knowledge areas and organizational competitive advantage.....	37
Table 6: Reliability statistics	54

Table of Contents

DECLARATION	I
LETTER OF CERTIFICATION	II
ACKNOWLEDGEMENT	IV
Abbreviation and Acronyms	V
List of Figures	VI
List of Tables	VII
Abstract	X
CHAPTER ONE	1
INTRODUCTION	1
1.1. BACKGROUND OF THE STUDY	1
1.2. STATEMENT OF THE PROBLEM	2
1.3. RESEARCH QUESTION	3
1.4. RESEARCH OBJECTIVE	3
1.5. SCOPE OF THE STUDY	4
1.6. LIMITATION OF THE STUDY	4
1.7. SIGNIFICANCE OF THE STUDY	4
1.8. ORGANIZATION OF THE STUDY	5
1.9. DEFINITION OF KEY TERMS	5
CHAPTER TWO	6
2. REVIEW OF RELATED LITERATURE	6
2.1.1. THEORETICAL REVIEW	6
2.1.1.1. PROJECT MANAGEMENT	6
2.1.1.2. PROJECT MANAGEMENT MATURITY	6
2.1.1.2.1. PROJECT MANAGEMENT KNOWLEDGE AREAS	7
2.1.1.2.2. PROJECT MANAGEMENT MATURITY MODELS (PMMM)	10
2.1.1.3. COMPETITIVE ADVANTAGE	17
2.1.1.4. PROJECT MANAGEMENT MATURITY AND COMPETITIVE ADVANTAGE	18

2.1.2. EMPIRICAL REVIEW.....	19
2.1.3 CONCEPTUAL FRAMEWORK.....	22
2.1.4 COMMERCIAL BANK OF ETHIOPIA AND PROJECT MANAGEMENT	23
3. RESEARCH METHODOLOGY.....	24
3.1. RESEARCH DESIGN.....	24
3.2. POPULATION AND SAMPLING PROCEDURE.....	24
3.2.1. POPULATION OF THE STUDY	24
3.3. DATA COLLECTION PROCEDURE	25
3.4. DATA ANALYSIS PROCEDURE.....	26
3.5. VALIDITY AND RELIABILITY	26
3.6. ETHICAL CONSIDERATION.....	27
4. DATA ANALYSIS AND INTERPRETATION	28
4.1. RESPONDENTS' DEMOGRAPHICS.....	28
4.2. PROJECT MANAGEMENT MATURITY.....	31
4.3. ORGANIZATIONAL COMPETITIVE ADVANTAGE	33
4.4. PROJECT MANAGEMENT MATURITY AND COMPETITIVENESS	34
4.5. DISCUSSION	37
CHAPTER FIVE	39
5. CONCLUSIONS AND RECOMMENDATIONS	39
5.1. CONCLUSION.....	39
5.2. RECOMMENDATIONS	40
REFERENCE.....	41
APPENDIX A.....	45
APPENDIX B	52

Abstract

These days, more and more enterprises are adopting and relying upon project management to secure a competitive advantage; and when project management becomes the dominant way through which the work these enterprises is accomplished, organizations strive to become good at delivering projects successfully. In order to improve project performance and project management maturity, organizations are considering adopting a project management maturity models which help them to enhance their project management processes and show them which area the organization should focus its efforts to improve its projects and become competitive in their industry. Thus, this study assesses the relationship between project management maturity and competitiveness in the case of Commercial Bank of Ethiopia (CBE). Descriptive survey design was used for the study which had Project Managers and Project team leaders of the CBE projects as the population for the study. Primary data was used for the study, and the data was collected using a questionnaire. Quantitative data analysis technique was used to analyze the data. Quantitative data collected were analyzed using descriptive statistics such as means, standard deviations, and Correlation, then presented in form of tables, pie-charts and bar-graphs where applicable. The study established that there is a statistically significant positive relationship between project management maturity (PMM) and organizational competitiveness but not with all project management knowledge areas. Furthermore, an increasing project management maturity improves the speed and quality services, as well as the competitiveness of an organization's. Therefore PMM efforts are crucial for the competitiveness of the Commercial Bank of Ethiopia.

Keywords: *project management; project management maturity; competitiveness*

CHAPTER ONE

INTRODUCTION

1.1. BACKGROUND OF THE STUDY

In today's competitive business environment change and complexity are common and incorporated in the day-to-day business activity. When working in an environment of constant change and increasing complexity, companies should be competitive, productive, and profitable to stay in the business. Hence, companies look for new opportunities, new product development, etc. To achieve this goal project management techniques are being considered by senior managers to manage their organizational activities. (Kerzner, 2009). According to Grant & Pennypacker (2006), there is dramatic and steady increase in the extent to which the modern enterprises adopt and relies upon project management to secure a competitive advantage; project management becomes the dominant way that enterprises' work is accomplished, organizations strive to become good at delivering projects successfully. For companies, it's essential to innovate and be time and cost efficient in order to stay competitive and projects, which usually involve a variety of human, financial and technical variables, are one of the means that allow companies to translate strategy into results. (González, et al. 2007). PMI (2013) define Project has a definite start and end date to create a new product, service or result, by incorporating skills, knowledge, tools and techniques, within limited budget, set schedule and to the required quality then terminated when the project objectives are achieved or will not be achieved.

PMI (2013) defines organizational project management maturity "the level of an organization's ability to deliver the desired strategic outcomes in a predictable, controllable, and reliable manner". Organizations use project maturity model that tries toward continues improvement of management of projects. According to Vergopia (2008), in order to improve project performance and project management maturity, organizations are considering adopting a methodical and sequential framework, namely, project management maturity models, which help them to enhance their project management processes and show them which area an organization should focus its efforts to improve its Project Management capabilities. And this project maturity models will allow organizations to assess their progress and implement the best practice which give them an advantage to continuously improve their practice and become competitive in their

industry. Those organizations which have higher maturity level are more successful than who are lacking of project maturity (Larson and Gray, 2011).

In today's business environment banking industry is one of the highly competitive industries and it requires the commercial banks to implement different mechanisms and adopt various projects to gain a competitive advantage on the market share.

Commercial Bank of Ethiopia (CBE), a pioneer in introducing modern banking to the country, was established in 1942. It implements a variety of projects to enhance its service delivery to its esteemed customers and introduce different technologies to achieve its mission; which is realizing the needs of stakeholders through enhanced financial intermediation globally and supporting national development priorities and its vision to become a world class Bank (CBE 2013/14). Commercial Bank of Ethiopia has established department of Program Management Office (PMO) lead by a Director who is directly answered to the president of the bank. This PMO department runs various IT projects under its domain office and these projects assist to improve and modernize the banks services that give competitive advantage to win on market share.

1.2. STATEMENT OF THE PROBLEM

Repetitive project management practices and successful implementation simply do not guarantee maturity in project management. Yen, Peng and Gee (2016) in their case study assessment found out those external factors which may directly or indirectly affect the success rate and continuity of project management implementation as a means of continuous improvements are important for long term survival. According to Kerzner (2009), both the project management maturity and project management excellence must extend well beyond experience and success. Organizations matured and excellent in project management create an environment in which there exists a continuous stream of successfully managed projects, where success is measured by having achieved performance that is in the best interest of the whole company, as well as having completed a specific project.

According to Yazici (2009) a significant relationship is found for organizational performance and Project Management Maturity (PMM) measured by internal and external indicators. In her

study with higher project maturity, organizations can achieve substantial savings, increase sales growth, show better competitiveness compared to their competitors and best practices in their industry or service sector, and suggest organizations should continue investing in PMM to improve their maturity level.

In Yen, Peng and Gee (2016) suggested that organizations need to perform project management maturity level assessment on periodic basis for any learning organizations, continuous improvement, better project performance, and better customer satisfaction. In other research Vergopia (2008) found that there exist a statistically significant correlation between project performance and maturity. Moreover as Mateen (2015) indicated when organization maintain higher project management maturity, it enables them to deliver project with increased efficiency. And to maintain these continuous improvements, organizations must need project management maturity benchmarking which provides an important vehicle to compare project delivery capability between a specific organization and industry norms. Thus, the aim of this paper is to assess the relationship between commercial bank of Ethiopia's project management maturity level and competitiveness on the banking industry.

1.3. RESEARCH QUESTION

The main research question of this paper is:-

What is the relationship of project management maturity level and competitiveness of commercial bank of Ethiopia?

And the specific questions are:-

- What is the level of project management maturity of Commercial bank of Ethiopia?
- What is the competitive positioning of the Commercial bank of Ethiopia?

1.4. RESEARCH OBJECTIVE

The general objective of this paper is to assess the relationship of project management maturity level and competitiveness of commercial bank of Ethiopia on Ethiopian banking industry.

The specific objectives are to:-

- Identify the project management maturity level of commercial bank of Ethiopia.

- Identify the competitive positioning of commercial bank of Ethiopia.
- Identify the relationship of project management maturity level on the banks competitiveness.

1.5. SCOPE OF THE STUDY

Every organizations desire is to stay on the business with consistent success and competitive advantage to win on the market share. And organizations implement different ideas and process to gain this success and competitive advantage and use projects to achieve these desires. Thus, the scope of this paper is to assess the relationship between project management maturity level and competitiveness of Commercial bank of Ethiopia. In addition, due to time constraints, this paper is focused on Commercial Bank of Ethiopia's IT projects that is under the banks program management office.

1.6. LIMITATION OF THE STUDY

The generalizability of the results of this study is weakened by some limitations regarding the scope, and survey design. From the initiation of the study this paper's main focus is on the commercial bank of Ethiopia IT projects which is under the department of programs management office of the bank, which is one of the limitations of this paper. With regard to the details of data assessment and collection, the information used in the study was collected only from team leaders and project managers. In addition to that, the research is only focused on the ten Project Management knowledge areas.

1.7. SIGNIFICANCE OF THE STUDY

The study will benefit the CBE project implementers by providing information on the maturity level of project management and it's perceived competitive advantage of the projects. Also, by identifying their level of maturity it can be used as one input to maximize the level of maturity and give support to improve their project management practice . The findings of this study can also be used as a reference for other researchers and students planning to undertake a research related to project management maturity and competitive advantage.

1.8. ORGANIZATION OF THE STUDY

Chapter one presented the foundation of the paper which is Introduction of the paper, the next chapter will be to present existing review of related literature on the project management maturity level and on the way to project performance. The chapter that follows; chapter three, will be the methodology of the research where the research design and research methods will be explained. Then the findings and analysis were presented and discussed, in chapter four. Finally, chapter five presents the conclusion and recommendations part.

1.9. DEFINITION OF KEY TERMS

Project Management: - is the ability to manage the scope, schedule, budget, risk and quality of project deliverables.

Project Management Maturity: - it refers to the progressive development of enterprise wide project management practices, approaches, and process.

Competitive Advantage: - is an advantage gained over competitors by offering customers greater value, either through lower prices or by providing additional benefits and service that justify similar, or possibly higher, prices.

CHAPTER TWO

2. REVIEW OF RELATED LITERATURE

In this chapter we are going to review different literatures which are concerned on the project management maturity level, Banking industry, competitive advantage and IT projects.

2.1.1. THEORETICAL REVIEW

2.1.1.1. PROJECT MANAGEMENT

González & et al.(2007) defines project management as the ability to manage the scope, schedule, budget, risk and quality of project deliverables.

Passenheim (2009) Project management currently observed as a very high priority as all companies or organizations, regardless of their size one time or another they are involved in implementing new undertakings, innovation or changes of projects. And in this projects some tools, management techniques, and problem solving approach have proven themselves to be more rewarding than other in bringing projects to a successful end. In Ibbs and Kwak (2002) Project management tools, techniques, and processes have become a professional management discipline to initiate, plan, control, and close out one-of-a-kind endeavors, and organizations are in favor of project management tools and practices that are well suitable for today's rapidly changing business environment.

2.1.1.2. PROJECT MANAGEMENT MATURITY

According to Cooke-Davies and Arzymanow (2003), the concept of process maturity was born in the Total Quality Management movement, where the application of statistical process control (SPC) techniques showed that improving the maturity of any technical process that leads to a reduction in the variability inherent in the process, and an improvement in the mean performance of the process.

For organizations to succeed in the global business competition of today, it is necessary that they produce a high standard of performance. Similarly, in the project management area, it is important for project managers to learn best practices to achieve the excellence in project

management (Bay and Skitmore, 2006). The poor performance of many projects is difficult to understand because of the multidimensional factors used in project management. In order to alleviate this problem and find some practical solutions, organizations need to improve their project management maturity, consequently organizations need to understand and improve their capabilities to manage projects effectively. And this need has increased interest both in the academic and operational fields to develop some type of descriptive reference models which would help organizations improve their project management processes (Vergopia, 2008).

González & et al.(2007) defines project maturity it the state where the project is in a perfect situation to achieve the expected objectives, and can be evaluated by the progress of process and procedures required for planning and development of the project. In project management institution organizational Project Management Maturity defined the level of an organization's ability to deliver the desired strategic outcomes in a predictable, controllable, and reliable manner (PMI 2013).

Vergopia (2008) remark that improving Project management processes will lead to higher project management maturity no matter which main goals are pursued in a project, in addition organizations with higher project management maturity are more effective at managing successful projects. In Ibbs and Kwak (2002) the level of project management maturity that assesses an organization's current levels of project management practices has become sophisticated over the years. Project management maturity is a well-defined level of sophistication that assesses an organization's current project management practices and processes.

2.1.1.2.1. PROJECT MANAGEMENT KNOWLEDGE AREAS

According to the PMI (2013), there are ten project management knowledge areas that every project addresses and these Knowledge areas represent a set of competency skills and processes that must be properly exploited in the life cycle of project. These are:

- **Project Integration Management** includes the processes and activities to identify, define, combine, unify, and coordinate the various processes and project management activities within the Project Management Process Groups (PMI, 2013).

- **Project Scope Management** includes the processes required to ensure that the project includes all the work required, and only the work required, to complete the project successfully (PMI, 2013)
- **Project Time Management** includes the processes required to manage the timely completion of the project (PMI, 2013).
- **Project Cost Management** includes the processes involved in planning, estimating, budgeting, financing, funding, managing, and controlling costs so that the project can be completed within the approved budget (PMI, 2013).
- **Project Quality Management** includes the processes and activities of the performing organization that determine quality policies, objectives, and responsibilities so that the project will satisfy the needs for which it was undertaken. Project Quality Management uses policies and procedures to implement, within the project's context, the organization's quality management system and, as appropriate, it supports continuous process improvement activities as undertaken on behalf of the performing organization. Project Quality Management works to ensure that the project requirements, including product requirements, are met and validated (PMI, 2013).
- **Project Human Resource Management** includes the processes that organize, manage, and lead the project team. The project team is comprised of the people with assigned roles and responsibilities for completing the project. Project team members may have varied skill sets, may be assigned full or part-time, and may be added or removed from the team as the project progresses. Project team members may also be referred to as the project's staff. Although specific roles and responsibilities for the project team members are assigned, the involvement of all team members in project planning and decision making is beneficial. Participation of team members during planning adds their expertise to the process and strengthens their commitment to the project (PMI, 2013).
- **Project Communication Management** includes the processes that are required to ensure timely and appropriate planning, collection, creation, distribution, storage, retrieval, management, control, monitoring, and the ultimate disposition of project information.

Project managers spend most of their time communicating with team members and other project stakeholders, whether they are internal (at all organizational levels) or external to the organization. Effective communication creates a bridge between diverse stakeholders who may have different cultural and organizational backgrounds, different levels of expertise, and different perspectives and interests, which impact or have an influence upon the project execution or outcome (PMI, 2013).

- **Project Risk Management** includes the processes of conducting risk management planning, identification, analysis, response planning, and controlling risk on a project. The objectives of project risk management are to increase the likelihood and impact of positive events, and decrease the likelihood and impact of negative events in the project. the processes of conducting risk management planning, identification, analysis, response planning, and controlling risk on a project and the primary focus is to minimize the probability of negative events hurting the outcome and maximizing any opportunities that exist for positive (PMI, 2013).
- **Project Procurement Management:** Project Procurement Management includes the processes necessary to purchase or acquire products, services, or results needed from outside the project team. The organization can be either the buyer or seller of the products, services, or results of a project. The Project Procurement Management includes the contract management and change control processes required to develop and administer contracts or purchase orders issued by authorized project team members (PMI 2013).
- **Project Stakeholder Management:** includes the processes required to identify the people, groups, or organizations that could impact or be impacted by the project, to analyze stakeholder expectations and their impact on the project, and to develop appropriate management strategies for effectively engaging stakeholders in project decisions and execution. Stakeholder management also focuses on continuous communication with stakeholders to understand their needs and expectations, addressing issues as they occur, managing conflicting interests and fostering appropriate stakeholder engagement in project decisions and activities. Stakeholder satisfaction should be managed as a key project objective (PMI, 2013).

- Thus, the level of the project management maturity clarified by the applicability of the above ten knowledge management areas in the project life cycle.

2.1.1.2.2. PROJECT MANAGEMENT MATURITY MODELS (PMMM)

According to Suarez (2016) maturity model assesses the maturity of the project management processes using a scale of maturity based on the relationship between capability levels and maturity levels. Maturity models can be said to be a reference guide for structured best practice as it breaks down the broad disciplines of portfolio, program and project management into a hierarchy of key process areas enabling an organization to assess their current capability and then plot a roadmap for improvement prioritized by those key process areas which will make the biggest impact on performance.

The maturity models such can provide organizations a number of potential advantages and disadvantages. These advantages or benefits include an assessment framework that enables an organization to compare its project delivery with best practice or against its competitors, ultimately defining a structured route to improvement (Pennypacker & Grant, 2003). That is, they enable organizations to do three things. Firstly, make an internal assessment of their project management capabilities, both strengths and weaknesses. This assessment is based on a framework that has been independently developed over many years by industry experts and practicing project managers. It provides a more independent, objective assessment. Secondly, it allows organizations to undertake benchmarking. This can be internal, between organizational elements, or external, against organizational peers or industry norms. Thirdly, it facilitates improvement initiatives, as organizations can then determine improvement paths based on the assessment and benchmarking data obtained. Project management maturity encompasses a broad range of organizational elements that underpin the organization's project management capabilities. Project management practices, operations, processes, knowledge areas, competencies, and phases are all among dimensions of project management capability (Pennypacker & Grant, 2003 and Nenni *et al.* 2012).

According to Ghorbanali, et al. (2010) to achieve dramatic performance gains, companies find that they must rethink, or transform, the way they manage their projects or programs. The maturity models provide an assessment framework that enables an organization to compare its

project delivery with best practice criterion or allows it to gauge its value against competitors, ultimately defining a structured route to improvement.

Over the past decade Project Management Maturity Models have become effective tools for benchmarking and driving improvements in organizational performance. Maturity models for project management are used to measure the degree to which an organization is executing project management (PM) by comparing its PM practices against practices in general or ‘best practices’. There are various maturity models on the market some of them are focus on specific industry, while other are more generic to fit all organization involved in project management.

According to Neverauskas and Railaite (2013) there are more than 30 PMM models in the world and in this study we are going to see some of them, besides there features of advantages and disadvantages. Maturity models identify organizational strengths and weakness in addition to providing benchmarking information (Vakhshoori, et al. 2012). As Jaleel and Mansur(2013) there exist two categories of PMMMs in terms of the way they deal with maturity – one which assume staged-representation of maturity(Like Kerzner PMMM) and the ones which assume non-staged representation of maturity (like OPM3).

Kerzner Project Management Maturity Model (K-PMMM)

According to Kerzner (2009) the basis for achieving excellence in PM can best be described as the Project Management Maturity Model (PMMM), which is comprised of five levels. The levels are:

Level 1- Common language: An organization which is on this maturity level recognizes the importance of project management and the need for a good understanding of the basic knowledge on project management and the accompanying language /terminology.

Level 2-CommonProcesses: In this level, the organization recognizes that common processes need to be defined and developed such that successes on one project can be repeated on other projects. Also included in this level is the recognition of the application and support employed by the company.

Level 3- Singular Methodology: In this level, the organization recognizes the synergistic effect of combining all corporate methodologies into a singular methodology, the center of which is project management. The synergistic effects also make process control easier with a single methodology than with multiple methodologies.

Level 4- Benchmarking: This level contains the recognition that process improvement is necessary to maintain a competitive advantage. Benchmarking must be performed on a continuous basis. The company must decide whom to benchmark and what to benchmark.

Level 5- Continuous improvement: In this level, the organization evaluates the information obtained through benchmarking and must then decide whether or not this information will enhance the singular methodology. The PMMM described above is illustrated in the following figure.

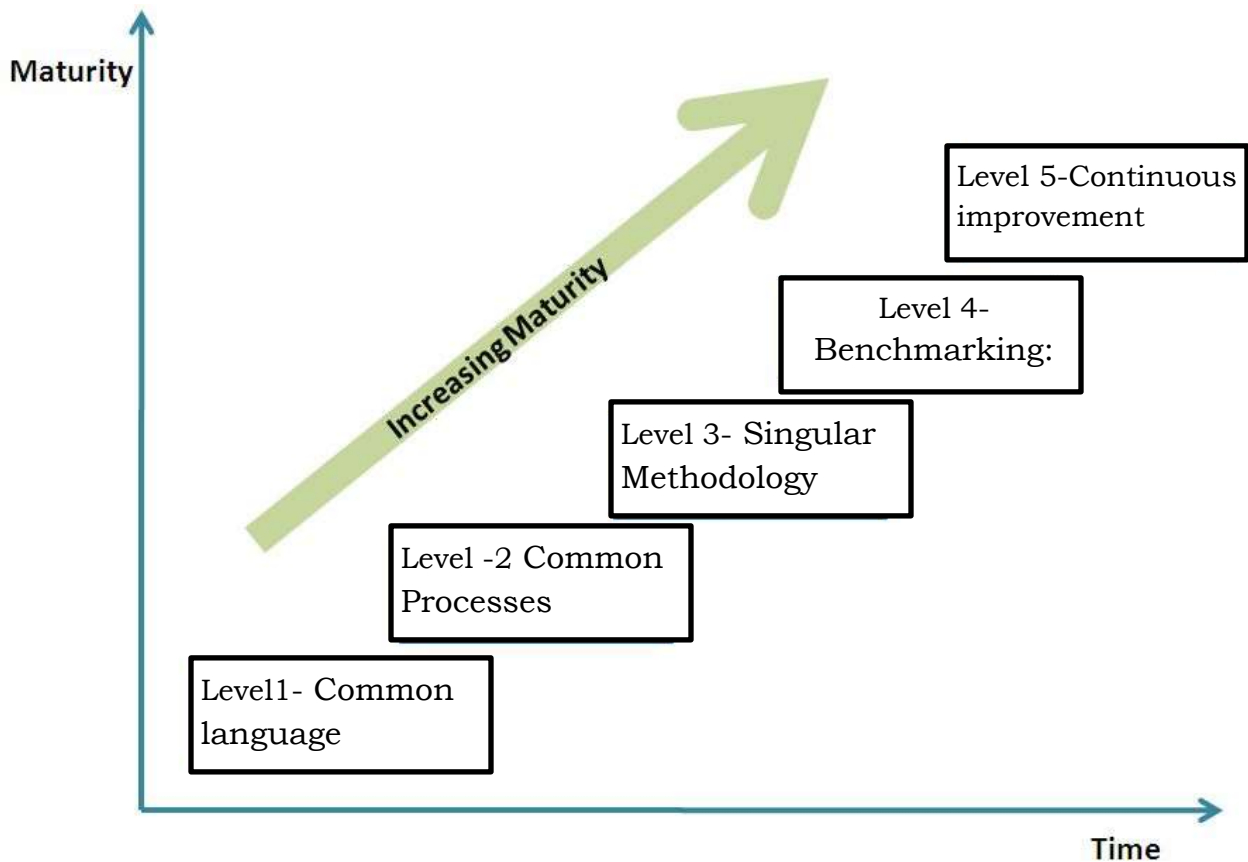


Figure 1. The five levels of PMM

Capability Maturity Model Integration (CMMI®)

The Capability Maturity Model Integration (CMMI®), owned by Software Engineering Institute (SEI), is focused on software and systems engineering. The model has three types for developers, for Acquisition and for services. The model presents two different representations: stages and continuous. The first one has five levels of maturity, from 1 to 5, in the process areas. In the second representation, the model assess against a capability scale from 0 to 5. The model probably is the most used, but with the drawback of the implementation framework to this specific sector and model focuses on ‘what’ needs to be done, rather than ‘how’ it should be done. (Montero, 2013)

PRINCE2™ Maturity Model (P2MM©)

The PRINCE2™ Maturity Model (P2MM©) is owned by the UK’s Office of Government Commerce (OGC), as a derivation from its other model, Portfolio, Programme and Project Management Maturity Model (P3M3©). The P2MM does not itself contain detailed descriptions of the activities needed to support project management processes, and the model requires for its application that the PRINCE2™ would be considered. This model is a hierarchical one, which describes the key elements of the PRINCE2™ method that need to be embedded within an organization to achieve a certain maturity level. Each level focuses on a set of key process areas, each process area being unique to a specific level of the model and underpinning achievement of higher levels of maturity. Probably the main benefit of this model for organizations the strength evaluation within the PRINCE2™ (Montero, 2013).

Portfolio, Program and Project Management Maturity Model (P3M3©)

The Portfolio, Program and Project Management Maturity Model (P3M3©) is owned by the Office of Government Commerce (OGC) and was developed in 2004 to build program and portfolio maturity elements into an existing project management maturity model. The P3M3© is essentially a set of structured descriptions of some 32 processes that span project, program and portfolio management. The process descriptions are assigned within the document structure to five different maturity levels from the lowest Initial Process through

Repeatable Process, Defined Process and Managed Process to the highest Optimized Process (Montero ,2013).

IPMA Project Excellence Model

The Project Excellence Model is owned by the International Project Management Association (IPMA) and was developed in 1996 by the German Project Management Association from the European Foundation for Quality Management (EFQM) Excellence Model. This Model offers a framework for assessing how well a project team is delivering, or has delivered a project with nine criteria related to project excellence. Also, it has two different blocks: project management and project results. Each criterion is divided into several sub-criteria, for a total of 22 sub criteria. Each of these is described in a way that allows actual activities and results to be assessed. The shortcoming of this model is its focus exclusively on individual projects, rather than penetration of project management in the corporate culture.

Organizational Project Management Maturity Model (OPM3®)

According to Montero (2013) the Organizational Project Management Maturity Model (OPM3®) is a standard owned by the Project Management Institute (PMI) and was launched in 2003 to help organizations align diverse aspects of their operations with their overall business strategy.

The standard defines globally developed and recognized industry ‘best practices’ that are necessary in each of these three domains, and the incremental ‘capabilities’ that are prerequisites to each ‘best practice’. Both the term ‘best practice’ and the term ‘capability’ are defined within the standard. The degree to which each ‘capability’ is practiced is defined in terms of one of four stages of process improvement: standardized, controlled, measured or improved. Moreover, the model considers the PMBOK® Guide in the implementation the project management maturity (Montero, 2013).

The *OPM3*[®] cycle consists of five steps:

Step 1: Prepare for Assessment

Step 2: Perform Assessment

Step 3: Plan for Improvement

Step 4: Implement Improvement

Step 5: Repeat the Process (PMI, 2003)

Step 1: Prepare for Assessment: Step 1 in the *OPM3*[®] cycle entails knowledge of the *OPM3*[®] model, which is described in detail in *Organizational Project Management Maturity Model, Knowledge Foundation*, (PMI, 2003). The directories included in the *OPM3*[®] tool provide an excellent reference on best practices and capabilities, and supply a guide to improvement programs. It is also important to have an understanding of project management standards as described in *A Guide to the Project Management Body of Knowledge*. The person who is directing the *OPM3*[®] implementation effort should have a thorough understanding of the *OPM3*[®] model and the tools used in its implementation. Team members should be comfortable with the *OPM3*[®] model concepts and requirements. (Matassa2006).

Step 2: Perform Assessment: Step 2 in the *OPM3*[®] cycle is to perform an assessment of the organization's current maturity level. As part of this step, two assessments are completed, a high-level view and a comprehensive assessment. The high-level view employs a questionnaire methodology to determine what best practices are currently implemented by the organization being evaluated in the domains of project, program, and portfolio, and what stages exist in those best practices. One method of accomplishing this view is through the use of the *OPM3*[®] tool functions. The embedded questionnaire enables this analysis to proceed quickly. The *OPM3*[®] tool produces reports that indicate overall organizational maturity, and that identify areas of strength and weakness within the organization. The comprehensive assessment phase of this process requires that further analysis of the high-level view be performed with a focus on capabilities. Best practices are analyzed to determine existing capabilities' stages as well as to identify which capabilities are not currently present. This analysis uses the *OPM3*[®] tool improvement planning directory to identify which capabilities are present and the capabilities directory to determine stage attributes. (Matassa2006).

When this step is completed the organization knows the following: What capabilities currently exist in the organization and at what stage the capabilities demonstrate, What capabilities do not exist in the organization, The importance of the individual capabilities to the organization (Matassa2006).

Step 3: Plan for Improvement: Step 3 of the *OPM3*[®] cycle uses the information gathered by the completion of Step 2 that identifies areas that need improvement. In most cases, a given organization cannot address all of the issues noted in the comprehensive assessment because of resource constraints, the fact that many capabilities build on the existence of prior capabilities so they can't be addressed simultaneously, or both. To address these issues an organization will need to employ 'organizational maturity triage' as a part of Step 3. Improvement efforts should only be undertaken if the following criteria are met: (Matassa, 2006).

- The improvement pursued has a high probability of being completed successfully. The *OPM3*[®] model is an iterative process; initial passes should emphasize harvesting low-hanging fruit. Success encourages future iterations, whereas failure during early iterations can result in the entire program being shut down.
- The capabilities to be improved or implemented have direct ties to organizational strategy. Organizational maturity by its definition enhances successful completion of strategic objectives. Capability improvement efforts must reflect this emphasis.
- The benefits of a given improvement can be realized quickly. Especially in the early iterations, proof of concept is important for organizational acceptance of the *OPM3*[®] model.
- The cost is acceptable to the organization. A capability improvement that will cost more than the organization is willing to spend is doomed to fail because the funds will not be there to enable success.

The *OPM3*[®] model is unique among models in that it does not have rigid levels of maturity hierarchy. It recognizes that a given organization will embrace organizational maturity only if it sees solid results. Consequently, the strategy for a successful *OPM3*[®] implementation must

employ tactics that exploit the iterative nature of the process to ensure successes that will encourage continuous improvement. (Matassa, 2006).

Step 4: Implement Improvement: Step 4 of the *OPM3*[®] cycle implements the improvements chosen in Step 3. Most of these improvements will end up being projects themselves and an understanding of *PMBOK*[®] *Guide* methodologies will enhance successful implementation. As was noted previously, organizational buy-in is imperative to the success of the improvement effort. When possible, priority should be given to projects with shorter timeframes. This can help to minimize the possibility of a change in strategic direction or of organizational leadership diminishing the need for, or commitment to, the improvement. (Matassa, 2006).

Step 5: Repeat the Process: Step 5 of the *OPM3*[®] cycle formalizes the iterative nature of the *OPM3*[®] model. When improvement projects have been completed successfully, an organization can do one of the following: Go back to Step 2: Perform Assessment, and re-assess where it now is on the Organizational Maturity Continuum, or Go back to Step 3: Plan for Improvement, and determine which capability enhancement or new capability establishment would best serve the strategic interest of the organization. (Matassa, 2006).

Which choice makes the most sense usually depends on the amount of time spent in implementation of the previous improvements: If the improvement(s) that was just implemented has taken a number of months or has had a large impact on the organization, it would be more useful for the organization to perform a reassessment. If the improvement(s) was completed in a relatively short period or did not have a major impact on the structure of the organization, the organization would be better served by implementing the improvement that was noted previously as providing the next largest benefit to the organization. (Matassa, 2006).

2.1.1.3. COMPETITIVE ADVANTAGE

According to Attiany (2014) competitive advantage is an advantage gained over competitors by offering customers greater value, either through lower prices or by providing additional benefits and service that justify similar, or possibly higher, prices. As of Attiany (2014), there is no single agreed definition on of competitive advantage it can be viewed as the unique position that the firm develops in comparison with competitors. Competitive advantage gives

the firms an edge over the rivals and ability to generate greater value for the company. The more sustainable the competitive advantage, the more difficult it is for competitors to neutralize the advantage.

According to Porter (1990) competitive advantage comes from continuous improvement and companies can achieve competitive advantage through acts of innovation. They perceive a new basis for competing or find better means for competing in old ways. Innovation can be manifested in a new product design, a new product process, a new marketing approach, or a new way of conducting training. Innovation involves ideas that might not be new but never vigorously pursued and it always involves investment in skill and knowledge, as well as in physical assets and brand reputation. Some innovations create competitive advantage by perceiving an entirely new market opportunity or by serving a market segment that others have ignored and when competitors are slow to respond. Companies can achieve and sustain competitive advantage by recognizing the pressure and challenge they are facing with.

2.1.1.4. PROJECT MANAGEMENT MATURITY AND COMPETITIVE ADVANTAGE

According to Kerzner (2009) as companies begin to mature in project management and reach some degree of excellence, they achieve a sustained competitive advantage. The sustained competitive advantage might very well be the single most important strategic objective of the firm. The firm will then begin the exploitation of its sustained competitive advantage.

According to Heagney (2012) a good project management can give you a real competitive advantage, especially in product development. If the organization are sloppy in managing projects, and don't have good control of development costs. That means that they have to either sell a lot of product or charge large margins to cover your development costs so that the project is worth doing in the first place. If the competitor, on the other hand, has good cost control, it can charge smaller margins and still be sure that it recovers its investment and makes money, thus, it has a competitive advantage over you because of its better control of project work.

According to Jaleel and Mansur (2013) successful completion of projects has become a source of competitive advantage for the organizations, thus organizations are concerned with assessing and

improving their project management processes. To achieve this objective, organizations need project management maturity assessment models in commensuration to the additional information of which PMMM will assure to help them for achieving competitive advantage. By adopting PMMM there are some important benefits mature organizations can have, they can manage all the projects undertaken by an organization effectively, they can improve continually the performance of all the projects undertaken, the creation of an organization-wide ability for managing projects based on set standard, defined project management processes that can be molded to meet the specific needs of individual projects, and enablement of the organization to advance its strategic goals through the application of project management principles and practices.

2.1.2. EMPIRICAL REVIEW

This part of literature review will discuss related articles and journals to the topic under study. According to González & et al. (2007) a mature organization has an organization-wide ability for managing projects based on standard, defined project management processes that can be tailored to meet the specific needs of individual projects. Thus, in theory at least, it should be possible to assess how mature a project-based organization is by looking at a combination of what aspects of project performance or project management practice it measures, and what the results of those measurements show. In certainty, we will not find an organization or project entirely mature, consequently we can talk about a certain degree of maturity and trying to measure the maturity of the organization and their projects by a model or methodology. These imply that organizations, regardless of their maturity, will each measure the same things; what will distinguish the maturity of an organization is the score that is revealed by the measurement(González & et al.2007)

In Cooke-Davies and Arzymanow (2003) some evidence in the results that the “industries of origin” are indeed more mature in terms of project management than industries that have adopted the approach more recently. The Engineering based industries do score more highly than industries that adopted project management as a core capability much more recently, such as financial services or pharmaceutical R&D.

Hartman & Ashrafi (2002) on their finding on Information system and Information technology industries through all project phases, the participants agree that a project mission, consultation with the project owner, good communication, and the availability of resource are important factors for project success. The alignment of project metrics with project success factors are priorities appears to be an opportunity for improvement in the software industry. Based on internal benchmarks in the test companies, saving on time and cost of between 10% and 30% were matched by improved quality and end user acceptance. Also Moraes and Laurindo (2011) in their study about the relationship between the project management maturity and IT project performance the survey with 185 IT professionals showed that there is statistical significance in the relationship between the dimensions of performance and the dimensions of project management maturity.

Grant and Pennypacker (2003) in their study on Project management maturity an industry benchmark, this research provides a cross-industry benchmark of project management maturity. By adopting the PM Solutions Project Management Maturity Model as the basis for this benchmark study The Center for Business Practices (CBP) Consortium is a benchmarking group that includes over 900 senior practitioners who possess knowledge of the project management practices and business results within their respective organizations. All of the members of the CBP Consortium were invited to participate in the Project Management Maturity Benchmark study which is conducted using a web-based survey. One hundred twenty-six members responded out of them 123 provided responses that were sufficiently complete to support the objectives of this study. Based on a survey of 123 firms, this research determined that nearly 67% of the organizations are currently at an overall project management maturity of level 2 (out of 5) or below. And companies that rely extensively on their project delivery capability to secure future business possess an increased impetus to reach higher levels of maturity as quickly as is prudently possible. Additionally, the research concludes the level of project management maturity is statistically consistent between industries and among companies of varying size maturity does not vary between small, medium, and large companies. In the case of competitive advantage can be realized through benchmarking with both similar and dissimilar organizations; however it is difficult to conclude that the focus of improvement initiatives should vary by industry, or that the maturity required to gain a competitive advantage currently varies by industry.

In Yazici, (2009) study of the role of project management maturity and organizational culture in perceived performance the PMM was based on eight Knowledge Areas of project management and an average score was calculated for each Knowledge Area and for the Knowledge Area maturity. Based on the responses collected from 86 project professionals from 75 U.S. organizations, the overall project management maturity was 2.27 (of a possible 5), indicating that there was a great opportunity to improve their project management practices. Project maturity ranged between 2.6 and 1.93. Looking closely to the sectors, in the case of manufacturing organizations, the highest project management maturity was found to be achieved at the project quality management area, and for service organizations, the highest maturity was achieved at project time management. For both manufacturing and service organizations, the lowest project management maturity was in the area of project risk management, scoring between 1.93 and 2.00. Project professionals significantly perceived that PMM relates to an organization's internal and external business performances. With higher project maturity, organizations can achieve substantial savings, increase sales growth, show better competitiveness compared with their competitors, and establish best practices in their industry or service sector.

The above studies are concentrated on measuring project management maturity level to model to indicate the relationship and the way to use it to improve the organization performance, success and competitiveness. However, the main objective of this study is to assess the project management maturity level of Commercial bank of Ethiopia to competitive advantage.

2.1.3 CONCEPTUAL FRAMEWORK

Maturity models for project management are used to measure the degree to which an organization is executing project management by comparing its project management practices against best practices. The best practices include the project management knowledge areas that every project addresses and represent a set of competency skills and processes that must be properly exploited in the life cycle of project. According to the PMI (2013), there are ten project management knowledge. These are Project Integration Management, Project Scope Management, Project Time Management, Project Cost Management, Project Quality Management, Project Human Resource Management, Project Communications Management, Project Risk Management, Project Procurement Management, and Project Stakeholder Management. In Caliste (2013) research on project management office and organizational project management maturity to the ultimate effect of competitive advantage of the firm, the common role of the project management office and project management gives the ability to provide a firm with competitive advantage. Thus in this paper the aforementioned concepts are modified and used as in the first part of the framework the organizational project management maturity are the independent variable evaluated by the ten project management knowledge areas and the second part of framework organizational competitiveness is the dependent variable that evaluate by the speed of project delivery, quality of service, and decrease of customer complaints.

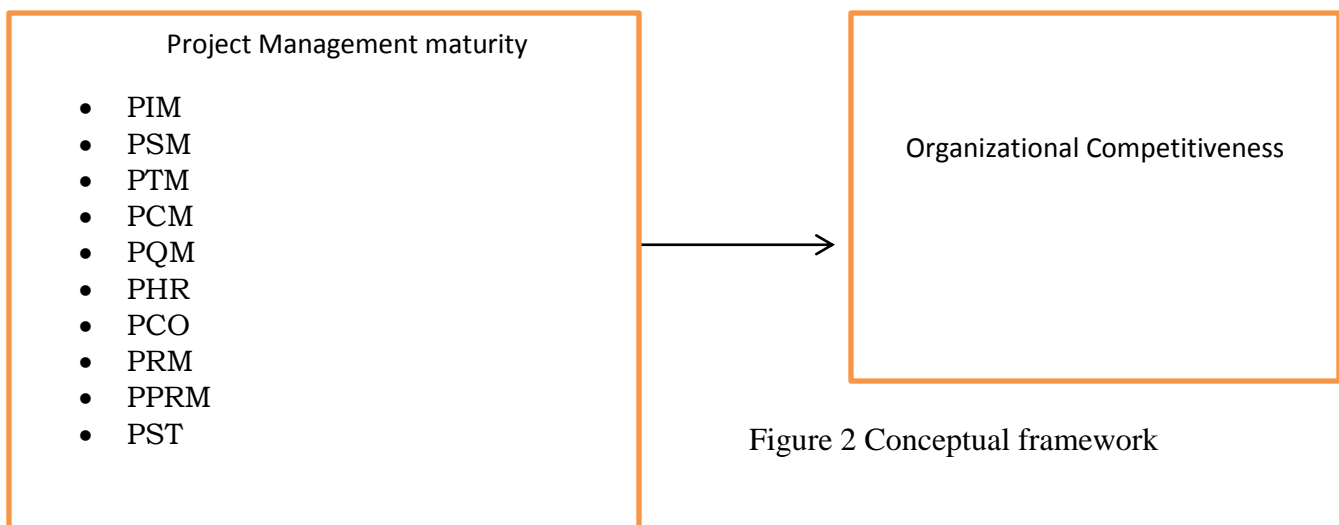


Figure 2 Conceptual framework

2.1.4 COMMERCIAL BANK OF ETHIOPIA AND PROJECT MANAGEMENT

Commercial Bank of Ethiopia was established in 1942 in Gregorian calendar. Commercial bank of Ethiopia (CBE) is pioneer to introduce modern banking to the country established in 1942, Currently there are 16 IT projects under the department of program management such as Enterprise resource planning (ERP), document management, CBE Birr, Customer Relationship Management(CRM). These projects vary by the number of people they involve, the time duration they take, the number of other organizational department involved and alike. Some project like ERP involve a large number of individuals on the project and benefit different units of the bank to analyses financial condition, and to share various process of banks with customers and partners: Moreover, the employees general information and work experience are easily accessed by the people who have a privilege for evaluation, promotion, etc. in the human resource department. Other projects increase the bank's return on investment by providing quality information service to customers, and by changing the delivery systems the bank use to interact with the customers. In general, the projects will benefit the CBE's business handling by reducing the paper work and making its business process standardize and common for the whole organization. This in turn will increase the efficiency of their operation by saving time and money. In conclusion, the enhancement of organization project management maturity has a direct impact on the advancement and performance of the projects that will enhance its services and back office systems which give the Bank a better competitive advantage to win a bigger market share.

CHAPTER THREE

RESEARCH METHODOLOGY

3. RESEARCH METHODOLOGY

In this section, we will discuss the research design, sample, sampling technique, sources, tools and procedures of data collection and method of data analysis employed for the study.

3.1. RESEARCH DESIGN

According to Saunders, Lewis and Thornhill (2009) research design is the general plan of how the researcher will go about answering the research questions. It contains clear objectives, derived from the research question(s), specify the sources from which the researcher intends to collect data, and consider the constraints that will inevitably have as well as discussing ethical issues. Thus in this study Descriptive research method was used and due to the limitation of time adopted only quantitative approach in order to gain insight regarding the study area and to answer the research questions. Therefore, this study tried to assess the level of project management maturity of Commercial Bank of Ethiopia to competitiveness.

3.2. POPULATION AND SAMPLING PROCEDURE

3.2.1. POPULATION OF THE STUDY

A target population is the collection of those people, events and records with the desired information for the research study from which a sample is taken (Saunders, Lewis and Thornhill. 2009). Thus, in this study the targeted population was Commercial Bank of Ethiopia Project managers and team leaders of present projects.

3.2.1 Sampling procedure

This study has adopted the census sampling (Saunders, Lewis and Thornhill. 2009) and incorporated all existing project managers and project team leaders due to their limited number.

3.3. DATA COLLECTION PROCEDURE

The researcher used primary data because it was the only method that could be used to collect the information required by the researcher. A structured questionnaire containing closed ended questions was used to collect the data. The questionnaire consisted of three parts. Part one sought to establish the background information of the respondents; Part 2 sought to establish to assess the level project management maturity; part 3 sought to examine the contribution of project management towards the organizations' competitive advantage.

According to Jaleel and Mansur (2013) most of the PMMMs follow a staged-representation of maturity, and have a definite number key performance indicators and they can assess only project management capability of the organization i.e. are not multidimensional ,thus any model that does not caters for the integrated nature of project management cannot fulfill ever changing organizational needs. Moreover the popular PMMMs are not based on any widely accepted theoretical base or body of knowledge of project management it makes them even more controversial of being an acclaimed standard for project management maturity assessment.

In contrast, OPM3 is based on a widely accepted project management body of knowledge (PMBOK), program management and portfolio management – which assures that it, has a solid underlying theoretical base capable to assess organizational maturity at any level, OPM3 is multidimensional i.e. it can assess project, program and portfolio management maturity of any organization, OPM3 does not have a definite number of key performance areas or indicators that makes it flexible and scalable for the organizations which wish to assess and improve only a subset of their processes, finally OPM3 does not follow staged-representation of maturity rather the progression of increasing maturity consists of several dimensions or different ways of looking at an organization's maturity (Jaleel and Mansur, 2013)

Due to its unique structure OPM3 is the most promising maturity model for any organization undertaking projects to gain competitive advantage (Jaleel and Mansur, 2013). Therefore, since this study is focused on the assessment of project management maturity level relationship with the organizational competitive advantage the organizational project management maturity model (OPM3) were chosen and used to assess.

3.4. DATA ANALYSIS PROCEDURE

In order to facilitate the interpretation of the findings of the study both descriptive and inferential statistic was employed in analyzing the study and the coded data was processed using statistical software package (SPSS). The data collected was coded and analyzed using graphs, tables and percentages to provide summaries of the respondents under study. Means were used to identify the level of project management maturity and competitive positioning of the Commercial Bank of Ethiopia. Standard deviation was used to establish consistency of application of project management approach and the competitive positioning of these organizations. The researcher used correlation analysis to establish the direction and strength of the relationship between the variables.

3.5. VALIDITY AND RELIABILITY

In a research of case study, validity and reliability of findings must be confirmed. Validity of a research is the accuracy or correctness of the results or findings. Reliability is assessment of the extent to which a question, instrument or measure gives correct results. One way to increase validity and reliability is data triangulation. Data triangulation is using multiple data sources and collection techniques. Merging and converging of research data collected from different sources and techniques can eliminate any biases in the study and increases reliability of the findings. However, due to the time limitation for the research the implementation of data triangulation were difficult thus examination by experts of project management and the researcher's supervisors to ascertain its content validity and was ratified as valid.

In addition, to make sure the research's reliability of questioner the researcher conducted Cornbach's alpha reliability test by using SPSS (Statistical Package for the Social Sciences) and found that 0.936 Cornbach's alpha for the project management maturity and 0.874 for the competitive advantage and it is generally considered acceptable s, suggesting that the items have relatively high internal consistency.

3.6. ETHICAL CONSIDERATION

The ethical issues need to be considered in a scientific research were also considered in this study. To assure the ethics of the study, the purpose of the study was clearly provided to the respondents and the response has been used only for the purpose of the study without making any adjustment by keeping the confidentiality of the respondents. The study results depend on the data provided by the respondents and the qualitative data obtained from questioner and the process is realistic and bias free.

CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATION

4. DATA ANALYSIS AND INTERPRETATION

This chapter presents the data analysis and findings of the study as set out in the research methodology. The chapter also provides the interpretation of the results of the data derived from the 19 respondents within the Commercial Bank of Ethiopia. From the 21 questioner distributed 19 questioners returned and responded. The realized response rate was therefore 95% and was considered to be excellent.

4.1. RESPONDENTS' DEMOGRAPHICS

This section presents the general information of the respondents including gender, age bracket, level of education, and duration of service in the bank.

Distribution of the Respondents by Gender

On gender distribution of the respondents, the study found that only 5% of respondents were female and 95% of the respondents were male. From this finding the gender distribution is not proportional. The findings were as presented in Figure 3.

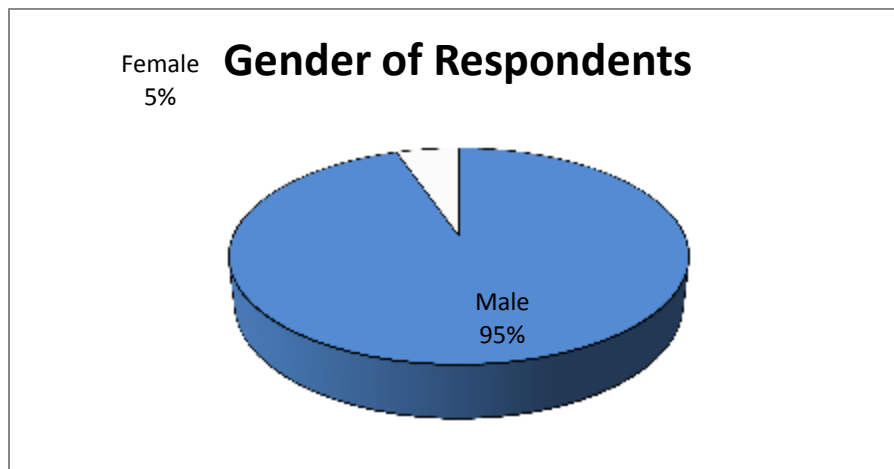


Figure 3 Distribution of the respondents by gender

Distribution of Respondent's by Age

On the distribution of the respondents by age bracket, the study found that 36.84 % of respondents were above 35 years, 26.32% of the respondents were in the age between 30 to 35 years and the remaining 36.84 % of respondents are 26 to 29 years, thus all the respondents of the questioner age are more than 26 years, which indicate that the employees who involved on the projects of commercial Bank of Ethiopia are more matured. The findings were as presented in Figure 4.2.

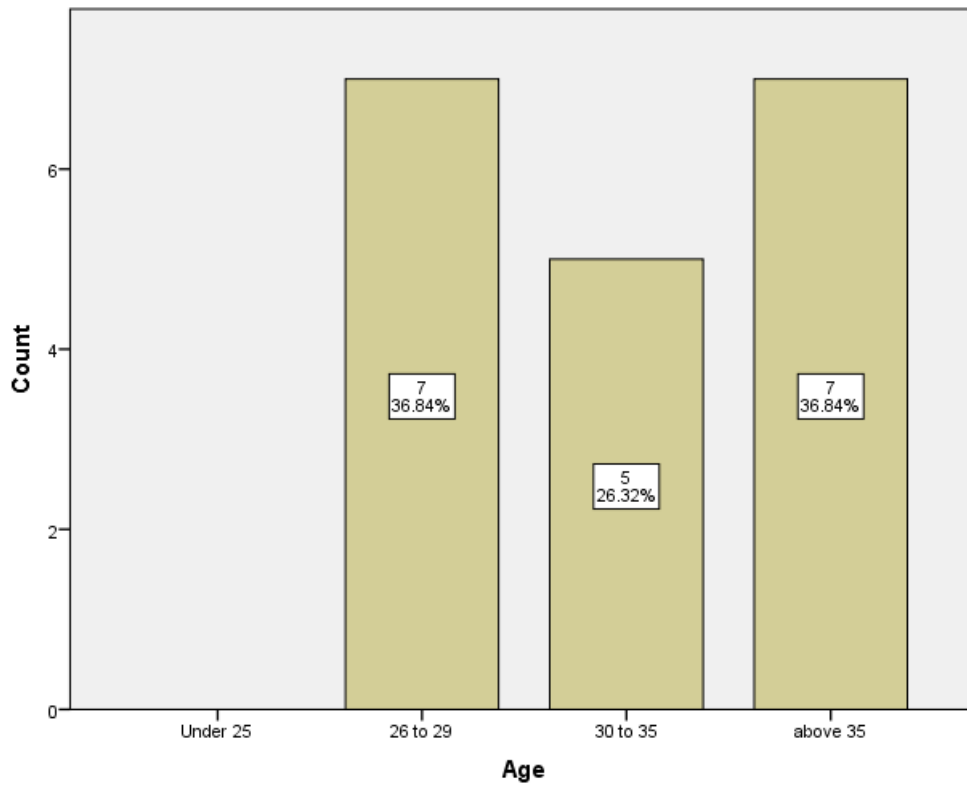


Figure 4 Distribution of the respondents by age bracket

Respondent's Employment Tenure

The respondents were asked to indicate the period they had served in Commercial Bank of Ethiopia(CBE). The study found that 31.58% of respondents served the bank for less than five years, 5.26% of respondents served the bank between 6 to 10 years, 15.79% of respondents served the bank between 11 to 15 years and the remaining 47.37% of respondents served the

bank for more than 15 years. From the finding of the study, it can be said that most of the respondents had served the bank for a period of more than 5 years, which considered being gives the bank better competitive advantage since the employees has well experienced on the banking service. The findings were as presented in Figure 4.3.

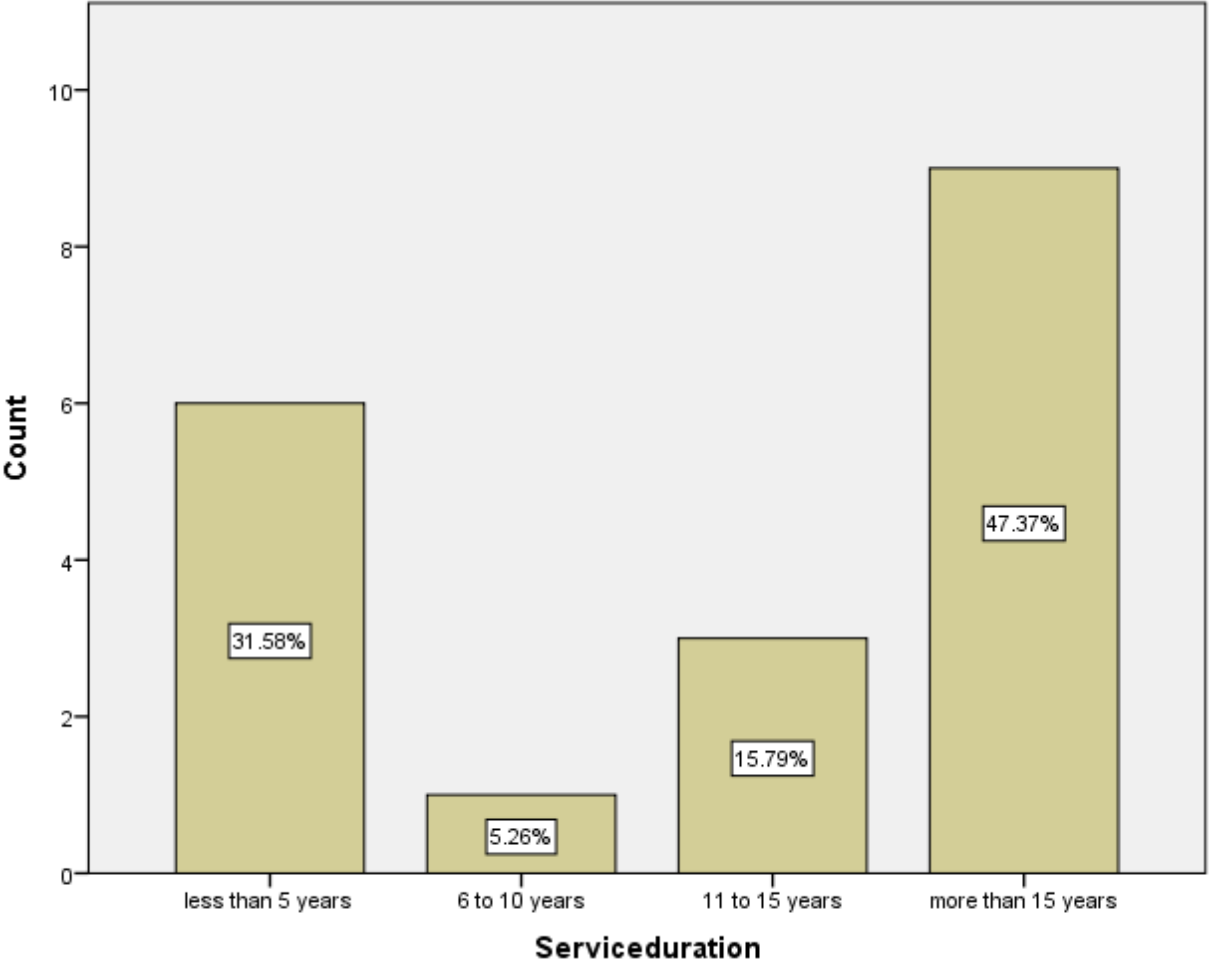


Figure 5 Distribution of the respondents by duration of service in the bank

Respondent’s attendance of project management training or course

The respondents were asked whether they ever attended any project management course or training, and the study found that, as the shown in the figure below, 53% of the respondents have never attend any project management training or course. Thus it indicates that even if they are

currently participating on the projects their knowledge on the project management depends on experience, not improved by through trainings.

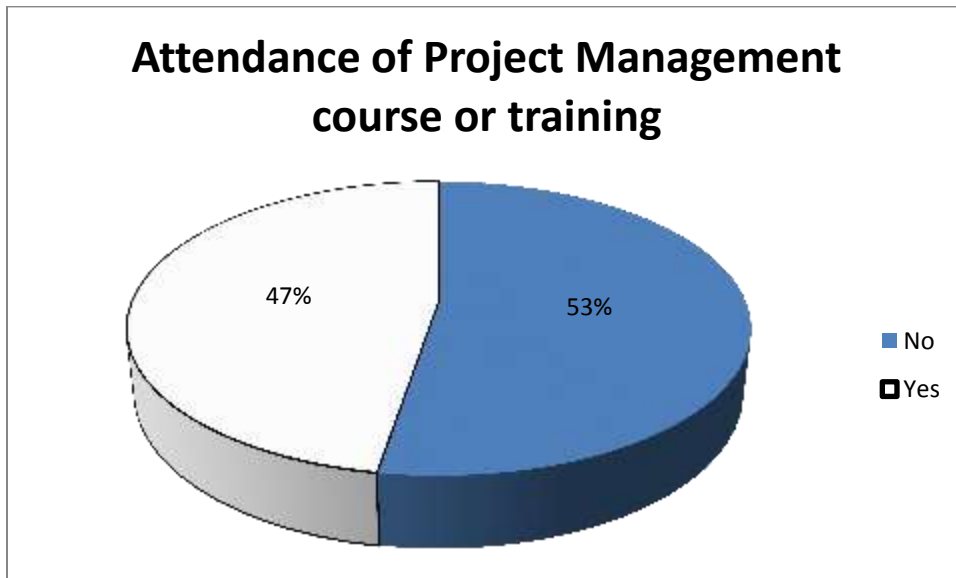


Figure 6 Distribution of respondents' attendance of project management training or course

4.2. PROJECT MANAGEMENT MATURITY

The first objective of the study was to measure the project management maturity level of commercial bank of Ethiopia. The project management maturity questionnaire was based on ten Knowledge Areas of project management. To achieve this objective respondents are requested to indicate their level of agreement on the questioner items on the subject. The responses were ranked on a five point Likert scale where: 1= we do not need this element; 2= we do not have or use this element but probably should; 3= we do have or use this element but do not always use it appropriately; 4= we do have or use this element and do use it appropriately and competently; and 5= we do have or use this element and do use it in an exemplary manner. The mean and standard deviations on these particular items and responses were generated and are presented in Table 1.

An average score was calculated for each Knowledge Area and for the Knowledge Area maturity. Based on the responses collected from 19 respondents the overall project management

maturity was 3.61 (of a possible 5), indicating that there was a great opportunity to improve their project management practices.

As shown in the table below almost the maturity level of the ten project management knowledge areas are similar with one another, meaning there is no huge difference between ten project management knowledge areas in the maturity level.

Table 1 Mean Scores and standard deviation of project management knowledge areas

Variables	Mean	Std. Deviation
Project Integration Management	3.6258	.99337
Project Scope Management	3.8411	.83637
Project Time Management	3.3511	1.25518
Project Cost Management	3.3084	1.15663
Project quality Management	3.4737	.87486
Project Human resource Management	3.7895	.99045
Project Communication Management	3.4868	1.29495
Project Risk Management	3.3474	1.15632
Project Procurement Management	3.8553	.94397
Project Stakeholder Management	4.0263	.90483
Project Management Maturity	3.6100	.82401

4.3. ORGANIZATIONAL COMPETITIVE ADVANTAGE

The Second objective of the study was to establish the competitive positioning of commercial bank of Ethiopia. To do this the respondents were requested to indicate their level of agreement on relevant statements on how their organization has attained its competitiveness in the market. The responses were rated on a five point Likert scale where: 5 = strongly agree; 4 = agree; 3 = neither agree nor disagree; 2 = disagree and 1 = strongly disagree. The mean and standard deviations were generated and presented in Table 2.

Table 2 Mean Scores of the banks competitive advantage

Statement	N	Mean	Std. Deviation
The speed of delivery service in the market has been improved	19	4.50	.601
The quality of service provided to our customers has been improved	19	4.47	.513
The delivery of our organization's new services in the Ethiopian market has been improved	19	4.53	.513
Production costs for our services have been reduced	19	3.74	1.195
Our response to customers need and provision of subsequent support has improved	19	4.21	.631
Our organization has enhanced the resolution of its customer Complaints	19	4.26	.653
The early adoption of IT projects has contribute to the benefits gained from competitive advantage	19	4.50	.687
Competitive advantage	19	4.24	.633

The findings on Table 2 show that due to the implementation different projects the respondents indicated that their banks improvement in speed of service delivery in the market (Mean score 4.5), the improvement of quality of service provided to (Mean score 4.47, the improvement

of delivery of the banks new services in the Ethiopian market (Mean score 4.43), the reduction of Production costs for services (mean 3.74), improvement of the banks response to customers need and provision of subsequent support (mean 4.21), enhancement of the resolution of its customer Complaints (Mean 4.26), and contribution of the early adoption of IT projects(Mean 4.5). And as a total due to the implementation of various IT projects as regard of the respondents has competitive advantage mean of 4.24, which indicate the bank has used the projects as an input for competitive advantage and has still the opportunity to improve it.

4.4. PROJECT MANAGEMENT MATURITY AND COMPETITIVENESS

In determining the effect of project management maturity on organizational competitiveness in the commercial bank of Ethiopia, the study used correlation analysis to establish the strength of the relationship between the study variables, and whether there are any significant relationships between them. The results are presented in Table 4. Before analyzing the relationship of the variables the requirement test of correlation that means the normality distribution test, Linearity, and Homoscedasticity were done and the results are presented and discussed below.

Table 3: Normality test for CM and PMM

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	Df	Sig.
CM	.146	19	.200*	.919	19	.109
PMM	.127	19	.200*	.973	19	.835

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

The Shapiro-Wilk test is one of the most popular tests for normality assumption diagnostics which has good properties of power and it based on correlation within given observations and associated normal scores and appropriate for sample sizes up to 50(Das and Rahmatullah Imon,2016) As we can see on the table the Shapiro-Wilk test the significance value of for both variables namely CM is equal to 0.109 and PMM is equal to 0.835 which is greater than 0.05 significance level , thus the data is significantly normally distributed.

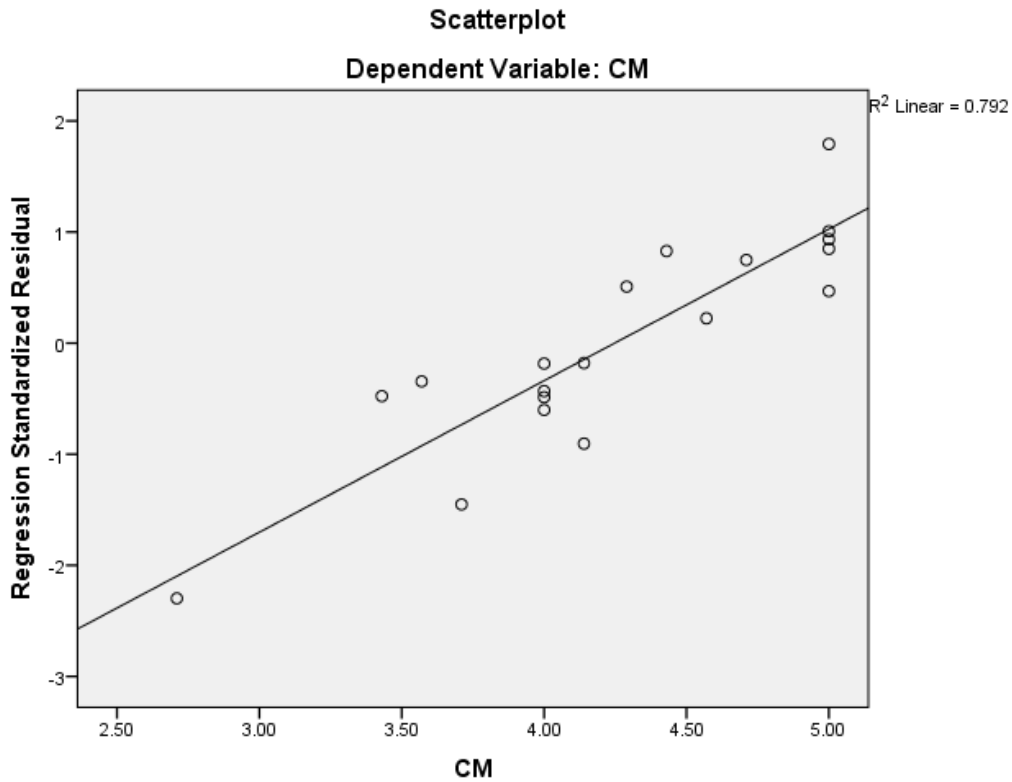


Figure 7 Homoscedasticity test for PMM and CM scatter plot

Homoscedasticity means the Y populations corresponding to various X values have the same variance (Gujarati, 2004). In Homoscedasticity test as shown in the graph the error term that means the random disturbance in the relationships between the variables are same across all values of the independent variables, i.e the data is normally distributed.

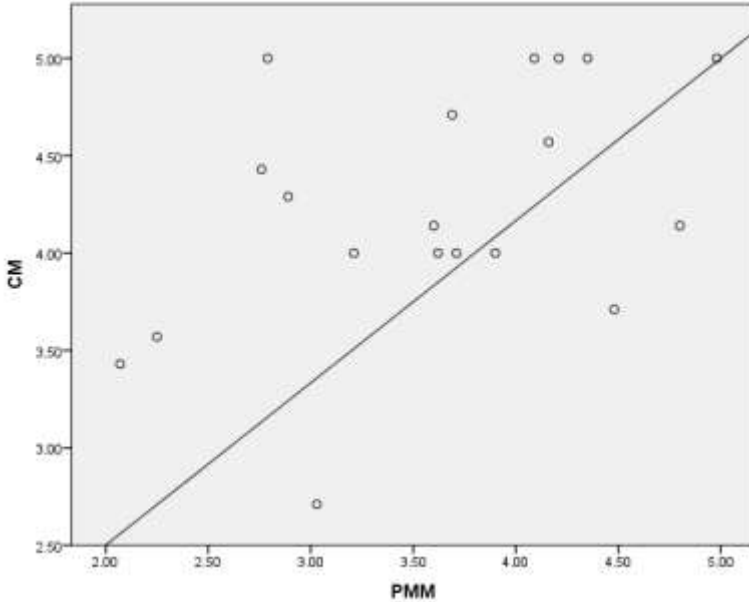


Figure 8 Linearity test for PMM and CM scatter plot

Testing for nonlinearity is necessary because correlation, regression and other general linear models assume linearity(Garson, 2012) In Linearity test as show in in the graph there is a linear relationship between project management maturity (PMM) and competitiveness (CM).

Therefore, the variables are namely PMM and CM was Normality distributed and linearly related, than the correlation analyses were analyzed.

Table 4: Correlation analysis of project management maturity and organizational competitiveness

Variables		CM	PMM
Competitiveness(CM)	Pearson Correlation	1	.456*
	Sig. (2-tailed)		.050
	N	19	19
Project Management Maturity(PMM)	Pearson Correlation	.456*	1
	Sig. (2-tailed)	.050	
	N	19	19

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

Pearson’s product moment correlation statistic was used to test the relationship between project management maturity level and organizational competitiveness. As can be discerned in Table 4, there is a statistically significant strong positive relationship between project management maturity level and organizational competitiveness with correlation coefficient 0.456, and the significance level of 0.05 at 95% confidence interval.

Table 5: Correlation analysis of project management knowledge areas and organizational competitive advantage

Variables		PIM	PSM	PTM	PCM	PQM	PHR	PCO	PRM	PPRM	PST
CA	Pearson Correlation	.369	.104	.477*	.044	.391*	.327	.666**	.571**	.115	.406*
	Sig. (1-tailed)	.060	.337	.020	.430	.049	.086	.001	.005	.319	.042
	N	19	19	19	19	19	19	19	19	19	19

*. Correlation is significant at the 0.05 level (1-tailed).

**. Correlation is significant at the 0.01 level (1-tailed).

In determining the effect of each project management knowledge areas on organizational competitive advantage in the commercial bank of Ethiopia, the study used correlation analysis to establish the strength of the relationship between the study variables, and whether there are any significant relationships between them. As shown in the table 5 there is a significant positive correlation between competitive advantage and Project time Management with 0.477, Project quality Management 0.391, Project Communication Management 0.666, Project Risk management .571, and Project stakeholder management 0.406with a significance of 0.05 in 95% of confidence interval .

4.5. DISCUSSION

In 2003 study Grant and Pennypacke companies in all of industries are largely performing at level 1 and 2 the focus of improvement initiatives should vary by industry, or that the maturity required gaining a competitive advantage varies by industry. The descriptive results suggest on their study that a substantial proportion of companies in the professional, scientific, and technical services industries have achieved notable advances to levels of increased maturity. However, in the study they infer that companies that rely extensively on their project delivery capability to

secure future business possess an increased impetus to reach higher levels of maturity as quickly as is prudently possible. Also in 2004 study of Jugdev, that involves four companies of North America and Europe. The study showed that Financial Institute had the strongest project management profile, followed by Telecom, Manufacturer, and Utility. In some project management areas, Telecom is more advanced than Financial Institute. Manufacturer and Utility place less emphasis on project management as compared to Financial Institute and Telecom. In the study, Financial Institute was the most mature (PMM=2.67), followed by Telecom (PMM=2.40) and Manufacturer (PMM=1.93), and then Utility (PMM=1.72). The company sequence determined from the PMM results supported the sequence that emerged from the textual analysis. The composite profile of a strategic asset is presented next.

In line with the above studies the commercial bank of Ethiopia project management maturity level of the bank was 3.61 (of a possible 5) was fairly good; however, in this study the results indicate that there was a great opportunity to improve their project management practices. In the relationship of maturity and competitiveness, since maturity that required to gain a competitive advantage varies by industry as shown in the analysis the Bank enhance competitiveness through Project time Management Project quality Management, Project Communication Management, Project Risk management, and Project stakeholder management which have a positive significant correlation with the organizational competitiveness.

CHAPTER FIVE

5. CONCLUSIONS AND RECOMMENDATIONS

This chapter presents the conclusion of the study and recommendation. The objective of this study was assessed the project management maturity level of Commercial Bank of Ethiopia to gain competitive advantage.

5.1. CONCLUSION

From the above findings the study concluded that project management maturity has positive correlation with organizational competitiveness with correlation coefficient of 0.456. Moreover the bank has a 3.61 mean score from the expected 5 point level of project management maturity this means the Commercial Bank of Ethiopia properly implement the project management practices, yet the organization requires an improvement in the organization project management maturity level to manage all the projects undertaken by an organization effectively, to improve continually the performance of all the projects undertaken ,to create an organization-wide ability for managing projects based on set standard, defined project management processes that can be molded to meet the specific needs of individual projects, and enablement of the organization to advance its strategic goals through the application of project management principles and practices with the aim of improving competitiveness.

Additionally from the study the significance level of the project management knowledge areas to the competitiveness are not the same, thus the bank should give more emphasis to the knowledge areas which have a significant impact on organizational competitiveness. For instance Project time Management which contains the processes required to manage the timely completion of the project which is related to the speed of delivery of project , Project quality Management which the processes and activities of the performing organization that determine quality policies, objectives, and responsibilities to satisfy the needs for customers , Project Communication Management which includes the processes that are required to ensure timely and appropriate phases of project information to enhance the resolution of its customer Complaints , Project Risk management related to increase positive events, and decrease the likelihood and impact of

negative events in the project , and Project stakeholder management those who are interested on the project outcome that include the customers of the bank.

5.2. RECOMMENDATIONS

Based on the conclusions derived the following recommendations are proposed:-

The first recommendation of the study is that the bank has to improve its project management practices by providing a training program for its employees who is involved on the projects which will have a positive impact on the performance of the projects.

The second recommendation of the study is that, the Bank should give more emphasis on improving the project management knowledge areas which has a significance impact on the competitive advantage of the bank on the market.

The other recommendation of this study is that, the bank should enhance the level of the project management maturity that has a direct impact on the project performance and success that will improve the speed and quality services, as well as improves the competitiveness of the Commercial Bank of Ethiopia on the Ethiopian banking industry.

REFERENCE

- Attiany, S.M. (2014). Competitive Advantage through Benchmarking: Field Study of Industrial Companies Listed in Amman Stock Exchange, *Journal of Business Studies Quarterly*, Vol.5, no. 4
- Bay, A., & Skitmore, M. (2006). Project Management Maturity: Some Results from Indonesia, *Journal of Building and Construction Management*, Vol.10, pp.1-5.
- Caliste, A.L.E, (2013). The PMO, Maturity and Competitive Advantage. *Paper presented at PMI Global congress - North America*, New Orleans, LA. Newton
- Commercial bank of Ethiopia annual report, 2013/14.
- Cooke-Davies,.T and Arzymanow, A.(2003). The maturity of project management in different industries: An investigation into variations between project management models, *International Journal of Project Management* , pp 471–478
- Das, R.K and Rahmatullah Imon, A. H. M. (2016). A Brief Review of Tests for Normality, *American Journal of Theoretical and Applied Statistics*, Vol.5, no.1, pp. 5-12 doi: 10.11648/j.ajtas.20160501.12
- Garson, D.G, (2012). *Testing Statistical Assumptions*, Statistical association Publishing Bluebook series, North Caroline State University
- Ghorbanali,A , Khosravi,S., Afshari,H., Borzabadi,M. and Valipour,M. (2010). ‘Improving project management competency by using an OPM3 approach’, *International Conference on Economics, Business and Management*, IPEDR vol.2 (2011) © (2011) IAC S IT Press, Manila, Philippines pp. 166-170
- Grant, K. P. & Pennypacker, J. S. (2003). Project management maturity: an industry benchmark, *Project Management Journal*, Vol.34, no.1, pp4–11.
- Grant, K. P. & Pennypacker, J. S. (2006). Project Management Maturity: An Assessment of Project Management Capabilities Among and Between Selected Industries, *IEEE transactions on engineering management*, Vol.53, no.1, pp59-68.

González, N., Marle, F. and Bocquet, J,(2007). Measuring project maturity: Example in a French automotive organization, *International conference on engineering design ICDE'07*

Gujarati,N.D .(2004). *Basic Econometrics*, 4th edition © The McGraw–Hill Companies

Hartman, F. and Ashrafi, R , (2002). Project management in the information system and information technology industries, *project management journal*, Vol.33, no.3, pp5-15

Ibbs, C. W and Kwak , H.Y. (2002). Project Management Process Maturity, (PM)² Model, *Journal of Management in Engineering*, Vol.18, no. 3 , pp150-155

Jaleel, F. and Mansur, A.K. , (2013). Project Management Maturity Models and Organizational Project Management Maturity Model (OPM3®): A Critical Morphological Evaluation, *International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering , World Academy of Science, Engineering and Technology*, Vol.7, no.5

Jugdev, K. (2004). Project management as a strategic asset: what does it look like and how do companies get there? *Paper presented at PMI® Research Conference: Innovations*, London, England. Newtown Square, PA: Project Management Institute.

Kerzner, H.(2009), *Project management: a systems approach to planning, scheduling, and Controlling*, 10thedn, Hoboken, New Jersey. John Wiley & Sons,

Larson, E.W and Gray, C.F, (2011) *Project management: the managerial process*, 5thed, New York, NY. McGraw-Hill Companies, Inc.,

Matassa, P. (2006). Grow up already!—An OPM3® primer. *Paper presented at PMI® Global Congress —North America, Seattle, WA*. Newtown Square, PA: Project Management Institute.

Mateen,M., (2015). Measuring Project Management Maturity - A framework for better and efficient Projects delivery, Master Thesis, Chalmers University of technology, Göteborg, Sweden

Moraes, R. and Laurindo,F.(2013). Maturity and Performance in Information Technology Project Management, *Journal of Technology management and Innovation*, Vol.8.

Montero G, (2013) . Analysis of Common Maturity Models Applied to Project Management, *Book of Proceedings of the 7th International Conference on Industrial Engineering and Industrial Management - XVII*, Congreso de Ingeniería de Organización. pp 788-794

Passenheim, O., (2009). *Project management*, Bookboon

Porter, M.(1990) The competitive advantage of Nations, *Harvard business review*, March to April, pp73-93

Nenni, E.M, Arnone, V. , Boccardelli, P. and Napolitano,I.(2014). How to Increase the Value of the Project Management Maturity Model as a Business-oriented Framework, *International Journal of Engineering Business Management*, DOI: 10.5772/58292

Neverauskas, B. and Railaite, R. (2013). Formation approach for project management maturity measurement, *Economics And Management*, Vol.18, no.2, pp360-365

PMI,(2013).. *A Guide to the Project Management Body of Knowledge (PMBOK Guide) – 5th Edition*, Project Management Institute, Inc. USA .

Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research Methods for Business Students*. 5th Ed. London: Pearson Education Limited.

Suarez, M.(2016). Project management maturity models. The Robert Gordon University: Aberdeen

Vergopia, C., (2008) Project Review Maturity and Project Performance: An Empirical Case Study, PhD thesis, Electronic Theses and Dissertations, University of Central Florida,<http://library.ucf.edu>

Vakhshoori, S., Nadali, A., Khalilinezhad, M., Nosratabadi, E.H., and Mirikalaniki, M. (2012). Maturity Assessment of an Information Technology Organization Based on OPM3 Using Fuzzy Expert System, *Proc. of Int. Conf. on Advances in Computer Science and Application*, pp 64-69

Yazici, H. J.(2009). Does project maturity matter for organizational Success? *Proceedings of the 2009 Industrial Engineering Research Conference Florida Gulf Coast University*, pp. 356-361

Yen, W.W, Peng, Y.K., and Gee, Y.S., (2016). A Case Study Assessment of Project Management Maturity Level in the Malaysia's IT Industry, *Proceedings International Conference on Industrial Engineering and Operations Management*, Kuala Lumpur, Malaysia, March 8-10.IEOM Society International, pp. 361-371

Part II Project management knowledge areas

Please simply answer by ticking for the following project management knowledge area where,

1= we do not need this element

2= we do not have or use this element but probably should

3= we do have or use this element but do not always use it appropriately

4= we do have or use this element and do use it appropriately and competently

5= we do have or use this element and do use it in an exemplary manner

1. Project Integration Management		1	2	3	4	5
PIM 1	Our organization describes roles and levels of delegated authority for decision making on the project					
PIM 2	Our organization describes the main roles required on the project and their responsibilities					
PIM 3	Our organization describes how the project charter is prepared and authorized					
PIM 4	Our organization describes any software you will use to help track, estimate, and report or document any part of the project					
PIM 5	Our organization describes the tools and techniques that will be used to monitor project performance					
PIM 6	Our organization describes the overall process for how requested changes will be documented and assessed					
PIM 7	Our organization describes the approved project change control process?					
PIM 8	Our organization describes how project status will be reported					
PIM 9	Our organization describes how project configuration management and version control will occur in the project					

2. Project Scope Management		1	2	3	4	5
PSM ₁	Our organization describes how project requirements will be gathered and documented?					
PSM ₂	Our organization describes how project requirements will be checked monitored and how changes to them will be assessed?					
PSM ₃	Our organization describes how the work breakdown structure is prepared and the format it is documented in					
PSM ₄	Our organization describes how the work breakdown structure will be checked, monitored and how changes to it will be assessed					
PSM ₅	Our organization describes how the project and product scope will be defined and documented					
PSM ₆	Our organization describes how the project scope will be checked, monitored and how changes to it will be assessed					
3. Project Time Management		1	2	3	4	5
PTM ₁	Our organization describes the processes, tools and techniques used to develop a project schedule					
PTM ₂	Our organization describes how the project schedule will be checked, monitored and how changes to it will be assessed					
PTM ₃	Our organization describes and require the use of scheduling software					
4. Project Cost Management		1	2	3	4	5
PCM ₁	Our organization describes the processes, tools and techniques used to estimate costs on the project					
PCM ₂	Our organization describes how project cost estimates will be checked, monitored and how changes to them will be assessed					

PCM ₃	Our organization describes the processes, tools and techniques used to prepare and document a project budget					
PCM ₄	Our organization describes how the project budget forecast will be checked, monitored and how changes to it will be assessed					
PCM ₅	Our organization require the use of earned value management techniques for monitoring cost and/or time					
PCM ₆	Our organization describes any internal financial processes that may influence the project					
PCM ₇	Our organization describes and require the use of cost and budgeting software					
5. Project Quality Management		1	2	3	4	5
PQM ₁	Our organization describes the processes for implementing quality assurance in the project					
PQM ₂	Our organization describes how quality assurance audits will occur in the project					
PQM ₃	Our organization describes how quality control will be defined, inspected and documented on the project					
PQM ₄	Our organization describes how the quality management processes will be checked, monitored and how changes to them will be assessed					
PQM ₅	Our organization describes and require the use of quality management software					
6. Project Human Resource Management		1	2	3	4	5
PHR ₁	Our organization describes how the numbers and experience of people required to complete the work will be estimated					
PHR ₂	Our organization describes how the people required to					

	complete the work will be monitored and changes to human resource requirements assessed					
PHR ₃	Our organization describes how the project team members will be recruited, developed and managed					
PHR ₄	Our organization describes how project leadership skills will be developed and assessed					
7. Project Communications Management		1	2	3	4	5
PCO ₁	Our organization describes how project communications will be defined and documented					
PCO ₂	Our organization describes the processes, methods, tools and techniques for distributing project communications					
PCO ₃	Our organization describes how project communications will be monitored and how changes to the communications process will be assessed					
PCO ₄	Our organization describes the use of communications management software					
8. Project Risk Management		1	2	3	4	5
PR M ₁	Our organization describes how risks will be identified, documented and qualitatively assessed					
PR M ₂	Our organization describes how risks will be identified, documented and quantitatively assessed					
PR M ₃	Our organization describes how identified risks will be monitored and how changes to the risk register will be assessed					
PR M ₄	Our organization describes how project issues will be documented and monitored					
PR M ₅	Our organization describes the use of risk management software					
9. Project Procurement Management		1	2	3	4	5
PP	Our organization describes the processes, tools and					

M ₁	techniques for preparing, assessing, negotiating and implementing project contracts					
PP M ₂	Our organization describes how contracts will be monitored and how changes will be assessed					
PP M ₃	Our organization describes how suppliers to the project will be managed					
PP M ₄	Our organization describes the processes by which contractual claims are assessed and are resolved					
10. Project Stakeholder Management						
PST 1	Our organization describes how project stakeholders will be identified and their needs and expectations documented					
PST 2	Our organization describes the processes and strategies for managing and influencing project stakeholder expectations					
PST 3	Our organization describes how the stakeholder register will be monitored and changes to it assessed					
PST 4	Our organization describes how the project customers' needs will be identified and managed					

Part III. Organizational Competitive advantage

Please indicate to what extent you think your organization has attained its competitiveness in the Ethiopian banking industry market by ticking appropriately where 1= Strongly disagree (Totally unimportant); 2= Disagree (Unimportant); 3= Neither agree or disagree (indifferent); 4= Agree (Important) and 5=Strongly agree (Very important).

Measure of organizational Competitiveness of CBE		1	2	3	4	5
CM ₁	The speed of delivery of Our service in the market has been					

	improved					
CM2	The quality of service provided to Our customers has been improved					
CM3	The delivery of Our organization's new services in the Ethiopian market has been improved					
CM4	Production costs for Our services have been reduced					
CM5	Our response to customers need and provision of subsequent support has improved					
CM6	Our organization has enhanced the resolution of its customer Complaints					
CM7	The early adoption of IT projects has contribute to the benefits gained from competitive advantage					

APPENDIX B

SPSS out Put Summary

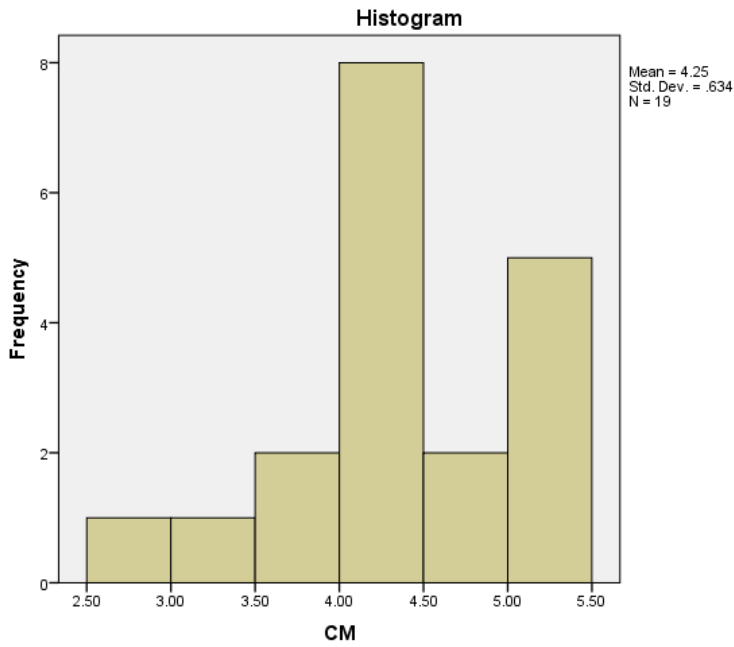


Figure 9: Normality test for CM histogram

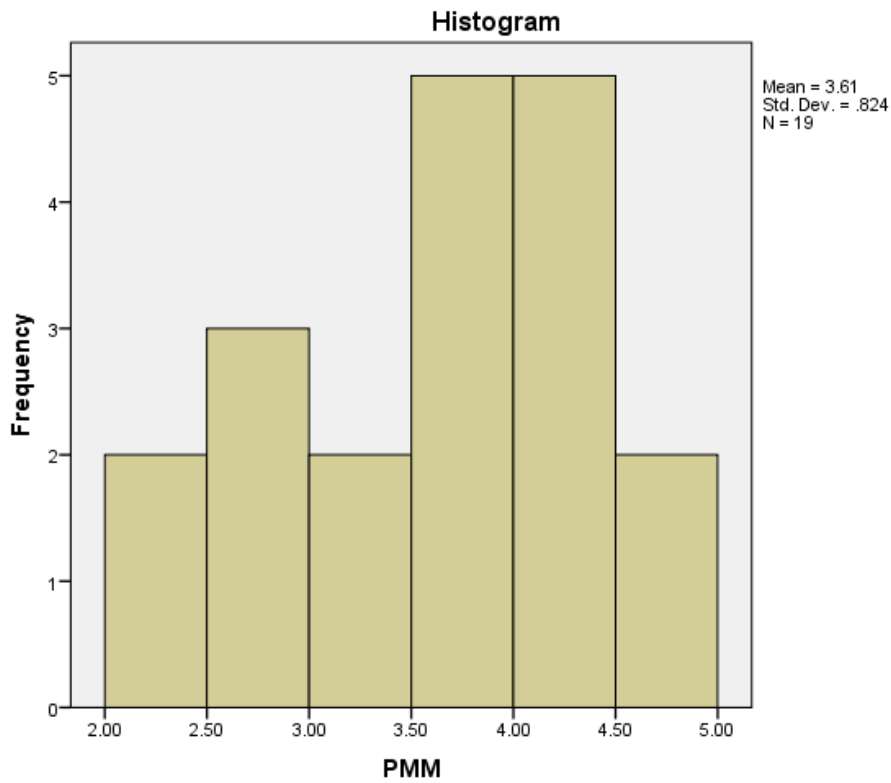


Figure 10 : Normality test for PPM histogram

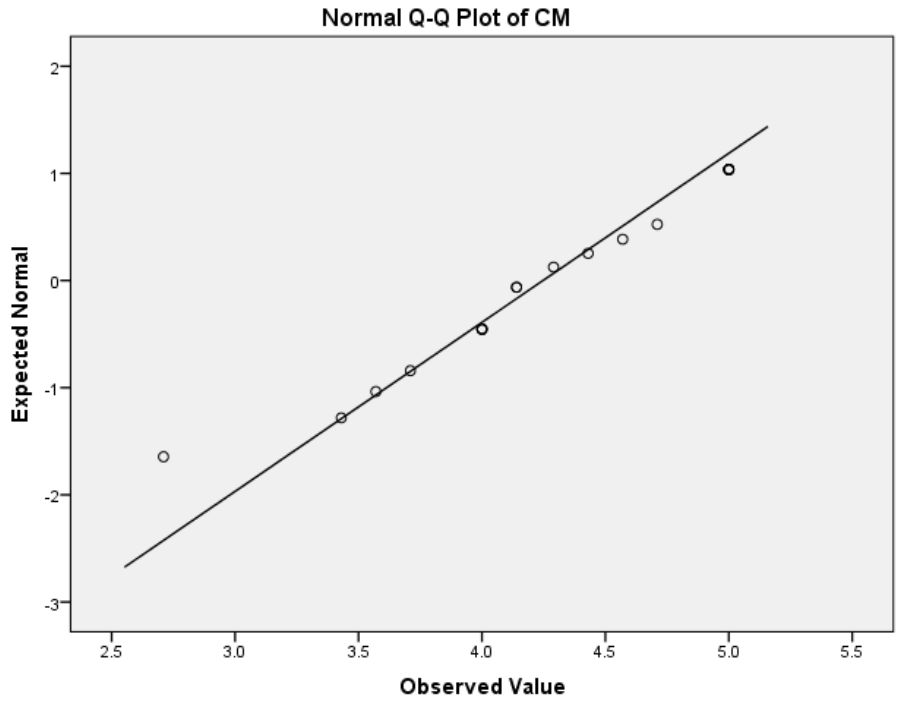


Figure 11: Normality test for CM Q-Q plot

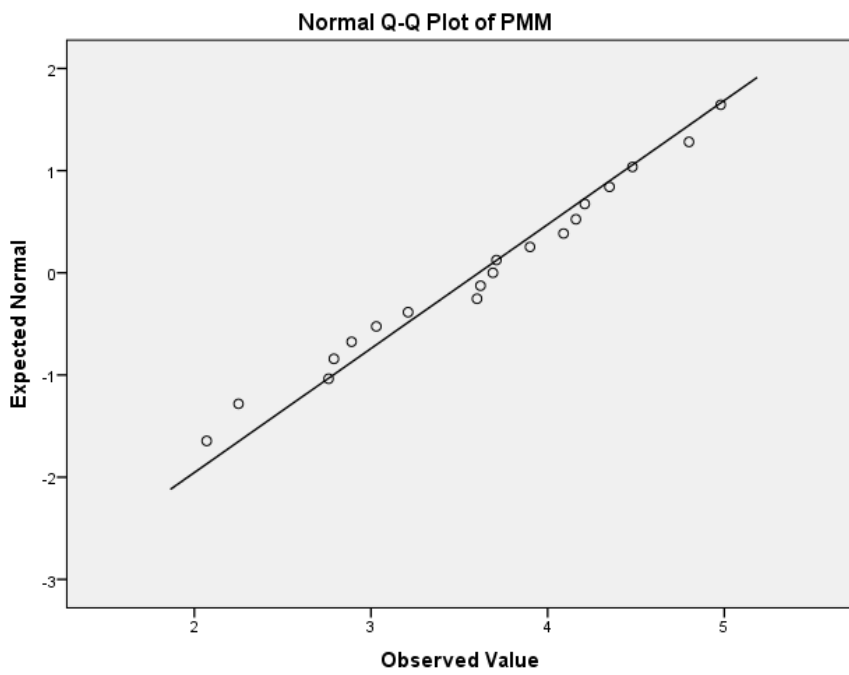


Figure 12: Normality test for PMM Q-Q plot

Reliability Statistics

Variables	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
Project management maturity	.930	.936	10
Competitiveness	.847	.874	7

Table 5 Reliability statistics