

Addis Ababa University  
College of Business and Economics  
School of Commerce



**The Relationship between Project Management Office Maturity and  
Organizational Project Management Maturity: The case of Bank of  
Abyssinia Information Systems Project Management Office**

By

Tesfaye Admassie Aberra

A Research Project Submitted in partial fulfillment of the requirement for the award of  
Master of Arts Degree in Project Management

Advisor: Fesseha Afework (Asst. Professor)

June 2018

Addis Ababa

## Declaration

I, hereby, declare that this Research work entitled **“The Relationship between Project Management Office Maturity and Organizational Project Management Maturity: The case of Bank of Abyssinia Information Systems Project Management Office”** is original work of my own, and has not been presented by anyone for any degree in any other university. And all the sources of materials used for the thesis have been duly acknowledged.

Tesfaye Admassie

Name (Candidate)

\_\_\_\_\_

Signature

\_\_\_\_\_

Date

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

Fesseha Afework (Asst. Prof.)

Advisor

\_\_\_\_\_

Signature

\_\_\_\_\_

Date



**ADDIS ABABA UNIVERSITY**

**SCHOOL OF GRADUATE STUDIES**

**MASTER OF ARTS IN PROJECT MANAGEMENT**

**The Relationship between Project Management Office Maturity and  
Organizational Project Management Maturity: the case of Bank of Abyssinia  
Information Systems Project Management Office**

**By  
Tesfaye Admassie**

**Approved By Board of Examiners**

Fesseha Afework (Asst. Prof.) Signature \_\_\_\_\_ Date \_\_\_\_\_  
Advisor

\_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_  
External Examiner

\_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_  
Internal Examiner

## **Acknowledgments**

I would like to thank my advisor Ato Fesseha Afework (Asst. Prof.) for his commitment and advice to helping me and his leadership during the study. This thesis would not have been possible without his support and patience.

Great thank goes to my wife, Yeshi Ayalew, for her courage and continuous support during my study. I dedicate this work to my children Kaleb Tesfaye and Yohana Tesfaye.

My special thanks go to my respondents for their time and responses to my inquiries for the success of this study.

<b>Contents</b>	<b>Page</b>
Declaration.....	i
Acknowledgments.....	ii
List of Tables .....	v
ABSTRACT.....	vi
CHAPTER 1: INTRODUCTION .....	1
1.1 Background of the Study.....	1
1.2 Background of the organization.....	3
1.3 Statement of the problem .....	5
1.4 Research Question .....	6
1.5 Objectives of the Study.....	6
1.6 Significance of the study .....	7
1.7 Scope of the Study .....	7
1.8 Limitation of the Study.....	8
1.9 Organization of the Study .....	8
CHAPTER 2: LITERATURE REVIEW .....	9
2.1 Theoretical Review.....	9
2.2 Empirical Review .....	22
2.3 The Conceptual Framework.....	24
CHAPTER 3: RESEARCH METHODOLOGY .....	26
3.1 Research Design.....	26
3.2 Target Population and Sampling.....	26
3.3 Instruments for Data Collection.....	27
3.4 Data Analysis.....	27
3.5 Data Reliability and Validity .....	28

3.6 Ethical Consideration .....	30
CHAPTER 4: RESULTS AND DISCUSSION.....	31
4.1 Demographic Characteristics of the respondents .....	31
4.2 Maturity level of IS PMO .....	33
4.3 OPM Maturity level.....	36
4.3 Relationship of IS PMO maturity and OPM Maturity.....	42
CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS.....	44
5.1 Conclusions .....	44
5.2 Recommendations .....	45
6. References .....	47
7. Appendix - Questionnaire .....	49

## List of Tables

## Page

Table 1: Panexec PMO Capability Maturity Model .....	21
Table 2: Cronbach's $\alpha$ -Values for Variables Representing the Three Functions of PMO ...	29
Table 3: Cronbach's $\alpha$ -Values for the Ten Project Management Knowledge Areas .....	29
Table 4: Respondents by Gender .....	32
Table 5: Distribution of Respondents by Age .....	32
Table 6: Educational Level of respondents .....	33
Table 7: Field of Specialization of Respondents .....	33
Table 8: PMO Maturity .....	36
Table 9: Organizational Project Management Maturity .....	38
Table 10: Pearson Correlation Coefficient Matrix .....	42

## ABSTRACT

*The main purpose of this research project was to assess maturity levels the Information Systems Project Management Office (IS PMO) and the organizational project management (OPM) maturity of the Bank of Abyssinia. Moreover, the research tried to establish whether there was a relationship between IS PMO and OPM. The maturity assessment was based on a five level project management maturity model devised by Bohner. To assess the maturity level of the Project management office, the three functions of the IS PMO, namely, strategic, tactical and operational were considered and to assess the organizational project management maturity, the ten project management knowledge areas were selected from the project management body of knowledge guide. The research employed quantitative research methods to realize the purpose of the study. Hence, a questionnaire was devised and data was collected from 31 respondents out of the total distributed to 39 respondents. The data was analyzed using SPSS. Based on the analysis, both the IS PMO as well as the OPM are at maturity level 3 or 'Defined' stage. However, the three functions of the IS PMO are at a relatively different maturity level with the operational maturity level relatively higher than the strategic and tactical level IS PMO functions. With respect to the ten knowledge areas, in terms of the average maturity values out of five, project time management (3.8), project scope management (3.8), Project cost management (3.7), Project Human Resources Management (3.6) and Project integration Management (3.5) are very much closer to 'Managed' or 'Level 4' which indicates that project management activities move from static improvements to dynamic change reflecting the lines of business perspective. The research showed that IS PMO strategic and operational maturity has a positive relationship with all the ten project management knowledge areas and IS PMO tactical maturity is positively associated with only four project management area maturities, namely, Quality management, Stakeholder management, Human Resources management and Communications management. The research enabled us to conclude that the ten knowledge areas as well as the three IS PMO functions are being practiced with relatively different maturities at the Bank of Abyssinia. Developing and practicing project management knowledge areas; devising procedures; carefully collecting, compiling and disseminating lessons learned from past project implementation; creating project management standards; and creating awareness among all stakeholders towards projects; strengthening the PMO's human and other resources; and providing trainings have been recommended as a means of improving project management practice and attaining higher maturity.*

**Keywords:** Project management, Organizational Project management maturity, Project Management Office, Project Management Office Maturity.

# CHAPTER 1: INTRODUCTION

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

## 1.1 Background of the Study

Continuous improvement in all facets of the business is key to success for an organization. As successful initiatives can directly translate into significant growth and increased profits for a company, many managers are looking at company processes for handling new initiatives. One of the areas where companies have traditionally struggled is effective project management.

Moreover, as organizations grow in the number and complexity of projects in the portfolio, it must adopt formal procedures for managing the volume and diversity of projects. To do this, the organization establishes the procedures that are followed for initiating, proposing, approving, and managing projects and initiates some kind of permanent work unit within the organization which manages the increasing number of projects. This evolves into a project management center, known as a Project Management Office (PMO), an organizational unit that is responsible for supervising internal projects, and integrating competencies and resources within the organization's line functions.

Godbole (2014: P1) stated that as the number of failed projects increase, a growing number of organizations are looking to contain this problem with the help of an organizational unit called a project management office or PMO. This unit is responsible for standardizing management resources used by all projects, such as project methodologies, processes, tools, and performance indicators. Standardizing project management-related assets across the entire organization leads to higher success rates for projects.

Zohrevandi (2014: P1) also asserted that the role of PMO increases when there are many overlapping projects in a project-oriented company, resulting in a need for enhanced governance controls to increase success rates.

As the importance of PMO is higher, not evaluating a PMO on a regular basis may lead to disagreements about its actual value. Also, in organizations that are already convinced about the importance and usefulness of a PMO, gauging performance can help improve current practices by identifying weak areas and promoting corrective actions. Moreover, assessing the maturity of the PMO can showcase the effectiveness of a PMO to the entire organization and solidify the foundation for this organizational unit responsible for project management.

PMO maturity will then represent the extent to which it is capable of generating value for its customers and for the organization as a whole. To this end, the road to PMO maturity begins with establishing the capability to create value for clients and for the whole enterprise; this is followed by implementing and enforcing those practices across all branches of the organization. A number of PMO maturity models have been developed from industry by consulting professional firms with experience in the field. Examples include the PMO Maturity Cube Model, the META PMO Capability Maturity Model, the ESI PMO Maturity Model, the Panexec PMO Maturity Model, and the Manta PMO Maturity Model. Many of these have adopted an outline similar to that of the Capability Maturity Model (CMM) from Carnegie Mellon (Software Engineering Institute) with five assessed levels of maturity: Level 1 Initial, Level 2 Stable, Level 3 Defined, Level 4 Managed, and Level 5 Incorporated (Bohner, 2000:P2); and a number of knowledge areas across which the practices of each level are described.

On the other hand, Organizational Project Management (OPM) has been traditionally defined as “the application of knowledge, skills, tools, and techniques to organizational and project activities to achieve the aims of an organization through projects” (PMI, 2008: P6).

Benchmarking through the use of maturity models is the instrument for evaluating and determining how capable and advanced an organization is in applying project management principles. In this context, OPM maturity models serve as pointers or benchmarks for accomplishing preferred levels of competence and maturity. So they are used to evaluate where the organization is at present, and where it wants to go in the future.

The Project Management Maturity Model concept has its origin in the Capability Maturity Model developed at Carnegie Mellon University in the USA between 1986 and 1993 (Paulk et al, 1993: P2). Over the past two decades more than 30 maturity models have evolved from the capability models and have been applied in organizational process maturity; and since software development is carried out through projects, software process maturity models have evolved into a tangible way of assessing aspects of the organization's project management maturity (Cookie-Davies et al, 2003: P5).

Out of the different maturity models that evolved from the Capability Maturity Model (CMM) from Carnegie Mellon (Software Engineering Institute), the one developed by Bohner (2000:P2);) with five assessed levels of maturity: Level 1 Initial, Level 2 Stable, Level 3 Defined, Level 4 Managed, and Level 5 Incorporated is applied in this study considering the commercial bank environment in Ethiopia.

This study is, therefore, designed to assess the maturity levels of the IS PMO and OPM, to evaluate the relationship between the maturity level of the IS PMO and maturity level of the OPM as it relates to the Information Systems (IS) PMO of the Bank of Abyssinia (BoA) so as to help the bank improve its IS PMO operations.

## **1.2 Background of the organization**

The present day Bank of Abyssinia was established on February 15, 1996 in accordance with 1960 Ethiopian commercial code and the Licensing and Supervision of Banking Business Proclamation No. 84/1994. The Bank started its operations with an authorized and paid up

capital of Birr 50 million and Birr 17.8 million respectively, and with 131 shareholders and 32 staff.

Currently, the Bank has a paid-up capital of Birr 1.8 billion. Total deposits and total loans & advances of the Bank amount to Birr 20.7 billion and Birr 14.1 billion respectively. BoA currently has more than 750,387 customers and employs more than 5,005 staff (as at June 30, 2017).

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

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

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

Therefore, assessment of maturity of the IS PMO is conducted to determine how mature is the PMO in performing its responsibilities.

Besides, the maturity level of organizational project management (OPM) at the bank level will be evaluated. OPM will be evaluated through the use of maturity models which is an instrument for evaluating and determining how capable and advanced an organization is in

applying project management principles. In this context, OPM maturity models serve as pointers or benchmarks for accomplishing preferred levels of competence and maturity. So they are used to evaluate where the bank is at present, and where it wants to go in the future with respect to applying the project management principles.

Finally, the effect of the maturity level of the IS PMO on the maturity level of the bank's OPM as it relates to the Information Systems (IS) PMO of the Bank of Abyssinia (BoA) so as to help the bank improve its IS PMO operations will be conducted.

### **1.3 Statement of the problem**

PMO is being utilized by some of the commercial banks in our country. Among them, Bank of Abyssinia (BoA) instituted the office three years ago as a result of its strategy implementation. The IS PMO is supposed to facilitate the implementation of various IT projects designed as part of the strategy to reach its goals at the end of the strategy period.

Despite the institutionalization of the PMO, very little empirical investigation has been conducted in Ethiopia to evaluate whether it has helped the organization in improving IT project performance.

Some assessments of project management practice in different organizations in Ethiopia by different graduate students of Project Management at the Addis Ababa University, School of Commerce has been conducted in the last two years with the launching of the Master's Program in Project Management. With respect to this, some of the works include,, Abraham (2017) assessed the project maturity level of commercial bank of Ethiopia, Befekadu (2017) conducted assessment of the practice of Project management practice in the Real estate industry in Ethiopia, Daniel (2017) assessed the project management practice in the Music Industry, and Ebise (2016) assessed the project management practice in Oromia Integrated Urban Land Information System Coordination Project Office.

These assessments did not consider the maturity of the PMO but the maturity of the organizational project management (OPM). Moreover, there was no attempt in determining the relationship between the PMO and OPM and no empirical study was conducted to the researcher's best knowledge.

This study, therefore, tries to fill this empirical gap in research, thereby contributing to the bank in determining the relationship between the PMO Maturity and the OPM maturity by enabling decision makers understand and make decisions on the influence of the PMO maturity on project success in the banking sector in Ethiopia with specific reference to BoA.

## **1.4 Research Question**

This research tries to find answers to the following research questions:

- What is the maturity level of IS PMO at BoA?
- What is the maturity level of OPM at BoA?
- What is the relationship between the maturity of IS PMO and the maturity of OPM?

## **1.5 Objectives of the Study**

The general objective of this study is to establish the mature level of IS PMO and OPM and whether there is any relationship between the maturity of the IS PMO and OPM in the bank of Abyssinia.

The specific objective of this study is to

- examine the maturity level of IS PMO in BoA;
- examine the maturity level of OPM in BoA ;
- examine the existence of the relationship between the maturity of IS PMO and the maturity of OPM in BoA.

## **1.6 Significance of the study**

The research seeks to make an original contribution to knowledge by investigating the relationship of IS PMO maturity and OPM maturity in Ethiopian Commercial banks with special reference to BoA. The contributions of this research will be beneficial to both academics and banks alike.

First, a careful study of the available literature from an academic point of view indicates that there is a wide gap in literature in the Ethiopian context due to the absence of research in Project management. No research has been identified on the relationship of PMO maturity and OPM maturity in Ethiopia except assessments done on Project management practices in some organizations as a result of the MA Program in Project Management in the School of Commerce of Addis Ababa University. Hence, the importance of this research. This means that a study of this nature is deemed very important for not only in academics but also decision makers in the banking industry.

Secondly, the dimension of PMO maturity and OPM maturity makes this study very important as most literature deals with only PMO maturity or OPM maturity and do not look at both concepts together, as only a little research has been done in this area. Putting the two concepts together and determining the relationship of PMO maturity and OPM maturity makes this research study very necessary as well as important.

Moreover, the findings of this study will be useful for the Ethiopian banking sector in adopting or improving PMO structures for the successful execution of their projects.

## **1.7 Scope of the Study**

Although bank of Abyssinia has a number of business related projects currently being executed, the study focused only on IT Projects managed by the Information Systems (IS) Project Management Office (PMO). The study only considers those staffs and project team leaders who

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

## **1.8 Limitation of the Study**

The study examined the relationship between the maturity of IS PMO with the overall organizational project management maturity although the overall project management maturity at the bank of Abyssinia may be also affected by the management of other business related projects. This is because of the lack of time allocated to the project work it was not possible to study the relationship of the overall project management with other business related projects (other than IT projects). Had it not be for the time limitation, it would have been possible also to include other commercial banks so that the result can be more generalizable.

## **1.9 Organization of the Study**

The research report will be organized under the following five chapters. These will be:

- 1. Introduction** which will consist of background of the study, statement of the problem, basic research questions, objectives of the study, hypothesis (if any), definition of terms, significance of the study, and delimitation/scope of the study.
- 2. Review of Literature** which deals with the literature relevant to the study.
- 3. Research Methodology** which describes the type and design of the research, the subjects/participants of the study, the sources of data, the data collection tools, the procedures for data collection and the methods of data analysis.
- 4. Results and Discussion** which summarizes the result/findings of the study, and interpret and/or discuss the findings.
- 5. Conclusions and Recommendations** which includes summary of the findings, conclusions, limitations of the study and recommendations.

## **CHAPTER 2: LITERATURE REVIEW**

In this section a definition of the concepts and variables from the literature will be discussed as a background to the research.

### ***2.1 Theoretical Review***

#### **2.1.1 Project and Project Management**

Wysocki (2014: P4) defined project as “ ... a sequence of unique, complex, and connected activities that have one goal or purpose and that must be completed by a specific time, within budget, and according to specification.” Moreover, the Project Management Institute (PMI) defined a project as “... a temporary endeavor undertaken to create a unique product, service or result.”

Kerzner (2009: P2) also defined a project as any series of activities and tasks that:

- Have a specific objective to be completed within certain specifications
- Have defined start and end dates
- Have funding limits (if applicable)
- Consume human and nonhuman resources (i.e., money, people, equipment)
- Are multifunctional (i.e., cut across several functional lines)

Even if a project is defined differently by different authors, the basic definition of a project as being a series of activities, with beginning and ending dates, with specific objective to achieved and requiring resources is common to most definitions.

Project management on the other hand is defined as the use of knowledge, skills, tools, and techniques in project activities needed to meet project requirements (PMI, 2008: P6).

Wysocki (2014: P27) defined project management as a set of tools, templates, and processes designed to answer the following six questions:

- What business situation is being addressed by this project?
- What does the business need to do?
- What will you do?
- How will you do it?
- How will you know you did it?
- How well did you do?

Project management is therefore applicable to any organization who has core objectives of improving scope, quality, schedule and cost. The use of project management within organizations allows management define the requirement of work, establish the extent of work, allocate the resources required, plan for the execution of the work, monitor the progress of work and adjust deviations from the plan to be implemented. Project Management is concerned with on-time delivery, within-budget expenditures and appropriate performance standards. This is in the context of the short-term life of the project development and delivery.

### 2.1. 2 Project Management Office (PMO) and PMO Maturity

As organizations grows in the number and complexity of projects in its portfolio, it must adopt formal procedures for managing the volume and diversity of projects. To do this, the organization establishes the procedures that are followed for initiating, proposing, approving, and managing projects and initiates some kind of permanent work unit within the organization which manages the increasing number of projects. This evolves into a project management center, known as a Project Management Office (PMO), an organizational unit that is responsible for supervising internal projects, and integrating competencies and resources within the organization's line functions.

A PMO is an organizational body or entity assigned various responsibilities related to the centralized and coordinated management of those projects under its domain. The

responsibilities of a PMO can range from providing project management support functions to actually being responsible for the direct management of a project (PMI, 2008: P11).

A PMO passes through a number of development stages, called maturities, before it reaches a high performing stage.

PMO maturity then represent the extent to which it is capable of generating value for its customers and for the organization as a whole. To this end, the road to PMO maturity begins with establishing the capability to create value for clients and for the whole enterprise; this is followed by implementing and enforcing those practices across all branches of the organization. A number of PMO maturity models have been developed from industry by consulting professional firms with experience in the field. Examples include the PMO Maturity Cube Model, the META PMO Capability Maturity Model, the ESI PMO Maturity Model, the Panexec PMO Maturity Model, and the Manta PMO Maturity Model. Many of these have adopted an outline similar to that of the Capability Maturity Model (CMM) from Carnegie Mellon (Software Engineering Institute) with five assessed levels of maturity: Level 1 Initial, Level 2 Stable, Level 3 Defined, Level 4 Managed, and Level 5 Incorporated (Bohner, 2000: P2); and a number of knowledge areas across which the practices of each level are described.

### 2.1. 3 Organizational Project Management (OPM) and Maturity

OPM has been traditionally defined as “the application of knowledge, skills, tools, and techniques to organizational and project activities to achieve the aims of an organization through projects” (PMI, 2008: P6).

Benchmarking through the use of maturity models is the instrument for evaluating and determining how capable and advanced an organization is in applying project management principles. In this context, OPM maturity models serve as pointers or benchmarks for accomplishing preferred levels of competence and maturity. So they are used to evaluate where the organization is at present, and where it wants to go in the future.

The Project Management Maturity Model concept has its origin in the Capability Maturity Model developed at Carnegie Mellon University in the USA between 1986 and 1993 (Paulk et al, 1993: P2). One of the co-founders of the model describes 'process maturity' as "the extent to which a specific process is explicitly defined, managed, measured, controlled, and effective". Over the past two decades more than 30 maturity models have evolved from the capability models and have been applied in organizational process maturity; and since software development is carried out through projects, software process maturity models have evolved into a tangible way of assessing aspects of the organization's project management maturity (Cookie-Davies et al, 2003). These models have similar structures and basic elements that define five levels of maturity. The two most influential models are Kerzner's five-level Project Management Maturity Model (K-PMMM), developed by Dr Harold Kerzner, a project management professional (Kerzner, 2009: P929), and the Organizational Project Management Maturity Model (OPM3), proposed by the US Project Management Institute (PMI). Compared with K-PMMM, which is complicated and technical, OPM3 is more comprehensive, as it was the result of examining 27 existing maturity models, and it has a broad application range (Yang 2009: P5).

#### 2.1.4 Knowledge areas of Project Management

Projects are divided into components, and a project manager must be knowledgeable in each area. A Knowledge Area stand for a complete set of concepts, terms, and activities that create a specialized professional field known as project management. Project teams should use these Knowledge Areas and other extension Knowledge Areas for specific project types, as appropriate. There are ten general project management knowledge areas which 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.

PMI (2013: P60) defines the important aspects of each knowledge area and how it integrates with the five Process Groups. As supporting elements, the knowledge areas provide a detailed

description of the process inputs and outputs along with a descriptive explanation of tools and techniques most frequently used within the project management processes to produce each outcome.

#### **2.1.4.1 Project Integration Management**

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. In the project management context, integration includes characteristics of unification, consolidation, communication, and integrative actions that are crucial to controlled project execution through completion, successfully managing stakeholder expectations, and meeting requirements (PMI, 2013:P63).

Project integration management incorporates allocation of resources, prioritizing among objectives and alternatives, managing the interactions among the rest of project management Knowledge Areas and creating an environment that encourages team members to fully engage in the project and encourages innovative approaches to developing the project plan. Project integration management processes include the following (PMI, 2013: P63):

- Develop project charter
- Develop project management plan
- Direct and manage project work
- Monitor and control project work
- Perform integrated change control
- Close project or phase

#### **2.1.4.2 Project Scope Management**

According to PMI (2013: P106), project scope management comprises the processes required to make sure that the project is armed with all the appropriate efforts to accomplish the project as

needed. In other word, the project scope is a document that describes the parameters that define a system and determine the behavior of the project, what work is done within the boundaries of the project, and the work that is external to the project boundaries. PMI (2013: P106) listed the following specific efforts as part of project scope management:

- Plan scope management
- Collect requirements
- Define scope
- Create WBS
- Validate scope
- Control scope

#### **2.1.4.3 Project Time Management**

Project time management includes the processes required to manage the timely completion of the project such as the following (PMI, 2013: P141):

- Plan schedule management
- Define activities
- Sequence activities
- Estimate activity resources
- Estimate activity durations
- Develop schedule
- Control schedule

#### **2.1.4.4 Project Cost Management**

The definition of project success often includes not only completing the project on time, but also completing the project within budget. Developing and controlling a project budget that will accomplish the project objectives is a vital project management skill. 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. Project cost management processes include the following (PMI, 2013:P193):

- Plan cost management
- Estimate costs
- Determine budget
- Control costs

#### **2.1.4.5 Project Quality Management**

Project quality management works to ensure that the project requirements, including product requirements, are met and validated (PMI, 2013: P227). Project quality focuses on the end outputs that reflect the purpose of the project. The project manager is accountable for developing a project implementation mechanism that gives a clear understanding of the expected project outputs and the quality specifications. In order to do so, (PMI, 2013:P227) listed the following project quality management processes:

- Plan quality management
- Perform quality assurance
- Control quality

#### **2.1.4.6 Project Human Resource Management**

Project human resource management includes the organizing, managing, and leading the project team. The project team consists of the people with assigned roles and responsibilities

for implementation of the project. Staffing the project with the right skills, at the right place, and at the right time is an important responsibility of the project management team.

Although, roles and responsibilities are assigned for project team members, it is important to involve all of them in the process of project planning to add their experience to the process as well as to motivate them so that their commitment will be stronger. PMI (2013: P266) stated project human resource management processes as the following:

- Plan human resource management
- Acquire project team
- Develop project team
- Manage project team

#### **2.1.4.7 Project Communications Management**

Completing a complex project successfully requires teamwork, and teamwork requires good communication among team members. The processes of project communications management are required to ensure timely and appropriate planning, collection, organization, storage, retrieval, and management of project information. Project managers devote most of their time to communicate with team members and other involved bodies, whether they are insiders or outsiders of the organization. Effective communication creates a hinge between the different involved bodies having different background, different experience, and different viewpoints which has significant impact on the bottom line of a project. Project communications management processes include the following (PMI, 2013: P287):

- Plan communications management
- Manage communications
- Control communications

#### **2.1.4.8 Project risk management**

Project risk management is the systematic process of identifying, analyzing, and responding to risks as project-related events or conditions which are not definitely known and which have the potential of adverse consequences on a project objective (PMI, 2013: P310). So, care has to be taken on the proper management of risk management.

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. Project risk management involves processes such as the following (PMI, 2013: P309):

- Plan risk management
- Identify risks
- Perform qualitative risk analysis
- Perform quantitative risk analysis
- Plan risk responses Risk Management
- Control risks

#### **2.1.4.9 Project Procurement Management**

PMI (2013: P366) stated that 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. For a successful accomplishment of Procurement, Project Procurement Management processes includes the following (PMI, 2013: P366):

- Plan procurement management
- Conduct procurements
- Control procurements

- Close procurements

#### **2.1.4.10 Project Stakeholder Management**

Stakeholder management give attention on smooth communication with stakeholders to recognize their expectations, deal with issues resolution of conflict of interests. Stakeholder satisfaction should be considered as the heart of any project. A well-structured project management involves the following processes (PMI, 2013: P391):

- Identify stakeholders
- Plan stakeholder management
- Manage stakeholder engagement
- Control stakeholder engagement

#### **2.1.5 Relationship of PMO with OPM**

The two maturity models proposed by Khalema etal (2015:P14), and described below, will be used to assess both PMO maturity and OPM maturity. Both maturity models were prudently selected from the existing collection of maturity models. The models are based on a five-level ranking for maturity.

##### **2.1.5.1 PMO maturity model**

Pinto etal (2010:P2) have developed a PMO maturity model and tested it for the purpose of academic discussion. This customized PMO maturity cube model – which is used in this study – summarizes all the typologies and functions of the PMO in the scientific literature, and categorizes them according to two principal dimensions: scope and approach (Pinto etal 2010:P2).

The scope of a PMO describes the extent and latitude of the PMO's mandate, whether it is organizational, departmental, or programmatic. A PMO's approach defines the focus and objectives of the PMO – strategic, tactical, operational, or all three concurrently (Pinto etal 2010:P2). All the activities within the three areas were evaluated to gauge their competence

and capability level in the normal course of the PMO. This establishes the extent to which the PMO is currently mature.

Using the 27 most common functions of a PMO (as identified by Hobbs and Aubry (2007: P10)), Pinto and others (2010:P2) classified them into the three approaches that an enterprise PMO (i.e. a PMO that covers the whole organization) can operate strategically, tactically, and operationally. The next section describes these three approaches (Khalem et al 2015:P17):

1. **At the strategic level**, the role of the PMO is to ensure that projects are aligned with:
  - Strategic objectives of the organization, so that projects undertaken are in line with the long-term objectives of the business.
  - Strategic growth of the organization, so that projects undertaken will contribute positively to the growth of the business.
  - Efficient and effective knowledge management, conducted to improve the policies, practices, and methodologies of project management.
  
2. At the **tactical level**, the role of the PMO is to ensure:
  - Close integration between project initiatives, so that there is coordination among the various projects being undertaken by the organization.
  - Consistent quality of products and services generated by projects, by monitoring to ensure that projects closely follow the defined standards and methodologies.
  - Knowledge sharing among the members of the projects to ensure clear communication between project teams.
  
3. At the **operational level**, the PMO is responsible for:
  - Conducting project evaluations, by creating the process for operational reviews, approving requests for increased budgets and/or resources, and ensuring that projects are conducted in an efficient manner.

- Integration of knowledge derived from projects by ensuring that information is readily available for informed decision-making on specific implementation processes.
- Expert knowledge of project management, by serving as a central repository of lessons learned, best practices, and standardized methodologies.
- Constant monitoring of customer satisfaction, providing regular project status reports to decision-makers, and coordinating communications between internal and external customers.

The customized maturity model to be used in this study was based on the PMO Maturity Cube Model, which adopts the three approaches above. Only one enterprise scope was considered for practicality and ease of application.

The model was further customized to include five maturity levels. This was accomplished by replacing the original model's three maturity stages (basic, intermediate, and advanced) with the five maturity levels given in the Panexec PMO Capability Maturity Model depicted in table 1 below.

**Table 1: Panexec PMO Capability Maturity Model**

Maturity Level	Maturity	Description	Typical Manifestation
Level 1	No PMO (Ad hoc)	<ul style="list-style-type: none"> <li>✓ PMO has not been adopted</li> </ul>	<ul style="list-style-type: none"> <li>✓ PM methodologies, processes &amp; governance are random and ad hoc</li> </ul>
Level 2	Mobilise	<ul style="list-style-type: none"> <li>✓ The PMO function has been recognised</li> <li>✓ Core resources are mobilised through hiring and secondment within other areas in the organisation</li> </ul>	<ul style="list-style-type: none"> <li>✓ Position of PMO in the organisation and reporting lines still unclear</li> <li>✓ No re-use and repeatability</li> <li>✓ Data not reliable</li> <li>✓ No clearly-defined or documented processes</li> </ul>
Level 3	Design	<ul style="list-style-type: none"> <li>✓ Define/adapt clear governance framework</li> <li>✓ Develop/adapt relevant methodology</li> <li>✓ Design and document core processes, project management product, and artefacts</li> </ul>	<ul style="list-style-type: none"> <li>✓ PMO charter is clear, understood and agreed</li> <li>✓ Repeatability &amp; re-use are developing at quick pace</li> <li>✓ Interactions with PMO still ad hoc and discretionary</li> <li>✓ Relationship with PMO still intense as the benefits are not obvious</li> </ul>
Level 4	Implement	<ul style="list-style-type: none"> <li>✓ Rollout of governance, methodologies and processes in all initiatives, projects and programmes</li> <li>✓ Establish PMO in a broader organisation</li> <li>✓ Build relevant capabilities and communities of practice in and out of PMO</li> </ul>	<ul style="list-style-type: none"> <li>✓ There is consistency and homogeneity coming in &amp; out of PMO, resulting in reliable data to create a single source of truth</li> <li>✓ Some PMO aspects may be perceived as 'rigid'</li> </ul>
Level 5	Manage	<ul style="list-style-type: none"> <li>✓ Identify, plan and implement improvements</li> <li>✓ Manage cultural change</li> </ul>	<ul style="list-style-type: none"> <li>✓ PMO is recognised as a change agent and model across the broader organisation</li> <li>✓ The values and functions of the PMO are deeply embedded in the organisation</li> </ul>

### 2.1.5.2 OPM maturity model

In order to customize a model that is applicable and practical for the purpose of this study, a choice of similar models is required – models that are not lengthy and that do not contain too much project management jargon. The Berkley Project Management Maturity Model, the PM Solutions Project Management Maturity Model, and Labuschagne and Marnewick's (2009:P16) Project Management Maturity Model were identified as less extensive because of their ease of application, methodology, and number of questions. The generic model is to be used to measure the maturity of the processes contained in the ten knowledge areas of the PMBoK

Guide. Thus a questionnaire is developed out of these three models and used for the purpose of this paper.

A few models will be disregarded since they entail a more detailed and complex questionnaire, supplemented with interviews, in order to reach any conclusive results. For example, the Organizational Project Management Maturity Model requires 151 questions that identify three levels of assessment, project, programme, and portfolio management (Khalem et al 2015:P18).

## ***2.2 Empirical Review***

A number of empirical studies have been conducted over the years on PMO, OPM and their maturities.

Muhammed (2015) conducted an empirical research in a multinational company in Pakistan about the importance of project management maturity on project performance and found out that project management maturity has a direct impact on project performance. He highlighted that high value of project management maturity ensures high performance for delivering projects whereas project performance will be low for less mature project management processes. Overall, he found that the company to has average project management maturity.

Hobbs and Hubry (2007: P76) conducted a survey of 500 project managers, PMO managers, Professionals in PMO, Executives and other managers as well as consultants in Canada and found out that PMOs are more legitimate in organizations with higher levels of organizational project management maturity. However, the empirical study does not show the nature of the relationship.

Khalema et al (2015: P22) examined the relationship of PMO maturity and the nine knowledge areas that describe Organizational Project Management (OPM) by collecting data from 129

PMO executives, staff, and project managers in South African Government Infrastructure Departments. The results showed that a PMO's 'strategic' maturity has the highest impact on all nine areas of OPM.

Ofori et al (2013: P1) in conducting a study on "Assessing Project Management Maturity in Africa: A Ghanaian Perspective" collected data from 200 managers from different economic sectors. The study showed that differences exist in the current project management maturity levels across each phase of the project life cycle for all organizations. The study also showed that most of the practitioners expect their respective organizations to attain higher levels of project management maturity (PMM) albeit at various levels. Organizations operating in the non-profit (NGO) category exhibited relatively higher levels of maturity compared to the other categories of organizations in all the five phases of the project management life cycle. Firms in the public sector of Ghana recorded low levels of maturity in most of the phases of the project management life cycle.

Empirical studies as it relates to OPM and PMO in the Ethiopian context is hard to get. Attempts have been made after the launching of the MA Project Management Programs at the School of Commerce of the Addis Ababa University and some private Universities. Abraham (2017: P56) conducted assessment of the Project Management Maturity Level of Commercial Bank of Ethiopia and concluded that all of the knowledge areas have lower maturities. Befekadu (2017:P87) in his Master's Thesis on the Project management practices in the real estate industry (on a survey of 24 Real Estate companies, 11 construction consultants, 3 instructors, and 44 Real Estate house owners) concluded that the findings reveal that Project integration, scope, time, HR, procurement, and claim are well managed in the Industry. In addition to this, Project initiation process groups and project closing process group are practiced well and consistently. On the contrary, the other knowledge areas and process groups are either poorly practiced or inconsistently applied or both throughout the Industry. Bezawit (2017: P30) on her study on assessing project implementation practices of entrepreneur and business growth project implemented by digital opportunity trust organization revealed that the project

processes of initiation, planning, and execution, were adopted while implementing the project. Daniel (2017:PX) in his Master's thesis studied the practice of Project Management in the Ethiopian Music Industry and concluded that the Ethiopian Music Industry does not fully use the project management practices.

In the empirical studies discussed, an assessment to determine the project management practices or maturity level were conducted except the one done by Khalema et al (2015: 19) which examined the relationship between PMO and OPM in the context of South African Government Infrastructure Departments.

This research, therefore, tries to extend the Khalema study to the Ethiopian context with reference to the Bank of Abyssina and determine the relationship of IS PMO and OPM.

### ***2.3 The Conceptual Framework***

This study deals with the relationship between PMO maturity and OPM maturity. Two models are used to both OPM maturity and PMO maturity. The following maturity models were selected to fit the South African Context by Khalem et al (2015: P16). These models, as depicted in Figure 1, are adapted for this study.

As discussed in the previous sections and shown in this conceptual framework, the PMO maturity is assessed in terms of the three approaches that an enterprise PMO can operate **strategically, tactically, and operationally**. **At the strategic level**, the role of the PMO is to ensure that projects are aligned with strategic objectives of the organization, strategic growth of the organization, and efficient and effective knowledge management.

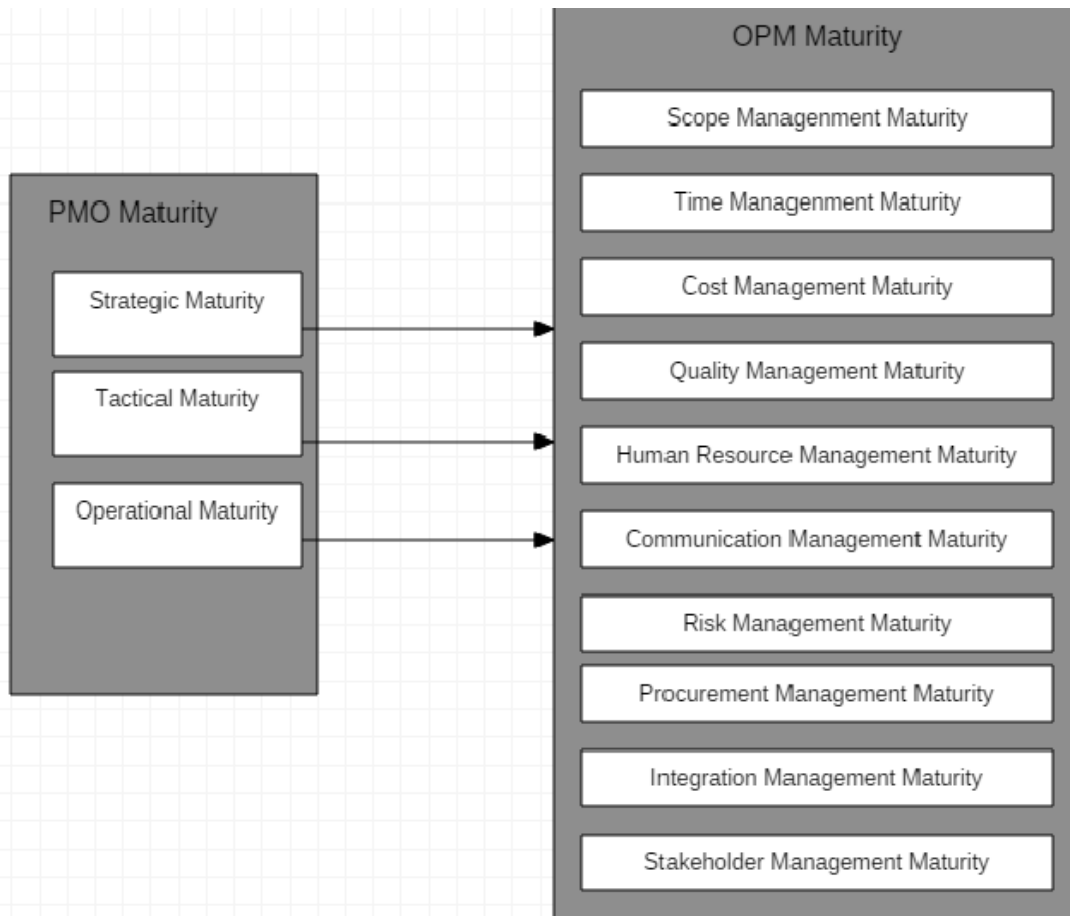


Figure 1 :Research Model(Adapted from khalem etal (2015))

At the **tactical level**, the role of the PMO is to ensure close integration between project initiatives, consistent quality of products and services generated by projects, knowledge sharing among the members of the projects to ensure clear communication between project teams. At **the operational level**, the PMO is responsible for conducting project evaluations, integration of knowledge derived from projects, expert knowledge of project management, and constant monitoring of customer satisfaction.

The OPM maturity is assessed in terms of the ten knowledge areas of Project Management Body of Knowledge.

## CHAPTER 3: RESEARCH METHODOLOGY

### *3.1 Research Design*

Research design is a blue print for selecting the sources and types of data relevant to the research questions and provides the basic direction for carrying out a research project to obtain answers to research questions.

The research work will be conducted by taking the IS PMO of Bank of Abyssinia as a case. The research mainly made use of descriptive and explanatory type. To describe and determine the IS PMO and OPM maturity, descriptive research is used and in addition explanatory research helped to establish the relationship between IS PMO and PMO.

From the perspective of data, quantitative research approach will be used. However, the quantitative research will be complemented with qualitative methods by conducting Interviews with the IS PMO manager and the Chief of Information Systems Officer.

### *3.2 Target Population and Sampling*

The target population consists of all staffs and project team leaders who were/are involved in IT projects execution. And since the staffs involved in all the projects is less than hundred, the study will employ the census. The projects executed/being executed by the BoA along with the number of teams participating in project execution is presented in the following table.

S. No.	Project	Number of Staffs involved in the project
1	Internal Service Desk Project	6
2	Comprehensive Change Management	5
3	Data Governance	5
4	Data Center/Disaster Recovery Site	8
5	Enhanced System Availability	5
6	T24 upgrade	10
	<b>Total</b>	<b>39</b>

So in this study, the entire staff and team leaders are taken as the subjects of the study which constitutes a census with 39 respondents.

### ***3.3 Instruments for Data Collection***

The main research instrument used for this study is the questionnaire adapted from Hobbs & Aubry (2007:P76), Pinto (2012: P8) and the PMBOK. The questionnaire used for the study is divided broadly into three sections. The first section is about the background of the study participants. The 2<sup>nd</sup> section consists of questions regarding the IS PMO maturity (about 27 questions) and the last section is about OPM maturity (47 questions). Under the demographic section variables such as age of the respondent, gender, experience, and highest educational level are asked. The section on IS PMO maturity is also sub-divided into the three sub sections in accordance with the three dimensions of PMO maturity, namely, strategic, tactical and operational maturities. The last section is subdivided into 10 subsections corresponding to the 10 Project management knowledge areas. The components of the IS PMO maturity and the OPM maturity items are measured on a 5-point Likert scale ranging from 5 (strongly agree) to 1 (strongly disagree). The respondents were then be asked to indicate the degree of agreement or disagreement.

The questionnaire is pre-tested and redesigned through personal interviews by undertaking a pilot study.

Moreover, a standardized Interview Guide is prepared and used for conducting interviews with the IS PMO manager and the Chief of Information Systems Officer.

### ***3.4 Data Analysis***

The data gathered through the questionnaires administered is recorded and coded into Statistical Package for Social Science (SPSS) software. In analyzing the data gathered from the

field (questionnaire), descriptive statistics, namely, frequencies, means, and reliability will be primarily calculated using SPSS. The following analysis were carried out on the data:

1. Descriptive statistics to determine the population sample's profile and to determine the maturity level of PMO and OPM by using means and standard deviations.
2. Reliability evaluation of the items used in the questionnaire.
3. Correlation analysis to explore the relationship between IS PMO and OPM.

The research methodology is summarized in the following table.

Target	Variables and factors	Data Collection method	Data Analysis Method	Contributions
BoA Project Management Team	PMO Maturity and OPM maturity	<ul style="list-style-type: none"> <li>• Survey question naire</li> <li>• Interview guide</li> </ul>	<ul style="list-style-type: none"> <li>• Descriptive statistics</li> <li>• Correlation Analysis</li> </ul>	<ul style="list-style-type: none"> <li>• PMO functions driving OPM</li> <li>• Relationship between PMO maturity and OPM maturity</li> </ul>

### ***3.5 Data Reliability and Validity***

A reliability analysis is conducted to establish both the consistency and stability of the research instrument. In this case, Cronbach's alpha is computed. Cronbach's alpha is computed in terms of the average intercorrelations among the items measuring the concept. The closer the Cronbach's alpha is to 1, the higher the internal consistency and reliability of the research instrument.

The calculated Cronbach's  $\alpha$  values are shown in Table 2 and Table 3 below for the three PMO functions and the ten knowledge areas of Project management respectively.

**Table 2:** Cronbach's  $\alpha$  -values for variables representing the three functions of PMO

Variables	Cronbach's $\alpha$ -values	No. of items
IS PMO Strategic Maturity Assessment	0.882	10
IS PMO Tactical Maturity Assessment	0.809	9
IS PMO Operational Maturity Assessment	0.843	8

As can be seen in Table 2, the Cronbach's  $\alpha$  -values are 0.882 for IS PMO Strategic Maturity Assessment, 0.809 for IS PMO Tactical Assessment and 0.843 for IS PMO Operational Maturity Assessment. Thus all of the values were above the minimum threshold of 0.70, suggesting a relatively high internal consistency of the questions.

**Table 3:** Cronbach's  $\alpha$  -values for the ten project management knowledge areas

Variables	Cronbach's $\alpha$ -values	No. of items
Scope Management Maturity Assessment	0.893	5
Time Management Maturity Assessment	0.880	5
Quality Management Maturity Assessment	0.795	4
Cost Management Maturity Assessment	0.889	5
Risk Management Maturity Assessment	0.911	5
Integration Management Maturity Assessment	0.870	4
Stakeholder Management Maturity Assessment	0.860	5
Human Resources Management Maturity Assessment	0.822	5
Communication Management Maturity Assessment	0.876	5
Procurement Management Maturity Assessment	0.898	7

As can be seen from Table 3, the Cronbach's  $\alpha$  -values for the ten project management knowledge areas range from 0.795 for quality management maturity assessment to 0.911 for project risk management maturity assessment. Since all of the  $\alpha$  -values are above the minimum threshold of 0.70, they suggest a relatively high internal consistency of the questions.

Therefore, since the  $\alpha$  -values for both the three functions of the IS PMO and the ten knowledge areas of project management are above the minimum threshold of 0.70 (Khalem et al, 2015:P20) a conclusion can be made that the questions of the study are relatively highly internally consistent.

### ***3.6 Ethical Consideration***

Finally, the study is conducted using ethical considerations. Each respondent to the study is first informed about the purpose and objective of the study and the questionnaires to be administered. After explaining the objective of the study, respondents were assured of anonymity and confidentiality before being administered with the questionnaire

## **CHAPTER 4: RESULTS AND DISCUSSION**

In this chapter the results of the data collected from the data collection survey are analyzed and discussed.

The adapted questionnaire was distributed to 39 respondents as specified in the Methodology of the study in Chapter 3 above. Out of the 39 distributed questionnaires, 31 were returned which gives a response rate of about 80%. The collected questionnaires were then entered into the IBM SPSS Statistics version 23 and analyzed using the same package.

The questionnaire used for the study is divided broadly into three sections. The first section is about the background of the study participants. The 2<sup>nd</sup> section consists of questions regarding the PMO maturity (about 27 questions) and the last section is about OPM maturity (47 questions). Under the demographic section variables such as age of the respondent, gender, experience, and highest educational level are asked. The section on PMO maturity is also subdivided into the three sub sections in accordance with the three dimensions of PMO maturity, namely, strategic, tactical and operational maturities. The last section is subdivided into 10 subsections corresponding to the 10 Project management knowledge areas. The components of the PMO maturity and the OPM maturity items are measured on a 5-point Likert scale ranging from 5 (strongly agree) to 1 (strongly disagree). The respondents were then asked to indicate the degree of agreement or disagreement.

The questionnaire is pre-tested to know whether the items are understood by respondents in the intended way, how long it will take to fill in a questionnaire, whether regrouping of questions is necessary and to decide which items to keep and which to discard. Based on the pre-test, some rephrasing and rearrangements of the questions were conducted.

### ***4.1 Demographic Characteristics of the respondents***

The gender classification of the respondents is depicted in Table 4. Accordingly, 93.5% of the respondents were male while 6.5% of them were females.

**Table 4: Respondents by gender**

	Frequency	Percent
Male	29	93.5
Female	2	6.5
Total	31	100.0

With regards to age of the respondents, the majority of them, 54.8% of them were in the age range from 31-40 and 38.7% of them were below the age of 30. Only a minority, about 6.5%, were above the age of 40(Table 5).

**Table 5: Distribution of Respondents by Age**

	Frequency	Percent
Below 30	12	38.7
31-40	17	54.8
41-50	2	6.5
Total	31	100.0

The educational level of the respondents was also captured in the study. Table 6 below shows the result. As can be seen from the result, all of the respondents have at least a first degree level education which may indicate their ability to fill self-administered questionnaires. The majority of the respondents (61.3%) hold a first degree and 38.7% have a 2<sup>nd</sup> degree (MA/MSc).

**Table 6: Educational Level of respondents**

	Frequency	Percent
MA/MSc	12	38.7
BA/BSc	19	61.3
Total	31	100.0

With regards to the field of study of respondents, the majority of them (51.6%) studied in Computer Science/Information Technology while 35.5% studied different social science fields (Accounting, Business Administration, Economics, Management and Marketing). About 12.9%

(or 4 respondents) did not disclose their field of study. The diversified field of study may provide different perspectives to the project management practice in the bank.

**Table 7: Field of Study of Respondents**

	Frequency	Percent
Accounting	2	6.5
Business Administration	4	12.9
Computer Science	16	51.6
Economics	2	6.5
Management	2	6.5
Marketing	1	3.2
Total	31	100.0

As to the year of service of the respondents, the average year of service of the respondents is found to be 5.6 years.

#### ***4.2 Maturity level of IS PMO***

As one of the objectives of the study, determining the level of IS PMO maturity is one of the tasks of this research project.

The five assessed levels of maturity (Level 1 Initial, Level 2 Stable, Level 3 Defined, Level 4 Managed, Level 5 Incorporated (Bohner, 2000:P2) are used to assess the IS PMO and OPM maturity levels.

The maturity of the IS PMO is assessed with respect to the maturity of the three PMO functions, namely, Strategic, Tactical and Operational levels. In the questionnaire, specific questions related to each of the three PMO functions were developed, data was collected and maturity assessment in terms of mean was calculated and the results are presented below.

#### 4.2.1 IS PMO Strategic Maturity Assessment

In the questionnaire, questions related to the IS PMO's strategic level functions were incorporated; the questions include provision of advice to top management, coordination and integration of the projects in the portfolio, development of project scorecard, participation in strategic planning etc. (details are in Appendix ). Each respondent was asked to rate, using a 5-point Likert scale, his understanding of the role of the IS PMO at strategic level.

The mean score obtained for this IS PMO strategic maturity is an average maturity value of 3.5226 (Table 8). As per the Bohner maturity level, the IS PMO Strategic maturity is at the **'Defined'** or **'Level 3'** level where initial integration is taking place. In this maturity level, macro-level practices are defined to boost project performance. The objective of this level is establish common best practices that will lead to overall organizational project performance. Local optimums of an individual project (e.g., favorite project management reporting style or project estimation tool) are discouraged in favor of common approaches to attain economies of scale.

#### 4.2.2 IS PMO Tactical Maturity Assessment

Questions that are likely to show the tactical functions of the IS PMO were incorporated in the questionnaire. Some of the tactical IS PMO functions questions include development and implementation of project management methodology, development of competencies of professionals, development and maintenance of project management information systems, allocate resources between projects, manage customer interfaces, etc. (See Appendix 1 for details). Each respondent was asked to rate, using a 5-point Likert scale, his understanding of the role of the IS PMO at tactic level.

A mean score of 3.5699 is obtained when analyzing using the SPSS Software. Accordingly, the PMO tactical maturity falls at the **'Defined'** or **'Level 3'** level where initial integration is taking place. In this maturity level, macro-level practices are defined to boost project performance. The objective of this level is establish common best practices that will lead to overall organizational project performance. Local optimums of an individual project (e.g., favorite

project management reporting style or project estimation tool) are discouraged in favor of common approaches to attain economies of scale.

#### 4.2.3 IS PMO Operational Maturity Assessment

The PMO maturity level with respect to the operational level was calculated with a mean value of 3.9315. As per the maturity model, the IS PMO operational maturity falls at the **‘Defined’** or **‘Level 3’** level where initial integration is taking place. This operational maturity level of the PMO is more closer to **‘Managed’** or **‘Level 4’** than the other IS PMO functions which shows that the PMO operational function is a little bit more mature than the rest.

Generally, the overall IS PMO maturity stands at 3.6743. As per the adapted maturity level, all are at the ‘Defined’ or ‘Level 3’ level where initial integration is taking place. In this maturity level, macro-level practices are defined to boost project performance. The objective of this level is establish common best practices that will lead to overall organizational project performance. Local optimums of an individual project (e.g., favorite project management reporting style or project estimation tool) are discouraged in favor of common approaches to attain economies of scale.

The result is also supported by the interview participants as they mentioned that the IS PMO is more dealing with operational issues than tactical and strategic issues and they interview also revealed that they put the maturity level at 3 or defined stage.

**Table 8:** PMO maturity

Three IS PMO functions	N	Mean	Std. Deviation
IS PMO Strategic Maturity Assessment	31	3.5226	0.64689
IS PMO Tactical Maturity Assessment	31	3.5699	0.63876

IS PMO Operational Maturity Assessment	31	3.9315	0.65019
<b>Overall PMO Maturity</b>		<b>3.6743</b>	<b>0.64527</b>

Source: own survey, 2018

### ***4.3 OPM Maturity level***

The organizational project management maturity is assessed in terms of the ten project management knowledge areas.

For organizational project management maturity assessment, the five assessed levels of maturity namely, Level 1 Initial, Level 2 Stable, Level 3 Defined, Level 4 Managed, Level 5 Incorporated as proposed by Bohner (Bohner, 2000:P2) is used.

From the questionnaires distributed and the questions asked with respect to the ten knowledge areas of project management, the summarized mean values of each of the ten knowledge areas is presented in Table 9 and the details re as follows.

#### **4.3.1 Scope Management Maturity Assessment**

Project scope management comprises the processes required to make sure that the project is armed with all the appropriate efforts to accomplish the project. To capture the required data to measure the maturity of project scope management questions related the scope management which deals with issues such as development of Plan for scope management, Collect requirements, Definition of scope, validation and controlling of scope were included in the questionnaire.

The mean score (as can be seen from Table 9) shows that the Scope management maturity is 3.8065. These values indicate the maturity level of project scope management is at the 'Defined' or 'Level 3'. However, this mean score is very much closer to 'Managed' or 'Level 4' of project management maturity. With 'Managed' level of maturity, PM activities move from static improvements to dynamic change reflecting the lines of business perspective. The key practices at Level 4 move the bar up for PMs to be handled as portfolios of initiatives, ultimately tuning the program of projects to the business needs.

#### 4.3.2 Project Time Management Maturity Assessment

Project time management includes the processes required to manage the timely completion of the project and the questions included in the questionnaire to capture the time management knowledge area includes schedule management, define activities, Sequence activities, Estimate activity resources, Estimate activity durations, development and control of schedule.

Like that of the Scope management, a mean score of 3.8710 was obtained when analyzed using the SPSS package which indicates a maturity at the 'Defined' or 'Level 3' stage. As that of the project scope management maturity, this mean score is very much closer to 'Managed' or 'Level 4' of project management maturity. With 'Managed' level of maturity, PM activities move from static improvements to dynamic change reflecting the lines of business perspective. The key practices at Level 4 move the bar up for PMs to be handled as portfolios of initiatives, ultimately tuning the program of projects to the business needs.

#### 4.3.3 Project Quality Management Maturity Assessment

Project quality management works to ensure that the project requirements, including product requirements, are met and validated. Questions related to quality management planning, performing of quality assurance and controlling of quality were included to capture the project quality management knowledge area.

Analysis of the data produced a mean score of 3.2258 which indicates a maturity level at the 'Defined' or 'Level 3' stage. In terms of mean score, this is the least value among the ten project management knowledge areas and can be concluded that it is the least practiced by the organization although the result is not statistically supported.

**Table 9:** Organizational project management maturity

<b>The ten project management knowledge areas</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
Scope Management Maturity Assessment	31	3.8065	.82702
Time Management Maturity Assessment	31	3.8710	.76516
Quality Management Maturity Assessment	31	3.2258	.78090
Cost Management Maturity Assessment	31	3.7097	.80306
Risk management Maturity Assessment	31	3.3742	.77759
Human Resources Management Maturity Assessment	31	3.6387	.77759
Integration Management Maturity Assessment	31	3.5484	.76762
Stakeholder Management Maturity Assessment	31	3.3935	.71271
Procurement Management Maturity Assessment	31	3.3733	.73470
Communication Management Maturity Assessment	31	3.3613	.71632
<b>Organizational project management maturity</b>	<b>31</b>	<b>3.5477</b>	<b>.765009</b>

Source: own survey, 2018

#### 4.3.4 Project Cost Management Maturity Assessment

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. So, this concepts were included on the questionnaire in terms of questions asked to capture the data for the analysis of the maturity of the project cost management.

The analysis of the data resulted in a mean value of 3.7097 which indicates a maturity level at the 'Defined' or 'Level 3' stage. Like that of the project scope management and project time management, this mean score is very much closer to 'Managed' or 'Level 4' of project management maturity. With 'Managed' level of maturity, PM activities move from static improvements to dynamic change reflecting the lines of business perspective. The key practices at Level 4 move the bar up

for PMs to be handled as portfolios of initiatives, ultimately tuning the program of projects to the business needs.

#### **4.3.5 Project Risk Management Maturity Assessment**

Project risk management is the systematic process of identifying, analyzing, and responding to risks as project-related events or conditions which are not definitely known and which have the potential of adverse consequences on a project objective (PMI, 2013: P310). Questions related to the planning of risk management, Identification of risks, performing risk analysis and controlling risks were included in the study to capture data (See Appendix 1).

Analysis of the data revealed a mean value of 3.3742 which indicates a maturity at the 'Defined' or 'Level 3' Stage.

#### **4.3.6 Project Human Resources Management Maturity Assessment**

Project human resource management includes the organizing, managing, and leading the project team. Concepts related to the project human resources management processes such as Plan human resource management, Acquire project team, Develop project team, and Manage project team were included in the study to capture the required data.

A mean score of 3.6387 was obtained from the data after analysis which leads to a maturity at the 'Defined' or 'Level 3' stage.

#### **4.3.7 Project Integration Management Maturity Assessment**

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. Questions related to the processes such as Develop project management plan, Direct and manage project work, Monitor and control project work, Perform integrated change control were included in the questionnaire.

Analysis of the data on project integration management revealed a mean score of 3.5484 which puts the maturity at the 'Defined' stage.

#### **4.3.8 Project Stakeholder Management Maturity Assessment**

Stakeholder management give attention on smooth communication with stakeholders to recognize their expectations, deal with issues resolution of conflict of interests. Stakeholder satisfaction should be considered as the heart of any project. Concepts related to Identification of stakeholders, planning, managing and controlling of stakeholders were asked to the respondents and responses were obtained.

Analysis of the responses obtained showed a mean value of 3.3935 which puts the maturity of the project stakeholder management maturity at the 'Defined' level.

#### **4.3.9 Project Communications Management Maturity Assessment**

The processes of project communications management are required to ensure timely and appropriate planning, collection, organization, storage, retrieval, and management of project information. Project communications management processes include the following: Plan communications management, Manage communications and Control communications for which data was captured from the respondents.

A mean score of 3.3613 was obtained as a maturity value after the data was analyzed which puts the maturity of the project communications management at the 'Defined' stage.

#### **4.3.10 Project Procurement Management Maturity Assessment**

Project Procurement Management includes the processes necessary to purchase or acquire products, services, or results needed from outside the project team. The Project Procurement Management processes that we were interested in collecting data from respondents include Plan procurement management, Conduct procurements, Control procurements, and Close procurements.

Analysis of the captured data revealed a mean value of 3.3733 which indicates a maturity level at the 'Defined' stage.

#### **4.3.10 Summary of Project Management Maturity Assessment**

As per the summary analysis result, all of the ten knowledge areas of project management have mean values ranging from a lowest mean value of 3.2258 for Quality Management Maturity

Assessment to the highest mean value of 3.8710 for Time Management Maturity Assessment. The overall organizational project management maturity has also an average value of 3.5477. These values indicate the maturity level of all of the ten knowledge areas plus the overall project management maturity is at the 'Defined' or 'Level 3' of the Bohner's model. In this maturity level, macro-level practices are defined to boost project performance. The objective of this level is establish common best practices that will lead to overall organizational project performance. Local optimums of an individual project (e.g., favorite project management reporting style or project estimation tool) are discouraged in favor of common approaches to attain economies of scale.

Although all of them are at the defined level, they show variations in their closeness to the next (Level 4) or preceding level (Level 2). For example, maturity in terms of **project time management, project scope management, Project cost management, Project Human Resources Management** and **Project Integration Management** are very much closer to 'Managed' or 'Level 4' and lie above the average value. With 'Managed' level of maturity, PM activities move from static improvements to dynamic change reflecting the lines of business perspective. The key practices at Level 4 move the bar up for PMs to be handled as portfolios of initiatives, ultimately tuning the program of projects to the business needs.

However, **quality management, risk management, stakeholder management, procurement management, communications management** lie below the overall organizational project management maturity value indicating that their maturity levels are below the other knowledge areas.

The result conquers with the result obtained from the interview in that more emphasis is placed on cost management, time management, scope definition and staffing. The interview also revealed that the maturity level of each of the knowledge areas to be around 3 or at the defined stage which supports the result of this analysis.

### 4.3 Relationship of IS PMO maturity and OPM Maturity

Pearson correlation coefficients for the three independent variables describing the IS PMO maturity assessment and for the 10 dependent variables describing the OPM maturity assessment were calculated. SPSS was used to calculate Pearson correlation coefficients and the results are presented in table 10 below.

**Table 10:** Pearson Correlation Coefficient matrix

Pearson Correlation Coefficients		IS PMO functions		
		Strategic Maturity	Tactical Maturity	Operational Maturity
Project Knowledge areas	Scope Management Maturity	.022	-.065	.061
	Time Management Maturity	.038	-.073	.161
	Quality Management Maturity	.065	.001	.333
	Cost Management Maturity	.058	-.123	.076
	Risk Management Maturity	.008	-.139	.242
	Integration Management Maturity	.181	-.034	.341
	Stakeholder Management Maturity	.271	.033	.173
	Human Resources Management Maturity	.312	.171	.321
	Communication Management Maturity	.275	.047	.266
	Procurement Management Maturity	.083	-.046	.110

Source: own survey, 2018

The maturity of each IS PMO function as well as the maturity of each of the ten knowledge areas was assessed as a separate variable, and each variable's association with the ten project management areas was determined through correlation analysis. This resulted in the following weak but positive and insignificant correlations:

1. IS PMO strategic maturity has positive correlation (thus is positively associated) with all the ten project management knowledge area maturities. However, it shows relatively stronger association with human resources management maturity (Pearson's correlation coefficient value of 0.312), stakeholder management maturity (Pearson's correlation coefficient value of 0.271) and communication management maturity (Pearson's correlation coefficient value of 0.275).

2. IS PMO tactical maturity is positively associated with only four project management knowledge area maturities, namely, Quality management, Stakeholder management, Human Resources management and Communications management. Relatively stronger relationship is obtained for human resources management maturity (Pearson's correlation coefficient value of 0.171).
3. IS PMO operational maturity is positively associated with all of the ten project management knowledge area maturities. Relatively strong relationships are observed with integration management (Pearson's correlation coefficient value of 0.341), quality management (Pearson's correlation coefficient value of 0.333), human resources management (Pearson's correlation coefficient value of 0.321), communications management (Pearson's correlation coefficient value of 0.266) and risk management (Pearson's correlation coefficient value of 0.242).

The result from the interview revealed that the maturity of the IS PMO has a great impact on the maturity of the organizational project management. However, the result from the quantitative study shows a weaker relationship between IS PMO and organizational project management maturity as can be seen in Table 10.

In addition to the weak relationships observed among the three functions of the PMO and the ten knowledge areas of the project management, abnormal negative relationships have been observed between tactical maturity function and six project management knowledge areas. Further study is required to examine the cause of this abnormal relationship and to determine whether this is due to the effect of some confounding variable or due to the inadequacy of the population in the survey.

## **CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS**

Based on quantitative study, the researcher has tried to measure the project management maturity level of Information Systems Program Management Office (IS PMO) of the Bank of Abyssinia. Also attempt was made to measure the maturity of the Organizational Project Management (OPM) of the Bank and tried to establish if there is any relationship between IS PMO and OPM. To measure the maturity of IS PMO and OPM, a project management maturity model proposed by Bohner (Bohner, 2000:P2) was used. The model follows five levels of progressive process maturity. The model is important to measure an organization's project management maturity and to direct organizations towards important project management practices that are important to achieve project management growth and excellence.

### ***5.1 Conclusions***

Based on the data gathered and analyzed, all of the ten knowledge areas of project management have mean values ranging from a lowest mean value of 3.2258 for Quality Management Maturity Assessment to the highest mean value of 3.8710 for Time Management Maturity Assessment. The overall organizational project management maturity has also an average value of 3.5477. These values indicate the maturity level of all of the ten knowledge areas and the overall project management maturity is at the 'Defined' or 'Level 3' of the Bohner's model. In this maturity level, macro-level practices are defined to boost project performance. The objective of this level is establish common best practices that will lead to overall organizational project performance. Local optimums of an individual project (e.g., favorite project management reporting style or project estimation tool) are discouraged in favor of common approaches to attain economies of scale.

Although all of them are at the defined level, they show variations in their closeness to the next (Level 4) or preceding level (Level 2). For example, the average maturity(out of 5) in terms of project time management (3.8), project scope management (3.8), Project cost management (3.7), Project Human Resources Management (3.6) and Project integration Management (3.5) are very much closer to 'Managed' or 'Level 4'. With 'Managed' level of maturity, PM activities move from static improvements to dynamic change reflecting the lines of business perspective.

The key practices at Level 4 move the bar up for PMs to be handled as portfolios of initiatives, ultimately tuning the program of projects to the business needs.

Moreover, the IS PMO Strategic, Tactical and Operational maturity levels were found to be at the 'Defined' stage.

The relationship between IS PMO maturity and OPM maturity was also determined and found out that:

- IS PMO strategic maturity has positive correlation (thus is positively associated) with all the ten project management knowledge area maturities.
- IS PMO tactical maturity is positively associated with only four project management area maturities, namely, Quality management, Stakeholder management, Human Resources management and Communications management.
- IS PMO operational maturity is positively associated with all of the ten project management area maturities.

## ***5.2 Recommendations***

Both the IS PMO and OPM maturities were at the stage of 'Defined'. This implies that there is ample room for improvement and in this regard the researcher recommends the following:

- The overall IS PMO maturity level with respect to the three functions is at the defined level with average maturity value of 3.6 out of 5. The IS PMO operation is relatively more mature than the strategic and tactical levels (an average maturity value of 3.9 against 3.5). However, all the three are at the defined stage and a lot need to be done to reach at the highest level of maturity. Accordingly, the bank needs to increase its IS PMO maturity by reorienting its focus to strategic and tactical functions without neglecting the operational level functions.

- The overall organizational project management maturity stands at the defined level. Moreover, the average maturity levels of the Quality (3.2 out of 5), Stakeholder (3.3 out of 5), Risk (3.3 out of 5) and Communications (3.3 out of 5) management are relatively lower and below the overall organizational project management maturity and the bank need to develop capacities in enhancing the adoption and use of these project management knowledge areas.
- Knowledge areas whose maturity scores are below the average should be carefully studied and procedures designed to help project staffs and project managers.
- The program management office would contribute in supporting project managers and project teams by carefully collecting, compiling and disseminating lessons learned from past project implementations; creating project management standards; and creating awareness among all stakeholders towards projects.
- It is also imperative to enhance the capacity of the PMO by strengthening its human and other resources and by providing trainings about project activities for team members.

### **5.3 Suggestions for Further Research**

Since the idea of PMO and OPM maturity is relatively new in Ethiopia, it would be valuable to conduct further research in the topic. Since this research is based on one case, further study can be conducted on many organizations and sectors. This will allow for greater reliability to provide important statistical generalizations.

## 6. References

- Abraham E.** (2017). Assessment of Project Management Maturity Level of Commercial Bank of Ethiopia. MA Research Project (unpublished). Addis Ababa University School of Commerce
- Al-Ahmad, A.** (2009). *Evaluation of project management maturity: The role of organization Influences in the GCC countries*. Lille, France: ESC-Lille University.
- Befekadu W.** (2017). The practice of project management in Ethiopian real estate industry and its contribution to project success: The case of selected company in Addis Ababa. MA Research Project (unpublished). Addis Ababa University School of Commerce
- Cooke-Davies, T. & Arzymanov, A.** (2003). The maturity of project management in different industries: An investigation into variations between project management models. *International Journal of Project Management*, 21, pp 471-478.
- Daniel G.** (2017). The Practices of Project Management: The Case of Ethiopian Music Industry. MA Research Project (unpublished). Addis Ababa University School of Commerce
- Desouza, K.C. & Evaristo, J.R.** (2006). Project management offices: A case of knowledge-based archetypes. *International Journal of Information Management*, 26(7), pp 414-423.
- Ebise G.** (2016). Assessing the Project Management Practice of Oromia Integrated Urban Land Information System Project Coordination Office. MA Research Project (unpublished), Addis Ababa University School of Commerce.
- Cooke-Davies, T. & Arzymanov, A.** (2003). The maturity of project management in different industries: An investigation into variations between project management models. *International Journal of Project Management*, 21, pp 471-478.
- GodBole, S.** (2014). PMO: Its Impact on Project Success and Measuring Its Performance in proceedings of *The 2014 IAJC/ISAM Joint International Conference ISBN 978-1-60643-379-9*
- Hobbs, B. & Aubry, M.** (2007). A multi-phase research program investigating project management office. *Project Management Journal*, 38(1), pp 74-86.

- Kerzner, H.** (2009). *Project management: a systems approach to planning, scheduling*. NY: John Wiley & Sons.
- Kerzner, H.** (2001). *Strategic planning for project management using a project management maturity model*. NY: John Wiley & Sons.
- Khalema, L.S. C.C. van Waveren<sup>2</sup> & K.-Y. Chan.** (2015). The relationship between project management office maturity and organizational project management maturity: an empirical study of the South African government infrastructure departments. *South African Journal of Industrial Engineering* November 2015 Vol 26(3) pp 12-26
- Labuschagne, L. & Marnewick, C.** (2009). Prosperus Report 2008: IT project management maturity vs. project success in SA. Johannesburg, SA: PMISA.
- O'Brochta, M., & Finch, C.** (2011.). *Key Performance Indicators for the PMO: Metrics for Success*.
- Paulk, M., Curtis, B., Chrissimb, B. & Weber, C.** (1993). *Capability maturity model for software*. Pittsburgh: Carnegie Mellon University.
- Pinto, A., Cota, M. & Levin, G.** (2010). *The PMO maturity cube, a project management office maturity*. US: PMI.
- Project Management Institute (PMI).** (2008). A guide to the project management body of knowledge (PMBOK Guide), 4th ed. Newtown Square, PA: Author. Wiley & Sons.
- Wysocki, R. K.** (2014). *Effective project management: traditional, agile, extreme*. John
- Yang, X. & Wang, X.** (2009). Study on the management maturity model of high-tech venturing project based on fuzzy comprehensive evaluation, in *Second International Conference on Future Information Technology and management Engineering, IEEE*.

## 7. Appendix - Questionnaire

**Addis Ababa University  
College of Business and Economics  
School of Commerce Master of Project  
Management Program**

Dear Sir/Madam,

I am undertaking a research titled **“The Relationship between Project Management Office Maturity and Organizational Project Management Maturity: the case of Bank of Abyssinia Information Systems Project Office”** for the partial fulfillment of the requirement of Master of Arts (MA) degree in Project Management. This survey is part of academic research that aims to determine the relationship between Project Management Office maturity and organizational project management maturity at Information Systems (IS) PMO of Bank of Abyssinia.

The information acquired through this questionnaire will be kept confidential and it is purely for academic purpose. There is no right or wrong answer here. Rather, your genuine, honest and timely response is vital for the accomplishment of this study. Therefore, you are kindly requested to give your response to each items/questions carefully. The researcher sincerely expresses his thanks in advance for devoting your time and energy to complete this questionnaire. Please note that you are not required to give your name in this questionnaire.

Sincerely,  
Tsfaye Admassie

**Part I: Demographic characteristics and general background of the respondents**

1. Sex:  
Male [ ]      Female [ ]
2. Age:  
Below 30 [ ]      31-40 [ ]      41-50 [ ]      above 50 [ ]
3. Educational Level  
PHD [ ]      MA/MSc [ ]      BA/BSc [ ]      Diploma [ ]      High School completed [ ]  
If other, please specify \_\_\_\_\_
4. Field of Specialization (The field you have studied) \_\_\_\_\_
5. Year of Service in the Bank \_\_\_\_\_

**Part II: Questions related to the Project Management Office Maturity.**

Based on your experience of your participation in any of the projects run by the Information Systems (IS) PMO, please provide your feedback as to what extent you think the IS PMO can operate strategically, tactically, and operationally.

In each of the following please put tick mark (v) corresponding to each choice presented below.  
(5=Strongly Agree, 4= Agree, 3= Neutral, 2= Disagree, 1= Strongly Disagree)

**I. At the Strategic level, what do you think is the role of the IS PMO?**

S. No.	Role of IS PMO	5	4	3	2	1
1	Provide top management with advice					
2	Coordinate and integrate the projects in the portfolio; prioritize these projects and rebalance them as required					
3	Develop and maintain a project scoreboard					
4	Promote project management awareness within the organization					

S. No.	Role of IS PMO	5	4	3	2	1
5	Monitor and control the performance of the PMO itself					
6	Participate in strategic planning					
7	Manage one or more portfolios					
8	Identify, select and prioritize new projects					
9	Manage program benefits					
10	Networking and environmental scanning, mapping project relationships and environment within the organization and external to it					

**II. At the Tactical level, what do you think is the role of the IS PMO?**

S. No.	Role of IS PMO	5	4	3	2	1
1	Develop and implement a standard project management methodology					
2	Develop the competences (skills) of professionals, including training					
3	Implement and operate project management information systems					
4	Manage customer interfaces					
5	Provide a set of tools that can be customized to meet the specific needs of programs and projects					
6	Allocate (and share) resources between projects					
7	Implement and manage the database of lessons learned or knowledge repository					
8	Implement and manage the risk and issues database					
9	Recruit, select, evaluate and decide on the salaries of project managers; establish a project management career path					

**III. At the Operational level, what do you think is the role of the IS PMO?**

S. No.	Role of IS PMO	5	4	3	2	1
1	Report project/program status (information) to upper (senior) management					
2	Monitor and control project/program performance					
3	Provide mentoring for Project Managers					
4	Manage project files/documentation; setting up a knowledge management repository					
5	Manage one or more programs					
6	Audit projects and programs					
7	Provide specialized tasks (services) for project managers					
8	Carry out post-project management reviews (lessons learned)					

**Part III: Questions related to the ten Knowledge Areas of Project Management according to PMBOK**

Based on your experience of your participation in any of the projects run by the Information Systems (IS) PMO, please provide your feedback as to what extent do you think the following factors listed under each project management knowledge areas are important to the effectiveness of the project.

*(5=Strongly Agree, 4= Agree, 3= Neutral, 2= Disagree, 1= Strongly Disagree)*

No.	Item	5	4	3	2	1
	<b><i>I. Project Scope Management</i></b>					
1	Plan scope management was defined (As a basis for future project decisions.)					
2	Requirements were clearly defined from the beginning					
3	Work Breakdown Structure (WBS) was created (WBS is a key project deliverable that organizes the team's work into manageable sections)					
4	Scope was verified (formalizing acceptance of the project scope)					
5	Changes to the project scope was controlled					
	<b><i>II. Project Time Management</i></b>					
1	Time/schedule management plan was developed					
2	Activities were defined					
3	Activities were sequenced					
4	Duration of activities were estimated					
5	Changes to the project schedule was controlled					
	<b><i>III. Project Quality Management</i></b>					
1	Quality standards of the project were identified					
2	Quality standards of the project were reviewed					
3	Project performance were evaluated on regular basis					
4	Results were monitored to check if they comply with the quality					
	<b><i>IV. Project Cost Management</i></b>					
1	The quantity of the necessary resources were determined					

No.	Item	5	4	3	2	1
2	Cost plan was well-defined					
3	The project cost was estimated					
4	The required budget was determined					
5	Changes to the project budget was controlled					
	<b><i>V. Project Risk Management</i></b>					
1	Risk management plan was developed					
2	Risks were identified and registered					
3	Risks were prioritized and their implication on the project was estimated					
4	Risk response plan was developed					
5	The identified risks were monitored and controlled					
	<b><i>VI. Project Integration Management</i></b>					
1	Project plan was developed by taking the results of other planning processes and putting them into consistent document.					
2	Project work was managed					
3	Project work was monitored and controlled					
4	There was effective coordination of project activities					
	<b><i>VII. Project Stakeholder Management</i></b>					
1	Project stakeholders were identified					
2	Stakeholder management plan was defined					
3	There was effective communication between project stakeholders					
4	Stakeholders engagement was controlled					
5	Project progress was reviewed frequently with the customer					
	<b><i>VIII. Project Human Resource Management</i></b>					
1	Project roles, responsibilities and required skill were identified					
2	Organizational chart and position descriptions were clear					
3	Availability and assigning human resource					
4	Project team was developed					
5	Project team was managed and controlled					

No.	Item	5	4	3	2	1
	<b><i>IX. Project Communication Management</i></b>					
1	The information and communication needed for the project were determined					
2	Making needed information available to project stakeholders					
3	Collecting and disseminating performance information					
4	Generating, gathering, and disseminating information to formalize phase or project completion					
5	Control communication					
	<b><i>X. Project Procurement Management Factors</i></b>					
1	Resources needed for the project were Determined					
2	Requirements of the project materials was documented					
3	Potential sources were identified					
4	Appropriate quotations, bid, offers or proposal were obtained					
5	Choosing from among potential sellers					
6	The relationship with the seller was managed					
7	Contract was completed and settled properly					

\*\*\*\*\* *Thank you for your time* \*\*\*\*\*

## Interview Guide

1. Would you please tell me about the role of the IS PMO in managing projects?
2. Would you elaborate the IS PMO direct role in managing, controlling and coordinating single and/or multi-projects
3. Is the IS PMO directly managing each project individually or are providing help, support, project management standards, and other services to these projects 'managers'?
4. How can you segregate the role of the IS PMO in terms of strategic, tactical and operational level roles? Which roles are dominant in the current setup?
5. How do you rate the IS PMO maturity?
6. How do explain the organizational project management practices at bank of Abyssinia?
7. Which project management knowledge areas are more practiced in this bank?
8. How do you rate the maturity level of each knowledge area?
9. How do you rate the overall maturity level of the organizational project management?
10. Do you think the maturity of the IS PMO has any relationship with the overall organizational Project management maturity?
11. What are the challenges faced by the IS PMO in conducting its business?