

*Addis Ababa  
University  
(Since 1950)*



# ***ADDIS ABABA UNIVERSITY***

SCHOOL OF COMMERCE

PROJECT MANAGEMENT DEPARTMENT

**The Perceived Knowledge Management Practice in IT Project  
Stakeholders in case of Ministry of Innovation and  
Technology, and Information Network Security Agency**

**ELSHALOM ENDRIAS ESSAY**

**August 2019**

**ADDIS ABABA UNIVERSITY**  
**SCHOOL OF COMMERCE**  
**PROJECT MANAGEMENT DEPARTMENT**

**The Perceived Knowledge Management Practice in IT  
Project Stakeholders in case of Ministry of Innovation and  
Technology, and Information Network Security Agency**

A Thesis Submitted to the School of Graduate Studies of Addis Ababa  
University in Partial Fulfilment of the Requirements for the Degree of  
Master of Art in Project Management

**BY**  
**ELSHALOM ENDRIAS ESSAY**

**August 2019**

**ADDIS ABABA UNIVERSITY**  
**SCHOOL OF COMMERCE**  
**PROJECT MANAGEMENT DEPARTMENT**

**The Perceived Knowledge Management Practice in IT  
Project Stakeholders in case of Ministry of Innovation and  
Technology, and Information Network Security Agency**

**BY**

**ELSHALOM ENDRIAS ESSAY**

**Name and signature of Members of the Examining Board**

	<u>Name</u>	<u>Signature</u>	<u>Date</u>
Examiner	_____	_____	_____
Examiner	_____	_____	_____
Advisor	<u>Dr. Adane Atara</u>	_____	_____

## DEDICATION

*Dedicated to my Beloved Parents Endrias Essay and  
Almaz Haile*

## ACKNOWLEDGMENT

First, I would like to express my genuine thanks to God, who gave me the strength, determination, endurance, and wisdom to bring this thesis to completion and made me who I am today. Oh God, I would be nowhere without you. Then, I would like to thank my thesis advisor Dr. Adane Atara faculty member of the School of Commerce at Addis Ababa University. The door to Dr. Adane office was always open whenever I ran into a trouble spot or had a question about my research or writing. He consistently allowed this paper to be my own work but steered me in the right direction whenever he thought I needed it.

I owe my gratitude to my teachers and faculty members of the Business Information System. I also need to express my gratitude and deep appreciation to colleagues, and INSA and MinT project team members, staffs and project managers and also all those people who have made this thesis possible and because of whom my graduate experience has been one that I will cherish forever.

Finally, I must express my very profound gratitude to my parents and to my brothers, brother-in-law, and sister for providing me with unfailing support and continuous encouragement throughout my years of study and through the process of researching and writing this thesis. This accomplishment would not have been possible without them. Thank you.

## Abstract

Knowledge management is revolutionizing the activities of business organizations and decreasing the learning curve in current organizations, and it is giving a vital opportunity by enabling to work more efficiently and maximize productivity by learning from the past. This research is conducted to assess and compare knowledge management practice in IT projects in the Ministry of Innovation and Technology and Information and Network Security Agency of Ethiopian.

Quantitative research approaches were followed and this research is more of behavioral science research. None-probability sampling was used and the total population of IT project members, project sponsors and project manager of Ministry of Innovation and Technology (MinT), and Information Network Security Agency (INSA) was considered for this study; SPSS Version 21.0 is used for analyzing quantitative data.

Knowledge management is a process of creating, sharing, using and managing the knowledge and information of an organization. In this study the process of creating, sharing, using and managing knowledge is assessed in project. Each process of knowledge management (that is creating, sharing, using and managing) is assessed from the perspective of IT project stakeholders. The study categorized the stakeholders in to three which are, project sponsors, project managers and project team member, and studied each knowledge management process from the three project stakeholders' perspective. In addition to that the organization project culture is also assessed.

Given the prominence of knowledge to efficiency and productivity, it is important that organizations manage their knowledge effectively. Knowledge management practices in INSA and MinT vary from each other. INSA's project team members have a better understanding of the knowledge management practice and share knowledge in between project team. Among the 35 factors used to assess the knowledge management practice in INSA only 4 factors responded high towards knowledge management and in MinT only six resulted high toward knowledge management practice. The overall knowledge management practice indicated poor knowledge management practice in IT projects both in MinT and INSA and obtained a low response.

Keywords: Project Management; Knowledge Management; Information Technology; IT

# Table of Contents

DEDICATION .....	1
ACKNOWLEDGMENT.....	2
Abstract.....	3
Table of Contents.....	4
List of Tables .....	6
List of Figure.....	7
List of Annexes .....	8
List of Acronyms .....	9
Chapter One .....	10
Introduction.....	10
1.1 Background.....	10
1.2 Statement of the Problem.....	12
1.3 Objective of the Study .....	14
1.3.1 General Objective .....	14
1.3.2 Specific Objectives .....	14
1.4 Scope and Limitation of the Study.....	14
1.5 Significance of the Study .....	14
1.6 Organization of the Study .....	15
Chapter Two.....	16
Literature Review.....	16
2.1 Overview of Knowledge Management .....	16
2.1.1 What is Knowledge Management? .....	16
2.1.2 Types of Knowledge .....	17
2.2 Learning Organization .....	18
2.3 Overview of Project .....	19
2.3.1 IT Project .....	20
2.4 Project Stakeholders.....	20
2.5 Conceptual Framework.....	21
2.6 Related Work .....	22
Chapter Three.....	24
Research Methodology .....	24
3.1 Research Approach and Method.....	24
3.2 Data Collection .....	25
3.2.1 Questionnaire .....	25
3.2.2 Documents .....	25
3.3 Source of Data.....	25
3.4 Population of the Study.....	26
3.5 Sample Design .....	26
3.6 Data Analysis Technique .....	26
3.7 Quality of Research.....	26
3.7.1 Reliability of the Research.....	27
3.7.2 Validity of the Research.....	28
Chapter Four .....	29
Data Presentation, Analysis, and Interpretation.....	29

4.1 Demographic Information.....	30
4.1.1 INSA .....	30
4.2.1 MinT .....	31
4.2 INSA .....	34
4.2.1 Project Sponsors Perceived Practice .....	34
4.2.2 Project Managers Perceived Practice .....	36
4.2.3 Organizational Culture .....	38
4.2.4 Project Team Members Perceived Practice.....	40
4.3 MinT .....	42
4.3.1 Project Sponsors Perceived Practice .....	43
4.3.2 Project Managers Perceived Practice .....	44
4.3.3 Organizational Culture .....	45
4.3.4 Project Team Members Perceived Practice.....	48
4.4 Analysis and Interpretation .....	49
4.4.1 Project Sponsors.....	49
4.4.2 Project Manager .....	50
4.4.3 Organizational Culture .....	50
4.4.4 Project Team Component.....	51
4.5 Discussion .....	52
4.5.1 INSA .....	52
4.5.2 MinT .....	54
Chapter Five.....	58
Summary, Conclusion and Recommendations .....	58
5.1 Summary of Findings.....	58
5.2 Conclusion .....	59
5.3 Recommendations.....	60
5.2.1 for Practice .....	61
5.2.2 For Further Research.....	62
References.....	63
Annexes .....	67

## List of Tables

Table 3.1 Pilot Test Cronbach's Alpha Result.....	27
Table 3.2 Pilot Test Cronbach's Alpha Theme's Result .....	28
Table 4.1 INSA Respondents' Demographic Profile.....	28
Table 4.2 MinT Respondents' Demographic Profile .....	33
Table 4.3 INSA Final Survey Cronbach's Alpha Test Result .....	34
Table 4.4 INSA Project Sponsor's .....	35
Table 4.5 INSA Project Manager .....	37
Table 4.6 INSA Organizational Culture Table A .....	38
Table 4.7 INSA Organizational Culture Table B .....	39
Table 4.8 INSA Project Team.....	41
Table 4.9 MinT Final Survey Cronbach's Alpha Test Result.....	42
Table 4.10 MinT Project Sponsors .....	43
Table 4.11 MinT Project Manager's .....	44
Table 4.12 MinT Organizational Culture Table A.....	46
Table 4.13 MinT Organizational Culture Table B.....	46
Table 4.14 MinT Project Team.....	48
Table 4.15 Overall Project Sponsors Result.....	50
Table 4.16 Overall Project Manager's Result .....	50
Table 4.17 Overall Organizational Culture Result.....	51
Table 4.18 Overall Project Team Result.....	51

## List of Figure

Figure 2.1: Knowledge Management Framework .....	22
--	----

## List of Annexes

Annex I Questionnaire Covering Letter.....	67
Annex II Questionnaire.....;	68
Annex III Declaration.....	73

## List of Acronyms

CV	Coefficient of Variable
INSA	Information and Network Security Agency
IS	Information System
IT	Information Technology
ICT	Information Communication Technology
KM	Knowledge Management
MinT	Ministry of Innovation and Technology
PM	Project Management

# Chapter One

## Introduction

### 1.1 Background

Nowadays, knowledge management plays a crucial role in companies. Since human knowledge is limited but on the other hand expandable also, companies want knowledgeable human capital. Knowledge isn't a simple reflex on a certain situation or won't be accumulated in seconds or few days. The organizational culture, experience, information, human skill, and personal experience will contribute to the accumulation of knowledge that will always take time. Above all, learning from experience is the best way of acquiring knowledge. Therefore, acquiring knowledge, sharing knowledge, storing and using in an appropriate time is the key to organizational success. In each type of organization and in each field of study and work there are different skills and knowledge required by different sectors (UNCTAD, 2012).

Every organization contains, and operates according to its culture, a culture which is arising from multiple characteristics ranging from individual employee personalities through team dynamics to deliberate policies on the part of management and leaders' emphasis on desired behaviors. (Stricker, 2014). As humans differ from one another companies also differ from one another in their behavior like business area, vision, mission, goal, strategic plan, and others. The ability to learn is the most important skill in today's human capital and also it is to today's organization. Many organizations are becoming increasingly concerned with organizational knowledge and their use of knowledge to create and make quality products, deliver quality services, and maximize the efficiency of their internal operations. The fact that knowledge is a company's asset no longer lies in the ability to store and retrieve them, but in the management of its usage in a dynamic knowledge era (Jelenic, 2011).

The quality of knowledge and the pace of learning in organizations affects all aspects of the organization. All forms of organizations all over the world are realizing that knowledge in the form of expertise and competence is the organization's most important asset and that its quality and availability affect all aspects of the organization (Squier, 2006).

Knowledge is created through learning; as human learns from their experience, their experiment, their wrong decision or failure; so do organizations. In knowledge management, learning is the

corner of creating knowledge and then managing knowledge. In business management, a learning organization is a company that facilitates the learning of its members and continuously transforms itself (Omotayo, 2015).

Many people see knowledge management as one paradigm of Information System. Therefore some think that knowledge management still remains in the information technology domain (McAdam & McCreedy, 1999). In the 1990s, the nature of competition changed rapidly because of increased global connectivity, distributed expertise and shorter product development cycles (Hussain, et al., 2004). Organizations are now, streamlining their processes and exploring ways of working smarter through improved collaboration and communication. As the whole world (almost) continues to migrate towards a knowledge-based economy, knowledge management has emerged as a methodology for capturing and managing the intellectual assets of all types of the organization as a key to sustaining competitive advantage.

Project Management as an independent discipline was founded in the middle of the previous century. Specific methods of project management network methods were developed in the 1950s and '60s. "Although it is a young discipline, it is experiencing rapid growth, as evidenced by the rapid increase in the number of people employed in the implementation of projects, as well as the growing demand for project managers" (Sloniec, et al., 2016, p.1).

Project management is temporary in that it has a defined beginning and end in time, and therefore defined scope and resources (PMBOK, 2013, p. 1). Project management is the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements. Project management has five project process groups which are Initiating, Planning, Executing, Monitoring and Controlling, and Closing (PMBOK, 2013, p. 4).

Many companies are becoming project-based and almost all of IT companies are project-based. Nowadays, project bases business has become the major strategy among a range of potential business strategy. While managing projects sharing best practice and keeping knowledge among the project team members are a critical success factor for the project success. Managing knowledge is one of the difficult situation a project manager encounter specifically managing and sharing tacit knowledge. Knowledge management (KM) is a process of systematic management of vital knowledge and its associated process of creating, gathering, organizing, diffusion, use, and

exploitation. A corporate company may have many projects at a time and may have completed many projects or else is planning of launching a project. Sharing experience and knowledge from past projects is a time saving for project managers.

This study assesses the knowledge management practice of IT, project managers. Since Information Technology projects have been growing in terms of size, number and impact, the researcher believes that it is important to study knowledge management practice specifically on IT project managers.

## **1.2 Statement of the Problem**

Project management has been in practice for thousands of years. But as a modern management practice, project management is a young and growing sector with full of future, it evolved out of World War II about sixty years while it is been introduced as a profession (Gentile, 2012). Knowledge sharing mechanisms and retain expertise knowledge in the team.

IT projects in the world have been emerging and growing quickly and having the greatest impact on human lives. Project Management Institute (PMI) estimates that there are 16.5 million Project Managers in the world and the majority of them are IT projects. After years of stagnating IT project success rates and project failures, shown by a new pulse of the Profession report from the Project Management Institute (PMI) shows that success rates for IT projects are finally on the rise. Besides the help of IT gadgets to manage project and knowledge base of the project team, assessing the knowledge management practice in IT project of Ethiopian technology companies is important.

Despite the importance of information management in business operations, many companies experience difficulty in executing IT projects within the pre-determined time or budget constraints. Many IT designs are canceled before completion and never implemented (Rahim & Dawson, n.d). According to a research by (Whittaker, 1999), an incredible 70% of organizations have suffered at least one project failure in the prior 12 months and 50% of respondents indicated that their project failed to consistently achieve what they set out to achieve. For organizations, this means wasted resources, time, and efforts. To put a value to projects failure, for every \$1B invested in the US, \$122M was wasted due to lacking project performance (Lim, 2018). “IT project management is a crucial issue for organizations today. The failure rate of IT projects is astounding” (Whittaker,

1999, p.1). However recent studies such as (PMI, 2018) (Mohagheghi & Jørgensen, 2017) (Veiga, 2017) shows that the success rate of IT projects is finally on the rise.

Total global spending on technology goods, services, and the staff were projected to reach \$2.4 trillion in 2008, an 8 percent increase from 2007 (Schwalbe, 2011). “Today, spending on these technologies is growing at about 18% per year and is expected to account for at least 80% of IT spending growth between now and 2020” (Gentile, 2012, p.2)

Today the globe is changing in a different way, the way of doing a job is changing, and technology is dynamically altering and is revolutionizing how people do their job and how they interact with each other. In today’s lives change is constant (Hornstein, 2015). On other hands, Soderlund stated that in large transformation projects, it is necessary to integrate a number of knowledge bases in these projects and also an increasing number of change processes and initiatives are organized and implemented as projects (Söderlund, 2010). For these projects, knowledge integration depends on the ability of the people involved to relate to each other, share and absorb findings and knowledge assets that have been developed in the project, and adjust them to the speed of other parts of the project.

Knowledge management, therefore, is a process and depends on how people can best integrate their individually held knowledge assets. Project professionals must use knowledge to the greatest advantage of portfolios, programs, and projects. It is necessary to ensure that knowledge is managed in the projects to achieve a project objective in projects. (Levin, 2010). As Meyerson, et al., (1996) stated, it is necessary to build swift common knowledge to manage projects. Successful knowledge integration leads to successful projects (Meyerson, et al., 1996)

Knowledge Management (KM) has been recognized as a critical factor for both project success and organizational performance (Alavi & Leidner, 2001). Realizing that KM is important for project success of any size and type of project, how an IT projects best work to succeed in their projects and how knowledge management practice benefit IT project perceived practice is assessed in this study. This study assesses the knowledge management perceived practice in IT project stakeholders.

What is the perceived practice of knowledge management IT projects stakeholders?

What is the perceived practice of knowledge management in project team, project manager and project sponsor?

What are the organizational culture effects on the perceived practice of knowledge management in IT projects?

## **1.3 Objective of the Study**

### **1.3.1 General Objective**

The main objective of this study is to assess IT project stakeholder's perceived practice of knowledge management.

### **1.3.2 Specific Objectives**

In order to assess knowledge management practice of IT project managers, the study has the following specific objectives.

- To assess project team, project manager and project sponsor perceived practice of knowledge management in IT projects.
- To assess how organizational culture affect the perceived practice of knowledge management.

## **1.4 Scope and Limitation of the Study**

The scope of this study is limited to the assessment of perceived knowledge management practice of IT project stakeholders. The perceived knowledge management practice of IT project stakeholders and the organizational culture effects on the perceived practice of knowledge management in IT project stakeholders in MinT and INSA is studied. The study only assessed the perceived knowledge management practice between project stakeholders only. From other IT based companies, the research covers only government owned MinT and INSA.

Due to time and financial constraint this research emphasis on the assessment of knowledge management practice of IT project managers.

## **1.5 Significance of the Study**

Project management is a recently growing field as a profession and knowledge management has driven organizations and projects into success. This study identifies perceived knowledge management practice of IT project stakeholders. This helps to improve the knowledge, attitude,

and practice of project stakeholders and lead the project into a success. This study would help the organization in identifying the gaps related to using knowledge. Finally, it is also important for future researchers as input if they are interested to do study in this subject.

## **1.6 Organization of the Study**

This study is organized into five chapters. The first chapter is about the background of the study, statement of the problem, the objective of the study and scope and limitation of the study. The second chapter presents a review of related works of literature on the assessment of knowledge management practice of IT project managers and discusses related works in that area from local and foreign works of literature. The third chapter discusses the methodologies and procedures followed for the data collection, analysis, and interpretations. The fourth chapter deals with the analysis and presentation of data, discussion; summary of findings. The fifth and the last chapter bring conclusion and recommendations.

## Chapter Two

### Literature Review

The reviews of relevant literature on project management, knowledge management, the perceived knowledge management practice in IT projects were reviewed in this chapter, both empirical and theoretical.

#### 2.1 Overview of Knowledge Management

Many organizations are becoming more concerned about how they manage knowledge and deal with organizational knowledge and their use of knowledge to create a product or add value to the existing product. Knowledge management promotes an integrated approach to identify, capture, evaluate, retrieve, and share an enterprise's information assets. These may include databases, documents, policies, procedures, and experience in individual workers (Koenig, 2014). Knowledge management is important since marketplaces are increasingly competitive and the rate of innovation is rising. “In recent years, the importance of KM has been widely recognized as the foundations of industrialized economies shifted from natural resources to intellectual assets” (Omotayo, 2015, p.2).

Fundamentally, knowledge management is applying the collective knowledge of the entire workforce to achieve specific organizational goals. The aim of knowledge management is not necessarily to manage all knowledge, just the knowledge that is most important to the organization. It is about ensuring that people have the knowledge they need, where they need it when they need it – the right knowledge, in the right place, at the right time (Brún, 2005).

##### 2.1.1 What is Knowledge Management?

Knowledge management is the process of finding, gathering, assessing, organizing, and sharing data. Knowledge consists of documents, procedures, resources, and employee skills. Knowledge management is the way toward making, sharing, utilizing and dealing with the data of an organization (Girard & Girard, 2015). It alludes to a multidisciplinary way to deal with accomplishing hierarchical destinations by utilizing knowledge. Knowledge management may be a useful tool to assist firms gather and organize necessary data so tasks and comes are often

completed with efficiency. It is conjointly a useful tool in serving to seek out the people that have the required skills necessary to complete those tasks and comes. So, knowledge management is actually a map that outlines the flow of data so an organization fulfill their duties, tasks, and comes (Gerami, 2010).

### **2.1.2 Types of Knowledge**

Nowadays, knowledge is able to harness the organization's competitive advantage. This competitive advantage is realized through the accumulated knowledge full utilization of information and data coupled with the harnessing of people's skills and ideas as well as their commitments and motivations. In the corporate context, knowledge is the product of organization and systematic reasoning applied to data and information in the process of achieving the organizational goal (Jong, 1996). Since knowledge is an essential asset in the modern organization, it has become more important than any resources and capital a company possesses.

In general, there are two types of knowledge: tacit knowledge and explicit knowledge (Uriarte, 2008)

#### **Tacit Knowledge**

Tacit knowledge is stored in the brain of a person and is personal and stored in the heads of people. It is accumulated through study and experience. It is developed through the process of interaction with other people. Tacit knowledge grows through the practice and experience of success and failure. Tacit knowledge is context-specific that makes it difficult to formalize, record, or articulate. It includes subjective insights, intuitions, and conjectures. As intuitive knowledge, it is difficult to communicate and articulate and is highly individualized, the degree and facility by which it can be shared depend to a great extent on the ability and willingness of the person possessing it to convey it to others (Smith, 2001).

The sharing of tacit knowledge is a great challenge to many organizations. Tacit knowledge can be shared and communicated through various activities and mechanisms. Activities include conversations, workshops, on-the-job training and the like. Mechanisms include, among others, the use of information technology tools such as email, groupware, instant messaging and related technologies. In managing tacit knowledge, the very first hurdle to most organizations is identifying the tacit knowledge that is useful to the organization. Once relevant tacit knowledge is

identified, it becomes extremely valuable to the organization possessing it because it is a unique asset that is difficult for other organizations to replicate. This very characteristic of being unique and hard to replicate is what makes tacit knowledge the basis of the organization's competitive advantage (Chilton & Bloodgood, 2007).

In any organization, tacit knowledge is an essential prerequisite for making good decisions. A new executive not yet familiar with the organization will find it difficult to make good decisions since he or she has yet to acquire tacit knowledge about the workings of the organization.

### **Explicit Knowledge**

Explicit knowledge is contained in documents or other forms of storage other than the human brain. Explicit knowledge may, therefore, be stored or embedded in facilities, products, processes, services, and systems. Actively managing organizational knowledge can also stimulate cultural change and innovation by encouraging the free flow of ideas.

A Guide to Putting the Learning Organization to Work, (Garvin, 2000) notes, "To move ahead, one must often first look behind" (p. 106).

Explicit knowledge is contained in documents or other forms of storage other than the human brain. Explicit knowledge may, therefore, be stored or embedded in facilities, products, processes, services, and systems (Takala, 2008).

## **2.2 Learning Organization**

A learning organization is an organization that encourages and facilitates learning in order to continually transform itself to survive and excel in a rapidly changing business environment. The highly complex, interrelated, and integrated global economy of the 21st century presents new challenges to managers and employees attempting to effectively compete in such a dynamic business environment. The characteristics of a learning organization will help managers and employees meet these challenges by providing them tools to pursue a creative vision, learn and work together effectively, and adapt to change (Yadav & Agarwal, 2016).

Learning organization represent an evolution of the organizational learning perspective because of its embedded potential to develop a transformational change in firms and also to re-conceptualize

an organization and facilitates the learning of its members (Gonzalez & Martins, 2017). A knowledge-based learning organization is a key for the company to achieve cost-effectiveness, competitiveness and better management of business risks.

Information technology (IT) has developed rapidly within the last decade. As a result, project managers must be prepared to manage the current and future challenges within the project management field, as well as within the IT industry. Rapid globalization of business means organizations must significantly increase its capacity to accurately manage information and data. In response to this growing capacity demand, more discussion is needed to develop effective IT project management processes and approaches (Rahim & Dawson, n.d).

## 2.3 Overview of Project

Projects have defined time, scope and budget which are aimed to solve a particular problem. PMI defines a project as a temporary endeavor undertaken to produce a unique product, service, or result (PMBOK, 2013) (Heagney, 2012) The PMBOK® also says the project is “application of knowledge, skills, tools, and techniques to project activities to meet the project requirements” (PMBOK®, 2008, p.6).

Project management has recently become an independent discipline and starts its professional journey in the last century. Project Management as an independent discipline was founded in the middle of the previous century. Specific methods of project management - network methods were developed in the 1950s and '60s (Słonieć, et al., 2016).

“Project is an original undertaking, aimed at solving a particular problem, taking an opportunity or fulfilling some other business requirement” (Gorecki, 2015, p.15). Projects are operated to achieve a defined goal in a predefined time. Projects normally include a set of defined deliverables designed to establish the desired level of control (PMBOK®, 2000)

Today, there are many approaches to project management which include: (1) traditional approach, where the project is a sequence of stages, and it is divided into phases: initiation, planning, execution, monitoring and completion of the project, e.g. PMI, Prince2; (2) extreme approaches, e.g. Agile or Scrum, where the project manager pursues the purpose which is intended and perfects its first version with a project team; the approach is used especially in IT projects; or an extreme

approach, if project objective or plan are not specified. The approach is used in research and development projects when the ultimate goal of the project is unknown and often unpredictable.

### **2.3.1 IT Project**

The modern working environment is an astonishing era of knowledge and information, the era of incredible acceleration in technology and innovation and one of the most eminent factors in managers' decision-making process is information (Yeganegi & Safaeian, 2012). Within the information systems field, there is a very wide variety of types of projects that may be undertaken. Although the general principles of project management are broadly common (Cadle & Yeates, 2008). According to Cadle and Yeates, there are nine IT project into broad types

- Software development
- Package implementation
- System enhancement
- Consultancy and business analysis assignments
- Systems migration
- Infrastructure implementation
- Outsourcing (and in-sourcing)
- Disaster recovery
- Smaller IS projects.

There are various types of IT projects but managing projects are essentially the same; the general principles of managing any project measure basically identical, there are some variations within the dynamics of every sort that the project.

## **2.4 Project Stakeholders**

Project stakeholders are those with any interest in the project's outcome. They're generally the members of a project team, project managers, project sponsors, customers, and users. According to the Project Management Institute (PMI), the term project stakeholder refers to, "an individual, group, or organization, who may affect, be affected by, or perceive itself to be affected by a decision, activity, or outcome of a project" (PMI, 2013).

## 2.5 Conceptual Framework

The researcher used an adapted MacCallum, et al., (2002) combined framework. To obtain the perceived knowledge management practice in IT project stakeholders. Since knowledge is the process of finding, gathering, assessing, organizing, and sharing appropriate organizational knowledge, all the knowledge management process is dealt in each IT project stakeholder theme. There are various knowledge management practices assessment models and tool found by different scholars such as (Kulkarni & Freeze, 2003); (Kulkarni & Freeze, 2004); (Leenders, 2006).

The researcher modified Kulkarni & St. Louis, (2003) assessment tools and dichotomized using MacCallum, et al., (2002) model in each theme. Each project stakeholders perceptive is dealt separately in this research. In addition to that, the organizational culture effects on the perceived practice of knowledge management in IT projects is also assessed. The researcher categorized project stakeholders in to project sponsors, project manager/s and project team. In addition to the project stakeholders' perspective, the organizational culture effects on perceived knowledge management practice in also studied.

The researcher categorized in to four themes in order to ease the data analysis. These are project sponsors, project manager, project team members and organizational culture. The researcher also combined MacCallum, et al., (2002) and Kulkarni & St. Louis, (2003). The MacCallum, et al., (2002) framework is used to dichotomize in to two "High" and "Low". High shows the positive impact of the specifically assessed factor or theme on knowledge management. If the assessed factor or theme resulted in low, it means there is no knowledge management perceived impact in the theme whether it is in project sponsors, project manager or project team member or not organizational culture.

A Kulkarni & St. Louis, (2003) framework was adapted to categorize the stakeholders in to project sponsors, project managers and project team members. The researched modified Kulkarni & St. Louis, (2003) framework and categorized in to four different themes which are project sponsors, project managers, project team members and organizational culture. The data analysis was done according separately for each themes and also for each organizations.

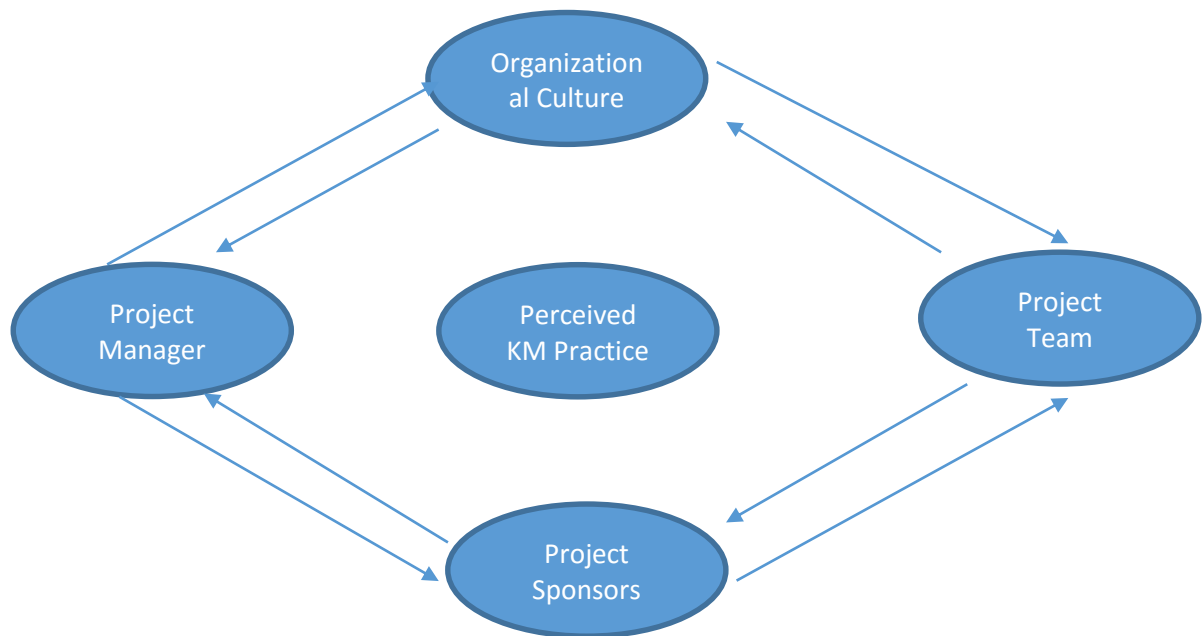


Figure 2.1: Knowledge Management Framework

Source: Own

## 2.6 Related Work

Research has been done by many organizations, NGOs, government offices, educational institutions, research centers and other using scholars, researchers, students and workers to enhance the way of life, to increase efficiency and effectiveness, to find out the real problem and its cause and also to get answers for many questions. Research on the field of knowledge management focuses on knowledge management process and their applicability and significance. In undertaking research on “The Perceived Knowledge Management Practice in IT Project Stakeholders in case of Ministry of Innovation and Technology, and Information Network Security Agency”, other literatures were reviewed. There are some related studies conducted by different researchers in different parts of the world. But in our country context, the researcher can’t find studies which are directly related to these research theme which are done on The Perceived Knowledge Management Practice in IT Project Stakeholders so far.

The study on “Perceptions towards Knowledge Management in Project-Based Organizations” (Na & Parvar, 2017) is one of the related studies with The Perceived Knowledge Management Practice

in IT Project Stakeholders. The research is done in chosen five companies and used quantitative study method and the main focus of the study was to explore project team members' perceptions towards knowledge management. In the study, the author focuses on a strong matrix structure organization and based on this principle.

The study adopted semi-structured interviews as a data collection strategy. The total number of interview participants were twenty-six and the interviewees were selected across the companies in order to ensure representativeness and to avoid any preconceived perceptions with respect to the research topic. The research categorized in to three different themes strategic management, tactical management and operational management. The name of the company used in the research wasn't mentioned. The research used grounded theory method, which was suggested by Corbin and Strauss (2008), was adopted as the main data analysis strategy of the study.

The researcher analyzed the collected data were analyzed to identify the perception regarding knowledge management in project based organizations. Major categories of perceptions towards knowledge management within project-based organizations fell into three:

1. Knowledge management is a communicating method between members in and across project teams.
2. Knowledge management in itself means sharing information and valuable intellectual assets with other members in a project team.
3. Large number of members in a team has already conducted knowledge management activities with an unconscious manner.

The study explored members' perceptions towards knowledge management in project-based organizations. The authors adopted a qualitative research method for gathering in-depth understanding of knowledge management within project management context. The study found out that the participants were not aware the existence of knowledge management activities since some of them were not titled as knowledge management or similar. Furthermore, the study recommended that a firm should examine the existing knowledge management systems activities thoroughly. The study suggested the companies to use the analysis of the study so that the company would be able to choose the best appropriate firm-specific knowledge management approach.

## **Chapter Three**

### **Research Methodology**

Research methodology as a process used to collect information and data for the intention of making business decisions which may consist of surveys, interviews, observation, and other research methods. For business organizations, research is an art of scientific investigation. It is also a systematic design, collection, analysis and reporting the findings & solutions for the marketing problem of a company (Greener, 2008). In other words, this is where the researcher tries to defend or search the given questions thoroughly his or her own way until answers and conclusions are developed. It is also explained as answering unanswered questions or exploring which presently not exist is research (Goddard & Melville, 2004)

#### **3.1 Research Approach and Method**

Research approach helps researchers to plan and implement the study in a way that will help them obtain the intended results, thus increasing the chances of obtaining information that could be associated with the real situation (Burns & Grove, 2005). A research approach is a preparation for conditions to collect data which establishes the blueprint for the gathering, measurement, and analysis of data. Research design stands for the planning of the methods to be used for collecting the relevant data, and the techniques to be used for analysis that is relevant to the objectives (Mulia, 2014).

There two paradigms that describe research, behavioral science and design science (Purao, et al., 2008). The behavioral science paradigm seeks to develop and verify theories that explain or predict human or organizational behavior (Essay, 2016). There are three approaches to conduct behavioral science research: Qualitative, Quantitative and Mixed Approaches. Mixed methodology approach is that the general term for once each qualitative and quantitative information assortment techniques area utilized design (Kaufman & L.Kaufman, 2005).

The project organization is selected based on approachability to get the required information to carry out the study. In this research, a quantitative approach is selected and conducted with a descriptive research method.

## **3.2 Data Collection**

Data collection is the method of gathering data on targeted variables. The data gathering instruments utilized in this study is a questionnaire.

Census was taken to assess knowledge management practice in IT projects. All project members have been considered and questionnaires were distributed for all project members in MinT and INSA. Finally, whereas distributing the form to the respondents, the researcher distributed sixty-three questionnaires and obtained 60 responses.

Finally, while distributing the questionnaire to the respondents, the researcher distributed 63 questionnaires and obtained 60 responses. Among 63 questionnaires, 30 were distributed to INSA and all of the questionnaires were collected. The rest 33 were distributed to MinT and 30 were collected. Among the uncollected questionnaires, 3 participants were not interested to participate in the survey.

### **3.2.1 Questionnaire**

Data were acquired through a personally administered questionnaire instrument to assess the knowledge management practice on IT project managers in Ethiopian the case of INSA and MinT. The questionnaire has three groups which are a group one demographic information of the respondents and group two has five-point Likert scale questions which assesses the knowledge management practice of IT project managers in Ethiopia and group three short-answer open-ended questions.

### **3.2.2 Documents**

In addition to the questionnaire and interviews, documents were reviewed. Different documents printed materials; books, journal articles, reports, published and unpublished documents were reread in-depth, and assess other countries experiences in assessing knowledge management practice of projects.

## **3.3 Source of Data**

There are two types of data which is usually used in research, primary and secondary data. Primary data does not actually exist unless the researcher generates it through the research process as part of the consultancy or dissertation or project (Joop & Hennie, 2005). Primary data is the original

data collected by the researcher. It will often be collected through techniques such as experimentation, interviewing, observation and surveys. On the other hand, secondary data is information which already exists in some form or other but which was not primarily collected, at least initially, for the purpose of the consultancy exercise at hand. In fact, secondary data is often the start point for data collection in as much as it is the first type of data to be collected (Joop & Hennie, 2005).

This study used both primary and secondary data. Regarding the primary data, the researcher distributed a structured questionnaire to relevant participants. In order to strengthen the result and findings of the study, the researcher examined different documents.

### **3.4 Population of the Study**

There is 30 IT project staff working in INSA in different projects assigned in software development, networking and security projects and there are 33 IT project staff working in MinT.

### **3.5 Sample Design**

The aim of the sampling is to make a conclusion about the general population by systematically taking representative samples from the total population. Sampling methods are classified as either probability or nonprobability. In probability samples, each member of the population has the same chance of being chosen is a non-zero probability of selection (Barreiro & Albandoz, 2001). Probability methods include random sampling, systematic sampling, and stratified sampling and nonprobability sampling includes census. In this research, the researcher uses the census.

### **3.6 Data Analysis Technique**

The entire instruments and collected data are categorized into major and sub-objectives. Different types of methods of analyzing data are used. Each major and subgroups are represented in a different way. In order to simplify the interpretation and finding of the study descriptive statistic were employed in analyzing this study and were done using SPSS. Some quantitative data analysis is included in different statistical techniques. Quantitative data were analyzed using SPSS v 21.

### **3.7 Quality of Research**

Reliability and validity are mostly raised in conducting quantitative research. In preparing the research to ensure that respondents would read and answer the question consistently on different

occasions in the same context; easy, clear and well-defined language is used. Reliability and validity can be acquired through analyzing data in different statistical methods and the data can be found from a different source (Golafshani, 2003).

### 3.7.1 Reliability of the Research

Reliability is the reparability of the research. This attribute of the instrument is actually referred to as stability. If the research is dealing with a stable measure, then the results should be similar. It is concerned with the uniformity of measurement which the survey questions used in research bear the same type of information each time they are used in the same condition (Golafshani, 2003). In order to determine whether the questionnaire that used to collect the data is reliable or not, the internal consistency of each section of the questionnaire was tested using Cronbach alpha. On the pilot survey, the Cronbach Alpha test resulted in 0.934 which means the questionnaire is reliable. See Table 3.1

Table 3.1 Pilot Test Cronbach's Alpha Result

#### Case Processing Summary -Reliability Statistics

		N	%	Cronbach's Alpha	N of Items
Cases	Valid	14	100.0	0.933	35
	Excluded <sup>a</sup>	0	0.0		
	Total	14	100.0		

a. Listwise deletion based on all variables in the procedure.

Pilot survey, the Cronbach Alpha test for each four categories has been assessed all the categories which are, project sponsors, project manager, organizational culture and project team member resulted greater than 0.7 which is accepted. The result of each categories are listed in the following Table 3.2.

Table 3.2 Pilot Test Cronbach's Alpha Theme's Result

Themes	Cronbach's Alpha	N of Items	Valid	
			N	%
Project Sponsors Perceived KM Practice	.705	7	14	100.0
Project Manager Perceived KM Practice	.790	6	14	100.0
Organizational Culture	.923	14	14	100.0
Project Team Member Perceived KM Practice	.836	8	14	100.0

### 3.7.2 Validity of the Research

For this study among thirty five factors in the survey eleven were taken from (Kulkarni & Freeze, 2003) and another ten were taken from (Downes, 2014) with little manipulation and the rest forty questions were formulated from the literature review and were approved to collect the valid data which are used to meet our research objective. In addition to that, the questionnaire were distributed to candidate respondent, different individuals and researchers to see if the questionnaire was clear and easy understand and also can collect required information and the researcher received relevant feedback prior to the pilot test. These makes the findings of the research are truly valid.

## Chapter Four

### Data Presentation, Analysis, and Interpretation

This chapter discusses data presentation, analysis, and interpretation of data collected from a primary source. This chapter has a reliability test result of the questionnaire, detail analysis discussion section. The data collected are presented by frequency tables wherever necessary and to analyze the results Statistical Package for the Social Science (SPSS) is used. Accordingly, for data summarization mean, median, mode, frequency, percentage and standard deviation values were used.

The findings from both INSA and MinT is represented, interpreted and analyzed in this section and subsections. The numeric representation and descriptive frequency are listed in each theme which are Project Sponsors Role, Project Managers Role, Organizational Culture, and Staff Competencies. The result of this study is obtained from a 5-point Likert scale questionnaire with 35 factors. Each factor has a value from 1 to 5. 1 representing “Strongly Disagree”, 2 “Disagree”, 3 “Neutral”, 4 “Agree” and 5 “Strongly Agree”. The score of the result is dichotomized using median and mean value according to MacCallum, et al., (2002). The result is separated using median, where the independent variable is split at the median to form High and low reactions to the factors, which are then compared with respect to their means on the dependent variable. The median value of the dichotomized result is taken to evaluate. The median can be low which indicates low reaction, high which shows High response (low and high which shows neutral) both low and high result may occur when the total numbers of variables are even numbers. In this case, further research should be done.

On categorizing standard deviation in to high and low, there is no standard value to categorize high standard deviation and low standard deviation; because standard deviation measures the degree of dispersion. Though, as a rule of thumb, a value greater than one indicates a relatively high variation, while a value less than one can be considered as low. This means that distributions with a coefficient of variation higher than 1 are considered to be high variance whereas those with a CV lower than 1 are considered to be low-variance

## 4.1 Demographic Information

### 4.1.1 INSA

Demographic information needs the background of the respondents to understand the employees or respondents who participated in filling the questionnaire for this research. The following demographic variables are used Gender, Age, Education, Life Time Work Experience, Job Position and Project Experience of Respondents. Based on the demographics information obtained which is shown in Table 4.1, the majorities (70%) of the respondents are male and the rest (30%) are female. When we see the respondent by age range 90% of the respondents are categorized in the age range between 21 - 30 years, 10% in the age range 31 – 40. This shows that 100% of the respondents are below the age range of 40 years. As shown in the table 96.7% of the respondents hold a bachelor's degree and 13.3% hold a master's degree. According to the survey, there are no diploma nor a PhD holder. There are none respondents with working experience less than one year and those who are in the range of 1-5 years working experience are 73.3% and there rest 26.7% has 6-10 years of working experience. According to the survey, 80.0% of the respondents are IT Professionals, 6.7%% of the respondents are IT Managers, 6.7% of the respondents are Project Officer, 3.3% of the respondents are Project Managers and 3.3% are Senior Managers. Respondents working experience on projects are as follows, response who work in project less than one year are 10%, working for 1 – 5 years are 73.3% and 16.7% works in project 6-10 years.

Table 4.1 INSA Respondents' Demographic Profile

		<b>Frequency</b>	<b>Percent</b>
Gender	Male	21	70.0
	Female	9	30.0
	<b>Total</b>	<b>30</b>	<b>100.0</b>
Age	21 – 30 Years	27	90.0
	31 – 40 Years	3	10.0
	<b>Total</b>	<b>30</b>	<b>100.0</b>
Level of Education	Bachelor's Degree	29	96.7
	Master's Degree	1	3.3
	<b>Total</b>	<b>30</b>	<b>100.0</b>
Experience	1 – 5 Years	22	73.3
	6 – 10 Years	8	26.7
	<b>Total</b>	<b>30</b>	<b>100.0</b>
Position	IT Professional	24	80.0
	IT Manager	2	6.7
	Project Officer	2	6.7
	Project Manager	1	3.3
	Senior Manager	1	3.3
	<b>Total</b>	<b>30</b>	<b>100.0</b>
Project Experience	Less than 1 Year	3	10.0
	1 – 5 Years	22	73.3
	6 – 10 Years	5	16.7
	<b>Total</b>	<b>30</b>	<b>100.0</b>

Source: Survey

#### 4.2.1 MinT

Demographic information needs the background of the respondents to understand the employees or respondents who participated in filling the questionnaire for this research. The following demographic variables are used Gender, Age, Education, Life Time Work Experience, Job Position and Project Experience of Respondents. Based on the demographic information obtained, the sex composition of the respondents, 20(66.7%) of them were males and 10(33.3%) of them were females. The number of males is slightly greater than the number of females. However, the difference in number does not affect the reliability of the data. 43.3% were between 21 and 30 years of age. 50% were between the age group of 31 and 40. Whereas the number of respondents between the ages group of 41-50 and above 51 is both 3.3%. This might indicate the organization

has significant maturity level in terms of age amongst its employees and this could help in implementing outlined objectives. The survey shows, there are 1 (3.3%) of the respondents are diploma holder and no Ph.D. holder. 70% of the respondents have a bachelor degree and 26.7% master's degree holder. Regarding working experience, 6.7% has less than one year experience, 26.7% has 1 - 5 years of experience, 33.3% has 6 - 10 years of experience, 20% 11- 15 years of experience, and the rest 13.3% has more than 15 years of experience. According to the survey, 73.3 % of the respondents are IT Professionals, 10.0% of the respondents are IT Managers, 6.7% of the respondents are Department Head, and the rest 10.0% are Project Managers. Respondents working experience on projects are as follows, response who work in project less than one year are 23.3%, working for 1 – 5 years are 56.7%, working 6 -10 years are 10.0%, working 11- 15 years are 6.7% and the rest 3.3% worked more than 15 years in project shown in Table 4.2.

Table 4.2 MinT Respondents' Demographic Profile

		<b>Frequency</b>	<b>Percent</b>
Gender	Male	20	66.7
	Female	10	33.3
	<b>Total</b>	<b>30</b>	<b>100.0</b>
Age	21 – 30 Years	13	43.3
	31 – 40 Years	15	50.0
	41 - 50 Years	1	3.3
	More than 50 Years	1	3.3
	<b>Total</b>	<b>30</b>	<b>100.0</b>
Level of Education	Diploma	1	3.3
	Bachelor's Degree	21	70.0
	Master's Degree	8	26.7
	<b>Total</b>	<b>30</b>	<b>100.0</b>
Experience	Less than 1 Year	2	6.7
	1 – 5 Years	8	26.7
	6 – 10 Years	10	33.3
	11 -15 Years	6	20.0
	More than 15 Years	4	13.3
	<b>Total</b>	<b>30</b>	<b>100.0</b>
Position	IT Professional	22	73.3
	IT Manager	3	10.0
	Department Head	2	6.7
	Project Manager	3	10
	<b>Total</b>	<b>30</b>	<b>100.0</b>
Project Experience	Less than 1 Year	7	23.3
	1 – 5 Years	17	56.7
	6 – 10 Years	3	10.0
	11 - 15 Years	2	6.7
	More than 15 Years	1	3.3
	<b>Total</b>	<b>30</b>	<b>100.0</b>

Source: Survey

## 4.2 INSA

In this category, the result obtained through the questionnaire is analyzed using SPSS v21 and descriptive statistics is used. Demographic information, descriptive statistics are analyzed. Cronbach Alpha test as shown in Table 4.3 the final survey resulted 0.974 which means the questionnaire very is reliable. Among the 30 questionnaires which are collected, only one is invalid and the researcher didn't exclude all the response of the invalid questionnaire only the invalid response for the specific questions were only excluded.

Table 4.3 INSA Final Survey Cronbach's Alpha Test Result

		N	%	Cronbach's Alpha	N of Items
Cases	Valid	29	96.7	0.974	35
	Excluded <sup>a</sup>	1	3.3		
	Total	30	100.0		

Source: Survey

The findings from INSA is represented, interpreted and analyzed in this section and subsections. The numeric representation and descriptive frequency are listed in each theme which is Project Sponsors perspective, Project Managers perspective, Organizational Culture, and Project Staff perspectives are analyzed and interpreted.

### 4.2.1 Project Sponsors Perceived Practice

All factors used to assess knowledge management and sharing practice from project sponsors perspective all have indicated Low. This shows the lack of knowledge management experience in INSA among project sponsors. Mostly, project sponsors are afraid to take over the project after its completion because there have no mechanisms of knowledge documentation and transfer among the project team. This resulting lack of confidence in the project quality and fear of risks. Projects have to be formally documented and knowledge has to be transferred. Due to poor documentation and lack of knowledge transfer, in many cases, few project team members are requested to stay on it even if after the project is completed and handed over or pieces of training will take time in order to empower staff to fully make operational. In either way, they are mostly dependent on the project team. The following tables (Table 4.4) shows the result obtained from the questionnaire.

Table 4.4 INSA Project Sponsor's

		Statistics						
		MR01	MR02	MR03	MR04	MR05	MR06	MR07
N	Valid	30	30	30	30	29	30	30
	Missing	0	0	0	0	1	0	0
Mean		3.90	3.87	3.77	3.93	3.93	3.87	3.70
Median		4.00	4.00	4.00	4.00	4.00	4.00	4.00
Mode		4	4	4	4	4	4	4
Std. Deviation		1.094	1.008	.971	.868	.961	.776	1.055
Variance		1.197	1.016	.944	.754	.924	.602	1.114
Range		4	4	3	3	3	3	4
Minimum		1	1	2	2	2	2	1
Maximum		5	5	5	5	5	5	5
Indication		Low	Low	Low	Low	Low	Low	Low

Source: Survey

Table 4.4 summarizes the project sponsors perspective on IT projects' knowledge management assessment in INSA. The assessment of the role of project sponsors is taken the value of the median of each variable. Table 4.4 illustrates data used to assess the role of sponsors affecting knowledge management practice in IT projects. MR04 ("Project owners regularly involve project staff in decision meeting") and M405 ("Project sponsors empower their staff") has the highest mean in the theme and ranges from 2 to 5 which means the minimum 2 and maximum 5 was given to these factors by 30 respondents of the company and also has relatively low standard deviation and variance, the low standard deviation and variance shows that there is relative consensus on the this factors. In INSA project sponsors involve project team in decision making and also empower their project team. MR01 ("Project sponsors are supportive of knowledge sharing and learning ") has 4 median and mode and has above average mean and relatively obtained a better result than the other four factors in the group. But it shows high standard deviation and variance, high standard deviation and variance mean there is low consensus in these factors. For some they encourage other respondents, they don't. The aggregate result implies that project sponsors are neither supportive nor discouraging in the knowledge sharing among the project team. Even though supporting the project team is the responsibility of the project manager's role, it will be better if project sponsors also do so. Facto MR02 ("Project sponsors are active in communicating the benefit of knowledge sharing and learning opportunities") has a low mean and the high standard

deviation. Project sponsors aren't active in sharing the benefits of knowledge sharing and learning experience for the project team members. This factor has high standard deviation and high variance this implies the respondents' experience is different; for some project team they do for some they don't, the researcher believes it might be different because of different factors probably the complexity of the project, the impact of the project on the society or others. In project learning is also an important factor in the project, not only learning but also documenting what is learned and saving for others help the coming project to succeed. Factor MR03 ("Project sponsors are committed to developing effective knowledge sharing practice") developing knowledge sharing mechanism and encouraging the practice is believed to be an important role in project management and especially documenting the project. Factor MR03 has the second low mean and low standard deviation. This shows that the respondents have almost reached on the consensus that project sponsors aren't committed to developing effective knowledge sharing mechanism and encouraging knowledge sharing practice. Factor MR06 ("Title status and formality are important in the project") has the lowest standard deviation and variance in the group. The respondents have reached on consensus than the other factors in this group and it has an average mean. Factor MR07 ("Project sponsors aren't busy delivering service to step back and look how they could manage better") has the second-highest standard deviation and variance in the group and 3.7 mean which is in between natural and agree. The respondents responded from strongly agree to strongly disagree which also increased variance and standard deviation.

For this group, factor MR03, MR04, MR05, and MR06 obtained a response from 2 to 5 which disagrees to strongly agree. The rest obtained the minimum possible and the maximum possible which is 1 to 5 (strongly disagree to strongly agree)

#### **4.2.2 Project Managers Perceived Practice**

To assess the project managers role on knowledge management, to find out how encouraging or discouraging the project manager is and its perspective towards knowledge management and documentation on IT projects has assessed using six factors. All six factors indicate a low perspective on knowledge management in IT projects. This shows the system and the project management culture doesn't encourage knowledge management, documentation among the project teams and other project teams.

Table 4.5 INSA Project Manager

		Statistics					
		PMR01	PMR02	PMR03	PMR04	PMR05	PMR06
N	Valid	30	30	30	30	30	30
	Missing	0	0	0	0	0	0
Mean		3.87	3.60	3.83	3.70	3.73	3.90
Median		4.00	4.00	4.00	4.00	4.00	4.00
Mode		4	4	4	4	4	4
Std. Deviation		1.137	1.192	1.147	1.055	1.202	1.094
Variance		1.292	1.421	1.316	1.114	1.444	1.197
Range		4	4	4	4	4	4
Minimum		1	1	1	1	1	1
Maximum		5	5	5	5	5	5
		Low	Low	Low	Low	Low	Low

Source: Survey

Table 4.5 summarizes the project manager’s perspective on knowledge management in IT projects. It illustrates data for factors affecting the project. In the project, the majority of the most important role in the project manager’s role. Project managers play a crucial role in projects. Factors are analyzed as follows.

Factor PMR01 (“Project managers assign tasks and give appropriate support when needed” has the second-highest standard deviation. This means it has a relatively low consensus among the respondents. This factor indirectly analyses the willingness of project managers to assign work continuously and give appropriate feedback to the project team. Factor PMR02 (“project manager uses project management tools”) has the highest standard deviation and variance. This shows the response obtained from the participant is different from each other showing that they have no consensus and it has average mean and median value when it compares with other factor means in the group. This shows, some project managers use project management tools and some doesn’t use. It has also the lowest mean value in the group. Project management tools may benefit INSA to manage and control the project they also help in documenting each task and activity of the projects and the result obtained from the given task. But the response obtained show there is low experience in using project management tools in INSA. Factor PMR03 (“Mistakes are accepted as opportunities to learn and develop while working in the given project”) has high standard deviation

and variance implying no consensus in this factors and also answers given by the respondents ranged from “Strongly Disagree” to “Strongly Agree”. Factor PMR04 (“Project managers provides appropriate resources to facilitate knowledge sharing”) has the second low mean value in group and high standard deviation. This implies, few project managers provide appropriate resource and some doesn’t provide. Factor PMR05 (“Knowledge sharing mechanisms are planned when the project is planned”) has the highest standard deviation in the group and an average mean value when it is compared within-group. The high variance shows there is a high difference in the response obtained. Factor PMR06 (“Project Managers use formal knowledge management strategy that is aligned with the type of the project.”) has an average value of mean compared with the others in the group and has a high standard deviation.

### 4.2.3 Organizational Culture

The organizational and project culture has assessed using 14 factors. Questions like does the working environment encourage knowledge transfer among and with other project team members? It is answered using 14 factors were identified and the response was obtained from 30 participants. The tables below (Table 4.6 and 4.7) shows the result obtained.

Table 4.6 INSA Organizational Culture Table A

		Statistics						
		OC01	OC02	OC03	OC04	OC05	OC06	OC07
N	Valid	30	30	30	30	30	30	30
	Missing	0	0	0	0	0	0	0
Mean		3.67	3.77	3.83	3.33	3.83	3.80	3.90
Median		4.00	4.00	4.00	4.00	4.00	4.00	4.00
Mode		4	4	4	4	4	4	4
Std. Deviation		.959	1.104	.791	1.124	1.053	1.064	1.094
Variance		.920	1.220	.626	1.264	1.109	1.131	1.197
Range		4	4	3	4	4	4	4
Minimum		1	1	2	1	1	1	1
Maximum		5	5	5	5	5	5	5
Indication		Low	Low	Low	Low	Low	Low	Low

Source: Survey

Table 4.6 encapsulates organizational culture in the project. The above table illustrates data for factors affecting project knowledge management practice. Factor OC01 ( “Our company has

designated manager to administer knowledge in each kicked off project” ) has low mean and value comparing within-group and low standard deviation indicating that consensus among respondents and high value of the mean. Factor OC02 (“Our Company encourages the exchange of ideas and knowledge between project staff and other staff”) have an average mean value of greater than average with the highest value of standard deviation. Factor OC03 (“Our Company accepts new ideas from its staff”) has the second-highest mean and low standard deviation value when it is compared within the group. Factor OC04 (“Our Company rewards employees for sharing their knowledge in the process of planning projects”) have the lowest mean and highest standard deviation, this shows the company doesn’t reward employees for sharing knowledge or properly documenting lessons learned. Factor OC05 (“Communication and knowledge flows are in both direction (top-down and bottom-up)”) has the second high mean and high standard deviation showing lack of consensus among the response on fact OC05. Facet OC06 (“Our Company uses the lesson learned and best practice from past projects”) has an average mean and high standard deviation. Facet OC07 (“In each project, there is a mechanism for creating and acquiring knowledge”)

Table 4.7 INSA Organizational Culture Table B

		Statistics						
		OC08	OC09	OC10	OC11	OC12	OC13	OC14
N	Valid	30	30	30	30	30	30	30
	Missing	0	0	0	0	0	0	0
Mean		3.57	3.73	3.80	3.80	3.93	3.90	3.60
Median		4.00	4.00	4.00	4.00	4.00	4.00	4.00
Mode		4	4	4	4	4	4	4
Std. Deviation		1.135	1.015	.997	.887	.868	.923	1.102
Variance		1.289	1.030	.993	.786	.754	.852	1.214
Range		4	4	4	3	4	4	4
Minimum		1	1	1	2	1	1	1
Maximum		5	5	5	5	5	5	5
Indication		Low	Low	Low	Low	Low	Low	Low

Source: Survey

Table 4.7 condenses the organizational culture of INSA in knowledge management practice, especially in IT projects. To understand the organizational culture, 14 factors were identified and measured using Likert scale and analyzed and interpreted as the following. Factor OC08 (“Our company has project knowledge capturing policies which allow project staff to entertain and share their idea”) has the lowest value of mean and median when comparing with others in the group and high standard deviation and variance indicating poor consensus. Majority of the response obtained shows that, respondents agree. The mode and median value for this factor are 4 (“Agree”). Factor OC09 (“Our Company has mechanism converting knowledge to action”) has the average mean value in a group with the relatively high standard deviation and variance. This shows the poor consensus among the respondents. OC09 has 4 value of median and mode which is (“Agree”). Factor OC10 (“Attention is paid to the role and importance of knowledge held in project team members”) has an average value of mean and median with fair standard deviation and variance. Factor OC11 (“It is easy to find out who knows what in the project team”) has an average mean and median when it compares with the other factors with low standard deviation value. This implies the respondents has the same experience in finding who knows what in the project team. Factor OC12 (“Lessons learned are recognized as a valuable asset for the success of the project”) has a relatively high mean and median and fairly low standard deviation. This shows in INSA lessons learned are recognized as an asset for the organization and for the success of the project. Facet OC13 (“Documenting of lessons learned is a required part of project practices.”) same as factor OC12, factor OC13 has also obtained relatively same response but with little variance. Factor OC12 obtained a better result in mean and standard deviation even though their result is closer than the other factors. Factor OC14 (“Our project team engages in knowledge management activity formally or informally”) has a relatively low mean and high standard deviation.

#### **4.2.4 Project Team Members Perceived Practice**

The project team includes the project manager and the group of individuals who work together on a project to achieve its objectives. Since the project manager’s perspective has been separately identified, the none-project manager’s project team has assessed using 8 factors as Table 4.8. Among eight factors only two indicated a High perspective towards knowledge management and sharing among the project team the rest six factors indicated a low perspective.

Table 4.8 INSA Project Team

		Statistics							
		SR01	SR02	SR03	SR04	SR05	SR06	SR07	SR08
N	Valid	30	30	30	30	30	30	30	30
	Missing	0	0	0	0	0	0	0	0
Mean		3.73	3.77	4.03	3.93	4.23	3.87	4.20	3.87
Median		4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Mode		4	4	4	4	4	4	4	4
Std. Deviation		.907	1.104	.765	.740	.504	.860	.805	.937
Variance		.823	1.220	.585	.547	.254	.740	.648	.878
Range		3	4	3	3	2	3	3	3
Minimum		2	1	2	2	3	2	2	2
Maximum		5	5	5	5	5	5	5	5
Indication		Low	Low	High	Low	High	Low	High	Low

Source: Survey

Table 4.8 encapsulates the project team role in the knowledge management practice of IT projects the table illustrates data for factors affecting knowledge management practice. Factor SR01 (“The primary concern of the project team is completing the project in time.”) has the lowest mean and relatively low standard deviation value. This shows for some project team the concern is completing the project in time but for others, it is only completing in time but also scope and quality too. Factor SR02 (“There is a strong focus on accountability on the quality of the project”) has the second low mean value and the highest standard deviation and variance among the group. This implies there is accountability among the project team on the project quality but not strong accountability. Factor SR03 (“I feel free forwarding ideas on how to do a given a task in project meetings”) has the highest mean value in the group and the value is greater than 4. This shows the respondents agree that the environment is free to forward ideas on how to finish a given task. It also has low standard deviation and variance which implies there is a consensus among the respondents. Factor SR04 (“I feel free to confront my managers in project-related issues which I believe it should be done”) has the lowest mean value in the group but also higher result than the average. Confronting a supervisor on work (project) related work isn’t an easy task, it needs skill and confidence. While confronting, they also need to justify why they are confronting and what they believe is wrong and what should be done. This process does not only needs ideas but they also need to show the impact it would bring. Therefore, it is difficult to get high value for this

factor but in INSA, there is a project team member who is doing it. Factor SR05 (“I discuss with my supervisor on how to do a project task”) has the highest value of mean and median with low standard deviation and variance in the group and also in other groups. The mean value is greater than 4 which means it is between “Agree” and “Strongly Agree” and also have very low standard deviation and variance in the group and in all the factors in other groups. This shows the respondent has reached on a strong consensus that all discuss with their supervisor on how to do a given task in a project. Factor SR06 (“I have been acknowledged to the work that I surpass my supervisor’s expectation”) has the third-lowest mean in the group and low standard deviation showing that there is fair consensus in this factor. Factor SR07 (“I am held accountable for my action”) has low standard deviation and a mean value greater than average showing the project team is accountable for their actions. Factor SR08 (“I find it easy to share lessons learned”) has the second-highest mean in the group and in all factors in other groups and also has the second low standard deviation and variance in the group. This shows the project team has reached on consensus that it is easy to share what they have learned in the project. All factors’ mean is greater than average.

### 4.3 MinT

The result obtained through the questionnaire is analyzed and discussed. Demographic information, descriptive statistics are analyzed. As shown in Table 4.9 Cronbach Alpha test for the final survey resulted in 0.965 which means the questionnaire is very reliable.

Table 4.9 MinT Final Survey Cronbach’s Alpha Test Result

		N	%	Cronbach's Alpha	N of Items
Cases	Valid	30	100.0	0.965	35
	Excluded <sup>a</sup>	0	0.0		
	Total	30	100.0		

Source: Survey

The findings from MinT is represented, interpreted and analyzed in this section and subsections. The numeric representation and descriptive frequency are listed in each theme which are Project Sponsors Role, Project Managers Role, Organizational Culture, and Staff Competencies.

### 4.3.1 Project Sponsors Perceived Practice

Project sponsors are primarily concerned with ensuring that the project delivers business benefits. The project sponsor’s perspective has seven factors. The researcher identified seven factors that can assess the knowledge management practice from the sponsor’s perspective. According to Table 4.10 only one factor indicated High and the rest six factors indicated low response toward knowledge management, documentation, and sharing practice in IT projects.

Table 4.10 MinT Project Sponsors

		Statistics						
		MR01	MR02	MR03	MR04	MR05	MR06	MR07
N	Valid	30	30	30	30	30	30	30
	Missing	0	0	0	0	0	0	0
Mean		3.77	3.60	3.43	3.27	3.60	3.63	3.23
Median		4.00	4.00	4.00	3.50	4.00	4.00	3.00
Mode		4	4	4	4	4	4	3
Std. Deviation		.935	.855	.935	.907	.855	.999	.935
Variance		.875	.731	.875	.823	.731	.999	.875
Range		3	3	3	3	3	3	3
Minimum		2	2	2	2	2	2	2
Maximum		5	5	5	5	5	5	5
Sum		113	108	103	98	108	109	97
Indication		Low	Low	Low	Low	Low	Low	High

Source: Survey

Table 4.10 summarizes project sponsors assessment based on seven factors listed in the above table. Factor MR01 (“Project sponsors are supportive of knowledge sharing and learning”) have the highest mean in the group but the value is fairly above average and has a second high standard deviation and variance even though the standard deviation is the second-highest in the group, the value isn’t that much high-value standard deviation. Factor MR 02 (“Project sponsors are active in communicating the benefit of knowledge sharing and learning opportunities”) have an average mean and relatively low standard deviation and variance. Factor MR03 (“Project sponsors are committed to developing effective knowledge sharing practice”) has a mean value close to an average with fairly low standard deviation and variance. Factor MR04 (“Project owners regularly involve project staff in decision making”). Factor MR05 (“Project sponsors empower their staff”) has a low standard deviation. This means it has a consensus among the respondents and also has a

low mean. Factor MR06 (“Title status and formality are important in the project.”) has the second-highest value of mean in the group and highest standard deviation and variance among other factors in the group. Factor MR07 (“Project sponsors aren’t busy delivering service to step back and look at how they could manage better”) has the lowest mean and relatively fair standard deviation and variance.

#### 4.3.2 Project Managers Perceived Practice

Project manager’s perspective has been assessed using six factors (PMR0, PMR02, PMR03, PMR04, PMR05, and PMR06). Only Factor PMR05 obtained High indication and the rest factors resulted Low. Low means the absence (lack) of the factors towards knowledge management from the project managers.

Table 4.11 MinT Project Manager’s

		Statistics					
		PMR01	PMR02	PMR03	PMR04	PMR05	PMR06
N	Valid	30	30	30	30	30	30
	Missing	0	0	0	0	0	0
Mean		3.93	3.57	3.73	3.60	3.23	3.47
Median		4.00	4.00	4.00	4.00	3.00	3.50
Mode		4	4	4	4	3	3 <sup>a</sup>
Std. Deviation		.521	1.040	.785	1.037	1.104	.900
Variance		.271	1.082	.616	1.076	1.220	.809
Range		2	4	3	4	4	4
Minimum		3	1	2	1	1	1
Maximum		5	5	5	5	5	5
Sum		118	107	112	108	97	104
Indication		Low	Low	Low	Low	High	Low

Source: Survey

Table 4.11 condenses the assessment of project managers regarding knowledge management practice. Six factors have been used to analyze and interpret. Factor PMR01 (“Project managers assign tasks and give appropriate support when needed”) has the high value of mean and median when comparing with others in the group and the lowest standard deviation and variance indicating a very good consensus. Majority of the response obtained shows that, respondents agree. The range for this factor only is 3 - 5. The response gathered shows the minimum is “Neutral” and the

maximum is “Strongly Agree”. There is no one disagree response. Project managers assign work and give appropriate support when needed. Factor PMR02 (“Our project manager uses project management tools”) has the third-lowest mean and relatively high standard deviation and variance. Factor PMR03 (“Mistakes are accepted as opportunities to learn and develop while working in the given project”) has the second high value of mean and median with second low standard deviation and variance. Factor PMR04 (“Project managers provides appropriate resources to facilitate knowledge sharing”) has fairly above-median mean value and relatively high standard deviation and variance. Factor PMR05 (“Knowledge sharing mechanisms are planned when the project is planned”) has the lowest mean value and the highest standard deviation and variance among other factors in the group. This shows knowledge management mechanisms aren’t formally planned in advance and the respondents don’t agree with each other. Factor PMR06 (“Project Managers use formal knowledge management strategy that is aligned with the type of the project.”) has a mean value in between 3 and four and relatively low standard deviation and variance.

### **4.3.3 Organizational Culture**

Project organizational culture has been recognized as a significant influencing factor of the success or failure of a project. In every company, project management happens within the much larger context of the company's organizational culture and knowledge management culture of the organization. The organizational knowledge management culture is simply different, and these differences may have an impact on the project. In order to assess the knowledge management culture in IT projects and project culture, 14 factors were identified and assessed. The result obtained is represented in the following tables (Table 4.12 and Table 4.13)

Table 4.12 MinT Organizational Culture Table A

		Statistics						
		OC01	OC02	OC03	OC04	OC05	OC06	OC07
N	Valid	30	30	30	30	30	30	30
	Missing	0	0	0	0	0	0	0
Mean		3.20	3.53	3.37	2.90	3.33	3.37	3.50
Median		3.00	4.00	4.00	3.00	3.00	3.50	4.00
Mode		4	4	4	3 <sup>a</sup>	4	4	4
Std. Deviation		1.031	1.042	1.066	1.062	1.061	.928	1.042
Variance		1.062	1.085	1.137	1.128	1.126	.861	1.086
Range		4	4	4	4	4	4	4
Minimum		1	1	1	1	1	1	1
Maximum		5	5	5	5	5	5	5
Sum		96	106	101	87	100	101	105
Indication		High	Low	Low	Low	High	Low	Low

Source: Survey

Table 4.12 summarizes the organizational culture assessment result in MinT. Factor OC01 (“Our company has designated manager to administer knowledge in each kicked off project”) has the third-lowest mean and low median value in the group. The project team in MinT doesn’t have designated knowledge management for the IT project. Factor OC02 (“Our Company encourages the exchange of ideas and knowledge between project staff and other staff”) has the third high mean in the group and relatively high standard deviation. OC03 (“Our Company accepts new ideas from its staff”) has a mean value in between 3 and 4 and relatively high standard deviation value when it is compared within-group. Factor OC04 (“Our Company rewards employees for sharing their knowledge in the process of planning projects”) has relatively low standard deviation and a median of 3.5. Factor OC05 (“Communication and knowledge flows are in both direction (top-down and bottom-up)”) has relatively high standard deviation and a 3.3 mean value. Factor OC06 (“Our company uses the lesson learned and best practice from past projects”) low value of mean with better median and lower standard deviation and variance indicates that there is better consensus in this factor and responses are better aggregated to the mean when it is compared within-group. Factor OC07 (“In each project, there is a mechanism for creating and acquiring knowledge”) has 3.5 mean and relatively high standard deviation and variance.

Table 4.13 MinT Organizational Culture Table B

		Statistics						
		OC08	OC09	OC10	OC11	OC12	OC13	OC14
N	Valid	30	30	30	30	30	30	30
	Missing	0	0	0	0	0	0	0
Mean		3.23	3.10	3.13	3.37	3.33	3.73	3.73
Median		3.50	3.00	3.00	3.50	4.00	4.00	4.00
Mode		4	3	4	4 <sup>a</sup>	4	4	4
Std. Deviation		.935	1.155	1.042	1.066	.994	1.081	.740
Variance		.875	1.334	1.085	1.137	.989	1.168	.547
Range		3	4	4	4	4	4	3
Minimum		1	1	1	1	1	1	2
Maximum		4	5	5	5	5	5	5
Sum		97	93	94	101	100	112	112
Indication		Low	High	High	Low	Low	Low	Low

a. Multiple modes exist. The smallest value is shown

Source: Survey

Table 4.13 shows the rest seven factors for assessing organizational culture towards knowledge management and sharing practice in IT projects. Factor OC08 (“Our company has project knowledge capturing policies which allow project staff to entertain and share their idea”) has slightly low mean and median and also low standard deviation and variance. Factor OC09 (“Our Company has mechanism converting knowledge to action”) has high standard deviation and lowest median and low mean and also the mode of OC09 is low. Factor OC10 (“Attention is paid to the role and importance of knowledge held in project team members”) has a mean value close to 3 and low median and mode; it has high standard deviation showing lack of consensus among the respondents. Factor OC11 (“It is easy to find out who knows what in the project team”) has a multiple mode value which is 4 and 5 and also has 3.5 median and low mean value. It has a relatively high standard deviation. Factor OC12 (“Lessons learned are recognized as a valuable asset for the success of the project”) has 3.3 mean and median and reasonable standard deviation. This shows gaps in identifying lessons learned and recognized as an asset for the organization and for the success of the project. Factor OC13 (“Documenting of lessons learned is a required part of project practices.”) relatively high mean in the group and high mean and median value. Factor OC14 (“Our project team engages in knowledge management activity formally or informally”) has relatively high mean value among other factors in the group and low standard deviation.

#### 4.3.4 Project Team Members Perceived Practice

A project team is a team whose members usually belong to different groups, functions and are assigned for IT project. Eight factors have been identified and used to assess the knowledge management practice of the project team and its members in IT projects. All eight factors resulted in a low indication according to Table 4.14. This shows the knowledge transfer and sharing between the project team and other project team members are poor.

Table 4.14 MinT Project Team

		Statistics							
		SR01	SR02	SR03	SR04	SR05	SR06	SR07	SR08
N	Valid	30	30	30	30	29	30	30	30
	Missing	0	0	0	0	1	0	0	0
Mean		3.87	3.63	3.63	3.73	3.83	3.43	3.83	3.67
Median		4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Mode		4	4	4	4	4	4	4	4
Std. Deviation		.776	.809	.928	.944	1.037	.935	.834	.922
Variance		.602	.654	.861	.892	1.076	.875	.695	.851
Range		3	3	3	3	3	3	3	3
Minimum		2	2	2	2	2	2	2	2
Maximum		5	5	5	5	5	5	5	5
Sum		116	109	109	112	111	103	115	110
Indication		Low	Low	Low	Low	Low	Low	Low	Low

Source: Survey

Table 4.14 illustrates data for factors affecting knowledge management practice. Factor SR01 (“The primary concern of the project team is completing the project in time.”) has the highest mean and relatively low standard deviation value. This shows the concern of the team. Factor SR02 (“There is a strong focus on accountability on the quality of the project”) has the second low mean value and reasonable standard deviation and variance among the group. This implies there is accountability among the project team. Factor SR03 (“I feel free forwarding ideas on how to do a given a task in project meetings”) has relatively low mean value in the group. This shows the respondents somewhat agree that the environment is free to forward ideas on how to do a given task. Factor SR04 (“I feel free to confront my managers in project-related issues which I believe it should be done”) has an average mean and a standard deviation less than 1. Factor SR05 (“I discuss with my supervisor on how to do a project task”) has the second-highest value of mean

and median with high standard deviation and variance in the group showing lack of consensus among the respondents. This shows the respondent has not similar experience on discussing with their supervisor. Factor SR06 (“I have been acknowledged to the work that I surpass my supervisor’s expectation”) has the lowest mean in the group and low standard deviation showing that there is fair consensus in this factor. Factor SR07 (“I am held accountable for my action”) has relatively low standard deviation and a mean the other second larger mean value. Factor SR08 (“I find it easy to share lessons learned”) has a mean value of 3.67 and relatively fair standard deviation among the other factors in the group.

## **4.4 Analysis and Interpretation**

Knowledge management practices in INSA and MinT vary from each other. Factors that are useful to identify knowledge management practice in IT projects are used to assess the practice in both organizations. The sponsor’s role, project manager’s responsibility, the organizational culture, and the project team competence and readiness towards knowledge management and sharing have been measured and analyzed and interpreted. The response of the assessment might vary from one factor to the other factors. The organizational culture is measured and evaluated if the culture is knowledge management friendly or not or whether does it encourage knowledge-sharing, does it properly manage knowledge? The main objective of this research is to assess and compare knowledge management practice in IT projects. In order to do this, five groups (themes) are identified which are, sponsor, project manager, organizational culture and project team members are evaluated separately. The result was presented in the previous section and in this section, the findings will be discussed. The findings will be discussed by comparing each theme.

### **4.4.1 Project Sponsors**

Knowledge management practice among project sponsors and their perspective towards their project resulted in an overall indication of low result both in INSA and MinT. The overall result shows the absence of knowledge management practice in IT projects when it is evaluated from the perspective of the sponsors. Among seven factors which are used to assess the practice of knowledge management, none has indicated High in INSA and only one factor has indicated High in MinT. This means that the practice of knowledge management has not been implemented and exercised in both organizations.

Table 4.15 Overall Project Sponsors Result

Factor Indicators	INSA	MinT
High	–	1
Low	7	6
Median	Low	Low
Overall Indication	Low	Low

Source: Survey

#### 4.4.2 Project Manager

Project managers are responsible for the success of the project and the failure of the project. They play a great role in projects. Starting from choosing the project team to hand over the completed project, they have a great role and responsibility in all aspects of the project. A good project manager will make the project successful. The survey shows the overall project manager’s competency towards knowledge management, transfer, and sharing in projects indicated Low. The low response shows a lack of knowledge management practice in IT projects. The overall result shows Low. Among the six factors, all factors indicated low for INSA and the only one indicated High for MinT.

Table 4.16 Overall Project Manager’s Result

Factor Indicators	INSA	MinT
High	–	1
Low	6	5
Median	Low	Low
Overall Indication	Low	Low

Source: Survey

#### 4.4.3 Organizational Culture

The organizational and project culture has a great impact on how projects have been done for new project staff and for the former. The result of the survey shows the overall organization and project culture indicated low for both INSA and MinT. Among 14 factors, all of the 14 factors obtained a low response and indicated the absence of knowledge management and sharing mechanisms in the organizational and project culture. This shows the culture doesn’t encourage knowledge

management, transfer and sharing among the project team and with other project team members. Relatively MinT indicated High for 4 factors in this group.

Table 4.17 Overall Organizational Culture Result

Factor Indicators	INSA	MinT
High	–	4
Low	14	10
Median	Low	Low
Overall Indication	Low	Low

Source: Survey

#### 4.4.4 Project Team Component

Studying the experience of the project team is necessary because it helps the company to know that if the project team share knowledge informally whether organization structurally support knowledge management or not. The result obtained shows that both organizations staff (INSA and MinT) doesn't share knowledge among the project team members as they should. The result obtained from the survey shows the overall result of low for both organizations. This shows there are poor knowledge sharing and management experience in the project team in both organizations. Relatively speaking, INSA staff has better knowledge sharing experience than MinT staff. Among 8 used factors, 3 obtained High and 5 Lows in INSA and whereas in MinT all 8 factors indicated low experience.

Table 4.18 Overall Project Team Result

Factor Indicators	INSA	MinT
High	3	-
Low	5	8
Median	Low	Low
Overall Indication	Low	Low

Source: Survey

## 4.5 Discussion

### 4.5.1 INSA

The knowledge management practice in IT projects is a crucial activity for IT projects since IT projects require expertise and knowledge of the task. Especially in large IT projects, management knowledge is difficult since there are different expertise in a different role. The researcher found that in INSA knowledge management initiatives aren't formally implemented and aren't incorporated in organizations structure. Respondents from INSA stated why knowledge management is important.

*“Knowledge management is necessary for projects because it is a technique which helps the manager to understand the existing knowledge and current status, understanding the gap and also consolidate or categorize.”*

The respondent explains why knowledge management is necessary for IT projects because IT projects are more technical. In order to understand the gap and manage projects, proper knowledge management is important because it shows the current status and the existing.

*“Knowledge management is necessary for a project because the project is done by knowledge so if knowledge is not managed properly the project might fail”*

The other respondent said that since doing task needs an understanding of the work and that understanding how to do the task in knowledge. Therefore, while participating in the project and doing a task, knowledge is important because it is done with it. So, proper management of knowledge is important.

*“Knowledge management is necessary for projects because it ensures proper expectations are set around what can be delivered, when and how much and it also ensures a project phase and progress are tracked and reported properly.”*

All the respondents agree that proper knowledge management is important for IT projects. The other respondent responded in a way that knowledge management ensures proper expectations are set around the deliverable, and also the when and how. It also helps to track changes, progress, and status of the project. Knowledge management isn't difficult if proper mechanism and tools are used in managing knowledge and sharing best practice with other project team member. Reflecting

on challenges encountered by each project teams and how they solve it with other project team members will not only share the knowledge of how they tackle such difficulties but it also encourages other project team members. The researcher raised questions to the participant if they think managing knowledge and sharing best practice is difficult or not. The researcher obtained the following responses.

The response which came out of the bloom stated by one of the respondents says

*“Knowledge management is difficult, because in the team there may not be close knowledge and experience since knowledge management isn’t implemented”*

The respondents’ response is that knowledge management is difficult because it isn’t implemented. Standing on the start point, starting something that has not been experienced might be difficult but there is no way that can be evaluated if it is not implemented. Another respondent also agrees that knowledge management is difficult because

*“The job satisfaction of the employees may influence the willingness toward knowledge sharing. This happens when employees aren’t treated equally and do not feel the benefits they set when the company achieves its success.”*

The respondent took another factor that might complicate the management of knowledge. There are factors that discourage knowledge management and make it complex and there are factors that encourage knowledge management and ease it. Perhaps motivating employees and avoiding (minimizing) factors, which discourage KM, and bringing factors, which encourage knowledge management, would make the KM more practical and easy. The last respondents disagree with the other respondents about the difficulties of KM in IT projects.

*“Knowledge management isn’t difficult if the project is well organized and communicated. If the project team members are optimistic and have a good personality, knowledge management and sharing won’t be a problem”*

Very few respondents agree that INSA should not invest in knowledge management initiatives for the upcoming projects because knowledge management is not the concern on a project. They say, “Managing knowledge has never been the concern”. The other says due to lack of budget “investing in knowledge management” would not happen. In contrary regardless of the lack of the

budget and the primary concern, some disagree with the former respondents. They stated boldly that INSA should invest in KM

*“INSA should invest in knowledge management since projects are done in team and tasks are given for each individual. Therefore, the individual who was given the task should share the knowledge and the experience he acquired for other members when needed. So, the company should invest and encourage project team members to share knowledge and document properly.”*

Another respondents explicitly describe why investing in KM is important and how it can avoid duplicate efforts and ease many things.

*“INSA should invest in KM in order to enable better and faster decision making, easy access to relevant information and resource, perusing good ideas, documents, and experience and to avoid duplicated effort.”*

“Documenting and sharing best practice of the former projects will increase the success rate of the upcoming projects. It helps the project manager to control the project progress and also not to repeat the previous mistakes”

*“Documenting and sharing best practices are mandatory since there is nothing new in the world. So, in my opinion, sharing the former projects best practice and challenges that they have overcome will increase the success rate of undergoing and upcoming projects.”*

*“Existing project management should be modified to incorporate knowledge management activity since some projects are not proceeding well beaus of underestimating the importance of well-organized knowledge management practice in IT projects.”*

#### **4.5.2 MinT**

Ministry of Invocation and Technology has been recently working on in different projects, incubation centers. MinT has recently incorporated the knowledge management department in its organization structure. The department is very new and it is on staffing stage. In IT projects, there are many tasks which need expertise in a specific role. Respondents in MinT shows the importance of knowledge management in their company.

*“Knowledge management is necessary for projects because it will be used to improve the decision-making process and effervesce of the project manager and also improve project quality and lead to success”*

A respondent stated. Another respondent said

*“Knowledge management make employee comfortable to do their job because it helps to see the wood from the tree.”*

Knowledge management is necessary for projects, it is used to improve the decision-making process and effervesce of the project manager and also improve project quality and lead to success. Knowledge management in IT projects will reduce renovation and mistakes. It increases efficiency in project activities.

Depending on the complexity of the project, resources needed to be allocated to knowledge transfer vary among the level of complexity. Regarding the difficultness of sharing knowledge, the respondents have different insight about it. A respondent said

*“Sharing knowledge is not difficult if you are kind. Sharing knowledge is not difficult rather it is expanding your knowledge. Therefore there is nothing a person loose by sharing knowledge.”*

The researcher found that there is no Knowledge sharing platform in MinT and the main focus is given to complete tasks and delivering them on time instead of looking for best practices and experience. Another respondent said

*“Sharing knowledge won't be difficult if it is shared as soon as new insights on how to do a task are acquired.”*

For project team members working in similar goal in the same projects, sharing knowledge won't be difficult since their goal is similar (finish the project in a given time, scope and budget). Since they have a similar intention, sharing knowledge among each other won't be difficult. If the project is designed with the correct standard it includes the specific methodology which includes the background and experience of the staff. Since it is easy to identify who knows what in a team, it is easy to seek support and share knowledge among the project team.

Some respondents recommend MinT to invest in knowledge management and sharing mechanism and use appropriate tools for sharing. They said

*“I recommend my organization to invest in knowledge management practices. Knowledge management practice increase staff performance to do their job.”*

Another respondent said,

*“In my opinion, our company MinT should invest more on knowledge management mechanisms and encourage sharing culture.”*

*“MinT should invest in KM for coming projects because awareness and gaps should be filled through knowledge and with the knowledge, it guides how to go”*

On properly documenting on IT projects, the respondent agrees that documenting and sharing best practice is mandatory for projects which failed and also for projects which are successfully delivered. The respondent in a different way said that documenting and sharing is absolutely necessary for IT projects not only for IT but also for all projects. They said

*“Documenting and sharing best practice, of course, will benefit the project and lead to success. Digging everything from scratch always waste time and energy. Therefore documenting best practice can make employee solve difficulties with no time.”*

*“Documenting and sharing best practice will definitely benefit the project team and increase the success rate. Because coming projects will learn how the plan should be, the challenges the project faced and how they were solved. Generally good learning and guide for upcoming projects.”*

*“Absolutely documenting the current projects will serve as a learning mechanism for the coming projects. More experience and mistakes are learned from past projects”*

Current IT projects show lack of KM integration. The existing process should be modified to incorporate KM activities in order to improve the trend of completing big projects on time.

*“Based on the project type and the factors faced during implementation, the project manager could change the actives involved in project management and special focus should be given to time management.”*

*“I recommend staffs to involve in the project based on their interest. Therefore, I think the process of assigning project teams should be interest centered.”*

## Chapter Five

### Summary, Conclusion and Recommendations

#### 5.1 Summary of Findings

Knowledge management practice in IT projects has not been acknowledged by INSA and MinT organizations. INSA's project team members have a better understanding of the knowledge management practice and share knowledge in between project team by their self-initiation. The study used 35 factors to assess the knowledge management practice in INSA among the 35 factors only 4 factors responded high towards knowledge management in IT projects. Among seven factors used to assess the perspective of project sponsor's on knowledge management practice in IT projects, all the seven factors responded low to the factors and among six factors used to assess the perspective of IT project manager's towards knowledge management in IT projects has indicated low response obtaining low on all the six factors used. There were fourteen factors used to assess the organizational/project culture towards knowledge management practice in IT projects obtained low insight. According to the survey, all fourteen factors indicated Low. Only three factors in project team obtained High among eight factors used to identify knowledge management practice in IT projects in INSA.

The response obtained from the survey shows in MinT there is an overall low indication of knowledge management practice in MinT. There is no knowledge management practice in IT project in MinT. The survey shows lack of knowledge management in IT projects. Among the 35 factors used to assess the practice of knowledge management only six indicated a High reaction to the assessment the rest twenty-nine resulted in Low. Among seven factors used to assess the practice of knowledge management in the perspective of project sponsors the only one indicated High and the rest six were Low. Six factors were used to assess the perspective of project managers on knowledge sharing in IT projects and only one indicated High and the rest five resulted in a low response. There were fourteen factors used to assess the organizational/project culture and among the fourteen only four resulted in High and the rest ten resulted in a low response. There are eight factors used to assess the perspective of IT project team members and their culture on knowledge management and sharing in their project and all of the factors showed low indicating the project

team lack sharing of knowledge in their project team members and with other project team members.

## **5.2 Conclusion**

Knowledge management practice in a project is an important research area to study. Technology companies are becoming very competitive among each other and the technology is radically changing. Managing knowledge and experience is an essential tool to undertake day to day activity effectively. The competitiveness of the organization's project is based on the effective use of knowledge. The efficient use of the information will give project with many opportunities and easy decision-making process by giving critical data for the project manager also allows the project team to learn from past mistakes. Technology is becoming a change agent in the organization, project and people lives. Efficient and effective management of knowledge is necessary to minimize cost and learning curves and increase the project success rate.

Organizations built on technology are the major user of information and are greatly affected by it. To create value from information and accumulate knowledge on the project's database to project team and for upcoming projects is an important task that increases accessibility to the best practice of the projects and increases the productivity of project team. Effective management of knowledge is a vital need for all IT projects to learn from past experience, see why they failed and to get back on feet and do it again with better understanding and knowledge. Research on project management provides vital information about the project character and the need for a project and the reason why most projects fail.

The primary objective of knowledge management is to effectively and efficiently manage knowledge accumulated within the organization. In this case, the primary objective of project management is to store, retrieve and share knowledge accumulated by individuals in a project team and use for the project. Research demonstrates problems in documenting and sharing tacit knowledge owned by individuals in IT projects. Assessment of knowledge management practice of IT projects is a major research area to assess the gap and to give further recommendation and also appropriate attention. If necessary, restructure and reorganize project recourses to utilize high benefits from individually owned knowledge.

This study has demonstrated the practice of knowledge management in IT projects in the Ministry of Innovation and Technology, and Information and Network Security Agency of Ethiopia. There is a low knowledge management practice in IT projects in both INSA and MinT. In most factors, the indicator shows a low result for the factors used to assess the practice of knowledge management. This shows, the organization's project team has no formal knowledge management tools; and sharing knowledge for colleagues in the project team is very difficult for the project team.

Based on the survey, project sponsors, project manager's and project team members aren't aware of the benefits of effective knowledge management. The project culture doesn't support knowledge management. In INSA except for the four factors categorized in project team members, all factors indicated low towards knowledge management. In MinT all project team factors indicated low towards knowledge management. Knowledge management isn't recognized as an important field in the IT project by project sponsor's, project manager and project team and also isn't given a part in the project culture.

However, assessing knowledge management practice in IT project is a difficult endeavor that requires competent methodologies and framework. In addition, the lack of standardized metrics of assessment and measurement for a few factors has an effect on assessing knowledge management in IT project. Therefore, knowledge management researchers should develop standardized metrics for assessing knowledge management in IT projects.

### **5.3 Recommendations**

The purpose of the study was to assess knowledge management practice in IT projects in the Ministry of Innovation and Technology, and Information and Network Security Agency of Ethiopia. Based on the findings and conclusions of the study, the researcher forwards the following recommendations to the management of the organizations and suggestion for other researchers. The recommendation is presented in two sections, for practice, and for further research. The practice section tries to recommend ideas for the organizations' management and governing bodies for better effective and efficient management of knowledge in IT projects and

for the success of IT projects. The further research section mainly tries to direct future possible related researches.

### **5.2.1 for Practice**

Grounded in the findings and conclusions of the study, the following recommendations are presented by the researcher to MinT and INSA.

- Training should be given for both MinT and INSA project team members and project managers. Knowledge management training should be given to all project team members and stakeholders.
- Proper documentation throughout the project life should be properly documented, saved, stored starting from the planning phase of the IT projects thought out the delivery of the project.
- In each phase and milestone, lessons learned, best practice, challenges should be documented and shared among the project team members both in INSA and MinT.
- Knowledge sharing and retention mechanisms should be developed in order to retain knowledge and share among IT project team members.
- Project sponsors and owners should give proper attention to knowledge management.
- Clear and content full knowledge management manual should be prepared and disseminated to give important information on “how to share knowledge”. To decrease the time of learning.
- Both organizations (MinT and INSA) should include knowledge management in IT strategy and prepare a strategic roadmap.
- A formal knowledge management structure should incorporate with IT projects, in order to help future projects and give a clue on how things have been done and how they should be done and share with current project teams and document for the upcoming project team.

### **5.2.2 For Further Research**

Further research can be done as a continuation of this research on the method or possibility of assessing the impact of knowledge management in both INSA and MinT and also by taking different private IT companies.

Further research can be done using a different assessment method or framework to study knowledge management practice in IT projects.

## References

- Alavi, M., & Leidner, D. E. (2001, March). Review: knowledge Management and Knowledge Movement systems: Conceptual Foundations and Research Issues. *MIS Quarterly*, 25(1), 107-136.
- Burns, N., & Grove, S. K. (2005). *The Practice of Nursing Research: Conduct, Critique and Utilization* (5th ed.). St Louis: St. Louis, Mo. : Elsevier/Saunders.
- Cadle, J., & Yeates, D. (2008). *Project Management for Information Systems* (5th ed.). Edinburgh Gate, Essex CM20 2JE: Pearson Education Limited.
- Chilton, M. A., & Bloodgood, J. M. (2007). The Dimensions of Tacit & Explicit Knowledge: A Description and Measure . *40th Hawaii International Conference on System Sciences*. The Computer Society.
- Downes, T. V. (2014). *An evaluation of knowledge management practices in nonprofit community services organisations in Australia*. Lismore, NSW: ePublications@ Southern Cross University.
- Essay, E. E. (2016). *Evaluating the Impact of Information Systems in Ethiopian Commercial Banks*. Addis Ababa: Unpublished: A Thesis Submitted to the School of Graduate Studies of Addis Ababa University.
- Gentile, S. (2012). *Project Management in the Information Technology Industry*. Massachusetts: Rabb School of Continuing Studies Division of Graduate Professional Studies Brandeis University.
- Gerami, M. (2010). Knowledge Management. *International Journal of Computer Science and Information Securit*, 7(2), 234-238.
- Girard, J., & Girard, J. (2015). Defining knowledge management: Toward an applied compendium. *Online Journal of Applied Knowledge Management*, 3(1).
- Goddard, W., & Melville, S. (2004). *Research methodology: An introduction* (2nd ed.). South Africa: Juta and Company Ltd.
- Gonzalez, R. V., & Martins, M. F. (2017). Knowledge Management Process: a theoretical-conceptual research. *Gest. Prod*, 24(2).
- Gorecki, J. (2015). Information Technology in Project Management. *Studies & Proceedings of Polish Association for Knoledge Management*(77).

- Greener, S. (2008). *Business Research Methods*. Dr Sue Greener and Ventus Publishing ApS.
- Heagney, J. (2012). *Fundamentals of Project Management* (4th ed.). New York, NY: American Management Association.
- Hornstein, H. A. (2015). The integration of project management and organizational change management is now a necessity. *International Journal of Project Management*, 33, 291-298.
- Hussain, F., Lucas, C., & Ali, M. (2004). Managing Knowledge Effectively. *Journal of Knowledge Management Practice*. Retrieved April 22, 2019, from <http://www.tlinc.com/articl66.htm>
- Jelenic, D. (2011). THE IMPORTANCE OF KNOWLEDGE MANAGEMENT IN ORGANIZATIONS – WITH EMPHASIS ON THE BALANCED SCORECARD LEARNING AND GROWTH PERSPECTIVE. *Management Knowledge and, Learning International Conference*, (pp. 33-43).
- Jong, T. d. (1996). Types and Qualities of Knowledge. *Educational Psychologist*, 31(2), 105-113.
- Kaufman, A. S., & L.Kaufman, N. (2005). *Essentials of Research Design and Methodology*. Hoboken, New Jersey: John Wiley & Sons, Inc.
- Koenig, M. E. (2014, May 4). What is KM? Knowledge Management Explained. *Content, Document and Knowledge Management World*.
- Kulkarni, U., & Freeze, R. (2003). Development and Validation of a Knowledge Management Capability Assessment Model. pp. 2542-2551.
- Kulkarni, U., & Freeze, R. (2004). Development and Validation of a Knowledge Management Capability Assessment Model. *Twenty-Fifth International Conference on Information Systems*, (pp. 647-670).
- Levin, G. (2010). Knowledge management success equals project management success. *PMI® Global Congress* . North America, Washington, DC. Newtown Square, PA: Project Management Institute.
- Lim, R. (2018, SEPTEMBER 18). *Hive*. Retrieved April 24, 2019, from <https://hive.com>: <https://hive.com/project-management-statistics/>

- M., B., Leenders, R., Kratzer, J., Gabbay, S., & Van Engelen, J. (2006). Is trust really social capital? Knowledge sharing in product development projects. *The Learning Organization*, 13(6), 594-604.
- Meyerson, D., Weick, K. E., & Kramer, R. M. (1996). Swift Trust and Temporary Groups. In T. R. Tyler, & R. M. Kramer, *Trust in Organizations: Frontiers of Theory and Research* (pp. 166-195). Oaks: Sage Publications.
- Mohagheghi, P., & Jørgensen, M. (2017). What Contributes to the Success of IT Projects? An Empirical Study of IT Projects in the Norwegian Public Sector. *Journal of Software*, 12(9), 751-759.
- Mulia, R. (2014). *A study of significant dimensions of emotional intelligence and creative thinking of self-regulated learners of the students of higher secondary schools*. Gandhinagar, Gujarat, India: Unpublished Ph.D. Thesis, Kadi Sarva Vishwavidyalaya.
- Na, S., & Parvar, J. (2017). Perceptions Towards Knowledge Management in Project-Based Organisations. *Information and Knowledge Management*, 7(3), 45-52.
- Omotayo, F. O. (2015). Knowledge Management as an important tool in Organisational Management: A Review of Literature. *Library Philosophy and Practice (e-journal)*.
- PMBOK. (2013). *A Guide to the Project Management Body of Knowledge* (5 ed.). Pennsylvania: Project Management Institute, Inc.
- PMBOK®. (2000). *A Guide to Project Management Body of Knowledge*. Boulevard: Project Management Institute.
- PMBOK®. (2008). *A Guide to Project Management Body of Knowledge*. Project Management Institute.
- PMI. (2018). *Success in Disruptive Times*. PMI's Pulse of the Profession.
- Purao, S., Baldwin, C., Hevner, A., Storey, V. C., Pries-Heje, J., Smith, B., & Zhu, Y. (2008). *The Sciences of Design: Observations on an Emerging Field*. Communications of the Association for Information Systems.
- Rahim, E., & Dawson, M. (n.d.). *Information Technology and Project Management: How To Avoid Failure and Achieve Project Success*. Colorado : Colorado Technical University.
- Schwalbe, K. (2011). *Information Technology Project Management* (6 ed.). Boston: Course Technology, Cengage Learning.

- Sloniec, J., Kaczorowska, A., & Motyka, S. (2016). Prospects for the Development of Project Management in the Information Society. *Research Gate*. Retrieved April 22, 2019, from [https://www.researchgate.net/publication/308801978\\_Prospects\\_for\\_the\\_Development\\_of\\_Project\\_Management\\_in\\_the\\_Information\\_Society](https://www.researchgate.net/publication/308801978_Prospects_for_the_Development_of_Project_Management_in_the_Information_Society)
- Smith, E. A. (2001). The role of tacit and explicit knowledge in the workplace. *Journal of Knowledge Management*, 5(4), 311-321.
- Söderlund, J. (2010, February). Knowledge entrainment and project management: The case of large-scale transformation projects. *International Journal of Project Management*, 28(2), 130-141.
- Squier, M. M. (2006). *The Principles and Practice of Knowledge Management*. Pretoria: University of Pretoria.
- Takala, T. (2008). Tacit and explicit knowledge from the point of learning processes - sketching critical approach. *Problems and Perspectives in Management*, 6(3).
- UNCTAD. (2012). Knowledge and human-resource management for effective enforcement of competition law. *United Nations Conference on Trade and Development* (pp. 1-18). Geneva: United Nations.
- Uriarte, F. A. (2008). *Introduction to Knowledge Management*. Jakarta: ASEAN Foundation.
- Veiga, A. P. (2017). *Project Success in Agile Development Projects*. Maryland : University of Maryland University College .
- Whittaker, B. (1999). What went wrong? Unsuccessful information technology projects. *Information Management & Computer Security*, 7(1), 23-29.
- Yadav, S., & Agarwal, V. (2016, December.). Benefits and Barriers of Learning Organization and its five Discipline. *IOSR Journal of Business and Management (IOSR-JBM)*, 18(12), 8-24.
- Yeganegi, K., & Safaeian, S. (2012, July 3 – 6). Design of Project Management Information Systems. *International Conference on Industrial Engineering and Operations Management*, pp. 2545-2551.

## Annexes

### *Annex I Questionnaire Covering Letter*

Date May 30, 2019

Dear Participant

**Subject:** - *Request for survey completion*

My name is Elshalom Endrias and I am pursuing my master's degree at Addis Ababa University. In partial fulfillment of the requirements for the degree, I am working on a thesis called "The Perceived Knowledge Management Practice in IT Project Stakeholders in case of Ministry of Innovation and Technology, and Information Network Security Agency". The purpose of this paper is to assess the perceived knowledge management practice in IT project in case of MInT and INSA. Because you are working in MInT or INSA as an IT expert, IT Security, System Admin, IT Manager, Incubate, Member of the Innovation center, or on apparent, or else any IT positions, I am requesting you to participate in this research study by completing the attached questionnaire. The questionnaire will require approximately 30 min to complete. There is no compensation for responding nor is there any known risk. In order to ensure that all information will remain confidential, please do not include your name. Copies of the thesis will, of course, be submitted to Addis Ababa University. If you choose to participate in this project, please answer all questions as timely and honest as possible and return the completed questionnaires promptly. Participation is strictly voluntary and you may withdraw to participate at any time.

Thank you for taking the time to assist me in my educational endeavors. The data collected will provide useful information to analyze and interprets knowledge management practice of IT projects. If you would like to receive a copy of this study, please contact me through the address listed below. Completion and return of the questionnaire will indicate your willingness to participate in this study. If you require additional information or have questions, please contact me at the number listed below.

If you are not satisfied with the manner in which this study is being conducted, you may report anonymously to my advisor Dr. Adane Atara via [adane22@yahoo.com](mailto:adane22@yahoo.com)

Sincerely,

Elshalom Endrias Essay

Mobile: - 0913 810906

Email: - [shalomendrias@yahoo.com](mailto:shalomendrias@yahoo.com)

## *Annex II Questionnaire*

### Part I Demographic Information

Please put a “v” mark in the box provided

1 Gender

Male

Female

2 Age

Less than 20 Years

21-30 Years

31-40 Years

41-50 Years

More than 50 Years

3 Highest level of education

College Diploma

Bachelor’s Degree

Master’s Degree

PhD Degree

Other, please specify \_\_\_\_\_

4 Work experience

Less than one year

1 – 5 years

5 - 10 years

10 - 15 years

More than 15 years

5 What is your current profession?

IT Expert

IT Manager

Department Head

Project Officer

Project Manager

Senior Manager

6 Work experience in project-based delivery?

Less than one year

1 – 5 years

5 - 10 years

10 - 15 years

More than 15 years

## Part II Knowledge Management Practice Assessment

Please put a “v” mark in your level of agreement.

<b>Project Sponsors Perceived KM Practice</b>					
Factors	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Project sponsors are supportive of knowledge sharing and learning					
Project sponsors are active in communicating the benefit of knowledge sharing and learning opportunities					
Project sponsors are committed to developing effective knowledge sharing practice					
Project owners regularly involve project staff in a decision meeting					
Project sponsors empower their staff					
Title status and formality are important in the project.					
Project sponsors aren't busy delivering service to step back and look at how they could manage better					
<b>Project Managers Perceived KM Practice</b>					
Project managers assign tasks and give appropriate support when needed					
Our project manager uses project management tools					
Mistakes are accepted as opportunities to learn and develop while working in a given project					
Project managers provide appropriate resources to facilitate knowledge sharing					
Knowledge sharing mechanisms are planned when the project is planned					

Factors	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Project Managers use a formal knowledge management strategy that is aligned with the type of project.					
<b>Organizational Culture</b>					
Our company has designated manager to administer knowledge in each kicked off a project					
Our company encourage the exchange of ideas and knowledge between project staff and other staff					
Our company accepts new ideas from its staff					
Our company rewards employees for sharing their knowledge in the process of planning projects					
Communication and knowledge flows are in both direction (top-down and bottom-up)					
Our company uses the lesson learned and best practice from past projects					
In each project, there is a mechanism for creating and acquiring knowledge					
Our company has project knowledge capturing policies which allow project staff to entertain and share their idea					
Our company has a mechanism converting knowledge to action					
Attention is paid to the role and importance of knowledge held in project team members					
It is easy to find out who knows what in the project team					
Lessons learned are recognized as a valuable asset for the success of the project					

Factors	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Documenting lessons learned is a required part of project practices.					
Our project team engages in knowledge management activity formally or informally					
<b>Project Team Member Perceived KM Practice</b>					
The primary concern of the project team is completing the project in time					
There is a strong focus on accountability on the quality of the project					
I feel free forwarding ideas on how to do a given a task in project meetings					
I feel free to confront my managers in project-related issues which I believe it should be done					
I discuss with my supervisor on how to do a project task					
I have been acknowledged to the work that I surpass my supervisor's expectation					
I am held accountable for my action					
I find it easy to share lessons learned					

**Part III Short Answers on Project KM Assessment**

If your answers are neither "Yes" nor "No" please try to explain why

1. Do you think Knowledge management is necessary in projects? Why?

---



---



---



---

2. Do you think sharing knowledge is difficult on projects? Why?

---

---

---

---

3. In your opinion, should your organization invest in knowledge management initiatives specifically for upcoming projects? Why?

---

---

---

---

4. Do you think documenting and sharing best practice of the former projects will increase the success rate of upcoming projects? Why?

---

---

---

---

5. Do you think the existing processes need to be modified to incorporate KM activities? Why?

---

---

---

---

Thank You!

*Annex III Declaration*

I declare that the thesis is my original work and has not been presented for a degree in any other university.

---

Elshalom Endrias

August 19, 2019

This thesis has been submitted for examination with my approval as a university advisor.

---

Adane Atara Ph.D.

August 19, 2019