



ST MARY'S UNIVERSITY
SCHOOL OF GRADUATE STUDIES
DEPARTMENT OF PROJECT MANAGEMENT

**THE CHALLENGES AND OPPORTUNITIES OF USING PROJECT
MANAGEMENT INFORMATION SYSTEM (PMIS) IN THE CASE
OF ETHIOPIAN WOMEN'S LAWYERS ASSOCIATION (EWLA)**

**BY
ZEWDU GEBEYEHU TESFAYE**

**A Thesis Submitted to St. Mary's University School of Graduate Studies in partial
fulfillment of the requirements for the Degree of Masters of Art in Project
Management**

**August 2020
ADDIS ABABA, ETHIOPIA**

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DECLARATION

I, the undersigned, declare that this thesis is my original work, prepared under the guidance of the research advisor. All sources of materials used for the thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or in full to any other higher learning institution for the purpose of earning any degree.

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August 2020

ENDORSEMENT

This thesis has been submitted to St. Mary's University, School of Graduates Studies for examination with my approval as a university advisor.

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Signature

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August 2020

DEDICATION

This research project report is lovingly dedicated to my mother, Wro Tifufat Mesfin, whose love for me knows no bounds and whose tireless efforts, sacrifice and devotion to their first born ensured that their son is now qualified to be a “master” in his own right. You are a constant source of inspiration; you have given me the drive and discipline to tackle any task with enthusiasm and determination. You believe in the richness of learning. This research project report is also dedicated to my Brothers Yonas and Tesfaye and Sisters Aynalem, Asnaku and Tizita; you have been a constant source of support, both emotionally and morally. You have given me unequivocal and overwhelming support throughout. You are my joy and guiding light.

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List of Abbreviations

EWLA	The Ethiopian Women’s Lawyers Association
PMIS	Project Management Information System
IS	Information System
IT	International Business Management
MIS	Management Information System
<i>CSFs</i>	Critical Success Factors
<i>SPSS</i>	Statistical Package for Social Science

ABSTRACT

Today the use of project management information system is one of the major and influential factors in the timely and successful implementation of projects so that by making proper flow of information to the managers such as project managers and executive managers help to the proper and timely implementation of projects. But, an Organization has many opportunities and challenges simultaneously. The aim of this paper is to extend the line of knowledge about the current challenges and opportunities of using Project Management Information System in the case of a non-profit women's advocacy group the Ethiopian Women Lawyers Association (EWLA). To do so the researcher conducted an extensive review literature in the field of PMIS to identify critical challenges of the EWLA to be alleviated and the current opportunities of the EWLA to be exploited. The paper assessed the current challenges and opportunities of the EWLA. The primary data will be collected using semi-closed ended questionnaires from project managers, project coordinators, regional coordinators and administrative staff of this organization. The sample size was 67 with 74.44% response rate. The secondary data were collected from organization' annual reports and publications, from various publications of EWLA and from other related books. The findings of the paper indicate that lack of system integration, multi-project capability, and precision of information are the current challenges of using PMIS in EWLA. On the other hand improvement of productivity at work, increase in quality of decisions, reduction of the time required for decision-making, reduction of the time required to complete a task, improve control of activities cost, better management of budgets, improve planning of activities, better monitoring of activities, more efficient resource allocation and better monitoring of the project schedule are the opportunities using PMIS in EWLA. Finally, the paper gives recommendations to overcome the challenges and exploit the existing opportunities of the Ethiopian Women Lawyers Association (EWLA).

Keywords: *Project Management Information Systems, Challenges, Opportunities and Ethiopian Women Lawyers Association (EWLA).*

Chapter One

Introduction

1.1 BACKGROUND OF THE STUDY

In recent years, successful implementation of projects in project-based organizations, without regard to the flow and proper analysis of information is not possible. Having accurate and timely information on the event about the project including cost, risk, procurement, quality, etc. can help experts, project managers and executive managers to promote better implementation of project. Accordingly, having a powerful database system in addition to project management is a prerequisite for successful implementation of projects. Projects due to their nature of being diverse and new have a structure different from the current routine affairs in organizations. Accordingly, project management has been always more difficult than general administration of organization and requires more attention to the changing dimension of the project (Project Management Institute).

Management to perform its main function, i.e. decision making in such a structure, requires accurate, rapid and efficient information to take his decisions based on reliable information. Project Management Information System (PMIS) is an information system that uses its own tools and techniques to gather, integrate, and disseminate the outputs of project management processes. This system supports all aspects of the project from the scratch to end and it has gotten both manual and automated systems.

By definition, the first task of project management information system is collecting, processing and refining the raw data and providing the baseline and analyzed information required by management at all levels. By make use of this information with passage of time and after a few projects, the organizational knowledge creates. In addition to these tasks, facilitating tasks of project is the other duty of these systems. Most of projects with medium to large complexity to plan and manage use data management system (Avazzadeh, 2008). Traditionally, project managers used it to advance sophisticated plans such as planning, resource management and project costing, but today their target has been

widened and more complex systems are able not only to manage their own projects but also to manage completely and properly the project itself (Daireet *al.*, 2008).

Powerful project management software has become a prerequisite to manage the projects more efficiently and effectively, and to aid the project managers in their decision making. Therefore, while projects managers continue to struggle with many problems, they are obligated at the same time to make decisions in such a way that risk is controlled, uncertainty minimized and where every decision made by them is ideally be beneficial to the project. This can accomplish when the organization usually acquire a Project Management Information Systems as a mean to solve all kinds of project management challenges.

The above situations and problems trigger a researcher to study in the area of this topic. The intension of this paper is to assess the current challenges and opportunities of using Project Management Information System in the case of a non-profit women's advocacy group the “Ethiopian Women Lawyers Association (EWLA).” The present common challenges such as: system integration, multi-project capability, and precision of information. This cause to this research is very important at this time since EWLA run women empowerment project and others.

1.2 BACKGROUND OF THE ORGANIZATION

The Ethiopian Women Lawyers Association (EWLA) is a non-profit women's advocacy group founded by Ethiopian women lawyers. It began its work in 1996 after being registered in 1995. It has been re-registered as a charitable organization by the Charities and Societies Agency in 2010 as per the Charities and Societies Proclamation. EWLA has a **vision** to see a country where women are equal to men. EWLA’s **mission** is promoting the economic, political, social and legal rights of women and to that end assist them to secure full protection of their rights under the Constitution of Federal Democratic Republic of Ethiopia and other international human rights conventions.

The Association, to achieve its mission, works through three core programs:

1. Provision of Free Legal Aid Service to Women and Female Children
2. Public Education and Capacity Building
3. Research and Law Reform Advocacy

EWLA has its head office in Addis Ababa around Mexico Square Progress Building (i.e. Temama-Foki), 4th Floor, and six branches in Adama/Nazareth, Assosa, Bahir-Dar, Dire-dawa, Gambella and Hawassa. The branch/regional offices are supported by 53 trained voluntary committees organized at woreda and zonal levels providing structures to reach women at grass root level in Ethiopia. Currently 116 employees at the head and regional offices.

Currently, EWLA is implementing a project named popularizing and following-up the implementation of Competition on the Sustainable Development Goals (SDGs) towards gender equality together with Network of Ethiopian Women's Association (NEWA) and Women Can Do It (WCIDI). This project has been designed with the aim of ensuring awareness on the SDGs of the public as well the government as duty bearer and setting ground for effective monitoring of the implementation of the Sustainable Development Goals specifically on gender equality goals (Goal 5).

1.3 STATEMENT OF THE PROBLEM

Powerful project management software has become a prerequisite to manage the projects more efficiently and effectively, and to aid the project managers in their decision making. With an estimated \$255 billion being spent on IS/IT applications annually, it is significant that Information Systems projects should effectively managed (Havelka & Rajkumar, 2006). PMIS provides the framework for collecting, organizing, storing, and processing project information. It provides the basis for assessing the status of the project with respect to time, cost, and performance goals and objectives. It also provides some sort of business intelligence on how the project contributes to the organization's strategy and success. It enhances improving the project success by 75%. Hence quality and use of PMIS are highly essential (Raymond L., Bergeron F., 2008). Without using any PMIS software, engineers and project managers wouldn't be able to communicate project status adequately with functional departments and upper management as well. However, PMIS provide supper management with adequate information about all the projects in the organization's portfolio.

Projects are managed within a limited time, cost, and performance condition. Thus, projects which are established by enterprises, which operate on different lines of industry,

share one thing in common: they need to be effectively managed, that is, they need to be planned, staffed, organized, monitored, controlled, and evaluated. (Liberatore et. al., 2003). Many of these projects exceed the original cost, got cancelled prior to completion, while others fail on terms of the delivered functionality. Thus, "project management remains a highly problematical endeavor", (White and Fortune, 2001).

Further, some project managers do not clearly identify the risks of the project which may lead to fails in accomplishing the project objectives toward success achievement in unsatisfactory way, in terms of elapsed time, accumulated cost, and/or functionality. Projects Information Systems are same as any other projects, may simply turn into "a monster of missed schedules, blown budgets, and flawed products" (Brooks, 1987, p. 10). Although project management assists an organization decrease product and service development time to market, exploit restricted resources, and enlarge global market rivalry, project managers still needs to utilize tools that helps in overcoming various challenges such as: uncontrollable time and budget restrictions; inconsistent project teams; unpredictable of firms resources; lack of clarity in prioritizing projects; delays in project decisions making; and lack of clarity in collaboration among project team members. Therefore, while projects managers continue to struggle with these problems or challenges, they are obligated at the same time to make decisions in such a way that risk is controlled, uncertainty minimized and where every decision made by them is ideally be beneficial to the project. This can accomplish when the enterprises usually acquire a Project Management Information Systems (PMIS) as a mean to provide top managers with the essential tools that aid the decision-making process with regards to selecting, planning, organizing, and controlling projects and portfolios.

The Ethiopian Women Lawyers Association has developed a Project Management Information Systems for the purpose of managing women empowerment projects. Despite this, system integration, multi-project capability, and precision of information are the common challenges facing EWLA's project management practice. There are no adequate and comprehensive academic researchers conducted to examine the challenges and opportunities of using Project Management Information System by EWLA. The purpose of this study is therefore to assess the current challenges and opportunities of using Project

Management Information System in the case of a non-profit women's advocacy group the “Ethiopian Women Lawyers Association.”

1.4 RESEARCH QUESTIONS

In connection with the aim and objectives, mentioned above, the following major research questions are set to guide the study.

- ❖ How does the practice of using a PMIS in EWLA looks like?
- ❖ What are the major challenges of using PMIS?
- ❖ What are the major opportunities of using PMIS?

1.5 RESEARCH OBJECTIVES

1.5.1 General Objective

The major aim of this study is to assess the challenges and opportunities of using Project Management Information System (PMIS) in the Ethiopian Women Lawyers Association.

1.5.2 Specific Objectives

In line with the major aim of the study, the specific objectives of the study are:

- 1) to examine to what extent the Ethiopian Women Lawyers Association (EWLA) used PMIS?
- 2) to identify the challenges of using PMIS?
- 3) to investigate the opportunities of using PMIS?

1.6 DEFINITION OF TERMS

This research uses some technical terms and concepts which could be hard to understand. Therefore, a list of definitions is created in order enable the reader to have an understanding of these issues. In this section the main definitions that are significant for the purpose of this thesis explain.

Accessibility: is easy of accessing the system functions and others.

Response time: is the time required for the system respond.

Ease of use: How easy is it to learn and operate the system?

Ease of querying: is an ability the system manipulation to process and analyze data

Ease of learning: is the users' friendliness of the system

Flexibility: is the systems also vary widely in flexibility

System Integration: - is the system compatibility with other systems

Error Recovery: ability of solving system error

Multi-project Capability: the ability of the system to processes two or more project information's side by side.

Precision is the closeness of the measurements to each other.

Comprehensiveness: All the information that is needed should be provided.

1.7 SIGNIFICANCE OF THE STUDY

The findings generated by the study are both relevant and significant when informing project managers currently involved in projects within and without, on the efficiency, reliability, and effectiveness of PMIS. Attaining optimal performance in projects saves costs, improves safety standards, enhances the quality of projects, reduces time expenditure, and galvanizes the profitability of organization. PMIS helps in overcoming various challenges such as: uncontrollable time and budget restrictions; inconsistent project teams; unpredictable of firm's resources; lack of clarity in prioritizing projects; delays in project decisions making; and lack of clarity in collaboration among project team members. The study provides evidence on how PMIS as a software tool, positively influences project managers, offers reliable information output, and improves current practices in EWLA.

1.8 SCOPE OF THE STUDY

The study is delimited conceptually, geographically and in terms of participants. Conceptually, it is focused on Project Management Information System (PMIS). Geographically, the challenges & opportunities of using PMIS with particular reference to the Ethiopian Women Lawyers Association (EWLA) focus due to time and financial constraints. The participants will be those who were involved in the projects as managing staff and implementers as well as beneficiaries. The target population of this study was all the 90 staff working in EWLA.

1.9 LIMITATIONS OF THE STUDY

For Data collection, this study employed questionnaires. Nonetheless, there is usually low validity in questionnaires thus identifying whether the respondents are telling the truth become difficult. Further, questionnaires are on a recall bias since they depend on how respondents have ability to remember. Validity and reliability of this instrument was used in order to find out whether it meets the necessary standards thus mitigating the problem. In addition, the respondents' willingness to answer the questions determines the data collected using a questionnaire. It is considered also that the staff working in EWLA may fear to fill the questionnaire due to concern of victimization. Further, they may feel as if they are being investigated and hence give biased information. To mitigate this, respondents had an assurance from the researcher that the information collected would only be used for academic purpose only.

1.10 ORGANIZATION OF THE STUDY

The study is organized into five Chapters. The first Chapter deals with the "Introduction", which starts with the topic, explains the statement of the problem and brief descriptions of the major techniques/approaches applied in the investigation. The Second chapter is the "Literature Review". Here the concern is discussing the theories and concepts used in the investigation as thoroughly as possible. The theories and concepts to be discussed here are supposed to provide the means for analysis and interpretation of the data. Chapter Three will present the "Context" of the study. It discusses the "Methodology" and describes the methods and the techniques employed for investigation. The data about research design, data collection, sample design and size, data presentation and analysis, reliability and validity are the key aspects will be presented in this chapter. Chapter Four will be the "Data Presentation and Analysis" and its focus is detailed and logical presentation and analysis of the data. The last chapter (fifth) is "Conclusion and Recommendation" which summarizes the findings in a way that each research question is answered. The chapter also gives the concluding remarks and provides key recommendations suggesting ways to alleviate problems, integrate efforts to derive lessons from the past mistakes, and suggest areas of further research.

Chapter Two

Literature Review

This chapter builds on chapter two. The chapter: defines and explores the systems theory and management information systems; outlines what project management information systems is; outlines the PMIS functions, characteristics of project management information systems; outlines the process of identifying a project's management information system needs, and outlines the project cycle and the concept of logical framework.

2.1 THEORETICAL LITERATURE REVIEW

2.1.1 INTRODUCTION

A project management information system (PMIS) is the systematic process of creating, identifying, collecting, organizing, sharing, adapting and using project information. Information management means identifying what information is needed, who has the information, how we can capture and store the information, and finding the best method for its distribution and use. It is a process the project uses for identifying all the information it needs, to define the methods to collect and organize the information, and use the best methods for its distribution and use. Information is therefore a key resource that needs to be available to the organization to know if the project has met its objectives.

2.1.2 INFORMATION TECHNOLOGY (IT)

IT relates to the products, methods, inventions, and standards that are used for the purpose of producing information. It can also be defined as “the preparation, collection, transport, retrieval, storage, access, presentation, and transformation of information in all its forms (voice, graphic, text, video, and image). Information movement can take place between humans, humans and machines, and/or between machines. Information management ensures the proper selection, deployment, administration, operation, maintenance, and evolution of the IT assets consistent with organizational goals and objectives” (Boar,

1993, p.3). IT refers to the products, methods, inventions, and standards that are used for the purpose of producing information (Kroenke, 2007).

2.1.3 INFORMATION SYSTEM (IS)

Information System (IS) “consists of the information technology infrastructure, application systems, and personnel who employ information technology to deliver information and communications services for transaction processing/operations and administration/management of an organization” (Baskerville, Stage, &DeGross, 2000). Therefore, Information System is a set of components which interact to produce information, which include hardware, software, data, procedures, and people, whereas these components can be found in every information system (Kroenke, 2007).

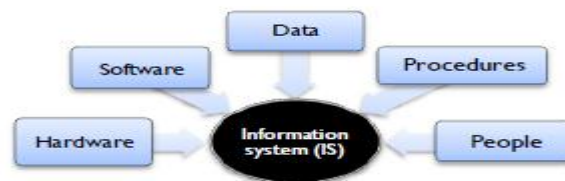


Figure 2.1 Five Components of an Information System (IS) (source: Kroenke, 2007: p. 5)

As it was mentioned, the information systems are one of the suitable tools of the organizations and by these tools to achieve the goals and increasing the efficiency, they are used. There are different kinds of information systems and they are used in various positions in the organization. These are: The Management Information System (MIS), Executive information system (E.I.S), Decision Support System (D.S.S), Expert Systems (E.S), Work Group Support System (W.G.S.S), Transaction Processing Support (T.P.S), Office Automation Systems (O.A.S).

Levels of Technology

Caldwell suggests that a Project Management Information System does not necessarily mean a state-of-the-art technology tool that provides features for every project because every project has different information needs both in quality and in quantity. Every project requires different levels of technologies to satisfy its basic information management needs, a small project with small needs will suffice with simple technologies, but large

projects with large information needs can benefit from more extensive technological solutions (Caldwell 2004). It is very advantageous to use a specialized Project Management Information System for it provides the project team and manager to use to correct amount and thus quality information. Figure 1 below illustrates how the four levels help define the technology required based on the information requirements of a project.

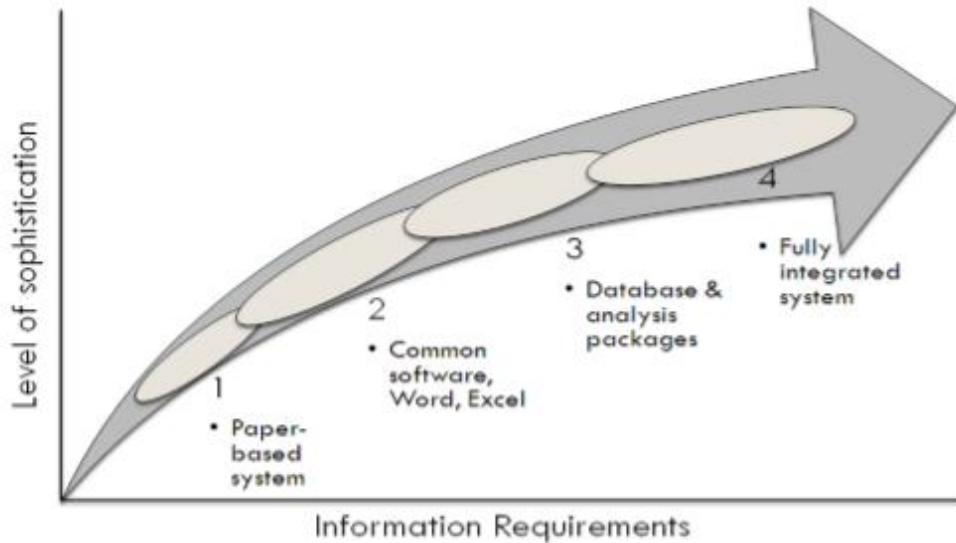


Figure 2.2: PMIS Levels of Technology (Caldwell 2004)

The ovals 1-4 represent the four levels progressively from low sophistication (level 1) to the higher level of sophistication (level 4). The overlapping ovals denote the occurrence of simultaneous characteristics among two levels. The upward-slanting arrow (from left to right) - represents the rising technical and resource requirements for setting up an increasingly automated information system and the ever greater complexity of the system itself as a project shifts from level 1 toward level 4. This classification of levels is for guiding projects in assessing their location on the range of lower to more sophisticated information systems.

During the life of a project the levels may alter, while on the other hand, a project manager with several projects, programs, and sectors may have each one at a different location on the range (Caldwell 2004). A project needs to determine its information requirements and match it with the appropriate technology.

The use of Project Management Information System in this study were measured by determining extent to which planning, monitoring, controlling, evaluating and reporting function tools were used by the project managers.

One of the major purposes of Project Management Information System is the smooth sharing of information among project stakeholders and therefore, when the use of Project Management Information System is expanded among them, and not restricted to individual users, the effects become greater. In other words, positive effects of improved quality of Project Management Information System should lead to intention of use, not limited to satisfaction with its use, thereby expanding its use; then, smooth information sharing and systematic information management would be enabled, thereby enhancing efficient and effective construction management (Caruan, 2002).

2.1.4 MANAGEMENT INFORMATION SYSTEM (MIS)

Various definitions of management information systems are presented and some of them are as: “MIS is a comprehensive human-machine system providing the supporting information of decision and operation in a social formation and organization (Schoderbeck, Kefalas & Charles, 1975).“MIS” is the comprehensive structure of database and information flow in all the organization levels that by collection, exchange and presentation of information, the organization needs are met as well(long , 1989).“MIS” is a computer system presenting the information to the users(Mcleoo, 1998). “MIS” is a combination of human attempts by computer to collect, store, recover information by using communication systems for good management of organization activities (Kelly, 1984).“MIS” is the formal methods of providing exact and timely information to facilitate the decision making process of the managers during the planning, control and taking effective and optimum decisions of the organization (Momeni, 1993).

2.1.5 REVIEW OF PROJECT MANAGEMENT INFORMATION SYSTEM

(a) What is a PMIS

Project Management Information System (PMIS) are system tools and techniques used in project management to deliver information. Project managers use the techniques and tools to collect, combine and distribute information through electronic and manual means. Project Management Information System (PMIS) is used by upper and lower management to communicate with each other. It is an automated system to quickly create, manage, and streamline the project management processes.

(b) Goal of a PMIS

The goal of a PMIS is to automate, organize, and provide control of the project management processes. Beside this, a PMIS mainly

(c) Objectives of PMIS

Record and report relevant information and the status of various components of the project in such a manner as to bring the most critical activities directly to the attention of concerned managers at appropriate level. Highlight deviations from the plan, if any, in respect of every component of the project and also to indicate the effects of such, deviations on the overall status and completion of the project as a whole. Form the basis of updating of project schedule wherever necessary.

Identify and report on critical areas which are relevant to different levels of management and to highlight the corrective action that needs to be taken. Sift the information and report on an exception basis. In other words, emphasis is focused on those activities that are not going according the plan. Provide a basis for the evaluation of the performance of the functions of various managers and departments by regular comparisons with budgets/plans/schedules.

(d) Elements of a Typical PMIS

A typical PMIS software system has: (a) WBS creation tools (b) Calendaring features (c) Scheduling abilities (d) Work authorization tools (e) EVM controls (f) Quality control charts, PERT charts, Gantt charts, and other charting features (g) Calculations for the

critical path, EVM, target dates based on the project schedule, and more (h) Resource tracking and leveling (I) Reporting functionality.

(e) Uses of a PMIS

Project Management Information System (PMIS) help plan, execute and close project management goals. During the planning process, project managers use PMIS for budget framework such as estimating costs. The Project Management Information System is also used to create a specific schedule and define the scope baseline. At the execution of the project management goals, the project management team collects information into one database. The PMIS is used to compare the baseline with the actual accomplishment of each activity, manage materials, collect financial data, and keep a record for reporting purposes.

During the close of the project, the Project Management Information System is used to review the goals to check if the tasks were accomplished. Then, it is used to create a final report of the project close. To conclude, the project management information system (PMIS) is used to plan schedules, budget and execute work to be accomplished in project management.

Project Management Information System is a tool used to document and store the project management plan, subsidiary plans and other documents / work products relevant for the project. It could be manual or automated and should support the change control procedures defined in the project.

(f) Typical features of a PMIS

The following are a list of the kinds of analytical capabilities, outputs, and other features offered by various PMI systems. (a) *Scheduling and Network Planning*: Virtually all project software systems do project scheduling using a network-based procedure. These systems compute early and late schedule times, slack times, and the critical path. (b) *Resource Management*: Most project systems also perform resource loading, leveling, allocation, or multiple functions, although the analytical sophistication and quality of reports vary between systems.

(g) Typical Outputs of a PMIS

Budgeting. In many project systems it is possible to associate cost information with each activity, usually by treating costs as resources. The ability of a system to handle cost information and generate budgets is a significant variable in the system's usability for both planning and control.

Reporting, Graphics, and Communication. This is an important consideration because it affects the speed with which PMIS outputs are communicated and the accuracy of their interpretation. Many systems provide only tabular reports or crude schedules; others generate networks and resource histograms; still others offer a variety of graphics including pie charts and line graphs. The main features to consider are the number, quality, and type of available reports and graphics.

Interface, Flexibility, and Ease of Use. Many larger PMISs allow data from different projects to be pooled so multi project analysis can be performed. Some systems are compatible with and can tie into existing databases such as payroll, purchasing, inventory, MRP, ERP, cost-accounting, or other PMISs. The capability of a PMIS to interface with other software from which existing data files have been created is an important selection criterion.

2.1.6 DEFINITION PROJECT MANAGEMENT INFORMATION SYSTEM

An information system is essential to project managers in support of their planning, organizing, control, reporting, and decision-making tasks. As defined by Cleland and King, the basic function of a PMIS is to provide managers with “essential information on the cost-time performance parameters of a project and on the interrelationship of these parameters”. The nature and role of a PMIS within a project management system, as presented in Figure 2.2, have been characterized as fundamentally “subservient to the attainment of project goals and the implementation of project strategies” (Raymond 1987). Figure 2.2: The PMIS within the Project Management System (Raymond 1987) illustrates how the PMIS uses project data in the different phase in a project life cycle.

Figure 2.2 also illustrates organizational or environmental data to aid in decision-making (with regard to planning, organizing, control and monitoring, evaluating and reporting) by the project manager to meet project specifications and deadlines.

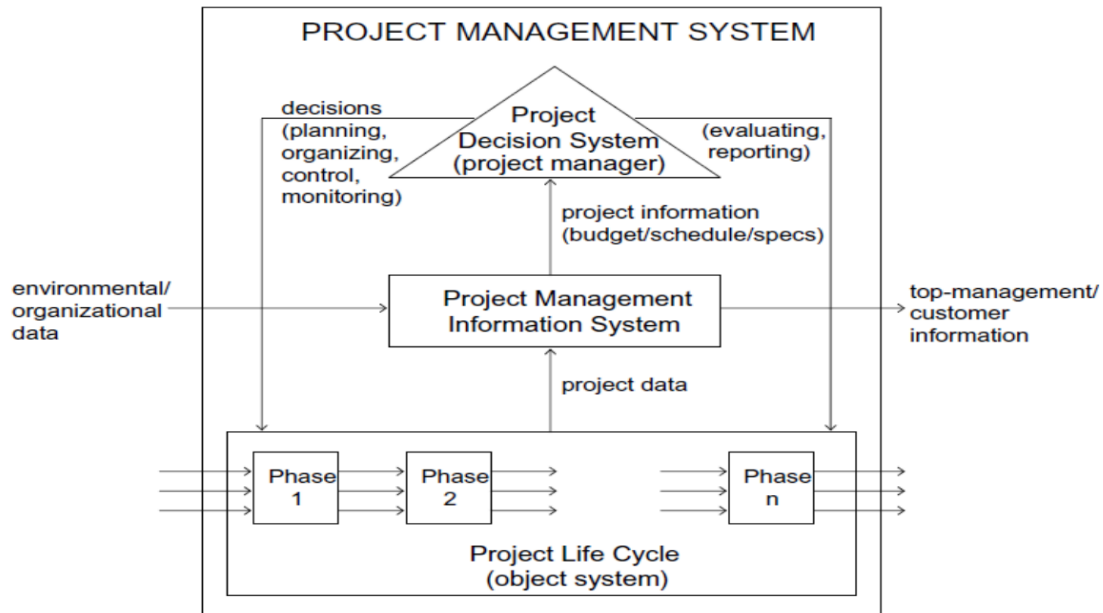


Figure 2.3: The PMIS within the Project Management System (Raymond 1987)

The Project Management Institute (PMI), (PMI 2004) has shown that Project Management Information System is system tools and techniques used in project management to distribute information. Project managers use the techniques and tools to collect, combine and distribute information through electronic and manual means.

PMIS is a standardized set of automated tools and techniques used in project management for planning, execution, management and closing of the project, as well as for collecting, combining and distributing project information Project Management Institute, *A Guide to the Project Management Body of Knowledge (PMBOK® Guide) —Fifth Edition*. PMI, 2014, p. 618.

2.1.7 PMIS FUNCTIONS

Most project management information systems have functionality that helps project managers to do planning, resources allocation and budgeting, furthermore most of the PMIS tools can perform analyses functions like performance, variance and forecasting for the project. When using an effective PMIS tool, project managers can proactively identify and manage stakeholder's expectation where they foresee issues within the project long before they happen. The following is a list of some of the kinds of analytical capabilities, outputs, and other features offered by various PMIS tools (Nicholas and Steyn, 2012).

Table 2-1: PMIS key features

#	Features	Description
1	Budgeting and Cost controlling	Used to link the costing information with an activity and a resource in the project;
2	Calendars	Highlight days and hours worked by single or group of resources on the project
3	Internet Capabilities	Ability of sharing project information online with project stakeholders;
4	Graphics	Involves generation of Gantt charts and network diagrams with critical paths quickly and easier using the available project information;
5	Data Import and Export	Uploading and downloading project information from one application to other applications like excel, word, databases etc.;
6	Generating Reports	Ability to generate reports quickly and easily for efficient reporting;
7	Management of Resources	Ability to have a view of all resources usage, availability or lack of to enable resource optimization;
8	Planning	Ability to pre-define all activities that must be performed in a project;
9	Project Monitoring Tracking	Ability to view project progress in real time.
10	Scheduling	Ability to plan and activate the correct task at a right time.
11	Other systems integration	Ability of the tool to talk with other applications that are used on the organization;
12	Mobility	Ability to access the project information from portable devices for as long as one is connected to the internet.

Source: © IEOM Society International

2.1.8 DECIDING FACTORS TO USE A PMIS

No matter how small or large a project is, being able to manage project information whenever, wherever, and however can greatly contribute to project success. A key requirement for making this possible is leveraging a PMIS. (Dux Raymond Sy, 2012)

Here are five deciding factors that you need to begin using a PMIS for projects:

- 1) No Standardized System for integrating project goals
- 2) Insufficient Document Management
- 3) Lack of appropriate tools to facilitate team collaboration
- 4) Inability to report accurate and timely status of project
- 5) Not achieving Strategic Goals

2.1.9 OPPORTUNITIES OF PMIS

Any system implementation has its own opportunity for the organization so use of PMIS project created opportunity for the organization since it is more modernized system it have the opportunity. Rozenes (2011) state that there are five main areas of project management that when managed correctly may lead to successful project delivery. Therefore, if the EWLA use a reliable PMIS then the EWLA will get the opportunity to have the following list of capabilities:

- 1) **Plan and Schedule.** Project managers must be able to plan and schedule activities ensuring that the correct activity happens at a right time.
- 2) **Monitor Project Activities.** The effective *monitoring* of projects may be able to highlight problematic areas early and allow project team to respond accordingly.
- 3) **Resource Management.** The effective use of *project resources* should be constantly monitored to ensure project does not go out of budget.
- 4) **Communication.** The correct information must be communicated to the right stakeholder at a right time.
- 5) **Reporting.** Generating reports that are the key to making project decisions
- 6) **Evaluation.** Ability to provide historical project information and project audit.

In general, uses of a PMIS can be improved through effective employee and end-user training. By increasing stakeholder awareness surrounding PMIS, organizations can expect to see increased use of the toolset, decreased resistance to using the toolset, increased adoption of more features provided by the system.

2.1.10 THEORETICAL FRAMEWORK

This study is based on the concept of information system (IS) success which is widely accepted for the evaluation of information systems (Yuan et.al, 2006). In management information systems (MIS) scholarship, a wide range of research has proposed IS success models (Delone et.al, 1992 and Raymond et.al, 2008). Various studies have been carried out in which the success factors of the models are applied to the evaluation of IS success or performance.

Delone and Mclean's IS Model

Delone, W. H., & Mclean, E. R. (1992). performed a review of the research published during the period 1981–1987, and created taxonomy of IS success based upon this review. In their 1992 paper, they identified six variables or components of IS success: system quality, information quality, use, user satisfaction, individual impact, and organizational impact Petter, S., & DeLone, W., & McLean, E. (2008). Delone & McLean DeLone, W. H. ,& McLean , E. R. (2003). proposed an updated model again based on a literature review. They added service quality as one important dimension. In addition, they added Intention to Use as an alternative measure because an attitude is worthwhile to measure in some context. Finally, they combined Individual and Organizational Impact to one dimension, named net benefits.

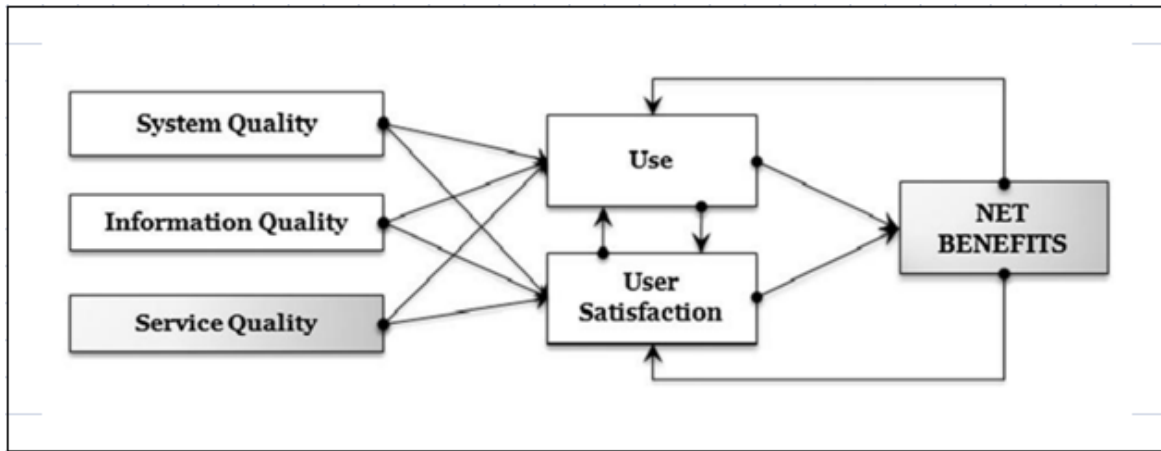


Figure 2.4: The Updated Information System Success Model (ISSM) (DeLone, McLean 2003)

2.1.11 CONCEPTUAL FRAMEWORK

A conceptual framework is a graphical representation of the theorized interrelationships of the variables of a study Kothari and Gang (2014). The conceptualization of variables in any academic study is important because it forms the basis for testing hypothesis and coming up with generalizations in the findings of the study.

The framework followed by this study is based on two variables namely; Critical Success Factors (CSFs) of Project Management Information System (PMIS) and Opportunities of using PMIS are independent variables and Using of Project Management Information System (PMIS) is a dependent variable.

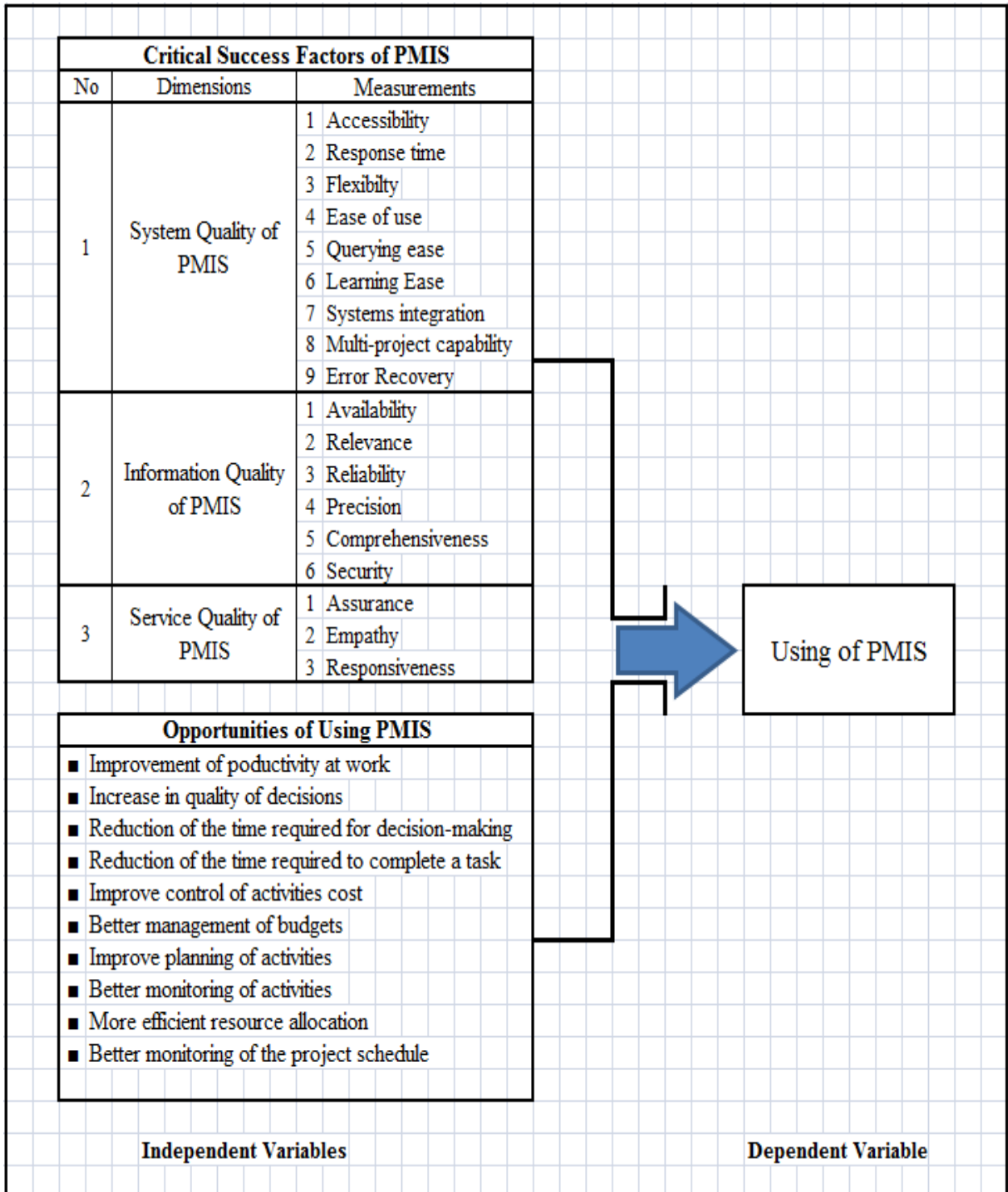


Figure 2.5 : Conceptual Framework

Source: Owen depict, 2020

2.1.12 KNOWLEDGE GAP

Table 2-2: Knowledge Gap

Variable	Author(s)	Key Findings	Knowledge Gap
Project Performance	Baccarini, D 1999	Came up with the concept that project success, is equal to project management success and project Product success. Dimensions such as the quality of the project management process and the satisfaction of the project stakeholder's expectations also need to be considered to measure project success	The study was not based on Projects in NGOs
Information Quality	Wilcox, M, and Bourne, M. (2002)	All decision making in a system is about the future, therefore if we are to use data to improve decision making we need to build a model that provides some predictive support. It is insufficient for data to merely contribute to an understanding of current performance; it must also allow the development of predictive management capabilities.	Investigating the influence of quality information in provision of predictive management capabilities in the construction sector, hence need for further research.
The System User	B.Y. Chung, M.J. Skibniewski, H.C. Lucas, Y.H. Kwak, 2008	Suggested a success model for construction ERP systems through extensive data collection and empirical analysis. However, they Analyzed factors related to end-users' attitudes toward Electronic Document Management (EDM) systems that are used for large-scale construction projects.	They focused on large-scale construction projects
The System Use	Raymond, L. & Bergeron, F. (2007).	Use of Project Management Information Systems (PMIS) is considered to be advantageous to project managers because of the supposed contribution regarding timelier decision making and project success	Investigating the influence of project management information system use in timelier decision in performance of construction projects

Source: Owen depict, 2020

2.2 EMPIRICAL LITERATURE REVIEW

2.2.1 CRITICAL SUCCESS FACTORS (CSFs) OF PMIS

An assistant professor Jung Ho Yu and a PhD candidate Seul Ki Lee is, Kwang-woon University, South of Korean studied the Critical Success Factors (CSFs) associated with PMIS in construction projects by make use of DeLeon McLean IS Model. The research results of their research identify that system quality, information quality and service quality are the critical success factors of PMIS through their Questionnaires' result and factor analysis that was conducted.

1) System Quality

System Quality is the desirable characteristics of any information system DeLone & McLean Hasan, Y., & Shamsuddin, A., & Aziati, N. (2013). The common measures for system quality that used/adopted by previous researchers are listed in the table below.

Table 2-3 System Quality in Literature Review

No	Item	Author
1	Ease of use, usability, Esthetics, Functionality, Certainty, Answerability, Accessibility, Stability, Convenience, Sympathy	Jung and Jung (2005)
2	Convenience, Simplicity, Accuracy, Reliability, Speed, Availability, Stability, Compatibility, Accessibility,	Kim (2007)
3	Speed, Reliability, Availability	Kim (2007)
4	Speed, Stability, Obstacle	Park (2004)
5	Convenience, Reliability	Joe and Lee (1997)
6	Simplicity of use, Accessibility, Accuracy, Flexibility, Reliability, Efficiency	Han and Lim (1997)
7	Accuracy, Flexibility, Reliability, Sophistication, Efficiency, Ease of use, Convenience of access	DeLone and McLean (1992, 2003)
8	Flexibility, Interoperability, Functionability	Edward et al. (2008)
9	Rapid access, Quick error recovery, Security, Correct operation & Computation, Coordination Balanced payment,	Liu and Arnett (2000)

Source: Survey Data, 2020

2) Information Quality

Information Quality is the desirable characteristics of the system outputs. DeLone&McLean .The common measures for information quality that used/adopted by previous researchers are listed in the table below.

Table 2-4Information Quality in Literature Review

No	Item	Author
1	Accuracy, Ability of Understanding, Availability, Precise, Currency, Conciseness, Consistency, Interpretation, fidelity.	Kim (2007)
2	Accuracy, Conformance, Correlation, Timeliness, Completeness, Significance	Kim (2007)
3	Accuracy, Component type, Completeness, Timeliness	Park(2004)
4	Accuracy, Screen configuration adequacy, Offering information diversity, Timeliness	Park(2004)
5	Timeliness, Accuracy	Joe and Lee (1997)
6	Accuracy, Immediate, Reliability, Completeness, Adequacy of format, Ability of Understanding	Han and Lim (1997)
7	Usefulness, Readability, Clarity, Format, Appearance, accuracy, Currency, Completeness, Timeless, Comparability, Usability	DeLone and McLean (1992, 2003)
8	Integrated and better quality of information	Edward.(2008)
9	Business profitability, Perceived benefits, Improved decision quality and performance,	Liu and Arnett(2000)
10	Accuracy, Completeness, Consistency, Timeless	Ballou and Pazer (1987)

Source: Survey Data, 2020

3) Service Quality

Service Quality is the quality of the support that system users receive from the technical support department (IS department)DeLone& McLean [4,6].The common measures for information quality that used/adopted by previous researchers are listed in the table below.

Table 2-5ServiceQuality in Literature Review

No	Item	Author
1	Diversity, Correspondence, Speed, Reliability, Kindness, Reactivity, Convenience, Supportability	Jung and Jung (2005)
2	Response at once, Reliability, Confidence, Sympathy	Kim (2007)
3	Service speed, Comply with hours of employee, Speciality of the service provider, Sympathy about the client company	Park(2004)
4	Operation of the information center, Education and support for user and so on	Joe and Lee (1997)
5	Reliability, Assurance, Tangibles, Empathy, Responsiveness	Parasuraman et al.(1998)
6	Quick, Responsiveness, Assurance, Reliability, Empathy	DeLone and McLean (1992, 2003)
7	Reliability, Availability of service	Edward.(2008)

Source: Survey Data, 2020

Chapter Three

Research Methodology

3.1 INTRODUCTION

This chapter presents the research methods that were applied for this study. It deals with specifically on the description of the study design, population and sampling techniques, data source, and data collection instrument, procedures of data collection, method of data analysis, and ethical consideration.

The study needed statistical measures to relate the independent and dependent variables, within the scope of the research as the case study. As such, the study employ a research methodology that employ the instruments of quantitative research methodology. Analyzed using statistical measures of central tendency, the quantitative research helps to determine the numerical significance of research variables among a sample, and the findings generated from an approximate are generalizable for the larger population (Dowdy and Wearden, 1983; Cohen et al., 2002).

3.2 RESEARCH DESIGN

The studies employ a descriptive research design. Descriptive researches are those studies which are concerned with describing the characteristics of a particular individual, or of group and it includes surveys and fact-findings enquire of different kinds (Sakaran, 2003). So, it helps to describe the opportunity and challenges of PMIS. In addition, the possible consequences of the system challenges that the PMIS implementation team faces would describe with the possible strategies of overcoming them.

3.3. POPULATION AND SAMPLE

3.3.1. Target Population

The target population for the case study was 90 employees among the entire population 116 EWLA employees which included all project managers previously and currently using PMIS when managing projects in EWLA. The population incorporates Project Managers, Regional Coordinators, Project coordinators, and Administrative Staff in EWLA, and who use PMIS.

3.3.2. Sampling Techniques and Final Sample

3.3.2.1. Sampling Techniques

To get more real data the representatives of the total population included in the research study. All parties involved in using of Project Management Information System are represented by the sample. In addition, as discussed above the organization have five hierarchical levels. They are chief Officers, officers, expert, managers, supervisors, and staffs. The first level four is classified as management group whereas the last one level is categorized as non-management group and consists of staff and specialties. Therefore, to be representative the sampling considers both groups.

The sample size is 90 respondents out of a target population of 116 human resource departments. These were selected to ensure that the sampling size had characteristic representation of the population using the formulae sited by Mugenda and Mugenda (2003). The formula to find the sample size is:

$$n = \frac{N}{1 + (N \times e^2)}$$

Where; N = population size

e = Tolerance at desired level of confidence, take 0.05 at 95% confidence level

n = sample size.

When use the formula, will obtain

$$n = \frac{116}{1 + (116 \times 0.05^2)} \Leftrightarrow n = 89.922 \approx 90$$

The researcher used Stratified random sampling to select the respondents. Since, stratified random sampling intends to guarantee that the sample represents specific subgroups or strata. Accordingly, application of stratified sampling method involves dividing population into different subgroups(strata) and selecting subjects from each stratum in a proportionate manner. In addition. When population from which a sample is to be draw does not constitute a homogeneous group, stratified sampling technique is generally applied in order to obtain a representative sample Kothari (2004).

So, the HR department consists of staff with different hierarchy level so this method is more applicable.

In relation to this, Stratified sampling can be divided into the following two groups: proportionate and disproportionate. Application of proportionate stratified random sampling technique involves determining sample size in each stratum in a proportionate manner to the entire population. Therefore, the choice of stratified random sampling by the researcher enabled to have adequate representation of all subgroups can be ensured.

3.3.2.2. Final sample size

The sample size for this study was 90 and 5 Officers such as One Administrative Officer, two project Managers, one regional coordinator and one project coordinator. (who participate in the visibility study) selected for the interview. The four hierarchical levels had taken as strata. From the complete list of each stratum, respondents are draw at regular interval through order list based on the proportion of the strata to the sample size determined. By considering the target population the researcher determined number of samples from each stratum.

3.4 DATA COLLECTION PROCESS, INSTRUMENTS, AND PROCEDURE

3.4.1. Sources of Collected Data

This study uses both primary and secondary sources of data for collecting valuable data. The use of primary sources supports the researcher to produce accurate data, and to gather first-hand information which could lead the researcher to make valid analysis.

3.4.2. Data Collection Instrument

The study will apply a survey questionnaire as the sole data collection instrument, to collect data from the sample project managers, incorporating both close-ended and open-ended questions. The sample questionnaire will be attached as an appendix to the final thesis paper.

The primary source of data will be collected by distributing questioner and semi structural interview. Secondary source of data includes feedback collected from the staff during training time, books, journals and articles were searched to make the finding trusting.

3.4.3. Data Collection Procedure

The researcher implements the research process by first initiating contact with the senior managers at the selected organization. Given the distance between the researcher and the recruited Organization, nature of the study, and available resources to conduct the study, much of the communication was conducted via Email messages. In most of the organizations, the researcher was introduced to the senior project managers by the public relations manager of selected organization, with who contact was relatively easy. Once in introduced to the project managers, the researcher sent a brief introduction of the study as an email attachment, focusing on its purpose, research question, and the role of their participation. At this point of the interaction, the researcher made the first phone call to each of the potential participants.

Thereafter, once all potential respondents are receiving the introductory information, the researcher proposes to recruit them for participation. The recruitment process is based on precise ethical guidelines, and a consent form, and only those participants who signed the consent form, were recruited for participation. Based on the availability and convenience of each recruited manager, the researcher sent the survey questionnaire, also as an Email attachment. The researcher followed up the questionnaire with a second phone call to each respondent. The filled questionnaires are ultimately will send to the researcher, again as Email attachments, at the convenience of the relatively busy respondents.

All the questionnaires will be sending out to the sample are receiving, although three of the respondents requested for additional time. The researcher finally call each respondent for the last time, thanking them for their voluntary participation, and reaffirming that their responses would be treated as confidential, and published with anonymity.

3.5 DATA ANALYSIS

After collecting both primary data from the sampled project managers and secondary data from its sources, the next stage of the research process is to implement the descriptive design, and analyze the findings.

Descriptive statistical analysis used throughout the analysis process. The analysis part combined all groups of respondents to obtain significant results. The data collected via questionnaires and analyzed using Statistical Package for Social Sciences (SPSS) and Microsoft Excel and it cleaned, categorized and coded in a way suitable for electronically and manually analyzing. Moreover, the interview data and review of documents interpreted qualitatively. In order to meet the study's objectives all valid responses and assessed using a variety of statistical techniques. Demographic characteristics of the respondents analyzed and interpreted based on the data collected by using frequencies, percentages and tabular descriptions. The study presented in the form of tables, graphs and charts as desired to make all the data readable and understandable by all concerned parties.

3.6 RESEARCH TYPE

Catherine (2007) refers to two types of research: pure and applied research. Pure research is that which has no obvious practical implications beyond contributing to a particular area of intellectual enquiry. Applied research on the other hand, is problem focused and directed towards solving some particular intellectual question that has practical implications for a client outside the academic world. Therefore, the type of this study is applied research.

3.7 RELIABILITY AND VALIDITY

The two major criteria which applied to evaluate the quality of the instrument are validity and reliability.

3.7.1 Reliability

The current study used multiple items in all constructs. So, the internal consistency has been checked. The foundation for internal consistency was that the individual items or indicators of the scale all were measuring the same constructs and thus be highly inter-correlated. Internal consistency reliability of all questions assessed by the Cronbach's alpha coefficients of measurement items for each construct. The alpha coefficient for three items System Quality, Information Quality and Service Quality as indicated in appendix-B are 0.789, 0.921 and 0.896. They are generally considered acceptable, suggesting that the items have relatively high internal consistency.

3.7.2 Validity

Validity of the questionnaire was done through consultations with the advisor. This was to establish any built-in errors in the measurement of the questionnaire. Pilot test was done to check the tendency of the instrument obtains the same result if the measurement was repeated by using the same subject under the same conditions. The respondents used for pretesting were not part of the main study. In this study all variables inspected by the study and research experts to make sure that research items were adequate and a thorough representation of the construct under investigation. To enhance the research instrument, for testing the questionnaire for clarity and for providing a coherent research questionnaire, a detailed literature review also performed.

3.8 OVERVIEW OF ETHICAL CONSIDERATIONS

The primary research required the participation of human subjects (project managers) from EWLA. The respondents have very important and sensitive jobs and social positions, and it is therefore important to consider their image and reputation in the manner they are depicted as participants in the study. The researcher thus ensures that all participants are treated with respect and dignity, after being informed that the study is voluntary and no discrimination is triggered by failure to participate. Further, the participants are accorded complete anonymity. All business names, participants' names, job titles, and positions are omitted in all the study's documentation. The filled questionnaires and consent forms were assigned identification codes, rather than participant names, to ensure that the participants received absolute confidentiality.

During the data collection processes, the researcher provides adequate time for respondents to fill and return the survey questionnaires due to their busy schedules. All participants are consulted and request to participate voluntarily prior to the study. The research purpose, objectives, and research questions are provided to all respondents in preparation for the data collection process, so that they are adequately aware of what is required of their participation. Further, each participant is only involved after signing a consent form, and reading an ethical statement of the study. It is hoped that these measures would help protect their reputation, since none of their contributions is traceable to any participant. The data generated from respondents are used exclusively for the purposes of the study and will not be available to third parties for any other purpose whatsoever.

Chapter Four

Result and Discussion

4.1 INTRODUCTION

The chapter covers the presentation and interpretation of the findings. The purpose of this study was to assess the challenges and opportunities of using Project Management Information System (PMIS) in the case of the Ethiopian Women Lawyers Association (EWLA). In addition, the study sought to examine to what extent the Ethiopian Women Lawyers Association (EWLA) used PMIS, to investigate the opportunities of using PMIS and to identify the challenges of using PMIS.

Data were collected through questionnaire from primary sources and secondary sources were collected from the Ethiopian Women Lawyers Association (EWLA). Findings from these primary and secondary sources are shown with tables and percentages.

4.2 QUESTIONNAIRE RESPONSE RATE

This study had a sample of 90 respondents whereby only 67 responses were obtained. This represents a response rate of 74.44%. According to Babbie (2002) any response of 50% and above is adequate for analysis thus 74.44% is even better.

Table 4-1: Response rate based on respondent’s position

Category of respondents	Number of questionnaires returned (i.e. feedback)	Target number of questionnaires (i.e. Sample size)	Response rate
Project Managers	13	13	14.08%
Project Coordinator	20	27	22.13%
Regional Coordinator	16	21	18.11%
Administrative Staff	18	29	20.12%
Total	67	90	74.44%

Source: Survey Data, 2020

4.3 DEMOGRAPHIC CHARACTERSTICS OF RESPONDENTS

The study sought to establish the background information of the respondents which includes the respondents' gender, age bracket, level of education, function and their role in the project.

4.3.1 Gender Distribution of Respondents

The study sought to find out the gender of the respondents. The findings obtained are as shown in below.

Table 4-2: Distribution of Respondents by Gender

Sex	Frequency	Percent
Male	36	54.05%
Female	31	45.95%
Total	67	100%

Source: Survey Data, 2020

As shown on table 4-1 majority (54.05%) of the respondents were male while females contributed to 45.95% of the respondents. These findings also indicate that there is a very good representation of gender and shows that both genders are well represented. In other words, there is gender equity and there is no discrimination in terms of gender.

4.3.2 Age Brackets of the respondents

The study also sought to establish the age bracket of the respondents. Age bracket was important in order to know which age bracket formed the majority of those who utilized the system in project management. The findings were as shown in the table below.

Table 4-3: Distribution of Respondents by Age

Age	Frequency	Percent
50 and above	9	13.51%
40 - 49	24	35.14%
30 - 39	14	21.62%
20 - 29	13	18.92%
Under 20	7	10.81%
Total	67	100%

Source: Survey Data, 2020

From the study findings, 13.51% of the respondents were aged 50 and above, 35.14% were aged between 40-49 years, 21.62% were aged between 30-39 years, 18.92% were aged between 20-29 years, and 10.81% were aged under 20 years. From these findings, it can be deduced that most of the project team members were aged between 40 and 49 years.

4.3.3 Level of Education of the respondents

The study also sought to establish the respondents' highest level of education. The level of education was important in order to determine the capability of the respondents to utilize Project Management information system.

Table 4-4: Distribution of Respondents by their highest level of education

Educational Level/Status	Frequency	Percent
Master	13	18.92%
Degree	47	70.27%
Diploma	7	10.81%
Total	67	100%

Source: Survey Data, 2020

From the findings in table 4-3, 18.92% of the respondents indicated that their level of education was masters, 70.27% indicated it was undergraduate degree, whereas 10.81%

indicated it was a diploma. These findings show that most of the project team members had undergraduate degree as their highest level of education.

4.3.4 Working Experience of the Respondents

The respondents were requested to indicate their working experiences. The researcher obtained the following results.

Table 4-5: Distribution of Respondents by their Working Experience

Work experiences	Frequency	Percent
More than 10 years	4	5.41%
6 - 10 years	33	48.65%
1 - 5 years	20	29.73%
Less than a year	11	16.22%
Total	67	100%

Source: Survey Data, 2020

From the findings, 48.65% of the respondents indicated that they had an experience of between 6 and 10 years, 29.73% of the respondents indicated that they had an experience of between 1 and 5 years, 16.22% indicated that they had less than an experience of less than 1 year, 5.41% indicated that they had an experience of more than 10 years. These findings show that most the project team members had an experience of between 6 and 10 years in the project.

4.4 OVERALL FINDINGS IN RESPONSE TO RESEARCH QUESTION

The last stage of data analysis involved generating the overall research findings for the broad research question the study was designed and implemented to respond to. The study generated the following findings regarding the Challenges and opportunities of using of PMIS in the case of EWLA.

4.4.1 THE PRACTICES OF USING A PMIS IN EWLA

The researcher of this study used two parts of information system components such as: Project Information needs and Project Technology Capacity to determine the practices of using PMIS of EWLA. Therefore, researcher has sent one-page simple questionnaire to 40 selected EWLA employees out of by make use of proportionate stratified sampling and 37 of them were responded to diagnose EWLA's practice of PMIS in detail. The result of the findings described here below.

Every project has different information needs both in quality and in quantity. Every project requires different levels of technologies to satisfy its basic information management needs, a small project with small needs will suffice with simple technologies, but large projects with large information needs can benefit from more extensive technological solutions (Caldwell 2004). Therefore, a project needs to identify the required level of technology based on project information needs and project technology capacity.

4.4.1(A) Project Information needs

The first step is to evaluate the level, volume and complexity of the information the project will manage, this will determine the level of information requirements. The respondents were asked to identify the project information needs. The results are shown in table 4-6 below.

Table 4-6: Project Information needs

No	Project Information needs	Level-I			Level-II			Level-III			Level-IV		
		Paper based system			Desktop Apps <i>Word, Excel</i>			Use Database system			Fully Integrated system		
		1st Choice	Feedback	Percentage	2nd Choice	Feedback	Percentage	3rd Choice	Feedback	Percentage	4th Choice	Feedback	Percentage
3.1.1	What are the requirements of information from the donor in terms of volume?	None	1	2.70	Low	4	10.81	Medium	27	72.97	High	5	13.51
3.1.2	What are the requirements of information from the country office management in terms of volume?	None	6	16.22	Low	25	67.57	Medium	6	16.22	High	0	0.00
3.1.3	Are there any local government policies or requirements to provide information?	None	5	13.51	Low	22	59.46	Medium	7	18.92	High	3	8.11
3.1.4	How often do we need to collect, and organize our information?	One or two times a year	2	5.41	Four or six times a year	2	5.41	Every month	25	67.57	Every week or more	8	21.62
3.1.5	How often do we need to analyze, report our information?	One or two times a year	0	0.00	Four or six times a year	8	21.62	Every month	24	64.86	Every week or more	5	13.51
3.1.6	What is the volume of information we need to collect from Beneficiaries?	None	0	0.00	Low	6	16.22	Medium	22	59.46	Large	9	24.32
3.1.7	What is the expected volume of surveys the project will undertake?	None	0	0.00	Low	11	29.73	Medium	24	64.86	Large	2	5.41
3.1.8	Do we need to do complex analysis on the data collected?	No	3	8.11	A few	7	18.92	Some	22	59.46	Several	5	13.51
3.1.9	Do we need the use of complex software packages? (SPSS, EPI Info, MER)	No	7	18.92	A few	21	56.76	Some	5	13.51	Several	4	10.81
Selected Level								X					

Source: Survey Data, 2020

According to the findings, the number of times each of the levels was mentioned, the level with the most responses, that is Level-III, is the required level of information complexity for the project.

4.4.1(B) Project Technology Capacity

The next step is to evaluate the current IT capacity of the project. This will let us know if we have the IT capacity that will satisfy the information requirement level from above.

The respondents were asked to identify the project technology capacity. The researcher obtained the following results below in Table 4-7.

Table 4-7: Project Technology Capacity

No	Project Technology Capacity	Level-I			Level-II			Level-III			Level-IV		
		Paper based system			Desktop Apps <i>Word, Excel</i>			Use Database system			Fully Integrated system		
		1st Choice	Feedback	Percentage	2nd Choice	Feedback	Percentage	3rd Choice	Feedback	Percentage	4th Choice	Feedback	Percentage
3.2.1	Do we have IT resources dedicated to the project?	No	4	10.81	No	24	64.86	Yes	8	21.62	Yes	1	2.70
3.2.2	What is the project capacity to manage technology?	None	2	5.41	Low	21	56.76	Medium	11	29.73	High	3	8.11
3.2.3	Does the project site have good communication, email, internet, etc.?	None	2	5.41	Low	25	67.57	Medium	9	24.32	High	1	2.70
3.2.4	How many staf will be using computers on the project?	None	0	0.00	Very Few	6	16.22	Most	30	81.08	All	1	2.70
3.2.5	What is the level of computer literacy of the project staff?	None	3	8.11	Low	23	62.16	Medium	8	21.62	High	3	8.11
3.2.6	Will the main office provide us with IT support?	No	5	13.51	Very Few	26	70.27	Some	0	0.00	Yes	6	16.22
3.2.7	Can we obtain good IT support near the project locations?	No	8	21.62	Very Few	25	67.57	Some	0	0.00	Yes	4	10.81
Current Level					X								
Required Level								X					

Source: Survey Data, 2020

From the findings, the project has identified that its current capacity is on Level-II but the desired level, to meet its information needs is Level-III. This project has large information management but low technical capacity. A project always needs to make a gap analysis to identify the current state and define what is needed to reach the desired state.

4.4.2 THE CRITICAL SUCCESS FACTORS (CSFs) FOR PMIS

The existing challenges have determined by make use of the critical success factors result. So, this part of the study consists of results and discussion of the critical success factors that contribute to the success of using the PMIS at Ethiopian Women Lawyers Associations (EWLAs). The questions consist of three different factors. The ranking of factors is done based on the level of importance of factors that affect the success of using PMIS.

4.4.2(A) The Challenges of using PMIS on System Quality

The study sought to determine the challenges of using Project Management Information System (PMIS) on its system quality in EWLAs project. The respondents were asked to requested to rate various aspects of general performance of PMIS in the organization. The results as shown in table 4.8 below.

Table 4-8 System Quality of a PMIS

No	System Quality of PMIS	Very Low		Low		Moderate		High		Very High		Total	
		1		2		3		4		5		FEEDBACK	Percent (%)
		FEEDBACK	Percent (%)	FEEDBACK	Percent (%)	FEEDBACK	Percent (%)	FEEDBACK	Percent (%)	FEEDBACK	Percent (%)		
2.1.1	Accessibility	2	2.99	5	7.46	12	17.91	20	29.85	28	41.79	67	100.00
2.1.2	Response time	1	1.49	11	16.42	20	29.85	25	37.31	10	14.93	67	100.00
2.1.3	Flexibility	21	31.34	17	25.37	13	19.40	9	13.43	7	10.45	67	100.00
2.1.4	Ease of use	4	5.97	24	35.82	28	41.79	8	11.94	3	4.48	67	100.00
2.1.5	Querying ease	6	8.96	11	16.42	30	44.78	15	22.39	5	7.46	67	100.00
2.1.6	Learning Ease	1	1.49	7	10.45	18	26.87	24	35.82	17	25.37	67	100.00
2.1.7	Systems integration	16	23.88	34	50.75	9	13.43	5	7.46	3	4.48	67	100.00
2.1.8	Multi-project capability	43	64.18	9	13.43	5	7.46	3	4.48	7	10.45	67	100.00
2.1.9	Error Recovery	11	16.42	23	34.33	14	20.90	13	19.40	6	8.96	67	100.00

NB: Feedback = frequency

(Source: Survey result, 2020).

According to the findings, the respondents rated *accessibility* in their organization as “very high” as shown by a percent 41.79%.The respondents also indicated with a percent of 37.31% and 35.82% that the general performance of both *Response time* and *learning*

Ease respectively in their organization were “high”. Further, the respondents indicated with a percent of 41.79% and 44.78% that the general performances of both *Ease of use* and *Querying ease* consecutively in their organization were “moderate”.

Additionally, the respondents rated the general performance of *System integration* and *Error recovery* in their organization were “low” as shown respectively by a percent of 50.75% and 34.33%. Besides, the respondents indicated with a percent of 31.34% and 64.18% that the general performance of *Flexibility* and *Multi-project capability* respectively were “very low”.

4.4.2(B) The Challenges of using PMIS on Information Quality

The study sought to establish the challenges of using PMIS on Information Quality in EWLA's projects. The respondents were further asked to rate the impact of various aspects of quality of information produced by using Project Management Information System in EWLA's project implementation. The findings are shown in table 4.9.

Table 4-9 Information Quality of a PMIS

No	Information Quality of a PMIS	Very Low		Low		Moderate		High		Very High		Total	
		1		2		3		4		5		FEEDBACK	Percent (%)
		FEEDBACK	Percent (%)	FEEDBACK	Percent (%)	FEEDBACK	Percent (%)	FEEDBACK	Percent (%)	FEEDBACK	Percent (%)		
2.2.1	Availability	2	2.99	7	10.45	22	32.84	29	43.28	7	10.45	67	100.00
2.2.2	Relevance	1	1.49	5	7.46	24	35.82	27	40.30	10	14.93	67	100.00
2.2.3	Reliability	4	5.97	14	20.90	33	49.25	12	17.91	4	5.97	67	100.00
2.2.4	Precision	18	26.87	28	41.79	14	20.90	6	8.96	1	1.49	67	100.00
2.2.5	Comprehensiveness	2	2.99	21	31.34	25	37.31	13	19.40	6	8.96	67	100.00
2.2.6	Security	5	7.46	13	19.40	21	31.34	25	37.31	3	4.48	67	100.00

NB: Feedback = frequency

(Source: Survey result, 2020).

From the findings, the respondents indicated with a percent of 43.28%, 40.30% and 37.31% that the general performances of *Availability*, *Relevance* and *Security* respectively in their organization were “high”. Beside this, the respondents indicated with a percent of 49.25% and 37.31% that the general performance of *Reliability* and *Comprehensiveness* respectively were “moderate”.

Furthermore, the *precision* of information produced by Project Management Information System in EWLA’s project implementation was rated as “low” as shown by a percent of 41.79%.

4.4.2(C) The Challenges of PMIS on Service Quality of a PMIS

The study sought to establish the challenges of using PMIS on Service Quality in EWLA’s projects. The respondents were asked to indicate the impact of various aspects of quality of service produced by using Project Management Information System in EWLA’s project implementation. The findings are shown in table 4.10

Table 4-10 Service Quality of a PMIS

No	Service Quality of PMIS	Very Low		Low		Moderate		High		Very High		Total	
		1		2		3		4		5			
		FEEDBACK	Percent (%)	FEEDBACK	Percent (%)	FEEDBACK	Percent (%)	FEEDBACK	Percent (%)	FEEDBACK	Percent (%)	FEEDBACK	Percent (%)
2.3.1	Assurance	3	4.48	20	29.85	26	38.81	11	16.42	7	10.45	67	100.00
2.3.2	Empathy	2	2.99	4	5.97	19	28.36	32	47.76	10	14.93	67	100.00
2.3.3	Responsiveness	5	7.46	7	10.45	20	29.85	23	34.33	12	17.91	67	100.00

NB: Feedback = frequency

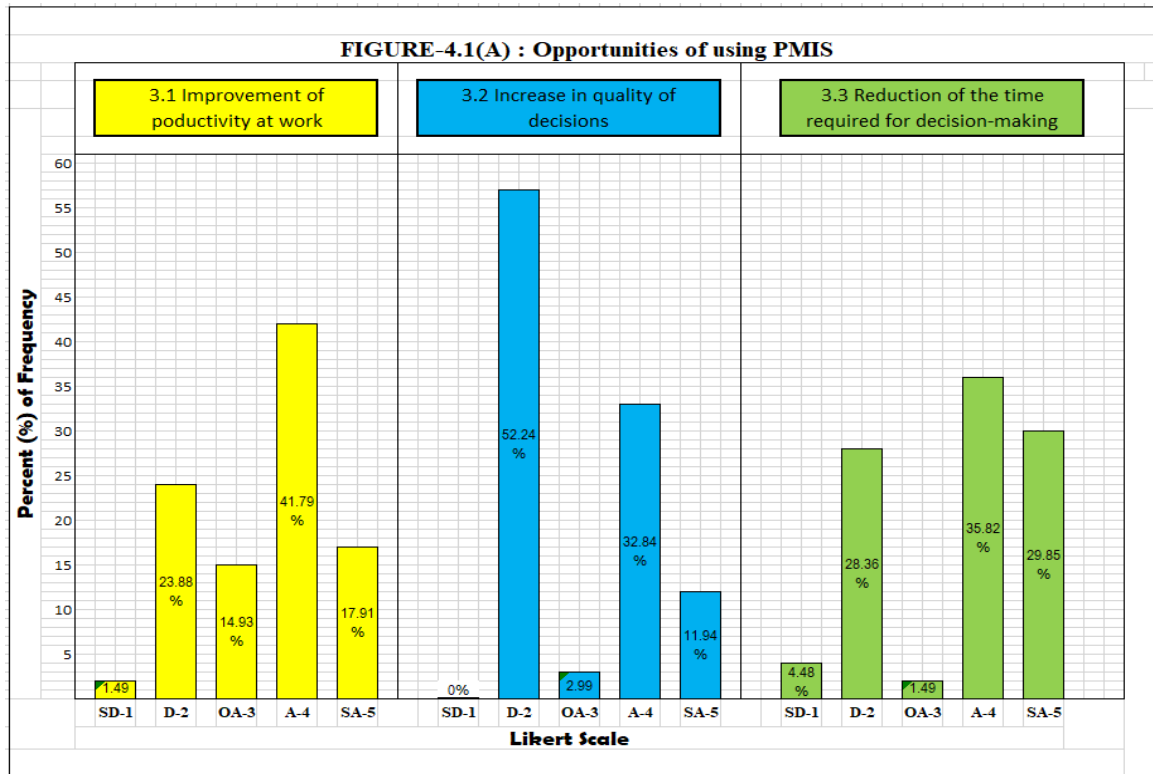
(Source: Survey result, 2020).

From the findings, the respondents rated both *Empathy* and *Responsiveness* in their organization as “high” as shown by a percent of 47.76% and 34.33% respectively. In addition, the respondents also indicated with a percent of 38.81% that the general performance of *Assurance* in their organization were “Moderate”.

4.4.3 OPPORTUNITIES OF USING A PMIS

Despite the fact that, there are challenges in the EWLA has many opportunities to make use of Project Management Information System. The researcher forwarded questions to the respondents to identify the major opportunities of that enable to use PMIS in EWLA.

By illustrating the results of the questionnaire using figures the researcher tried to find out the major opportunities.



Source: Survey Data, 2020

1- Improvement of productivity at work

Regarding to opportunities of using PMIS in EWLA the researcher asked whether respondents agreed with improvement of productivity is the opportunity that enable EWLA to use PMIS. From the respondents 17.91% of them replied that they strongly agreed the improvement of productivity is the opportunity for using PMIS. 41.79% of the respondents replied they agreed improvement of productivity is the opportunity of using PMIS. On other hand 14.93% of the respondents were occasionally agreed. The other 23.88% of the respondents replied they disagreed improvement of productivity is the opportunity for using PMIS in EWLA. 1.49% of the respondents replied strongly disagree as it is shown in the above figure 4.1(A).

From the above figure 4.1(A) we can conclude that over half of the respondents (59.70%) considered improvement of productivity is the opportunity of using PMIS in EWLA.

2- Increase in quality of decision

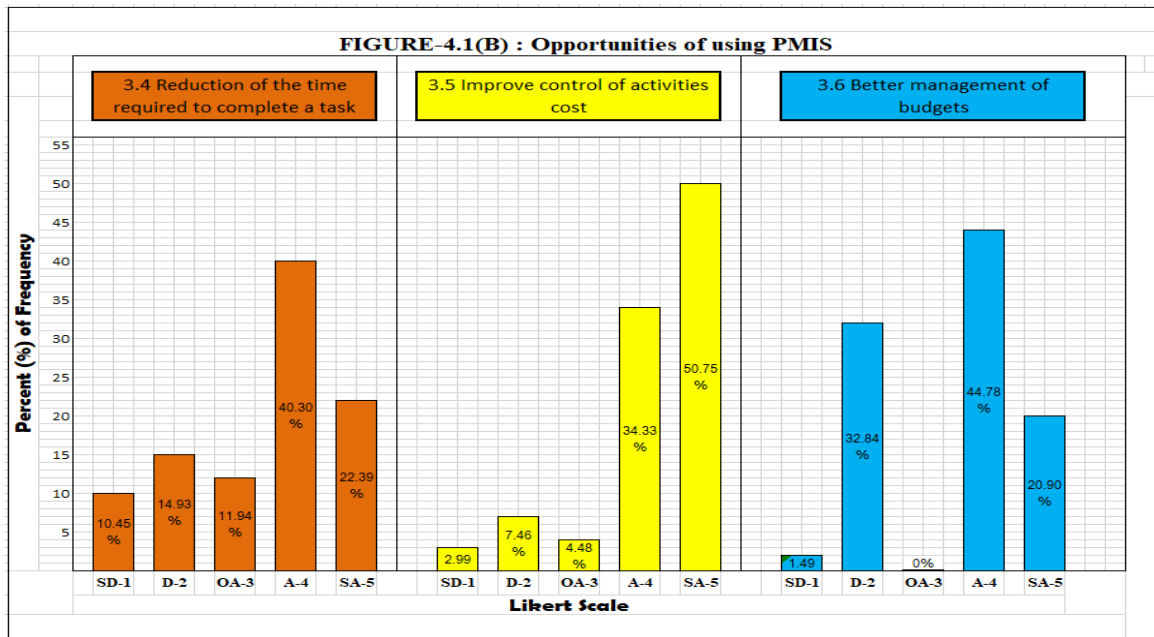
Regarding to increase in quality of decision, 11.94% of the respondents replied that they strongly agreed that increase in quality of decision is an opportunity of using PMIS. On the other hand 32.84 % of the respondents replied they agreed that increase in quality of decision is an opportunity of using PMIS. But 2.99% of the respondents are occasionally agreed that increase in quality of decision is an opportunity of using PMIS. 52.24% of the respondents from the sample replied disagreed that increase in quality of decision is an opportunity of using PMIS. None of respondents replied strongly disagree as it is shown in the above figure 4.1(A).

Figure 4.1(A) project team members' response about increase in quality of decision in EWLA is not an opportunity of using PMIS.

3- Reduction of the time required decision-making

The researcher includes reduction of the time required for decision-making in EWLA as an opportunity to using PMIS. Among the respondents 20 which represent 29.85% of respondents replied they strongly agree with the contribution of reduction of the time required for decision-making is an opportunity to use PMIS. As it is shown in Figure 4.1(A), among the respondents 35.82% of them, which are 24 in number, agreed that reduction of the time required for decision-making is an opportunity to EWLA to use PMIS. On the other hand 1 respondent which represent 1.49% of the respondents replied they are occasionally agreed. Other 19 respondents, which are 28.36% of the respondents, replied that they disagreed with the contribution of the reduction of the time required for decision-making as an opportunity to use PMIS. Three of the respondents which represent 4.48% replied strongly disagree.

From the above figure 4.1(A) we can conclude that over half of the respondents (65.67%) considered the reduction of the time required for decision-making is the opportunity of using PMIS in EWLA.



Source: Survey Data, 2020

4- Reduction of the time required to complete a task

Regarding to opportunities of using PMIS in EWLA the researcher asked whether respondents agreed with reduction of the time required to complete a task is the opportunity to use PMIS in EWLA. From the respondents 25.37% of them replied that they strongly agreed the reduction of the time required to complete a task is an opportunity of using PMIS. 40.30% of the respondents replied they agreed reduction of the time required to complete a task is the opportunity of using PMIS. On other hand 11.94% of the respondents were occasionally agreed and disagreed. The other 10.45% of the respondents replied they disagreed reduction of the time required to complete a task is the opportunity of using PMIS in EWLA.

From the above figure 4.1(B) we can conclude that over half of the respondents (65.67%) considered reduction of the time required to complete a task is the opportunity of using PMIS in EWLA.

5- Improve control of activities cost

Regarding to improve control of activities cost, 50.75% of the respondents replied that they strongly agreed that improve control of activities cost is an opportunity of using

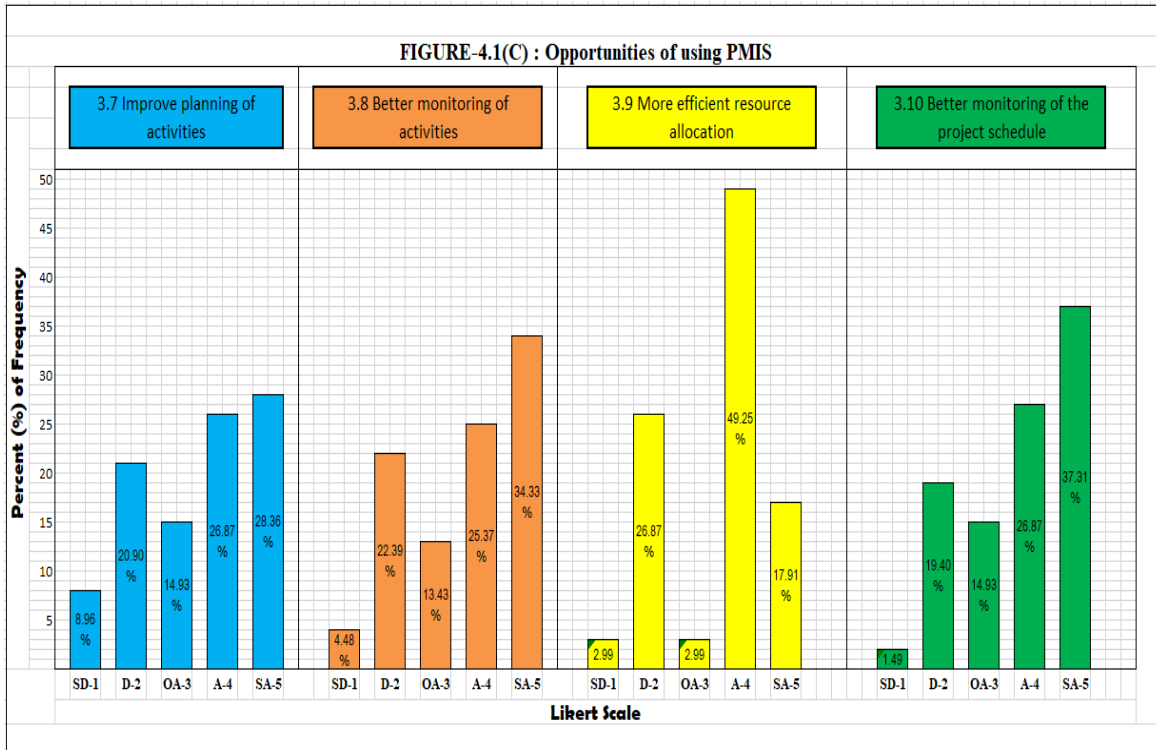
PMIS. On the other hand 34.33 % of the respondents replied they agreed that improve control of activities cost is an opportunity of using PMIS. But 4.48% of the respondents are occasionally agreed that improve control of activities cost is an opportunity of using PMIS. 7.46% of the respondents from the sample replied disagreed that improve control of activities cost is an opportunity of using PMIS. 2.99% of respondents replied strongly disagree as it is shown in the above figure 4.1(B).

Figure 4.1(B) project team members' response (85.07%) about improve control of activities cost in EWLA is an opportunity of using PMIS.

6- Better Management of Budget

The researcher includes better management of budget in EWLA as an opportunity to using PMIS. Among the respondents 14 which represent 20.90% of respondents replied they strongly agree with the contribution of better management of budget is an opportunity to use PMIS. As it is shown in Figure 4.1(B), among the respondents 44.78% of them, which are 30 in number, agreed that better management of budget is an opportunity to EWLA to use PMIS. On the other hand, none of respondents which represent 0.00% of the respondents replied they are occasionally agreed. Other 22 respondents, which are 32.84% of the respondents, replied that they disagreed with the contribution of the better management of budget as an opportunity to use PMIS. One of the respondents which represent 1.49% replied strongly disagree.

From the above figure 4.1(B) we can conclude that over half of the respondents (65.67%) considered the better management of budget is the opportunity of using PMIS in EWLA.



Source: Survey Data, 2020

7- Improve planning of activities

Regarding to opportunities of using PMIS in EWLA the researcher asked whether respondents agreed with improve planning of activities is the opportunity to use PMIS in EWLA. From the respondents 28.36% of them replied that they strongly agreed the improve planning of activities is an opportunity of using PMIS. 26.87% of the respondents replied they agreed improve planning of activities is the opportunity of using PMIS. On other hand 14.93% of the respondents were occasionally agreed and 20.90% of the respondents were disagreed. The other 8.96% of the respondents replied they strongly disagreed improve planning of activities is the opportunity of using PMIS in EWLA.

From the above figure 4.1(C) we can conclude that over half of the respondents (55.22%) considered improve planning of activities is the opportunity of using PMIS in EWLA.

8- Better monitoring of activities

Regarding to better monitoring of activities, 34.33% of the respondents replied that they strongly agreed that better monitoring of activities is an opportunity of using PMIS. On

the other hand 34.33 % of the respondents replied they agreed that better monitoring of activities is an opportunity of using PMIS. But 13.43% of the respondents are occasionally agreed that better monitoring of activities is an opportunity of using PMIS. 22.39% of the respondents from the sample replied disagreed that better monitoring of activities is an opportunity of using PMIS. 4.48% of respondents replied strongly disagree as it is shown in the above figure 4.1(C).

Figure 4.1(C) project team members' response (59.70%) about better monitoring of activities in EWLA is an opportunity of using PMIS.

9- More efficient resource allocation

The researcher includes more efficient resources allocation in EWLA as an opportunity to use PMIS. Among the respondents 12 which represent 17.91% of respondents replied they strongly agree with the contribution of more efficient resources allocation is an opportunity to use PMIS. As it is shown in Figure 4.1(C), among the respondents 49.25% of them, which are 33 in number, agreed that more efficient resources allocation is an opportunity to EWLA to use PMIS. On the other hand 2 respondents which represent 2.99% of respondents replied they were occasionally agreed. Other 18 respondents, which are 26.87% of the respondents, replied that they disagreed with the contribution of more efficient resources allocation as an opportunity to use PMIS. Two of the respondents which represent 2.99% replied strongly disagreed.

From the above figure 4.1(C) we can conclude that over half of the respondents (67.16%) considered more efficient resources allocation is the opportunity of using PMIS in EWLA.

10- Better monitoring of the project schedule

Regarding to better monitoring of the project schedule, 50.75% of the respondents replied that they strongly agreed that better monitoring of the project schedule is an opportunity of using PMIS. On the other hand 34.33 % of the respondents replied they agreed that better monitoring of the project schedule is an opportunity of using PMIS. But 4.48% of the respondents are occasionally agreed that better monitoring of the project schedule is an opportunity of using PMIS. 7.46% of the respondents from the sample replied disagreed

that better monitoring of the project schedule is an opportunity of using PMIS. 2.99% of respondents replied strongly disagree as it is shown in the above figure 4.1(C).

Figure 4.1(C) project team members' response (85.07%) about better monitoring of the project schedule in EWLA is an opportunity of using PMIS.

4.5 DISCUSSION OF FINDINGS

Based on the findings the researcher evaluated and interpreted the implications of the findings. Thus by examining, interpreting and qualifying the results drawn from the findings the discussions are done qualitatively and quantitatively.

4.5.1 Discussion of practices of using PMIS in EWLA

The study found that nowadays the Ethiopian Women Lawyer Associations using Level-II that Desk top computer based PMIS. But, there is a misalignment between project information needs and project technology capacity.

4.5.2 Discussion of finding about Challenges of using PMIS

4.5.1(A) System Quality of PMIS

Regarding to the current challenges facing Ethiopian Women Lawyers Association there is a huge difference in quality level with regard to flexibility of the system. The results as shown in table 4.11 below.

Table 4-11 Summary of findings on System Quality of PMIS in EWLA

No	System Quality of PMIS	Very Low		Low		Moderate		High		Very High		Total		Remark			
		1		2		3		4		5				Sum(3+4+5)		Wt	Grade
		FEEDBACK	Percent (%)	FEEDBACK	Percent (%)	FEEDBACK	Percent (%)	FEEDBACK	Percent (%)	FEEDBACK	Percent (%)	FEEDBACK	Percent (%)	FEEDBACK	Percent (%)	1	Very Low
2.1.1	Accessibility	2	2.99	5	7.46	12	17.91	20	29.85	28	41.79	67	100.00	60	89.55		Very High
2.1.2	Response time	1	1.49	11	16.42	20	29.85	25	37.31	10	14.93	67	100.00	55	82.09		Very High
2.1.3	Flexibility	21	31.34	17	25.37	13	19.40	9	13.43	7	10.45	67	100.00	29	43.28		Moderate
2.1.4	Ease of use	4	5.97	24	35.82	28	41.79	8	11.94	3	4.48	67	100.00	39	58.21		Moderate
2.1.5	Querying ease	6	8.96	11	16.42	30	44.78	15	22.39	5	7.46	67	100.00	50	74.63		High
2.1.6	Learning Ease	1	1.49	7	10.45	18	26.87	24	35.82	17	25.37	67	100.00	59	88.06		Very High
2.1.7	Systems integration	16	23.88	34	50.75	9	13.43	5	7.46	3	4.48	67	100.00	17	25.37		Low
2.1.8	Multi-project capability	43	64.18	9	13.43	5	7.46	3	4.48	7	10.45	67	100.00	15	22.39		Low
2.1.9	Error Recovery	11	16.42	23	34.33	14	20.90	13	19.40	6	8.96	67	100.00	33	49.25		Moderate
Total		11.7	17.41	15.7	23.38	16.6	24.71	13.6	20.23	9.56	14.26	67	100.00	39.7	59.20		Moderate

Source: Survey Data, 2020 **NB:**VL=1/5=20/100; L=2/5=40/100; M=3/5=60/100; H=4/5=80/100; VH=5/5=100/100

The study found that on System quality of PMIS, the respondents perceive that the system have good *Flexibility*, *Ease of use*, and *Error Recovery* Since, both rated as “Moderate”. In addition, the study also found that the system has lacks in quality with regard to the *System integration* and *Multi-project capability* because, both rated as “Low”. Therefore, the study revealed that both *System integration*, and *Multi-project capability* of the system become the challenges of using PMIS in EWLA from system quality of PMIS.

4.5.1(B) Information Quality of PMIS

The other challenge with regard to Information quality of PMIS was lack of the *precision* of information produced by Project Management Information System in EWLA’s project implementation was rated as “Low” as shown by a percent of 31.34%. Therefore, the study found that *precision* of information is another challenge of using PMIS in EWLA from information quality of PMIS. The results as shown in table 4.12 below.

Table 4-12 Summary of findings on Information Quality of PMIS in EWLA

No	Information Quality of a PMIS	Very Low		Low		Moderate		High		Very High		Total		Remark			
		1		2		3		4		5		Total		Sum(3+4+5)	Wt	Grade	Scale
		FEEDBACK	Percent (%)	FEEDBACK	Percent (%)	FEEDBACK	Percent (%)	FEEDBACK	Percent (%)	FEEDBACK	Percent (%)	FEEDBACK	Percent (%)	FEEDBACK	Percent (%)	1	Very Low
2.2.1	Availability	2	2.99	7	10.45	22	32.84	29	43.28	7	10.45	67	100.00	58	86.57		Very High
2.2.2	Relevance	1	1.49	5	7.46	24	35.82	27	40.30	10	14.93	67	100.00	61	91.04		Very High
2.2.3	Reliability	4	5.97	14	20.90	33	49.25	12	17.91	4	5.97	67	100.00	49	73.13		High
2.2.4	Precision	18	26.87	28	41.79	14	20.90	6	8.96	1	1.49	67	100.00	21	31.34		Low
2.2.5	Comprehensiveness	2	2.99	21	31.34	25	37.31	13	19.40	6	8.96	67	100.00	44	65.67		High
2.2.6	Security	5	7.46	13	19.40	21	31.34	25	37.31	3	4.48	67	100.00	49	73.13		High
Total		5.33	7.96	14.7	21.89	23.2	34.58	18.7	27.86	5.17	7.71	67	100.00	47	70.15		High

Source: Survey Data, 2020 **NB:** VL=1/5=20/100; L=2/5=40/100; M=3/5=60/100; H=4/5=80/100; VH=5/5=100/100

4.5.1(C) Service Quality of PMIS

The Study revealed that there is no any challenge with regard to service quality of PMIS in EWLA. The results as shown in table 4.13 below.

Table 4-13 Summary of findings on Service Quality of PMIS in EWLA

No	Service Quality of PMIS	Very Low		Low		Moderate		High		Very High		Total		Remark			
		1		2		3		4		5		Total		Sum(3+4+5)	Wt	Grade	Scale
		FEEDBACK	Percent (%)	FEEDBACK	Percent (%)	FEEDBACK	Percent (%)	FEEDBACK	Percent (%)	FEEDBACK	Percent (%)	FEEDBACK	Percent (%)	FEEDBACK	Percent (%)	1	Very Low
2.3.1	Assurance	3	4.48	20	29.85	26	38.81	11	16.42	7	10.45	67	100.00	44	65.67		High
2.3.2	Empathy	2	2.99	4	5.97	19	28.36	32	47.76	10	14.93	67	100.00	61	91.04		Very High
2.3.3	Responsiveness	5	7.46	7	10.45	20	29.85	23	34.33	12	17.91	67	100.00	55	82.09		Very High
Total		3.33	4.98	10.3	15.42	21.7	32.34	22	32.84	9.67	14.43	67	100.00	53.3	79.60		High

Source: Survey Data, 2020 **NB:** VL=1/5=20/100; L=2/5=40/100; M=3/5=60/100; H=4/5=80/100; VH=5/5=100/100

4.5.1(D) Overall Quality of PMIS

In general, based on the findings, majority of the respondents indicated that the overall quality of the PMIS in EWLA rated as “high” with 69.65%. But, the study also found that 59.20% represented Moderate. Therefore, the organization does not consider any one of

the three technical success factors of PMIS (System Quality, Information Quality and Service Quality) as a challenge. The results as shown in table 4.14 below.

Table 4-14 Summary of findings on Overall Quality of PMIS in EWLA

No	variables	Very Low		Low		Moderate		High		Very High		Total		Remark		
		1		2		3		4		5		Sum(3+4+5)		Wt	Grade	Scale
		FEEDBACK	Percent (%)	FEEDBACK	Percent (%)	FEEDBACK	Percent (%)	FEEDBACK	Percent (%)	FEEDBACK	Percent (%)	FEEDBACK	Percent (%)	FEEDBACK	Percent (%)	1 Very Low
1	System Quality of PMIS	11.7	17.41	15.7	23.38	16.6	24.71	13.6	20.23	9.56	14.26	67	100.00	39.7	59.20	Moderate
2	Information Quality of PMIS	5.33	7.96	14.7	21.89	23.2	34.58	18.7	27.86	5.17	7.71	67	100.00	47	70.15	High
3	Service Quality of PMIS	3.33	4.98	10.3	15.42	21.7	32.34	22	32.84	9.67	14.43	67	100.00	53.3	79.60	High
Total		6.78	10.12	13.6	20.23	20.5	30.54	18.1	26.98	8.13	12.13	67	100.00	46.7	69.65	High

Source: Survey Data, 2020 **NB:**VL=1/5=20/100; L=2/5=40/100; M=3/5=60/100; H=4/5=80/100; VH=5/5=100/100

4.5.3 Discussion of finding about Opportunities of using PMIS

The study found the following findings which are as shown in below in Table 4-15.

Table 4-15 Summary of the opportunities of using PMIS in EWLA

No	Opportunities of using PMIS	Strongly Disagreed		Disagree		Occasionally Agreed		Agreed		Strongly Agreed		Total		Remark		
		1		2		3		4		5		Sum(3+4+5)		Wt	Grade	Scale
		FREQUENCY	Percent (%)	FREQUENCY	Percent (%)	FREQUENCY	Percent (%)	FREQUENCY	Percent (%)	FREQUENCY	Percent (%)	FREQUENCY	Percent (%)	FEEDBACK	Percent (%)	1 Strongly Disagreed
3.1	Improvement of productivity at work	1	1.49	16	23.88	10	14.93	28	41.79	12	17.91	67	100.00	50	74.63	Agreed
3.2	Increase in quality of decisions	0	0.00	35	52.24	2	2.99	22	32.84	8	11.94	67	100.00	30	47.76	Occasionally Agreed
3.3	Reduction of the time required for decision-making	3	4.48	19	28.36	1	1.49	24	35.82	20	29.85	67	100.00	44	67.16	Agreed
3.4	Reduction of the time required to complete a task	7	10.45	10	14.93	8	11.94	27	40.30	15	22.39	67	100.00	42	74.63	Agreed
3.5	Improve control of activities costs	2	2.99	5	7.46	3	4.48	23	34.33	34	50.75	67	100.00	57	89.55	Strongly Agreed
3.6	Better management of budgets	1	1.49	22	32.84	0	0.00	30	44.78	14	20.90	67	100.00	44	65.67	Agreed
3.7	Improve planning of activities	6	8.96	14	20.90	10	14.93	18	26.87	19	28.36	67	100.00	37	70.15	Agreed
3.8	Better monitoring of activities	3	4.48	15	22.39	9	13.43	17	25.37	23	34.33	67	100.00	40	73.13	Agreed
3.9	More efficient resource allocation	2	2.99	18	26.87	2	2.99	33	49.25	12	17.91	67	100.00	45	70.15	Agreed
3.10	Better monitoring of the project schedule	1	1.49	13	19.40	10	14.93	18	26.87	25	37.31	67	100.00	43	79.10	Agreed
Total		2.6	3.88	16.7	24.93	5.5	8.21	24	35.82	18.2	27.16	67	100.00	42.2	71.19	Agreed

Source: Survey Data, 2020 **NB:**VL=1/5=20/100; L=2/5=40/100; M=3/5=60/100; H=4/5=80/100; VH=5/5=100/100

Respondents were asked to rank the most important opportunities of using project management information system in the EWLA's context. Accordingly, 89.55 percent of the respondents put improve control of activities cost in the first rank because it is rated as "Strongly Agreed".

In addition, as can be seen from Table 4.13, improvement of productivity at work, reduction of the time required for decision-making, reduction of the time required to complete a task, better management of budgets, improve planning of activities, better monitoring of activities, more efficient resource allocation and better monitoring of the project schedule, taken as the opportunities of using PMIS in EWLA in the second rank since, all of them are rated as "Agreed".

Further, 47.76 percent of the respondents put increase in quality of decisions in the last rank because, it is rated as "Occasionally Agreed".

Chapter Five

Summary, Conclusions and Recommendations

5.1 INTRODUCTION

This chapter gives a summary of the findings that were analyzed by the researcher in the study. It also involves the conclusions derived, recommendations given and the areas recommended for further study by the researcher in light of the data collected and the analysis thereof.

5.2 SUMMARY OF FINDINGS

This section encompasses, it comprises of the Challenges of using Project Management Information system and the Opportunities of using Project Management Information system in the Ethiopian Women Lawyers Association (EWLA).

5.2.1 The Practices of using PMIS in EWLA

On practice of using PMIS in EWLA, the study found that the project has identified that its current capacity is on Level-II (Use Desktop applications *Words, Excel* etc.) but the desired level, to meet its information needs is Level-III (Use Database systems). This project has large information management but low technical capacity. A project always needs to make a gap analysis to identify the current state and define what is needed to reach the desired state.

5.2.2 The Challenges of Using Project Management Information System in EWLA

The study found that the following findings regarding the challenges of PMIS in EWLA:

On System quality of PMIS, the study found that the system have lacks in quality with regard to the System integration and Multi-project capability because, both rated as “Low” 25.37% respondents agree (13.43% rated as “moderate”, 7.46% rated as “high” and 4.48% rated as “Very high”) and 22.39% respondents agree (7.46% rated as “moderate”, 4.48%

rated as “high” and 10.45% rated as “Very high”) respectively. Therefore, the study revealed that both System integration and Multi-project capability of the system become the challenges of using PMIS in EWLA from system quality of PMIS.

On Information quality of PMIS, the study also found that the system have lacks in quality with regard to the precision of information as rated as “Low” 31.34% respondents agree (20.90% rated as “moderate”, 8.96% rated as “high” and 1.49% rated as “Very high”). Thus, the study revealed that the precision of information of the PMIS become the challenges of using PMIS in EWLA from information quality of PMIS.

On Service quality of PMIS, the study found that there is no any challenge in using of PMIS in EWLA.

5.2.3 The Opportunities of Using Project Management Information System in EWLA

Respondents were asked to rank the most important opportunities of using project management information system in the EWLA’s context. Accordingly, 89.55 percent of the respondents put improve control of activities cost in the first rank because it is rated as “Strongly Agreed”.

Additionally, the study revealed that better monitoring of the project schedule rank in 2nd opportunity of using PMIS in EWLA since, 79.10%of respondents agree.

Further, the study also found that improvement of productivity at work and reduction of the time required to complete a task were the 3rdopportunities of using PMIS in EWLA because 74.63% of respondents agree. Beside this, the study found that better monitoring of activities was the 5th opportunity of using PMIS with 73.13% of respondents agree.

Furthermore, the study revealed that improve planning of activities, more efficient resource allocation and better monitoring of the project schedule were the 6th opportunities of using PMIS in EWLA since, 70.15% of respondents agree.

In addition, the study found that reduction of the time required for decision-making and better management of budgets both the 8th and 9th opportunities of using PMIS in EWLA because 67.16% and 65.67% of respondents respectively agree.

Finally, the study revealed that 47.76 percent of the respondents consider increase in quality of decisions does not become an opportunity of using PMIS in EWLA with rated as “Occasionally Agreed”.

5.3 CONCLUSIONS

The research aim of this study was to assess the challenges and opportunities of using Project Management Information System (PMIS) in the Ethiopian Women Lawyers Association (EWLA). More specifically, one objective was examining to what extent the Ethiopian Women Lawyers Association (EWLA) using PMIS and to identify the challenges of using PMIS. Another objective was to investigate the opportunities of using PMIS.

Following the conclusions of previous research that PMIS success models should continue to be validated and challenged, the results of this research show that the project management information system (PMIS) success factors presence or absence determines the success of using PMIS in EWLA. They can be drivers or enablers. Their absence can cause failure or become a challenge, and their presence can cause success using PMIS in EWLA. Therefore, based on the above summary of the major findings, the results of this research study show that:

Regarding the practice of using PMIS in EWLAs,

- The study found that nowadays the Ethiopian Women Lawyer Associations using Level-II that Desk top computer based PMIS.
- The misalignment between project information needs and project technology capacity indicate that there is a technical gap.

Regarding the Challenges of using PMIS in EWLAs,

- ❖ On System Quality of PMIS, the system has lacks in quality with regard to the System integration and Multi-project capability. Thus, both the System integration and Multi-project capability were the challenges of using PMIS in EWLA.
- ❖ On Information Quality of PMIS, the system has lacks in quality with regard to the precision of information. Therefore, the precision of information was another challenge of using PMIS in EWLA.
- ❖ On the Service Quality of PMIS, there is no any challenge observed.

Regarding the Opportunities of using PMIS in EWLA's,

- On the other hand improvement of productivity at work, reduction of the time required for decision-making, reduction of the time required to complete a task, improve control of activities cost, better management of budgets, improve planning of activities, better monitoring of activities, more efficient resource allocation and better monitoring of the project schedule are the opportunities using PMIS in EWLA.
- But, increase in quality of decisions does not be the opportunity of using PMIS in EWLA due to less percentage score 47.76%.

5.4 RECOMMENDATIONS

Based on the findings presented in chapter four, the research forwarded the under listed recommendations.

- In order to attain the effective using of PMIS, the Ethiopian women lawyers Association must make special efforts towards the success of using PMIS by dealing with the challenges & opportunities mentioned in this research work.
- Again the EWLA should be used the opportunities of using PMIS to address the challenges of it.
- The Ethiopian women lawyers Association have tried to identify the information requirement and the technology capacity of EWLA's project to determine the kind of PMIS which exactly fit with the projects by taking into consideration the uniqueness characteristics of a project.

- The interviewers replied that during the semi-structured interview were conducted currently EWLA do not have any ICT policy. Thus, EWLA should prepare its ICT policy in collaboration with all stakeholders to make it comprehensive enough in addressing issues related to PMIS. In addition, should work towards introducing and implementing the policy.
- The EWLA, project managers and project team members should work in collaboration to benefit the best opportunities out of using a PMIS.

Areas for Further Studies

The study recommends that a longitudinal study be conducted on the Challenges and opportunities of using PMIS in EWLA. The study on the challenges and opportunities of using PMIS in EWLA will enable the findings of this study to be generalized and replicated for Non-Governmental Organizations in Ethiopia. This will be useful in providing a more reliable reference material for other researchers interested in the area of using PMIS.



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Appendix - A : The Validation of Critical Success Factors (CSFs)

1) Testing for reliability

a value higher than 0.7 is considered a relatively higher reliable. In the survey, result of reliability test is 0.835 to 0.941. Therefore, this provides evidence that all the factors have a high internal consistency and reliable.

2) Testing for content validity

To ensure the content validity of our survey was established from the existing literature, and our measures were constructed by adopting constructs validated by other researchers, as a result of the pretesting, we conducted with experts in the field of PMIS in construction. After the pretesting of the measures these items were modified to fit the construction context studied.

3) Testing for construct validity

Construct validity was used to check for unidimensionality. Unidimensionality means that a single factor is extracted for each test. Each factor grouping was evaluated by factor analysis for construct validity. table presents results of the unidimensional test. Since all of the KMO value were greater than 0.5, and the percentage of variance explained by each component was more than %, all 3 components were demonstrated to be unidimensional.

Table 7. Result of unidimensionality Test

Component	KMO value	Factor Loading	Eigen value	Percentage variance explained
1	0.921	0.747-0.856	6.549	65.492
2	0.896	0.753-0.861	5.292	66.152
3	0.789	0.679-0.835	3.054	61.084

Appendix - B : Main Questionnaire



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Research Questionnaire

This is project work questionnaire to be filled only by those employees who have been participated before and who is currently involving in any EWLA's Project Work activities directly and indirectly

Dear Respondent,

This questionnaire is part of research being conducted on the topic "*The Challenges and Opportunities of Using Project Management Information System (PMIS): In the Case of The Ethiopian Women Lawyer's Associations (EWLAs).*" It is designed to collect relevant data for this study that aims to address the general and specific objectives of the study.

The research will mainly assess the challenges and opportunities of using Project Management Information System (PMIS) in the Ethiopian Women Lawyers Association (EWLA). The purpose of the study is for the partial fulfillment of the requirements for the Degree of Masters of Arts in Project Management. The information that you provide is strictly confidential and will be used only for academic purpose. Thus, you are kindly requested to fill the questionnaire genuinely without writing your name.

Thank you for spending your valuable time!

Kind regards,

ZewduGebeyehu

Cell Phone # 0911-07-57-88

Email: zewdugebeyehu6@gmail.com

Part-I : Demographic Information of the respondents'

Please respond to the following questions by putting " X " mark you agree with in the box provided.

1.1. Gender/Sex : → Male → Female

1.2. Age group :

→ under 20 → 20 - 29 → 30 - 39 → 40 - 49 → Above 50

1.3. Educational Level :

Under Diplom → Diploma → Degree → Masters → PhD

1.4. For how long you have been in the EWLA ?

→ Less than a year → 1 - 5 years → 6 - 10 years → More than 10 years

1.5. What is your position in EWLA ?

→ Project Managers → Project Coordinators
 → Regional Coordinators → Administrative Staff member

The Current Project Management Information System used within EWLA

Part-II : Project Management Information System (PMIS) Success Factors

Please mark with a CROSS " X " in the applicable box with regard to the current PMIS used daily

2.1 System Quality of PMIS

No	System Quality of PMIS		Very Low	Low	Moderate	High	Very High
	Description	Question	1	2	3	4	5
2.1.1	Accessibility	I am comfortable using the system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.1.2	Response time	The system is able to provide information quickly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.1.3	Flexibility	The system is easy to use according to my purpose	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.1.4	Ease of use	I am satisfied in using the system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.1.5	Querying ease	The system enables me to easily manipulate project data using query	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.1.6	Learning Ease	The system is easy to learn	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.1.7	Systems integration	The system is integrated with project information systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.1.8	Multi-project capability	The system allow me to process many projects' information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.1.9	Error Recovery	The system provides repair facilities, in the event of a failure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2.2 Information Quality of PMIS

No	Information Quality of PMIS		Very Low	Low	Moderate	High	Very High
	Description	Question	1	2	3	4	5
2.2.1	Availability	Searching of information is easy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.2.2	Relevance	The information I get is important & useful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.2.3	Reliability	The information I get is reliable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.2.4	Precision	The information that I get is according to my needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.2.5	Comprehensiveness	The information that I received is complete	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.2.6	Security	The information that I get is Secured	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2.3 Service Quality of PMIS

No	Service Quality of PMIS		Very Low	Low	Moderate	High	Very High
	Description	Question	1	2	3	4	5
2.3.1	Assurance	The data that I have is kept confidential	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.3.2	Empathy	The system provides usage guidelines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.3.3	Responsiveness	System provides the appropriate response	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Part-III : Opportunities of using Project Management Information System (PMIS)

Please mark with a CROSS " X " in the applicable box with regard to the current PMIS used daily

No	Opportunities of Using a PMIS	Strongly Disagree	Rarely Disagree	Ocasio nally	Often Agree	Strongly Agree
		1	2	3	4	5
3.1	Improvement of poductivity at work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.2	Increase in quality of decisions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.3	Reduction of the time required for decision-making	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.4	Reduction of the time required to complete a task	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

No	Opportunities of Using a PMIS	Strongly Disagree	Rarely Disagree	Ocasio nally	Often Agree	Strongly Agree
		1	2	3	4	5
3.5	Improve control of activities cost	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.6	Better management of budgets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.7	Improve planning of activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.8	Better monitoring of activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.9	More efficient resource allocation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.10	Better monitoring of the project schedule	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Part-VIII : Questions that need further explanation

1. Do you think using PMIS contribute to the success of project management? How

2. From your experience what do you suggest to increase the effectiveness of PMIS of the organization and points to be improved?

3. If there is any other issue that you observed in relation to the challenges and opportunities of using PMIS, please write down here:

Procedures/Steps you need to follow when you received this questionnaire via your email & forwarding it to a researcher through his email or any other social media after you

1. First you need to download both questionnaire front page & the page that contain all questions
2. Next open and read both the downloaded a word front page and an excell page that contains all questions
3. Then fill the softcopy of the questionnaire by putting " X " mark you agree with in the box provided and save it well.
4. Finally, forward the completed softcopy of the questionnaire soon to a researcher via his email : zewdugebeyehu6@gmail.com or through his telegram/Viber/imo using his Cell phone number 0911-07-57-88

Thank you for your kind cooperation. Stay Safe !!

Appendix - C : Semi Structure Interview Guide for Managers



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Semi Structure Interview guide for Managers

1. Please give me general information about the company. (Branches, working hours, number of employees disaggregated by sex, hiring and promotion policy.
2. Please describe the nature and types of projects handled by the organization.
3. Is there any pushing factors that the organization enables to use PMIS?
4. How does the practice of using a PMIS in EWLA looks like?
5. Do EWLA has ICT policy?
6. Please give me a detail explanation on the challenges of using PMIS.
7. Please give me a detail explanation on the opportunities of using PMIS.
8. Are there any other issues concerning using PMIS that have not been covered in the interview and that you wish to bring to our attention?

Appendix-E : Questionnaire to Check Practices of using PMIS in EWLA

1 Information Requirements

Please respond to the following questions by putting " X " mark you agree with in the box provided.

No	Project Information needs	Level-I	Level-II	Level-III	Level-IV
		Paper based system	Desktop Apps <i>Word, Excel</i>	Use Database system	Fully Integrated system
1.1	What are the requirements of information from the donor in terms of volume?	↓ <input type="checkbox"/> None	↓ <input type="checkbox"/> Low	↓ <input type="checkbox"/> Medium	↓ <input type="checkbox"/> High
1.2	What are the requirements of information from the country office management in terms of volume?	↓ <input type="checkbox"/> None	↓ <input type="checkbox"/> Low	↓ <input type="checkbox"/> Medium	↓ <input type="checkbox"/> High
1.3	Are there any local government policies or requirements to provide information?	↓ <input type="checkbox"/> None	↓ <input type="checkbox"/> Low	↓ <input type="checkbox"/> Medium	↓ <input type="checkbox"/> High
1.4	How often do we need to collect, and organize our information?	↓ <input type="checkbox"/> One or two times a year	↓ <input type="checkbox"/> Four or six times a year	↓ <input type="checkbox"/> Every month	↓ <input type="checkbox"/> Every week or more
1.5	How often do we need to analyze, report our information?	↓ <input type="checkbox"/> One or two times a year	↓ <input type="checkbox"/> Four or six times a year	↓ <input type="checkbox"/> Every month	↓ <input type="checkbox"/> Every week or more
1.6	What is the volume of information we need to collect from Beneficiaries?	↓ <input type="checkbox"/> None	↓ <input type="checkbox"/> Low	↓ <input type="checkbox"/> Medium	↓ <input type="checkbox"/> Large
1.7	What is the expected volume of surveys the project will undertake?	↓ <input type="checkbox"/> None	↓ <input type="checkbox"/> Low	↓ <input type="checkbox"/> Medium	↓ <input type="checkbox"/> Large
1.8	Do we need to do complex analysis on the data collected?	↓ <input type="checkbox"/> No	↓ <input type="checkbox"/> A few	↓ <input type="checkbox"/> Some	↓ <input type="checkbox"/> Several
1.9	Do we need the use of complex software packages? (SPSS, EPI Info, MER)	↓ <input type="checkbox"/> No	↓ <input type="checkbox"/> A few	↓ <input type="checkbox"/> Some	↓ <input type="checkbox"/> Several

2 Technology Capacity

Please respond to the following questions by putting " X " mark you agree with in the box provided.

No	Project Technology Capacity	Level-I	Level-II	Level-III	Level-IV
		Paper based system	Desktop Apps <i>Word, Excel</i>	Use Database system	Fully Integrated system
2.1	Do we have IT resources dedicated to the project?	↓ <input type="checkbox"/> No	↓ <input type="checkbox"/> No	↓ <input type="checkbox"/> Yes	↓ <input type="checkbox"/> Yes
2.2	What is the project capacity to manage technology?	↓ <input type="checkbox"/> None	↓ <input type="checkbox"/> Low	↓ <input type="checkbox"/> Medium	↓ <input type="checkbox"/> High
2.3	Does the project site have good communication, email, internet, etc.?	↓ <input type="checkbox"/> None	↓ <input type="checkbox"/> Low	↓ <input type="checkbox"/> Medium	↓ <input type="checkbox"/> High
2.4	How many staf will be using computers on the project?	↓ <input type="checkbox"/> None	↓ <input type="checkbox"/> Very Few	↓ <input type="checkbox"/> Most	↓ <input type="checkbox"/> All
2.5	What is the level of computer literacy of the project staff?	↓ <input type="checkbox"/> None	↓ <input type="checkbox"/> Low	↓ <input type="checkbox"/> Medium	↓ <input type="checkbox"/> High
2.6	Will the main office provide us with IT support?	↓ <input type="checkbox"/> No	↓ <input type="checkbox"/> Very Few	↓ <input type="checkbox"/> Some	↓ <input type="checkbox"/> Yes
2.7	Can we obtain good IT support near the project locations?	↓ <input type="checkbox"/> No	↓ <input type="checkbox"/> Very Few	↓ <input type="checkbox"/> Some	↓ <input type="checkbox"/> Yes