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ASSESSMENT ON THE CHALLENGES AND PROSPECTS OF
INTEGRATED FINANCIAL MANAGEMENT INFORMATION
SYSTEM IMPLEMENTATION IN ETHIOPIA

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JUNE, 2020

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**“ASSESSMENT ON THE CHALLENGES AND PROSPECTS OF
INTEGRATED FINANCIAL MANAGEMENT INFORMATION
SYSTEM IMPLEMENTATION IN ETHIOPIA”**

**BY
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**A THESIS SUBMITTED TO SCHOOL OF GRADUATE STUDIES
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DECLARATION

I, the undersigned declare that this thesis is my original work, prepared under the guidance and support of Dr. Abebaw Kassie. All source of material used for this thesis have been duly acknowledge. I further confirm that has not been submitted to any institution for the purpose of earning any degree.

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Abstract

Integrated Financial Management Information System (IFMIS) is an information system that tracks financial events and summarizes financial information. It supports adequate management reporting, policy decisions, fiduciary responsibilities and the preparation of auditable financial statements. In its basic form, an IFMIS is little more than an accounting system configured to operate according to the needs and specifications of the environment in which it is installed. Sound integrated financial management information systems (IFMIS) can not only help developing country governments gain effective control over their finances, but also enhance transparency and accountability, reducing political discretion and acting as a deterrent to corruption and fraud. This study therefore aimed at assessing the challenges that IFMIS implementation is facing due to staff resistance, lack of top management commitment, complexity of the system, lack of capacity and technical skill plus the prospects of the system in the government budgeting process, on automated procurement process, government service delivery and report generation. The study covered five public bodies in Ethiopia where 566 IFMIS users were involved in the population. Then stratified random sampling method was used to select a sample of 234 senior and junior IFMIS users. Data collection was based on primary data using structured questionnaire. Descriptive statistics were employed in data analysis. The Statistical Package for Social Sciences (SPSS20) tool aided in data analysis. The study found out that IFMIS implementation is facing resistance from users, the top management lacks commitment to properly monitor and evaluate the progress and being part of the implementation process, it is also seen as complex system by the users which creates frustration for them and the users also lack the capacity and technical skill to effectively use the system. On the other hand, the finding also showed that IFMIS had a positive effect in different aspects which includes enhancing report generation, enhances transparency and accountability, supports budget planning and execution, improves record management in the organizations, affects the overall procurement performance positively. The study recommended that to create awareness on the prospects of the system to the top management of the public bodies and their staffs, to develop a team to improve competency and also track the performance of all users, enforce the users to take training and give basic computer literacy training, prepare enough reference study manuals to the users.

Key Terms: *Integrated Financial Management Information System, Staff Resistance, Top management Commitment, Capacity and Technical Skill, Government Budgeting Process*

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CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Nowadays Information Technology has become an important part of our daily activity. IT and Information Systems changed the business atmosphere. Western countries are convinced that the information society will result in economic and social benefits. The author quoting organization for economic cooperation and development notes that information infrastructures are expected to stimulate economic growth, increase productivity, create jobs and improve the quality of life (Audenhove, 2000). Governments around the world are investing a great deal of resources to streamline and improve public financial management. In the modern world, developing countries like Kenya, Tanzania, Ethiopia and several others in the African continent have been encouraged to reform their public expenditure management systems through computerization of the entire public sectors in response to the increasing volume of data or information that need to be processed (Jared, Migiro, & Mutambara, 2017). The establishment of an IFMIS has become an important benchmark for the country's budget reform agenda often regarded as a precondition for achieving effective management of budgetary resources (Diamond & Khemani, 2005).

IFMIS is built through ERP solutions such as EPICOR, SAP, Free Balance, and ORACLE. ERP systems are integrated software systems that have functions to manage different business processes, such as material management, sales and operations planning, or order processing. (Samuel, 2012). ERP systems have the ability to automate and integrate business processes, share data and practices across the organization, and produce and access real time information. A successful ERP can be the backbone of business intelligence for an organization, giving management a unified view of its processes. Due to the capabilities of large ERP system and the essential solutions expected from this system to support the enterprise, its implementation process is complex and risky. It engages a considerable amount of enterprise resources, which are put at risk during implementation.

IFMIS is an information system that tracks financial events and summarizes financial information. It supports adequate management reporting, policy decisions, fiduciary responsibilities and the preparation of auditable financial statements. In its basic form, an IFMIS is little more than an accounting system configured to operate according to the needs and specifications of the environment in which it is installed. In general terms, it refers to the automating of financial operations (Hendriks, 2012). According to Hendriks (2012), IFMIS can improve public financial management in a number of ways, but generally seeks to enhance confidence and credibility of the budget through greater comprehensiveness and transparency of information. The purpose of using an IFMIS is to improve budget planning and execution by providing timely and accurate data for budget management and decision-making. A more standardized and realistic budget formulation process is allowed for and improved control over budget execution is affected through the full integration of budget execution data.

An IFMIS stores, organizes and makes access to financial information easy. It not only stores all the financial information relating current and past years spending, but also stores the approved budgets for these years' details on inflows and outflow of funds, as well as complete inventories of financial assets (e.g. equipment, land and buildings) and liabilities (debt). A strong Public Financial Management (PFM) system is a catalyst for economy's growth and development. It ensures that the government and its departments raise manage and spend public resources in an efficient and transparent way. Sound systems, strong legal and regulatory frameworks as well as a competent and productive civil service are the cornerstones of an efficient PFM regime. Public Financial Management reforms have been identified as the key drivers to efficient public service delivery and creation of wealth and employment. Sound integrated financial management information systems (IFMIS) can not only help developing country governments gain effective control over their finances, but also enhance transparency and accountability, reducing political discretion and acting as a deterrent to corruption and fraud (Cherotich & Bichanga, 2016). IFMIS is usually considered in terms of core and non-core financial functions while public financial management is a broad field with multiple systems, it is striking how limited the commonly cited specification of the core functions of an IFMIS is a conventional specification of the IFMIS core is accounting and reporting functions, while non-core functions include budgeting, commitment control, cash management and disbursement functions. The common specification of the core

functions does not include all of the components needed for effective financial control and, by definition, therefore, will increase risk. (MUSEE , 2011)

Obstacles should not be underestimated. The road to implementing successful IFMIS in developing countries is paved with difficulties, such as resistance from the bureaucracies involved; lack of decision-making from the top; corruption and fraud; and, in the case of conflict ridden countries, the instability and violence that impair any efficient long-term work. Moreover, IFMIS systems are complicated, expensive and difficult to manage and maintain. Obstacles notwithstanding, the task is still feasible. The technology exists and aid agencies can play a very important role in helping the decision makers choose the most adaptable and appropriate tools for their environments. The choice of a step-by-step or phased approach offers the best chances for successful implementation as a project can be carefully monitored and reviewed regularly. Given the cost of such exercises, it is important to aim first for a sound “entry level”, which, once functioning effectively, can then be extended to support additional functions. (USAID, IFMIS A Practical Guide, 2008)

Again according to (USAID,2008) political will is crucial to this process. Once the decision has been made to implement an IFMIS, the battle is half-worn. Garnering support from those who will use the new system, and overcoming resistance from those who stand to lose from its implementation, can be an equally daunting challenge. Change management is therefore an important part of any IFMIS project. IFMIS implementation requires patience. (Rozner, 2008) stated that the full project life cycle from definition of objectives, to system specifications, to system procurement, configuration, testing and rollout- can easily take years to complete. For this reason, IFMIS implementation is best done when it is divided into clearly defined stages with clear objectives and milestones. As each stage is completed, stakeholders should carefully assess project progress and ensure that the system under development still meets the needs of the government, and that government commitment to the IFMIS is still there. The ultimate goal should be to put in place sound systems that are well understood and embraced by counterparts and in the end will be self-sustaining.

1.2 Statement of the Problem

In most developing countries (DCs), budget execution and accounting processes were/are either manual or supported by very old and inadequately maintained software applications. This has had deleterious effects on the functioning of their public expenditure management (PEM) systems, that are often not adequately appreciated. The consequent lack of reliable and timely revenue and expenditure data for budget planning, monitoring, expenditure control, and reporting has negatively impacted budget management. The results have been a poorly controlled commitment of government resources, often resulting in a large buildup of arrears; excessive borrowing, pushing up interest rates and crowding out private-sector investment; and misallocation of resources, undermining the effectiveness and efficiency of service delivery. Further, governments have found it difficult to provide an accurate, complete, and transparent account of their financial position to parliament or to the interested parties, including donors and the general public. This lack of information has hindered transparency and the enforcement of accountability in government, and has only contributed to the perceived governance problems in many of these countries (Dener & Young, 2013).

In light of these adverse developments, it is perhaps not surprising that many DCs have pressed for, or have been pressed into, adopting financial management information system (FMIS) projects to strengthen their PEM systems. The establishment of an FMIS has consequently become an important benchmark for the country's budget reform agenda, often regarded as a precondition for achieving effective management of the budgetary resources. There is a broad agreement that a fully functioning IFMIS can improve governance by providing real-time financial information that financial and other managers can use to administer programs effectively, formulate budgets, and manage resources. The FDRE Ministry of Finance is charged with the responsibility of providing proper budgetary and expenditure management of government financial resources. In this regard, the ministry has been continually striving to improve financial management systems through various Public Financial Sector Reform Programs, aimed at increasing transparency, accountability, as well as responsiveness of public financial resources to enhance the quantity and quality of public service delivery to meet its developing priorities (Mohammed, 2017). According to (Chene, 2009), the automation projects in Ethiopia faced major challenges of resource, capacity, technological infrastructure, change

resistance, lacks institutional and political commitment and dependency on foreign aid policies. The IFMIS project office established under Ministry of Finance as of 2010, aimed at implementing the system within 850 public institutes throughout the country in the interior of five years. Through the IFMIS project implementation Ethiopia's stated goal is to: "support public bodies and regions to generate accurate, accessible, and timely government-wide financial information and reports which contribute to the improved quality of the nation's financial decision making". At the outset of an IFMIS project, it is necessary to ensure the availability of adequate financial resources.

Various factors determine the success of IFMIS development and implementation in developing countries. Though, the Ethiopian government has made ambitious steps in adopting and implementing IFMIS, a lot of issues are still hindering it from its progress. Creating efficient, effective, transparent and accountable government financial system was among the strategic directions pursued by the Government of Ethiopia. Various reform programs of system development and human resource capacity building were designed and implemented in the areas of auditing, government accounting, program budgeting, public procurement and property administration (USAID, 2011). The project by now consumed nine years of time but the system implemented within ninety federal public bodies only. Consequently, in order to appropriately identify the challenges, the area requires investigation.

There is lack of research studies and availability of sufficient current literature in the Ethiopian context. (Mohammed, 2017) has studied factors affecting the implementation of Integrated Financial Management Information System in Ethiopian Public Sector by taking only Ministry of Finance as a sample. (Derara, 2016) has also done a case study in the Addis Ababa University to see the factors affecting IFMIS implementation in Ethiopia. This shows that the studies that were done on the area mainly focuses only on the factors affecting the implementation and limited their scope of study only to a single organization. So the research problem that this study aims to address borders not only on the challenges the organizations are facing but also the prospects of IFMIS for the public bodies by taking five organizations which have a different nature and volume of transaction and implemented the system at a different period of time.

1.3 Objective of the study

The main objective of this research is assessing the major prospects and challenge of Integrated Financial Management Information System (IFMIS).

The specific objectives of this research are: -

- To assess the challenge of staff resistance for IFMIS implementation
- To determine the challenge of public bodies' top management commitment in implementation of IFMIS
- To assess the complexity of the system is a challenge for IFMIS implementation
- To discuss capacity and technical skills are hindering IFMIS implementation
- To assess the IFMIS implementation support in the government budgeting process
- To identify the prospect of IFMIS in the automated procurement process
- To determine the improvement of government service delivery with IFMIS implementation
- To assess the report generation enhancement with the implementation of IFMIS

1.4 Scope of the Study

The scope of this study is limited on assessing the prospects and challenges of IFMIS implementation in five Ethiopian public institutions at the federal level namely: Ministry of Finance, Ethiopian Food and Drug Authority, Office of the Federal Auditor General, Technical and Vocational Education and Training Institute, Trade Competition and Consumer's Protection Authority. The study focuses on the users of IFMIS in each department: finance users, planning users, property Admin users, procurement users, top management users and self-service users on the implementation of the integrated financial management information system.

The five public bodies were selected due to the diversified characteristics in terms of activity, nature of transaction and source of fund so that they will represent all the public bodies which implemented IFMIS with different nature. Ministry of Finance is the responsible organization for the overall IFMIS implementation project in all the public bodies and all the public bodies are reporting to the MOF. So it is believed that the research would have been incomplete if the sample size fails to incorporate this public body. In addition to fund from the central treasury,

Ethiopian Food and Drug Authority is one of the public bodies that runs its business by the fund raised from donors and lenders. On the other hand, Trade Competition and Consumer's protection Authority is one of small public bodies that runs its activity having fund only from Central treasury while Office of the Federal Auditor General is one of the big public bodies that have big number of transactions. On the other hand, in addition to funds from central treasury, Technical and Vocational Education and Training Institute is among the public bodies that runs its activities by revenue generated from internal source.

1.5 Significance of the Study

The research was important because it will investigate and will provide answers to issues that are becoming more applicable in the increasingly information systems environment; leadership and financial management of public sector. The research conducted for this study will identify the challenges that influenced implementation of IFMIS and the prospect of IFMIS to the public bodies then will recommend solutions to the issues. The information contained in the study will be important to the top management of the public bodies because it can be used to make major improvements to managerial deficiencies.

As stated in GTPII (NPC, 2016), the Government of Ethiopia will strive to get rid of rent-seeking practices by fully and more effectively implementing the reforms on government finance and public procurement. The capacity of the regulatory agency for public procurement and property administration will be strengthened for a well-functioning public procurement and property management system. The structures/departments of finance, internal audit, procurement and property administration of budgetary government offices will be further strengthened by investing in institutionalized and centralized training and human resource development programs. The IFMIS project will be fully implemented across all federal institutions.

Clearly, it is critical to identify and understand the challenges that largely affect IFMIS implementation and the prospects that IFMIS will bring to the public sector. This study will identify the challenges of the implementation and analyze them accordingly. If these challenges are addressed properly, the contribution to the knowledge about IFMIS success will be huge. Furthermore, the research provides a clear understanding about the concept of Integrated Financial Management Information System and its prospects.

This should allow MOF, as the responsible government organization of IFMIS implementation, to make informed decisions in regard to the existing alternatives and form a foundation for enhancing implementation of IFMIS successfully throughout the country. The findings of the study will assist for government policy makers to address the challenges faced in the implementation process, for users to have a clear insight on the benefits of the system and for other stake holders to know the challenges that have been faced during implementation.

1.6 Organization of the Study

This study is organized into five main chapters. Chapter one of the study presents the general introduction of the study includes; background of the study, statement of the problem, objective of the study, scope of the study and significance of the study. The second chapter is dedicated to review of related literature. The third chapter presents a method of the study. It described the type and design of the research used, detail description of participants/sample/ of the study, data sources, data collection tools and methods of data analysis. The fourth chapter covered results and discussions about the research topic. Here, the results/findings of the study summarized and discussed. Finally, the fifth chapter will explain the conclusion and recommendation part of the study.

1.7 Limitation of the study

The scope of the study and its output is limited by various factors. Time was the major constraint, making the research to be limited on selected 5 public bodies only. Moreover, the time constraint also affected the collection of data from the federal organizations as the officials are busy with work and other office commitments like meeting and training. Additionally, lack of sufficient research in Ethiopian context on the subject made it difficult to collect information.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

In order to understand the IFMIS implementation, there has to be a clear understanding of what IFMIS is and the history should be reviewed. In addition, this section reviews the challenges that affect the effective implementation of IFMIS project. The chapter will also look at the benefits and prospects of IFMIS implementation on financial function and the empirical literature part consist of cases from other developing countries that have experience in the implementation of IFMIS project.

2.2 Definition of IFMIS

In the context of public financial management, IFMIS is the automation of the financial management systems and processes of public institutions. Thus, it encompasses the computerization of the formulation, preparation and execution of public budgets through to the accounting and/or reporting of public financial information with the help of an integrated system, (Peterson, 2006). According to (Rodin-Brown , 2008) also support the above definition by a Financial Management Information System, or Integrated Financial Management Information System (IFMIS), is an information system that tracks financial events and summarizes financial information. In its basic form, an IFMIS is little more than an accounting system configured to operate according to the needs and specifications of the environment in which it is installed. Generally, the term “IFMIS” refers to the use of information and communications technology in financial operations to support management and budget decisions, fiduciary responsibilities, and the preparation of financial reports and statements. As noted by (Diamond & Khemani, 2005), in the government realm, IFMIS refers more specifically to the computerization of public financial management (PFM) processes, from budget preparation and execution to accounting and reporting, with the help of an integrated system for financial management of line ministries, spending agencies and other public sector operations. The principal element that “integrates” an IFMIS is a common, single, reliable platform database (or a series of interconnected databases)

to and from which all data expressed in financial terms flow. Integration is the key to any successful IFMIS.

The successful IFMIS implementation project is characterized by many factors. “A project can be considered to be successful if it is completed within the time bound, completed by using assigned financial plan, achieves basically all goals originally set for it and it is accepted and used by the clients for whom the project is intended (Pinto & Slevin, 1987). In addition, in a project has achieved a large portion potential benefit we can assume that the project implementation is successful for instance reduction in human resource or a decrease in the cost of information technology. Another description would be that the system accomplishes the level of return on Investment identified in the project approval thus given the time assigned to the project, an IFMIS implementation can be evaluated based on cost of ownership against quantifiable benefits (Umble E., Haft R., & Umble M., 2003).

2.3 Development of IFMIS

In most developing countries (DCs), budget execution and accounting processes were/are either manual or supported by very old and inadequately maintained software applications. This has had deleterious effects on the functioning of their public expenditure management (PEM) systems that are often not adequately appreciated. The consequent lack of reliable and timely revenue and expenditure data for budget planning, monitoring, expenditure control, and reporting has negatively impacted budget management. The results have been a poorly controlled commitment of government resources, often resulting in a large buildup of arrears; excessive borrowing, pushing up interest rates and crowding out private-sector investment; and misallocation of resources, undermining the effectiveness and efficiency of service delivery. Further, governments have found it difficult to provide an accurate, complete, and transparent account of their financial position to parliament or to other interested parties, including donors and the general public (Diamond & Khemani, 2005). Implementing a new software solution carries with it a number of challenges. The process can be overwhelming, confusing and lengthy—all reasons that can cause companies to avoid making the switch at all. Lack of a detailed comprehensive training methodology, the migration of data from the legacy system to

the new solution, lack of support beyond the implementation phase can be listed as a major setback for any software implementation project. (Prinzo, 2011)

In the 1990s, Sub-Saharan African governments and other developing countries embarked on plans to automate their business processes. Public financial management is one of the areas that were automated (Laizer & Suomi, 2016). Many are implementing new, Integrated Financial Management Information Systems (IFMIS) that computerize and automate key aspects of budget and accounting operations (Rozner, 2008). This system has been championed by the World Bank to help countries in the management of their public funds since 1984. Amongst the regions funded by World Bank, Latin America and the Caribbean regions stand out having successfully implemented IFMIS. (Jared, Migiro, & Mutambara, 2017). Introducing modern financial management systems demands a commitment to change: change in technology, in processes and procedures, in skills, responsibilities and behaviors.

IFMIS can be built through custom-built solutions or Commercial Off-the-shelf Solutions. Choosing between the two is contradictory. Custom-developed applications may be an effective interim solution when transitioning from manual to computerized recordkeeping. They also may be sufficient if the functionality of the system and the number of users is limited. However, the “build-your-own” approach has its shortcomings. Among others, custom systems generally take much longer to complete than expected. The work involved in developing all the applications required to support a labyrinth of information flows, then testing them and maintaining them, is colossal and prone to costly errors and delays. Moreover, because custom development tends to be piecemeal, it regularly results in fragmented systems that lack the basic controls and audit trails necessary for effective financial management.

On the other hand, commercial package producers invest considerable effort to standardize core IFMIS functions and “fail-safe” them against the most common problems faced in custom development. The detailed checks and balances built in to COTS systems are critical, especially for building and maintaining trust and transparency. There is great value in taking a COTS system that has been used successfully in other environments, or even one that has been certified by an internationally recognized accounting group. COTS packages are typically modular and can expand in capacity and functionality to meet expanding requirements. They can also be

configured to link up with “legacy” systems that are already in place to postpone investments in modules that may not be needed right away.

There are a number of COTS packages that tailor to and incorporate public sector requirements related to budget control and accountability. These start from simple “shareware” and “open Source” packages to complex, full-blown ERP systems, such as SAP, Oracle Financials, and Free Balance. Of course, there are drawbacks to using COTS, too. For one, COTS solutions are not cheap. Initial outlays for software alone may be reasonable, but the ongoing costs of maintenance contracts, license fees and system upgrades are considerable and can be greater than the initial costs of the COTS. Furthermore, COTS packages tend to impose a rigid, standardized structure on business processes, forcing a government to organize to the application, not the other way around. This may be a positive outcome, however, since many reforming governments could benefit from the discipline built into COTS software applications. Nevertheless, resistance should be anticipated.

The structure of public and business firms finance management are different, therefore the ERP is normally customized to fit the public finance management structure (Laizer & Suomi, 2016). ERP is an enterprise-wide information system that integrates and controls all the business processes in the entire organization. It is an enterprise information system designed to integrate and optimize the business processes and transactions in a corporation. The ERP is an industry-driven concept and systems, and is universally accepted by businesses and organizational industries as a practical solution to achieve an integrated enterprise information system solution. ERP implementations are usually large, complex projects, involving large groups of people and other resources, working together under considerable time pressure and facing many unforeseen developments. In order for an organization to compete in this rapidly expanding and integrated marketplace, ERP systems must be employed to ensure access to an efficient, effective, and highly reliable information infrastructure (Samuel, 2012).

According to (Addo-Tenkorang & Helo, 2011), ERP systems have become vital strategic tools in today’s competitive business environment. The ERP system facilitates the smooth flow of common functional information and practices across the entire organization. In addition, it improves the performance of the supply chain and reduces the cycle times. However, without top

management support, having appropriate business plan and vision, re-engineering business process, effective project management, user involvement and education and/or training, organizations cannot embrace the full benefits of such complex system and the risk of failure might be at a high level. (Samuel, 2012) stated that the implementation of ERP systems in organizations is an enormously complex undertaking. It is a high-risk project that needs to be managed and planned properly because it can affect nearly every aspect of organizational performance and functioning. ERP implementations are complex, resource consuming and risky projects for organizations implementing, that is why the organizational context has a great influence on the success of implementation.

The Government of Ethiopia has asked that the United States provide technical and financial assistance for the Ministry of Finance (MOF) Integrated Financial Management Information System (IFMIS) Oracle implementation with a goal to “support public bodies and regions to generate accurate, accessible, and timely government-wide financial information and reports which contribute to the improved quality of the nation’s financial decision making”. IFMIS will replace the locally developed legacy Integrated Budget Expenditure System (IBEX) with a commercial off the shelf (COTS) solution, Oracle E-Business Suite (USAID, IFMIS A Practical Guide, 2008).

To achieve these objectives MOF has commenced an initial 18-month Oracle implementation pilot program. Through a sole source solicitation process MOF selected the Oracle E-Business Suite which is an internationally accepted COTS software application to effectively manage public financial information at the national and sub-national levels. The selection of the Oracle E-Business Suite is a sound functional decision based on Ethiopia’s Public Financial Management (PFM) requirements, goals, and objectives. Then the implementation of IFMIS started in May, 2010 based on the Oracle Financials platform Software. IFMIS refers to computerization of public expenditure management processes including budget formulation, budget implementation and accounting with the help of a fully integrated system for financial management of the line ministries and other spending agencies (Kahari , Gathogo, & Wanyoike, 2015). In the government realm, IFMIS systems must be designed to support distinctly public sector functions. They must be able to handle and communicate all the financial movements for

the complex structure of budget organizations. Moreover, they must be designed to ensure compliance with budget laws and public finance rules and restrictions.

An IFMIS provides decision-makers and public-sector managers with the information they need to perform their managerial functions. IFMIS is also defined as a standardized reporting and monitoring system that consolidates all the information needs of the government into one information database. The scope and functionality of an IFMIS can vary from a basic general ledger accounting application to a comprehensive system covering budgeting, accounts receivable or payable, cash management, commitment control, debt, assets and liability management, procurement and purchasing, revenue management, human resource management and payroll (Biwott, 2015). Its role is to connect, accumulate, process and then provide information to all parties in the budget system on a continuous basis. It is therefore imperative that the system should be able to provide the required information timely and accurately, because if it does not it will not be used and cease to fulfil its central function as a system.

2.4 Challenges in the implementation of IFMIS

The implementation projects of ERP systems are big, strategic and complex projects which involve lots of risks, what is reflected on time, scope and costs of project implementation. Not like the private sector, the government sector has restricted law and procedures that will be changed rarely. This will affect any ERP implementation project from process point of view. However, the famous ERP software Packages like Oracle realize this fact and start research about studying government processes and try to produce a standard package for this purpose. The new trend of the government ERP industry is to build a shared platform for each government organization. According to (Chene, 2009), the main aim of an IFMIS, is to integrate all aspects of the government's budgetary cycle and provide suitable interfaces to other systems and entities. However, the implementation is facing lack of top management support and involvement, insufficient user training and education, change management issues, ineffective communications, inadequate knowledge transfer from consultants, staff resistance and inadequate infrastructure.

(Hendriks, 2012) conducted a study to identify the challenges and risks that are involved in the implementation of the IFMIS in order to develop guidelines that make the implementation more successful. The study used literature study methodology where theories were explored and used

to solve a research problem. Based on the theoretical research, solutions and guidelines were developed to solve challenges and risks experienced. The study found that the sheer size and complexity of an IFMIS poses significant challenges and a number of risks to the implementation process. In its main report on the 2004 Country Integrated Financial Assessment, the World Bank commented that, IFMIS is highly complex, sophisticated, and expensive (GAO, 2004). (Rodin-Brown , 2008) discussed the Best Practices for Designing and Implementing IFMIS and how to put them into place in Developing and Transitional countries. The study aimed at identifying the most appropriate strategies with respect to IFMIS project design, management, monitoring and evaluation around the world. The study concluded that IFMIS systems were complicated, expensive, difficult to manage and maintain.

Though (Proeller, 2013) points out that complexity of a system makes it more likely to be positively appreciated as compared to very simple systems, (Chene, 2009) also argues that making the right and simple technical choice for automation is so critical to the successful adoption and implementation of MIS. The platform on which the interconnectivity of the MIS operates also impacts on the successful implementation of the system and this involves the internet and the intranet facilities. Lack of IT capacity that works with the system, resistance due to complexity and technical challenges of the software are also additional challenges to the implementation. Hendricks points out that one of the major factors impeding successful implementation of IFMIS especially in the public sector is lack of capacity with IT knowledge. This can be due to the disparity in salary rewards of the private and public sectors with the private sector rewarding better salaries. Additionally, low budget on personnel emolument leads to inadequate capacity. Studies in other countries indicate lack of IT staff as a major contributor to the slow implementation of IFMIS (Diamond & Khemani, 2005).

(Rodin-Brown , 2008) again came to the conclusion that change management must be addressed early in the needs assessment phase of IFMIS implementation. If human needs are not addressed, the project will constantly be faced with resistance and obstacles from executive staff and elected officials, all the way down to civil service personnel who use the system regularly. Introducing modern financial management systems demands a commitment to change: change in technology, in processes and procedures, in skills, responsibilities and behaviors.

(Muriuki, 2009) studied challenges facing the Kenya Ministry of Finance in the adoption of automated financial system. The objective of the study was to determine the challenges facing the ministry of finance in managing change from legacy accounting systems to IFMIS. The study concluded that the major challenge was resistance to change brought about by fear of the unknown, not enough training, fear of redundancy and the fact that IFMIS ensured transparency leading to detection of fraud thus challenging the existing corrupt systems. It further recommended that ICT equipment and training be increased to boost employee awareness and that senior government officials show more support and commitment to the implementation of IFMIS.

(Combaz, 2015) in a study of implementing integrated financial management information systems found that one of the major challenges of IFMIS implementation is lack of adequate human and technical capacity in key PFM positions, combined with insufficient financial, organizational and human resources management. The study recommended that the introduction of new system should always be accompanied by systematic long term and timely capacity development. This involves establishing mechanisms to disseminate specific knowledge acquired by individuals to all relevant stakeholders in order to preserve the gained knowledge and capacity for the institution.

In addition, USAID practical guide (2008) identified challenges which were common to IFMIS around the world, these include: inadequate planning; poor communications between implementers, donors and government; shortage of management capacity and resources; changes in systems design documents without full agreement; poorly implemented trainings and unnecessary and spurious project expenditures.

According to (MUSEE , 2011) ,in Ethiopia, the automation process faced major challenges of resource, capacity, infrastructure, changes in government and dependency on foreign aid policies. Therefore, the reform strategy prioritized a pragmatic sequential approach based on the logic to ensure that the “basics” are in place before moving to more complex systems. A strategic choice was made to drive the automation process from the procedural requirements which were defined by the users, through an incremental and iterative approach, with government staff extensively being involved. The reform process first focused on bringing

existing system up to date through simplification, elimination of backlogs and sequential procedural change before introducing new systems. Constant consideration was given to limit the burden imposed on scarce staff throughout the whole process. This strategy was justified by low level of skills, evolving fiscal decentralization and the general degradation of the financial system that had taken place over the previous years. Based on a case study of Ethiopia, (Peterson, 2006) thus cautions against using IFMIS as an innovation in processes (a comprehensive change in procedures and organization driven by IT) rather than simply a change in processes (an incremental evolution driven by procedural reform and supported by IT).

2.5 Benefits of IFMIS

Information technology has a long history of use in cutting costs and raising outputs by automating basic, repetitive operations. There is evidence that investment in information technology to streamline processes and automate transactions provides business benefits by speeding up processes, substituting labor, and increasing operation volumes. Since ERP systems automate business processes and enable process changes, one would expect ERP systems to improve costs, productivity, cycle time, quality, and customer service (Blackburn, 1996). The root of ERP systems lies in their modules. Modules are the separate blocks designed to control specific business functions within the organization. Although ERP offerings range from custom and industry specific to mass off-shelf systems, most offer Finance, Manufacturing, Customer Service, Logistics, and Human Resources. (Keen, 1991), focused on the informational benefits to senior managers. With their centralized database and built-in data analysis capabilities it seems likely that ERP systems will similarly provide informational benefits to management. Informational benefits might help an organization achieve better resource management, improved decision making and planning, and performance improvement in different operating divisions of the organization. On the other hand, (Porter & Millar, 1985) define three generic strategies where IT could be used to contribute to achieving business competitive advantages: cost leadership, differentiation and focus. (Rackoff & Wiseman, 1985) expanded Porter's model to five strategic thrust areas where the company could make a major offensive or defensive move. These five thrusts are: differentiation, cost, innovation, growth and alliance.

Integrated information systems present a new opportunity for achieving competitive differentiation by customizing products or services for individual users at a lower cost, to directly support a tight link with customers and to all related business parties. ERP systems, with their large scale of business involvement and internal/external integration capabilities, could assist in achieving these strategic benefits: business growth, alliance, differentiation, innovation, cost, and external linkages. (Peters & Waterman, 1982) argues that in successful corporations, information technology was highly relied upon for its integrated processes and flexible system co-ordination in either supporting employee “common vision” communications or facilitating a flattened organizational structure and empowering users. IT tools, accumulated information, and application knowledge are key factors that facilitate organizational learning behavior. The integrated information processing capabilities of ERP systems could affect the establishment of the organizational capabilities by supporting organization structure changes, facilitating employee learning, empowering workers, building common visions. Infrastructure building was also mentioned, as one of the fundamental management objectives in IT investment (Weill & Broadbent, 1998).ERP systems with their integrated and standard application architecture provide an infrastructure that could support business flexibility for future changes, reduced IT costs and increased capability for quick and economic implementation of new applications.

At the start of the twenty first century, with the efforts of computerizing their government operation with respect to Public Financial Management(PFM), most developing countries has introduced Integrated Financial Management Information Systems (IFMIS) which automates different transactions and allows the use of online platform for real time solution to many financially delayed problems.

(Diamond & Khemani, 2005) stated the benefit of IFMIS in three categories. First, the improved recording and processing of government financial transactions also allows prompt and efficient access to reliable financial data. This supports enhanced transparency and accountability of the executive to parliament, the general public, and other external agencies. Second, an FMIS strengthens financial controls, facilitating a full and updated picture of commitments and expenditure on a continuous basis. Once a commitment is made, the system should be able to trace all the stages of the transaction processing from budget releases, commitment, purchase, payment request, reconciliation of bank statements, and accounting of expenditure. This allows a

comprehensive picture of budget execution. Third, it provides the information to ensure improved efficiency and effectiveness of government financial management. Generally, increased availability of comprehensive financial information on current and past performance assists budgetary control and improved economic forecasting, planning, and budgeting.

IFMIS practices if effectively implemented may result in a number of benefits in the public procurement performance such as enhanced transparency and compliance, increased performance and quality, and economic development (Mutui, 2014). The improved transparency of the public sector operation will itself will lead to improved efficiency of financial controls and other expenditure management procedures, rapid expedition of many transactions at once, rapid compilation of data from many sources for improved financial analysis and decision making and improved consistency of information and improved checks and balances. This shows that the IFMIS will greatly boost transactions thus improving the procurement performance of the state corporation. Hence it will work as a catalyst for economy's growth and development as it will ensure that the government and its departments manage the public resources efficiently and in an efficient and a transparent way. Similarly, the Kenyan Ministry of Finance adds on that IFMIS highly improves the performance of the public sector in that it; enables efficient resource allocation mechanisms, improves management information for decision making, establishes effective links between key players in accounting and financial management and improves financial controls by availing reliable and timely financial information (GoK, 2015). IFMIS also improves accounting, recording and reporting through timely, accurate financial data provision, accelerates the pace/scope of economic growth and generally enhances development partners' confidence.

IFMIS programme in the public sectors promotes efficiency and effectiveness of service delivery, once well implemented. By recording information into an integrated system that uses common values, IFMIS users can access the system and extract the specific information they require to carry out different functions and tasks. All manner of reports can be generated: balance sheets, sources and uses of funds, cost reports, returns on investment, aging of receivables and payables, cash flow projections, budget variances, and performance reports of all types (Mwaniki, 2014).

According to USAID practical guide (2008) Integrated Financial Management Information System in government refers to automation of public financial management (PFM) processes, from budget preparation and execution to accounting and financial reporting, with the help of an integrated financial management system for public bodies. According to DFID (2003) some of the benefits as: firstly, improved recording and processing of government financial transactions allow prompt and efficient access to reliable financial data hence support enhanced transparency and accountability of the executive to stakeholders. Secondly, availability of a complete and updated representation of revenue and expenditure as a result of strong financial controls provides an all-inclusive picture of budget execution. Lastly, the system provides comprehensive financial information which aids in better economic forecasting, planning, budgeting and budgetary control. The findings of (Bosire, 2016) shows that the employees level of accuracy increases together with the amount of work handled. The reduced level of errors increases the level of customer satisfaction. The study also established that the implementation of IFMIS has reduced the corruption practices as the civil servants' act with integrity while carrying out transactions and offering services to the public. Streamlined procedures and reduced corruption had mean IFMIS has ensured that the organization's budget is executed to avoid overspending. (Wescott & Bowornwathana, 2009) noted that IFMIS can facilitate recurrent/capital budget integration and improve accounting and reporting systems, but only if the country's budget and accounts classification is reformed and the system is appropriately phased and adapted to a country's capacity to maintain it. Based on another study that has been done by (Biwott, 2015) in Kenya, that implementation of IFMIS affects the overall procurement performance in the government ministries in Kenya where management commitment, capacity and training, the resistance and acceptance of IFMIS, and the level of IFMIS adoption have a positive effect on procurement performance. the study found that management commitment, capacity and training, the resistance and acceptance of IFMIS and the level of IFMIS adoption have positive influence on procurement performance. This means that a change in these variables would affect how procurements performed. The study thus concluded that IFMIS does have a positive and significant effect on the procurement performance at the ministries under the National Government.

2.6 Review of Empirical Studies

Some authors stress that enhancements are best made through a slow reinforcing of existing procedures and abilities. This system works with existing prerequisites and builds up client's learning and limit, which are typically restricted in low-and middle income nations. Thus, this technique will probably relieve the dangers related with IFMIS (Chene, 2009)

In view of the Ethiopian experience, (Peterson, 2006) indicates how improvement, not replacement, can prompt achievement. He advocates moving toward IFMIS as a procedure change, where IT supports finance related administration change and causes existing methodology to advance. On the other hand, he cautions against utilizing IT as a driver of change to supplant existing methods.

As indicated by (Mohammed, 2017), the automation process in Ethiopia faced major challenges of resource, capacity, infrastructure, changes in government and dependency on foreign aid policies. Therefore, the reform strategy prioritized a pragmatic sequential approach based on the logic to ensure that the “basics” are in place before moving to more complex systems. A strategic choice was made to drive the automation process from the procedural requirements which were defined by the users, through an incremental and iterative approach, with government staff extensively being involved. The reform process first focused on bringing existing system up to date through simplification, elimination of backlogs and sequential procedural change before introducing new systems. Constant consideration was given to limit the burden imposed on scarce staff throughout the whole process. This strategy was justified by low level of skills, evolving fiscal decentralization and the general degradation of the financial system that had taken place over the previous years.

(Derara, 2016) made a case study at Addis Ababa University to see the factors affecting the implementation of IFMIS and found that employees resisted the implementation of IFMIS for fear of making mistake and for the absence of promotion for the fast learner. And lack of the capacity and technical skill is also being a challenge with a possible cause for the lack of capacity and technical skill of IFMIS users was lack of proper training, ICT phobia, lack of experts to guide the users, and lack of accounting background. Further management laxity in supporting the IFMIS users had largely affected the effective implementation of IFMIS.

2.6.1 IFMIS Implementation in Developing Countries

Tanzania

The IFMIS in Tanzania appears to be the most successfully implemented system in Anglophone African countries. Its implementation was distinguished by selecting a mid-range commercial software package, supported by a high quality local consultancy company that provided a strong support to the implementation process including training; availability of adequate donors' resources, combined with very experienced international and local consultants; and a solid backing at the political level, which trickled down to the management level, with both political and management commitment being strong throughout the entire reform process (Rodin-Brown , 2008)

In Tanzania IFMIS was introduced through the Public Finance Reform Program Phase One (PFMRP I) of 1998. The Tanzanian IFMIS for central government and local authorities is built on EPICOR ERP which is a commercial off the shelf (COTS) and designed for business firms. Some of the governments in Africa such as Tanzania, Lesotho, Malawi, Gambia, and Nigeria use EPICOR. The structure of public and business firms finance management is different, therefore the ERP is normally customized to fit the public finance management structure. (Laizer & Suomi, 2016). Tanzania has been reported as one of successful countries in implementing IFMIS. The reported success of the Tanzanian IFMIS is based on political willingness, ICT readiness, sound project design, the phased approach of implementation, changes in the legal framework (to be IFMIS-compliant), project management capability, and adequate resources supply like money and human resource (Chene, 2009).

Regardless of the described success, some literatures demonstrate the challenges facing Tanzania's IFMIS. Both the central government and local authorities in Tanzania have multiple IT systems for planning, accounting and reporting that are not able to interface with each other. This lack of an interface between IFMIS components weakens financial management and control. The first design of IFMIS for Tanzania's local authorities was a standalone whereby each local authority had its own server computer and workstations within their local area network. This design complicated maintenance as user had to travel hundreds of kilometers with server computers to the vendor's office for maintenance. The vendor personnel also had to travel

to the local authorities for updates and other maintenance services. Both approaches were expensive in terms of money and time. In 2012 the government of Tanzania through a local government reform program decided to centralize local authorities IFMIS. The data center was built at the Ministry of Local Authorities. The centralization approach solved some old challenges, but has also created new challenges and some of the old challenges still persist (Laizer & Suomi, 2016). The non-Integration of IFMIS with other Planning and Human Resource Systems has remained the main challenge as it is a mandatory requirement. This affects the production of the reports from local authorities IFMIS. Unavailability of IT personnel in Tanzania's local authorities and lack of IFMIS skill for those who have IT personnel, has been another major problem for the implementation of IFMIS by local authorities.

Malawi

There has been a series of reforms in the legal and institutional framework for management of public finances in Malawi. This system has undergone quite some reforms since the first elections in 1994. The process of incorporating a sound system was spearheaded by sound legislations that regulated finances, audits, and procurements which were in time for the Malawi budget process. There are various studies that have indicated that the IFMIS system in Malawi was a success and relatively well designed. In principle, it provides a good starting point for a sound management of public finances (Rakner, 2004). For example, the World Bank's 2003 Country Financial Accountability Assessment for Malawi states: "When compared to most developing countries, Malawi has a good legal and institutional framework for public sector financial management and accountability" (World Bank, 2003). Therefore, one could expect that the formal legal and institutional PFM framework in Malawi should provide in principle for effective fiscal and expenditure planning, budget preparation, execution, and control in line with the priorities set in the Malawi Poverty Reduction Strategy Paper (MPRSP).

On the other hand, some studies show that there have been significant implementation delays. The pilot implementation did not follow the standard implementation methodology for this type of software. Some of the planned core modules for implementation have not been completed, while others have not been implemented at all. According to (Diamond & Khemani, 2005), this project has encountered numerous difficulties. The project implementation team was not well

resourced, and was dismantled even before the implementation was completed. The change management and communication activities did not receive adequate attention, and there are inconsistent views within the implementation team and implementing ministries. The software support arrangements have changed over the years, and there have been various contracts for implementation activities. Some of the contractual work has not been properly fulfilled. The auditing aspects of the system have not been adequately planned and tested for live operations. A fast review of the system conducted by the Auditor General with the help of an outside expert in July 2004 revealed a number of problems with the functionality of the system, so that the roll-out has been delayed until the problems have been resolved. These problems included technical serious deficiencies in expenditure control and tracking processes. (Erlandsson, 2005) also states that the implementation phase has not progressed well, primarily because lack of political commitments reflected by clearly limited involvement and some neglect of the system by the main players, including the Ministry of Finance, Auditing General and pilot ministries. There are several significant issues to be addressed before the system can be made fully functional and rolled out.

Slovak Republic

Slovak Republic is one of the countries that has successfully implemented IFMIS. Political will was the main driving force in the success. It was also supported by clearly defined timeframe and strategy. Some clear comprehension of what was required by the government and the other institutions turned out to be clear examples of what was required as well as a clear cut definition of the tools that needed to be made use of. This system was defined, tested, configured and then switched on in a timely manner at the start of the fiscal year. The result of this system in its basic form was enough to pay for the money invested in less than a year of operation. (USAID, IFMIS A Practical Guide, 2008). In determining the effectiveness of the system, there was a need to do need assessment. This was important to establish the functions of the new IFMIS for the country's ministry of finance that was also to serve in other organizations that were related to the government in a feasible manner. The requirements of the system included; the system ought to function like a bank for all the destined users, the system should have functionality that manages budgets, records transactions and manages financial resources, the framework of accounting to be used was to be IAS, currently IFRS (Biwott, 2015).

South Africa

According to (Nomvalo, 2008) IFMIS in South Africa forms part of the broader financial management reforms of the South African government, which started in 1994 with the institutionalization of democracy in South Africa. The IFMIS implementation project in South Africa is a priority initiative led by the National Treasury to review and upgrade the government's transverse information technology (IT) systems. In 2005, in order to give effect to the implementation of an IFMIS in South Africa, the South African cabinet approved a cabinet memo (resolution) that the transversal systems, namely, Supply Chain Management, Human Resources, Finance and Business Intelligence, should be replaced. Thus, the IFMIS aims to replace the different transversal systems currently in use with a single system. In 2007, the National Treasury informed the Standing Committee on Public Accounts that the IFMIS would be fully implemented by 2011. Different phases would be launched and early releases could be expected by 2008/2009 (Maake, 2007). The implementation of an IFMIS in South Africa took place according to a phased-in approach as opposed to a one-stage approach. According to Hendricks, South Africa has faced a number of challenges involved with the implementation of an IFMIS. Lack of capacity is regarded as one of the main causes for the delay in the implementation process. The lack of staff with IT knowledge and experience cannot be easily remedied by training and hiring. The implementation also demands a commitment to change: change in technology; in processes and procedures; as well as changes in skills, responsibilities and behaviors. Decision-makers must be convinced that the benefits of an IFMIS exceed the risks, and participating departments must recognize the need for a new system. According to (Rozner, 2008) a change management strategy should be developed as soon as an IFMIS project is conceived, taking into consideration the change implications for diverse stakeholders, that is, from politicians and senior officials to heads of departments, civil servants and the IT personnel who will support the new systems. Despite all the challenges South Africa is currently implementing different modules of the IFMIS at lead sites in both the national and the provincial departments to ensure that all functional requirements are met (Govender, 2012)

Kenya

The IFMIS in Kenya was developed by the Ministry of Finance in 1998 while deployment of the system to line ministries started taking place in 2003. The Kenyan government has initiated some capital investment towards set up and installation of ICT infrastructure by that time. Kenya has been implementing a broad-based public reform program partly founded on an e-government vision which was officially articulated in 2004 with the adoption of E-government strategy. It originally covered public sector budgeting, purchase ordering, accounts payable, accounts receivable, general ledger and cash management as well as supply analytical tools. IFMIS has been implemented to connect all government ministries, agencies (companies), and department to a core network for purpose of effecting a single public financial management system. Funding for these investments is achieved through partnerships between the government and development partners. The system was Enterprise Resource Planning (ERP) software based on Oracle. The Kenyan Ministry of Finance implemented an Integrated Financial Management Information System (IFMIS) as part of its Public Financial Management (PFM) reforms. Specific aspects which the system was supposed to address have had small successes. Since its introduction, it is yet to be rolled out to all government ministries, parastatals and agencies. Accounting, auditing, Human resources, reporting and asset management are some of the objectives/aspects that IFMIS encompasses across the institutions of government (USAID, IFMIS A Practical Guide, 2008).

According to (MUSEE , 2011), despite substantial time spent in developing and customizing the software application, the pilot implementation and the roll-out of the IFMIS in various government Ministries has not progressed well. There were also problems with the management commitment to the new system. The overarching concern is the significant limited involvement and ownership of the system by the various government staff in the design and development of the IFMIS. Somehow, the development process was largely driven by consultants and donors in the formative period of the project. On the other hand, the Oracle team has not been able to make much progress in this area because of lack of clear specifications on the government reporting requirements. The complex nature of the system has encountered significant design and implementation problems and delays. The capacity and know-how of the government staff has always been and is still the major issue, and the government still relies on the assistance of

consultants. Consequently, several significant issues need to be addressed before IFMIS can effectively be used.

In February 2011, IFMIS Re-Engineering Strategic Plan (2011-2013) was launched to provide a structured methodology to stabilize the existing IFMIS while facilitating the development of a comprehensive IFMIS which would allow the government to realize the full benefits of a fully integrated end-to-end financial management information system. The Ministry of Finance (2013) defines IFMIS as an automated system that interlinks planning, budgeting, expenditure management and control, accounting, audit and reporting. It is intended to ensure a higher degree of data quality, improve workforce performance for improved business results and link planning, policy objectives and budget allocations. It is also intended to enhance reporting capabilities to support budget planning, automate the procurement process such as requisition, tendering, contract award and payment. Further, it is also intended to facilitate auto-reconciliation of revenue and payment, automated revenue collections and automated bank reconciliation. (GoK, 2015)

A study conducted by (Bosire, 2016) shows that Introduction of IFMIS in Kenya has resulted to greater accountability among staff as there are able to give account of all the transactions done since IFMIS accurately discloses financial position. (Muigai, 2012) investigated the effect of IFMIS on the financial management of public sector in Kenya: a case of the Kenyan ministries. The researcher found out that IFMIS has greatly contributed Kenyan improvement in financial management. (Chuma, 2014) study on the IFMS and Its Effect on Cash Management in Eldoret West District Treasury, Kenya found out that flexibility of IFMIS positively affects cash management. The findings of the study also showed that a reliable IFMIS is basically one that is accurate, consistent, timely and complete in collection of information and the infrastructure as a result securing the system from destruction, unauthorized access, breach of confidentiality and corruption for efficient cash management.

2.7 Summary of Literature Review

A well-Integrated Financial Management Information System will support government wide as well as agency level policy decisions. It will also integrate budget and budget execution data,

allowing greater financial control and reducing opportunities for discretion in the use of public funds. This system will provide information for budget planning, analysis and government wide reporting. It will also facilitate preparation of financial statements and provide a complete audit trail in order to facilitate audits. According to International Telecommunication Union ((ITU), 2012) a sound regulatory environment and stable institutions are the key factors driving ICT investment. (Gerster Consulting, 2008) also recommended that African Governments and their international partners create and support enabling environments, consisting of both ICT specific regulatory frameworks and an overall policy framework that promotes sound economic and political governance. The above studies provide an important aspect regarding IFMIS and its components. They also adequately described the numerous drivers and barriers for implementation of IFMIS in most African countries. However, these studies were not conducted in Ethiopia which is a unique field by itself. There is a lack of literature in the Ethiopian context. Moreover, the existing studies in the area focus only on the factors affecting the implementation of IFMIS, mainly limiting their scope on the Ministry of Finance. It is against this backdrop that this research will seek to fill the existing gap by seeking to determine the major challenges and the prospects of IFMIS in the public sector of Ethiopia.

2.8 Conceptual Framework

(Gallarza, Saura, & García, 2002) defined a conceptual framework as a virtual or written product, one that explains, either graphically or in narrative form, the main things to be studied- the key factors, concepts or variables and the presumed relationships among them. A conceptual framework is used in research to outline possible courses of action or to present a preferred approach to an idea or thought. It can be defined as a set of broad ideas and principles taken from relevant fields of enquiry and used to structure a subsequent presentation. The interconnection of these blocks completes the framework for certain expected outcomes. In the current study, the researcher will describe eight variables from which four of them to assess the challenges and the other four to see the prospects of IFMIS implementation in Ethiopian Public Sector. The four variables that will be used to assess the challenges will be the staff resistance to IFMIS, the management commitment to the implementation, complexity of the system, capacity and skills of

IFMIS users. To assess the prospects of IFMIS, report generation, budgeting process, government service delivery and automated procurement will be used as a variable.

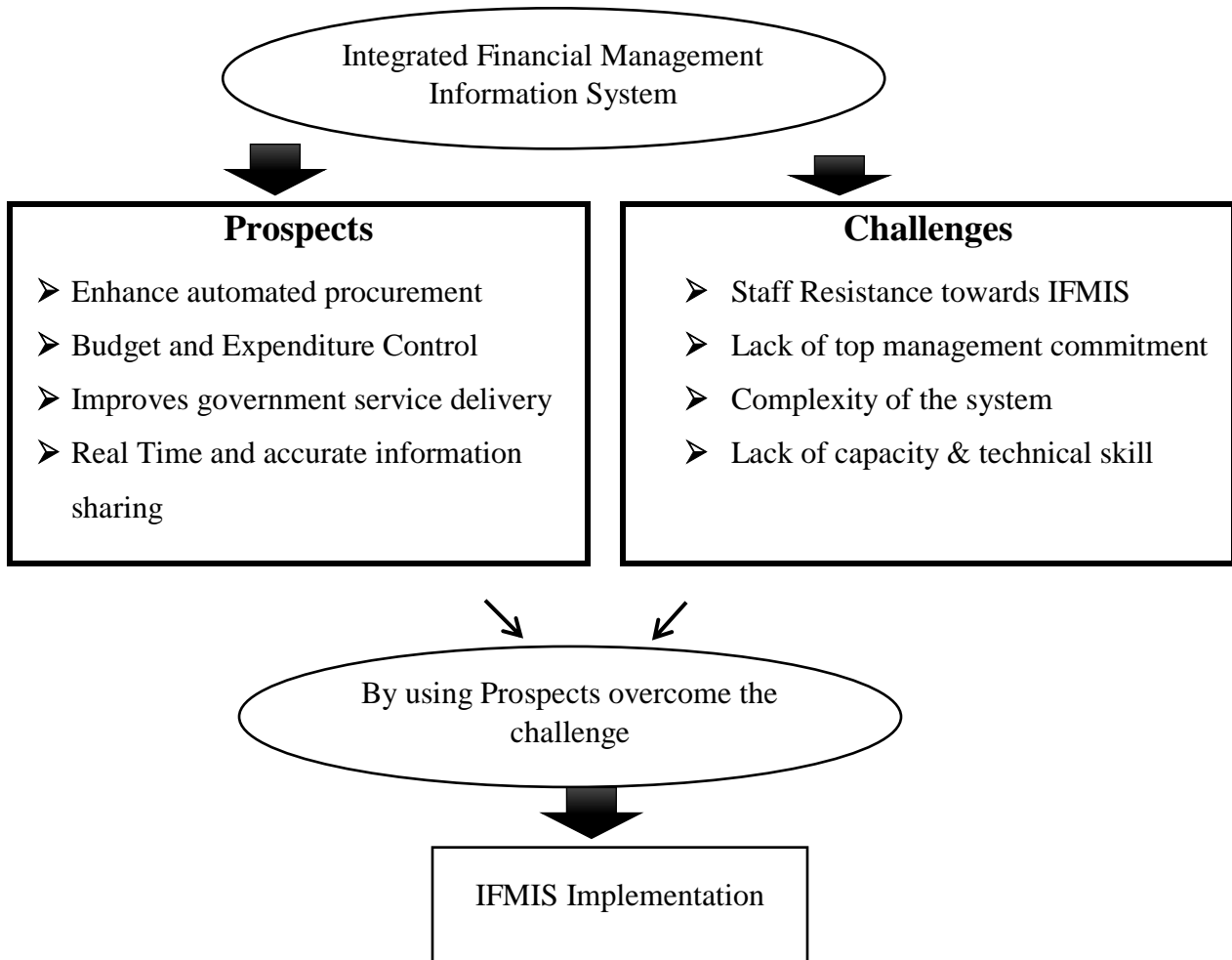


Figure 2.1 Conceptual Framework

CHAPTER THREE

METHODOLOGY

The aim of this section is to highlight the overall methodological considerations of the thesis. According to (MUSEE , 2011), research methodology refers to the analysis of principals of methods, rules and techniques. It involves the systematic study of methods which are to analyze a specific study. In order to make the research organized and to increase its reliability different methodologies are adopted. In this study, the research methodology consists of four parts. The first part focuses on the research design of the study. The second part highlights the population of the study. The third part looks at the target population followed by the method of the selection of sample and lastly, the manner in which the data was analyzed.

3.1 Research Design

(Yin, 2004)posits that a research design should be determined by the nature of the research questions. A research design is paramount to the achievement of the study objectives. This study adopts descriptive research method.

The goal of descriptive research is to describe a phenomenon and its characteristics. It is concerned with describing, recording, analyzing and interpreting conditions that exists at present. A descriptive design was adopted for this study because it will enable an in- depth inquiry and understanding of the challenges that the implementation of IFMIS is facing currently and the advantage the public sectors are getting with IFMIS implementation. The main characteristic of this method is that the researcher has no control over the variables; focuses only on describing what has happened or what is happening.

3.2 Target Population

Study population is simply an aggregate of all objects, subjects or members that conform to a set of specifications. The population to whom the findings of the study generalized included all the management and finance/accounting staff of the selected federal offices. The target population is further said to refer to the group or individuals to whom the survey applies (Kitchenham & Pfleeger, 2002). In other words, the researcher will survey those individuals who will be in a

position to answer the questions and to whom the results of the study will apply. The population of the study are 5 government offices currently using IFMIS. The target population of this study constitutes management/administrative and finance/accounting staff working in selected federal offices.

This research confines to selected 5 public bodies in Ethiopia (Ministry of Finance (MOF), Ethiopian Food and Drug Authority (EFDA), Technical and Vocational Education and Training Institute (TVETI), Office of the Federal Auditor General (OFAG) and Trade Competition and Consumer's Protection Authority (TCCPA)) located in the capital, Addis Ababa with a population of 566 IFMIS users.

The organizations were selected due to the diversified characteristics in terms of activity, nature of transaction and source of fund so that they will represent all the public bodies which implemented IFMIS with different nature. They were also selected from different time period of IFMIS implementation. Ministry of Finance plays and takes responsibility on the roll out of IFMIS throughout Ethiopian Public sectors and it leads as the owner for the effective implementation which spent more than 7 consecutive years to implement IFMIS successfully and the user of this public sector still have an issue on system. The other four implemented IFMIS in the rollout phase with the latest one to be Ethiopian Food and Drug Authority which implemented it a year ago. In addition, the above mentioned five public bodies except Trade Competition and Consumer's Protection Authority are large organizations with more than 500 employees each of them. This will help the study to have more representatives of IFMIS users.

3.3 Sampling Method

A sample is a sub-set or part of the target population; sampling is a process of selecting subjects or cases to be included in the study of the representatives of the target population (Mugenda & Mugenda, 2003). Stratified random sampling method was used to select a sample. The sampling will therefore involve a number of employees in each department, the department to be contacted for these study will be Finance department, Budgeting/planning, human resources and procurement department. In addition, senior administrative officers, consultants and key users of the system will be involved too. The population comprises about 566 employees as per IFMIS USERS LIST database (May 7, 2020).

The stratified random sampling will be appropriate because the size of the population of these officers in each ministry is known and its proportion to the total will be determined and used for sampling purposes. Stratified random sampling method was used to select a sample of 234 senior and junior IFMIS users. These were selected to ensure that the sampling size had characteristic representation of the population using the formula sited by (Mugenda & Mugenda, 2003). The formula to find the sample size is:

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

Where; N= population size

N= IFMIS users each= 566

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

n= sample size.

How the formula is used is shown below: -

$$n = \frac{566}{1+(566*0.05*0.05)} = 234$$

3.4 Data Collection Instrument

We can say that the data dictate the research method of a particular field. This study will depend mainly on primary data to come up required conclusion about the study. This is a result of no prior research conducted on challenges and prospects of IFMIS in Ethiopian Public Sector since it is a new financial system.

The data was collected using structured questionnaire. According to (Sekaran, 2009) a questionnaire is a pre-formulated written set of questions to which respondents record their answers, usually with in closely defined alternatives. The questionnaire was developed based on the specific objective that the study wants to focus with the literatures that has been done in different African countries. So it was organized to fit the objective using rating scale. Likert scale was used in the questionnaire where 1-Strongly Disagree; 2-Disagree; 3-Neutral; 4-Agree; 5-Strongly Agree due to the fact that each variable or topic comprises serious of questions which

fit with the mere purpose of using rating scale. It allows respondents to express both the direction and strength of their opinions about a given topic. The questionnaire used to collect data is shown as Appendix 1.

The questionnaires have been distributed to the employees based on the sample size from each population group. The questionnaire contains three parts; part one deals with the personal profile of each respondent, part two was about prospect of IFMIS regarding report preparation, budgeting, service delivery and automating procurement in government offices presented by means of a 5 -point Likert Scale. Then part three presented the challenges faced by the government offices towards implementing IFMIS again presented by means of a 5 -point Likert Scale.

3.5 Reliability Test

To measure the consistency of a questionnaire a reliability analysis was used. Reliability is how well a test measures what it should. There are different methods of reliability test, for this study Cronbach's alpha is considered to be suitable. Cronbach's alpha tests to see if multiple-question Likert scale surveys are reliable. These questions measure latent variables hidden or unobservable variables like: a person's conscientiousness, neurosis or openness.

3.6 Data Analysis

(Anderson & Poole, 2001) postulates that once data has been collected, the researcher must be able to interpret it reliably. The process involves summarizing and categorizing the data to a temporary manageable length, identify themes, analyze and assess. Data for the study was analyzed in several stages. Data was first coded and entered into the Statistical Package for the Social Sciences (SPSS20) in preparation for data summarization and analysis. The SPSS20 was also used to validate and interpret the collected and edited data. The data results are presented by calculating the percentages on the variables.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter deals with data presentation, analysis and interpretation. These data are analyzed based on the data collected through close ended questionnaires. The chapter consists of two sections. The first section presents the profile of respondents showing gender, age group, level of education and work experience. In the second section consists presentation of variables for the prospects and challenges of IFMIS implementation.

The number of respondents who participated in this survey were a total of 166 which is 71% of the targeted sample size. This response rate was very good to make conclusions for the study. According to (Mugenda & Mugenda, 2003), observed that a 50% response rate is adequate, 60% good and above, while 70% rated are very good.

4.2 General Information

Variable	Classification	Frequency	Percent
Highest level of education	Diploma	21	12.7%
	BA/BSC	125	75.3%
	Master's	17	10.2%
	PHD & Above	3	1.8%
	Total	166	100%
	Less than 5	12	7.2%
	6-10	46	27.7%

Work Experience	11-20	94	56.7%
	Above 20	14	8.4%
	Total	166	100%
How long have you used IFMIS?	Less than 1 year	48	28.9%
	1-2 Years	83	50%
	2-5 Years	21	12.7%
	Above 5 Years	14	8.4%
	Total	166	100%

Table 4.1 – General Information

Table 4.1 indicates the demographic information of respondent's level of education, work experience and the time they use IFMIS. Findings in this study indicated that a majority of the respondents 75.3% had bachelor degree level. In addition, 12% of the respondents had post graduate level of education while 12.7% had college level of education. This implies that all the respondents were informed and knowledgeable in their areas of specialization. And finally, 71.1% of the respondents indicated that they are deeply involved in the use of IFMIS which for they have used more than a year. They could therefore competently respond to questions regarding the adoption of IFMIS as key persons.

4.3 Presentations of Variables

This study focuses on the prospects and challenges of IFMIS project implementation process. Consequently, the discussion part detail and separately discuss both variables.

4.3.1 Challenges of IFMIS

IFMIS has emerged as a concept which has been implemented in many countries and actively promote by international aid agencies, such as the World Bank and international economic

institutions such as the IMF. Many countries, both developed and developing, already have more than ten years' experience in IFMIS, yet they still encountering problems in implementation. Relatively to other experienced countries which have been implementing IFMIS for many years and have strong economic and highly trained and developed civil servant conditions it is apparent that Ethiopia will face many challenges on the way. It is with such considerations that Ethiopia went fully implement IFMIS. Here under the findings of questionnaire of the possible challenges are discussed. To more detail finding it's better to see the challenges separately as change management, technological infrastructure, institutional and political, project planning and staffing and staff capacity challenges.

4.3.1.1 Staff Resistance

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
IFMIS system is resisted by majority of the senior officer of the organization	9.70%	15.70%	18.90%	41.20%	14.50%
IFMIS exposes corrupt officials that is why it is resisted	11%	8.10%	12.80%	29.90%	38%
Most employees resist IFMIS for fear of losing out control and jobs	12.40%	47.10%	14.20%	11.30%	15.00%
The system is resisted due lack of knowledge on how to use it.	17.60%	51.90%	14.80%	7.70%	8%
The system installation stage ignored staff involvement	16.30%	40.60%	14.20%	22.50%	6.40%

Table 4.2: Staff Resistance Challenges of IFMIS implementation

The study analyzed the views of respondents on how the resistance of the public sectors staff affects the implementation of IFMIS. Firstly, regarding staff resistance challenges forwarded to federal public body's respondents that the resistance comes from the senior officers and corrupt officials. It was established that 41.2% and 14.5% of the respondents disagree and strongly disagree that the senior officers of the organization resist the implementation of the system. And the remaining 15.7%, 18.9% and 9.7% of the respondents agree, neutral and strongly agree respectively. The senior officers' resistance is average challenge for the implementation.

Again focusing on the staff resistance the issue raised was if the system exposes corrupt officials. The result shows that majority of response of 28% and 39.9% are strongly disagree and disagree respectively. On the other side 8.10%, 11.2% and 12.8% of respondents agree, strongly agree and neutral respectively. From this we can conclude that exposing corrupt official challenges are below half of the respondents.

Still focusing on the staff resistance, the other issue raised was if there is a fear of losing out control and jobs. It was established that 12.4% and 47.1% of the respondents strongly agree and agree on the fear of losing out control and jobs which shows a high percentage of challenge for the implementation. The remaining 11.3%, 16.1%, 14.2% respondents disagree, strongly disagree and neutral respectively.

In addition, the respondents were asked whether the end users lack basic knowledge to use the system. The result shows that at most 17.6% and 51.9% the respondents with in strongly agree and agree that there is lack of knowledge to carry out transactions daily using the system. On the other side 7.7%, 14.8% and 8.0% of the respondents disagree, neutral and strongly disagree respectively. From this we can conclude that there is lack of basic knowledge on how to use the system. This is a big challenge for implementation sites due IFMIS is a complex computerized financial information system and hence, requires that staff or users possess adequate IT knowledge and skills to operate the system.

Regarding the issue risen on whether the installation stage ignoring the staff involvement, the result shows that almost (56%) of the respondents with in strongly agree and agree as 16.5% and 44.6% respectively. On the other side 6.4%, 22.7% and 14.8% of the respondents strongly disagree, disagree and neutral. From this we can conclude that there is high degree of challenge in the implementation, due to the ignorance of staff involvement on the system installation.

Generally, the rate that the senior officers resisting the system is low. This implies that the system is mostly being resisted by the junior officers. And it could be due to fear of job loss, lack of knowledge and no involvement in the design phase as this challenges were showing high percentage.

4.3.1.2 Top Management Commitment

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Top management lacks the drive to inspire the use of IFMIS	13.70%	48.40%	20.60%	10.30%	7.00%
The management is not well versed with IFMIS	15.80%	41%	12.70%	10%	20.50%
There is general lack of interest in IFMIS among top management	22.80%	44.20%	13.70%	10.70%	8.60%
Management is made accountable, so they are keen on the use IFMIS	5.30%	23.60%	1.60%	58.30%	11.20%
Majority of top management are nearing retirement age, thus are less keen	18.90%	6.80%	4.80%	31.90%	37.60%

Table 4.3 Top Management Commitment Challenge of IFMIS implementation

This section sought to assess the effect that top management commitment had on the implementation process. Management support is critical for successful implementation of projects. The extent to which the respondents receive management support may have a bearing on the implementation of the IFMIS system. The study asked different questions from the collected data concerning the top management lacks the drive to inspire the use of IFMIS, 13.7% and 48.4% the respondents strongly agree and agree. The remaining 20.6% ,10.3% and 7% of the respondents' neutral, disagree and strongly disagree respectively. From the findings, it is clear that the top management lacks inspiring the staff for IFMIS implementation. Having this evidence in mind that lack of the drive by top management to inspire users or staff is one of the major challenges in IFMIS implementation.

Regarding on the top management commitment of IFMIS implementation the respondents were asked if the top management doesn't have good knowledge about IFMIS. The highest number of respondents 15.8% and 41.0% strongly agree and agree respectively that the top management lacks knowledge. The remaining response 12.7%, 10.0% and 20.5% of the respondents are neutral, strongly disagree and disagree concerning this issue. This shows that the IFMIS implementation in the public bodies top management not versed with the IFMIS implementation.

Still focus on the top management commitment and general interest in them. IFMIS implementation requires the top management interest. The response shows that the largest shares 22.8% of the respondents strongly agree and 44.2% agree and the rest 13.7%, 8.6% and 10.7% of the respondents were neutral, strongly disagree and disagree. This shows that IFMIS implementation is facing high challenge due to lack of the top management commitment and general interest in the public bodies.

Again additional question was raised if the management was made accountable and keen to the use of IFMIS. 11.2% of the total respondents strongly disagree and 58.3% disagree that the management was made accountable. Moreover, 23.6% of the respondents rated as agree, 1.6% neutral, 5.3% strongly agree. It can be understood that majority of the respondents believe that top management is not made accountable on the use of IFMIS. It is clear that, lack of accountability of relevant authorities is one of the main challenges in the implementation of an IFMIS.

Finally, the other issue raised was if the top management are less keen due to nearing to a retirement age. The finding displays that 37.6% and 31.9% which means majority of the respondents strongly disagree and disagree. The remaining 18.9%, 6.8% and 4.8% of the respondents agree, strongly agree and neutral respectively. This shows even though the management commitment is a challenge for IFMIS implementation, their age nearing to retirement is not an issue for the low commitment.

4.3.1.3 Complexity of the system

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The system is very complex in its processing of information	13.70%	39.80%	2.60%	20.90%	23%
The systems complicates very simple manual processes	22.80%	34.20%	13.70%	18.60%	10.70%
The system is too complex for ordinary users like us	14.40%	36.20%	21.10%	21.40%	6.90%
The system components are too many and complicated	17.47%	35.54%	16.87%	16.87%	13.25%
IFMIS envisages government systems which are complicated	16.20%	47.60%	13.10%	10.70%	12.40%

Table 4.4 Complexity of the System Challenge on IFMIS implementation

This section discusses the various aspects of complexity of the system on the effective use of IFMIS system in government ministries. System complexity is a function of design and can be complicated by different reasons. The study asked different questions concerning the IFMIS implementation facing a challenge due to its complexity. The first was about the complexity in the processing of information, 13.7% and 39.8% the respondents strongly agree and agree that IFMIS is very complex in its processing of information. The remaining 2.6%, 20.9% and 23.0% of the respondents were neutral, disagree and strongly disagree concerning the complexity in its processing of information. Therefore, the majority agrees that there is a challenge due to the complexity of the system in its processing information.

Again the respondents were asked if the system complicates simple manual processes. The response shows that the largest shares 22.8% of the respondents strongly agree and 34.2% agree and the rest 13.7%, 18.6% and 10.7% of the respondents were neutral, disagree and strongly agree. This shows that IFMIS complicates very simple manual process for the users which in turn will lead a huge challenge for the implementation.

Still focusing on the complexity of the system, the respondents were asked if it is too complex to ordinary users. The response indicates that the 36.2% and 14.4% of the respondents agree and strongly agree that the system is too complex to ordinary users. The remaining 21.10%, 6.9% and 21.4% of the respondents were neutral, strongly disagree and disagree respectively. From this it can be said that the challenge the system is too complex to ordinary users exists.

Finally, for the question raised up to assess if the system envisages complicated government systems, 47.6% and 16.2% of the respondents agree and strongly agree. The remaining 13.1%, 10.7 % and 12.4 % of the respondents were neutral, disagree and strongly disagree respectively. Therefore, it could possibly be said that since the majority of the respondents agree the system envisages complicated government system, the challenge on this regard is low.

Generally, IFMIS is seen as complex system by the users due to the fact that the information processing was quite too complex to be understood, that the system complicates simple manual processing, the system components are too many to understand and use. On the other hand, the issue that the system is too complex for ordinary users is not a major challenge as the others.

4.3.1.4 Capacity and technical skills

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The Ministry lacks proper training program for the use of IFMIS	12.00%	17.20%	15.40%	35.70%	19.70%
The Ministry relies heavily on experts to run the system	19.50%	38.70%	22.70%	13.20%	5.90%
The users are not well trained to handle IFMIS	17.30%	48.70%	6.50%	13.20%	14.30%
Most users lack accounting background which is essential in the use of the system	18.20%	39.30%	12.20%	21.10%	9.20%
The ICT phobia is still an issue if IFMIS is to effectively used	27.20%	57.90%	3.20%	4.00%	7.70%

Table 4.5 Capacity and technical skill Challenge for IFMIS implementation

This section discusses the various aspects of staff capacity and technical skills on the use of IFMIS system in the public bodies. For the question raised to assess if there is a lack of proper training program for the use of IFMIS, the response indicated that majority 35.7% and 19.7% of the respondents disagree and strongly disagree. The remaining 17.2%, 15.4% and 12% of the respondents agree, neutral and strongly agree respectively. Training is one way to gain deeper understanding of the systems by users. From the results we can say that more than half of the respondents disagree on the lack of proper training program. This can be a low challenge for the implementation in the capacity and technical skill.

In addition to what has been raised before, the respondents were asked whether the ministry relies heavily on experts to run the system. The result shows that 19.5% strongly agree and 38.7% agree. On the other side 22.7%, 13.2% and 5.9% of the respondent's neutral, disagree and strongly disagree. From this we can conclude that there is dependency on the users which in turn may affect the use of IFMIS negatively.

To strengthen the above mentioned concepts of capacity and technical skill challenges researcher has raised question whether the users are not well trained to handle IFMIS. Accordingly, the response shows that the challenges were high for the implementation sites since 17.3% and

48.7% of the respondents strongly agree and agree respectively. On the other hand, only 6.5%, 13.2 % and 14.3% of the respondents strongly disagree, disagree and neutral concerning this issue. This leads to conclude that the main challenge in the capacity and technical skill for the implementation of IFMIS is not well trained users to handle.

According to the findings, even though lack of training program is not an issue, users are not well trained to handle IFMIS. This could be due to the participation rate the users are having on the training or the training may not be given in a simple and understandable way.

In order to get the real challenge of capacity and technical skill the study also asks whether the users lack accounting essential in the use of the system. The majority of respondents 18.2% and 39.3% strongly agree and agree that most user lack accounting back ground. But 9.2%, 21.1% and 12.2% of the respondents strongly disagree, disagree and neutral. Therefore, the largest share (57%) of the response shows the respondents agree there is a challenge due to the user’s lack of accounting background.

Finally, regarding the capacity and technical skill challenge raised on whether the ICT phobia is still an issue for IFMIS to be used effectively. The result reflected by 27.2% and 57.9% of the respondents strongly agree and agree. The remaining 3.2%, 4.0% and 7.7% of the respondents were neutral, strongly disagree and disagree correspondingly. Hence it can be understood that the majority of the respondents support that the ICT phobia is still remains as a big challenge for IFMIS to be used effectively.

4.3.2 Prospects of IFMIS

Implementation of automated system has more prospects for once public body since it is more modernize and supportive system. This also showed in the collected data below. Regarding IFMIS has an opportunity for effective management systems through excellent planning.

4.3.2.1 General Status and Report Generation of IFMIS

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
IFMIS implementation has effective management systems through excellent planning	15.50%	59.10%	15.50%	8.50%	1.40%

IFMIS facilitates federal level consolidation through using single standard platform and unified chart of account across public bodies	25.20%	42.10%	5.60%	15.60%	11.50%
IFMIS promotes transparency and accountability	28.00%	39.30%	7.00%	15.60%	10.10%
IFMIS enables for effective information sharing (communication) and monitoring of transactions.	26.00%	47.90%	15.60%	6.30%	4.20%
IFMIS enhances budget implementation and expenditure control.	26.00%	41.90%	16.90%	5.60%	9.60%
IFMIS initiates for technological change and enhance productivity.	20.60%	26.80%	4.10%	31.60%	16.90%

Table 4.6 IFMIS General Status and Prospects in Report Generation

The study sought to determine the respondents' views on whether IFMIS implementation has effective management systems through excellent planning. The result shows 59.1% of the respondents disagree and a further 15.5% strongly disagree. However, 15.5% of the respondents were neutral whereas 8.5% of the respondents agree and 1.4% strongly agree that IFMIS implementation has effective management system through excellent planning. Therefore, majority of the respondents (74%) of the respondents were of the view that IFMIS doesn't have excellent planning which will result on the effective management system.

The study sought to establish whether IFMIS facilitates federal level consolidation through using single standard platform and unified chart of account across public bodies. And the results were 42.1% of the respondents agree and 25.2% of the respondents strongly agree. On the other hand, 15.6% of the respondents disagree and 11.5% strongly disagree whereas another 5.6% of the respondents were neutral. Having this evidence in mind, most of the staffs who are working in the system agree with the system prospect of enhance the federal public body's single standard platform, unified chart of account and federal level consolidation.

Again the respondents were asked if IFMIS promotes transparency and accountability. The result shows that 39.3% of the respondents agree and 28.0% of the respondents strongly agree. 7% of the respondents were neutral whereas those who disagree were 15.6% and 10.1% of them strongly disagree. From this it can be said that IFMIS implementation has a high prospect

through promoting transparency and accountability in the public financial management by creating objectivity and traceability of transactions.

The study again sought to establish whether the system enables for effective information sharing and monitoring of transactions. The response showed that 47.9% and 26% of the respondents agree and strongly agree which constitute 73.9% of the response. On the other hand, the remaining 15.6%, 6.30% and 4.2% of the respondents were neutral, disagree and strongly disagree respectively. Accordingly, we can conclude that IFMIS implementation has a prospect for effective information sharing and monitoring of transactions. This affirmed that IFMIS implementation makes communication more effective because all manual work can be changed to automated one and communication can be easy and not time taking. IFMIS also improves timely transaction monitoring through every one has manageable access to see what going on in every minutes including management and auditors.

Respondents were asked whether IFMIS enhances budget implementation and expenditure control. The result shows that 41.9% of the respondents agree and 26% of the respondents strongly agree that IFMIS made it possible enhancing budget implementation and expenditure control. However, 5.6% of the respondents disagree and 9.6% strongly disagree while 16.9% of the respondents were neutral. Therefore, majority (67.9%) of the respondents agree that through IFMIS, IFMIS made it possible enhancing budget implementation and expenditure control. This shows that IFMIS allows government to track public expenditure using the budget and commitment modules and thus, provide a basis for controlling budget spending. The commitment module consents for the control of fund balances not disbursed at specific periods and it is critical or important in avoiding public expenditure arrears.

To strength the above mentioned concept the researcher has raised a question that IFMIS initiates for technological change and enhance productivity. It was found out that only 26.8% of the respondents agree and 20.6% of the respondent strongly agree which is below half of the respondents. On the other hand, 31.6% and 16.9% of the respondents disagree and strongly disagree respectively. While the remaining 4.1% of the respondents were neutral. From this we can say that, unlike the above mentioned prospects which was supported by majority of the respondents, the prospect of IFMIS concerning the technological change and increasing

productivity is not at least supported by half of the respondents. This may indicate that there is a concern on IFMIS technology and productivity as the system may not decrease time spent on doing activities plus all manual work may not be automated.

4.3.2.2 Budgeting

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
IFMIS has supported government offices budgeting process	15.20%	43.70%	14.10%	15.60%	11.40%
IFMIS has robust support towards procurement of government items	18.30%	36.60%	26.80%	12.70%	5.60%
IFMIS is highly reliable to manage the accounts payable.	17.00%	50.60%	16.90%	9.90%	5.60%
IFMIS has in build controls at each level to ensure strict authorization of government expenditure	25.40%	45.10%	12.60%	12.70%	4.20%
IFMIS easily supports customization of required management reports based on the user levels or various revenue and expenditure streams	7.60%	5.20%	12.70%	46.30%	28.20%
IFMIS has great capabilities of ensuring audit trails remaining intact for a considerable period	16.80%	45.10%	28.20%	8.50%	1.40%

Table 4.7 Prospects of IFMIS in Budgeting

In this section the analysis of the prospects of IFMIS towards budgeting will be made concerning if IFMIS has supported government offices budgeting process, procurement of government items, reliability to manage accounts payable, ensures strict authorization of government expenditure, supports customization of required reports and capability of ensuring audit trial.

The study seeks to establish whether IFMIS has supported government offices budgeting process. The findings show that 43.7% and 15.2% of the respondents agree and strongly agree, respectively. However, there were 15.6% and 11.4% of the respondents who disagree and strongly disagree respectively while 14.1% of the respondents were neutral. Therefore, the majority (67.5%) of the respondents agree that the budgeting process is being supported by IFMIS.

Respondents were asked whether IFMIS has robust support towards procurement of government items. 36.6% of the respondents agree and a further 18.3% of the respondents strongly agree. However, 26.8% of the respondents were neutral, whereas 12.7% and 5.6% disagree and strongly disagree, respectively. Therefore, majority (54.3%) of the respondents agree that IFMIS has robust support towards procurement.

Again focusing on the prospects of IFMIS in the budgeting side, a question was raised if the system is highly reliable to manage the accounts payable. The findings showed that 50.6% of the respondents agree and another 17% strongly agree. On the other hand, 16.9% of the respondents were neutral whereas 9.9% of the respondents disagree and 5.6% of the respondents strongly disagree. Therefore, majority of the respondents agree that IFMIS implementation has a prospect on reliability to manage the accounts payable. Again respondents were asked whether IFMIS has in build controls at each level to ensure strict authorization of government expenditure. Result shows that 45.1% of the respondents agree and 25.4% of the respondents strongly agree. Nevertheless, there were 12.7% of the respondents who disagree that it has control at each level to ensure strict authorization of government expenditure and a further 4.2% of the respondents who strongly disagree. On aggregate, majority (70.5%) of the respondents agree that IFMIS ensure that the government expenditure was implemented with a strict authorization.

Another question raised to the respondents was whether IFMIS easily supports customization of required management reports based on the user levels or various revenue and expenditure streams. The finding shows that 46.3% of the respondents disagree and 28.2% strongly disagree. The remaining 12.7% of the respondents were neutral while 7.6% and 5.2% of the respondents agree and strongly agree respectively. Therefore, according to the response from the majority (74.5%), the prospects of IFMIS in easily supporting customization of required management reports based on the user levels or various revenue and expenditure streams is very low.

Still focusing on the prospects on the budgeting a question raised was whether IFMIS has great capabilities of ensuring audit trails remaining intact for a considerable period. Thus, 45.1% of the respondents agree and 16.8% of the respondents strongly agree. However, 28.2% of the respondents were neutral whereas 8.5% of the respondents disagree and another 1.4% of the

respondents strongly disagree. Therefore, majority (62.0%) of the respondents agree on the prospects of IFMIS capability at ensuring audit trails remaining intact for a considerable period.

4.3.2.3 Government Service Delivery

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The IFMIS has improved the record management in the organization	22.70%	39.20%	25.40%	7.40%	5.30%
The IFMIS is a scalable system providing ability to add new additional services as the come up	8.50%	30.60%	28.20%	21.30%	11.40%
IFMIS has provided real time reports on customers services	21.10%	60.60%	9.90%	7.00%	1.40%
IFMIS is able to generate reports on number of services offered on daily basis per category	8.50%	49.20%	12.70%	18.50%	11.10%
IFMIS user interface is friendly to the users	15.20%	27.10%	11.50%	40.60%	5.60%

Table 4.8 Prospects of IFMIS in Government Service Delivery

This section presents the findings on the prospects of IFMIS on the government service delivery. The dimension of the government service delivery includes; the record management in the organization, ability to add new additional services, providing real time reports on customer's services, generating reports on number of services offered on daily basis per category and friendly user interface.

The views of the respondents regarding the prospects of IFMIS on the record management in the organization was 39.2% agree and 22.7% strongly agree. There were 25.4% of the respondents who were neutral whereas 7.4% of the respondents disagree and another 5.3% strongly disagree. Therefore, majority (61.9%) of the respondents agree that since the implementation of IFMIS, the record management in the organization has been improved.

Respondents were asked whether IFMIS is a scalable system providing ability to add new additional services as the come up. The finding shows that 30.6% and 8.5% of the respondents agree and strongly agree, respectively. And also 28.2% of the respondents were neutral whereas 21.3% of the respondents disagree and 11.4% of the respondents strongly disagree. This shows

that the respondents who agree on the prospect of IFMIS as a scalable system providing ability to add new additional service is not far from than the respondents who disagree.

Additional question raised whether IFMIS provides real time reports on customer services. 21.1% of the respondents strongly agree that the system assisted them in real time reports on customer service while 60.6% of the respondents agree. Nevertheless, 7% of the respondents disagree while 1.4% strongly disagree. The result also revealed that 9.9% were neutral. Therefore, the majority of the respondents agree that IFMIS assisted the users in a real time reports on customer services. Related to this another question raised was whether IFMIS is able to generate reports on number of services offered on daily basis per category. The finding shows that 49.2% of the respondents agree that IFMIS generates reports on number of services offered on daily basis per category, 8.5% of the respondents who strongly agree and 11.1% of the respondents who strongly disagree and 18.5% of the respondents who disagree. The study also showed that 12.7% of the respondents were neutral.

The views of the respondents were sought as to whether IFMIS interface is user friendly. The result shows that 27.1% of the respondents agree and 15.2% of the respondents strongly agree. On the other hand, 40.6% and 11.5% of the respondents disagree and strongly disagree whereas another 5.6% of the respondents were neutral. Therefore, the majority of the respondents believe that the IFMIS system is not user friendly.

4.3.2.4 Automated Procurement

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
IFMIS has enhanced the level of accountability and responsibility in the operations	26.10%	56.20%	12.50%	4.10%	1.10%
IFMIS has supported reduction of unnecessary expenditure leading to public wastage	16.40%	29.20%	14.50%	28.50%	11.40%
IFMIS generated reports are error free as a result of manipulation	20.20%	47.10%	15.60%	15.60%	1.50%
IFMIS has ability to generate exceptional and suspicious reports per worker and per department	10.50%	12.20%	7.00%	42.30%	28.00%
IFMIS has reduced number of frauds in the organization	18.20%	49.30%	9.70%	12.50%	10.30%

Table 4.9 Prospects of IFMIS on Automated Procurement

In this section, the prospect of IFMIS on the automated procurement is analyzed. The analysis is situated within the level of accountability and responsibility, reduction of unnecessary expenditure, error free reports, ability to generate exceptional and suspicious reports per worker and department and reducing number of frauds in the organization.

As to whether IFMIS has enhanced the level of accountability and responsibility in the operations, 56.2% and 26.1% of the respondents from federal institute agree and strongly agree respectively. The remaining 1.1%, 4.1% and 12.5% strongly disagree, disagree and neutral. From the respondents finding we can conclude that IFMIS implementation has opportunity to promote accountability and responsibility in the operations.

The study sought to establish respondents' views on whether IFMIS has supported reduction of unnecessary expenditure leading to public wastage. The result shows that 29.2% of the respondents agreed and a further 16.4% strongly agreed. However, 14.5% of the respondents were neutral whereas 28.5% of the respondents disagreed and 11.4% strongly disagreed that IFMIS enabled them to truly understand the true cost of service delivered at the ministry. Therefore, the respondent's view who agreed on IFMIS prospect in the reduction of unnecessary expenditure is not that far from who disagreed.

Still focusing on the prospect of IFMIS, the researcher has raised a question whether IFMIS generated reports are error free as a result of manipulation. Accordingly, the result shows 47.1% of the respondents agreed and 20.2% of the respondents strongly agreed. On the other hand, 15.6% of the respondents disagreed whereas another 15.6% of the respondents were neutral. Therefore, the majority (67%) of the respondents agreed that IFMIS generated reports are error free as a result of manipulation.

The respondents were also requested whether IFMIS has ability to generate exceptional and suspicious reports per worker and per department. The finding was 42.3% of the respondents disagreed and 28.0% of the respondents strongly disagreed. 7% of the respondents were neutral whereas 10.5% and 12.2% of the respondents strongly agreed and agreed respectively. Therefore, majority (77.7%) of the respondents disagreed that IFMIS has the ability to generate exceptional and suspicious reports per worker and per department.

The final question raised to the respondents regarding the prospect of IFMIS in automated procurement was whether IFMIS has reduced number of frauds in the organization. The results showed that 49.3% and 18.2% of the respondents agree and strongly agreed respectively, that the system reduced the fraud in the organization. However, there were 9.7% of the respondents who were neutral while 12.5% and 10.3% of the respondents disagreed and strongly disagree respectively. Therefore, majority (67.5%) of the respondents agreed that on the prospect of in reducing a number of frauds in the organization.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

The purpose of this chapter is to discuss the findings, draw conclusions and make recommendations. The chapter begins with a summary of the study. Conclusions are then drawn in view of the discussion. Lastly, this chapter makes recommendations for improvement as well as suggestions for future study.

5.1 Summary

Ethiopia introduces this system with the intention to bring efficiency and effectiveness in the whole financial system. However, the efforts are somehow impaired by challenges that don't ensure realizing sustainable system within short period of time. The purpose of this study was to determine the major prospect and challenge of Integrated Financial Management Information System (IFMIS). The specific objectives of the study were: to assess the main challenges that are hindering the implementation of IFMIS, to identify the potential advantages of IFMIS for the government organizations and to determine the best practices to eliminate the challenges being faced.

Descriptive research design was used because of its ability to provide a snapshot of the current state of affairs. The population of the study was 566 staffs of five different public bodies. The target population comprised of 234 staff working in these public bodies. The data collection method used in this study was a questionnaire and the response rate was 71%. The data was analyzed using Statistical Package for the Social Science. Then the following concluding remarks were done.

5.2 Conclusions

Integrated Financial Management Information System has many prospects which is also agreed and supported by the respondents. However, the efforts are somehow impaired by challenges that don't ensure realizing sustainable system. The following concluding remarks are drawn from the findings of the analysis.

IFMIS had a positive effect in different aspects which includes enhancing report generation, promoting transparency and accountability in the public financial management, supporting the government budget process, ensuring government expenditure was implemented with a strict authorization, reducing unnecessary expenditure and reducing a number of frauds in public bodies. This response clearly indicates the implementation of IFMIS obtains almost all prospects for the federal institutes.

From the findings it was clear that the system has a huge prospect to enhance the federal public body's single standard platform, unified chart of account and federal level consolidation. This in turn implies that system uses standard data classification for recording, coding and reporting financial events. It also improves an internal control over data entry, transaction processing, and reporting. The system has pushed to follow common processes for similar transactions and a system design that eliminates unnecessary duplication of data entries which promote standardization across public bodies and facilitate easy consolidation of federal level revenue, expenditure and others without requiring mapping.

The study shows that IFMIS enhances transparency and accountability, reducing political discretion and acting as a deterrent to corruption and fraud. This helps the government gain effective control over their finances. The IFMIS allows for the preparation of detailed reports on costs by activity and programme contributing for the transparency and accountability. The introduction of IFMIS in public financial management offers objectivity, transparency, accountability and traceability of transactions and events in the financial management systems. Lack of accountability and transparency has been identified as the main drivers of corruption in the public sector (Biwott, 2015). Consequently, through IFMIS implementation we can reduce corruption by lessening the discretion of officials and increasing transparency.

It is clear from the findings that IFMIS implementation enhances government office budget process. Budget planning and execution by providing timely and accurate data for budget management and decision making is one of the main purpose in implementing IFMIS. Regarding the budgeting process, the finding highlighted the various success aspects on the budgetary cycle, such as enhancing support towards procurement, enhanced more scrutiny of expenditure, ensures audit trails remaining intact in for a considerable period. IFMIS also allows government

to track public expenditure using the budget and commitment modules and thus, provide a basis for controlling budget spending.

Another finding on the prospect shows since the implementation of IFMIS, the record management in organizations has been improved. The use of IFMIS has also helped the users in real time reports on customer services and generating reports on number of services offered on daily basis per category. This allows the preparation of reports to be easier and more transparent. In addition, it promotes efficient access to reliable financial data.

The study also shows that the implementation of IFMIS affects the overall procurement performance in the government organizations. It was seen that it had an opportunity to promote accountability and responsibility in the operations. And this in return had an advantage in reducing number of frauds in the organization.

The study findings indicated that IFMIS project implementation faced resistance from users. This confirms that there are negative effects of resistance on the effective use of the system. User resistance may be result from different reasons. According to this study the main reasons found out to be that users will fear to lose out control and also their jobs, lack of basic knowledge on how to use the system and ignorance of staff involvement on the system implementation.

The study results also indicated that the implementation process lacks top management commitment to properly and timely monitoring and evaluating the progress and being part of the implementation process. The challenges cited as lacking in the top management were inspiring the staff for IFMIS implementation, the management not versed with the IFMIS implementation, the management not made accountable on the use of the system, lack of commitment and general interest.

Another finding of the study was how the system complexity influences effective use of the system IFMIS is seen as complex system by the users as it has some process for them which was a very simple during the manual time. In addition, the users believe it is too complex for ordinary users. This creates frustration for users, source of resistance to use the system and also affects the user's confidence over the system.

The study further concludes that users of IFMIS lack the capacity and technical knowhow to effectively use the system. This is because users are not well trained to handle the system, some users have no accounting background and ICT phobia still remains as a challenge. In this regard the public institute under study has been challenged by inadequate employee skill during implementing IFMIS because of lack of proper training and capacity building issue.

5.3 Recommendation

The main intention of this study is to identify and indicate the prospects and possible challenges during the implementation of IFMIS and show how it can be best utilized. It is important to bear in mind that the main challenges in IFMIS implementation is resistance of users, lack of top management commitment and capacity issue. In order to avoid the issue raised, it is recommended that different user groups have to be identified and their levels of capacity should be determined and training programs explored.

It is important to know that the top management plays basic role in every task in the organization so that the implementer should enhance ways of dealing with change, should work hard to communicate the top management and should also create different awareness creation mechanisms. This will help the top management of the organization to know the benefits of IFMIS and promote the system to their staffs/users of the system in order to find accurate data for their decision making purpose. And the management should lead by example by being proactive and supportive.

All public sectors should have good human resource by planning staff management to identify responsibilities and required skills. So that they should develop a team to improve competency. The team then should track the performance of the users, provide feedback, resolve issue and manage changes.

The application of the IFMIS requires a high overhead in training across all government organizations and at different levels of staffing. This training, and the basic computer literacy training should be given more regularly. And the availability of training programs alone will not be enough. Users should be enforced to take the training provided and focus has to be given on

the way training is given, Skills upgrading courses should also be planned more regularly for staff working with IFMIS and motivation to retain the trained staff in the organization.

Enough reference study manuals for the users should be provided which will guide them to the learning process and also will help them at any time they want to do transaction. This will avoid IFMIS to be seen as complex system by the users.

The researcher generally will recommend that educating the users and top managements on the benefits of the system will lead for internal acceptance and will be a better way for the implementation process of IFMIS. Also consulting them regularly will change their attitudes towards IFMIS.

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Appendix I – Questionnaire for IFMIS Implementation sites

I am an MBA student at Addis Ababa University. I wish to conduct a research entitled “Challenges and Prospects of Integrated Financial Management Information System in Ethiopia”. A questionnaire has been designed and was used to gather relevant information to address the research objectives of the study. This is to kindly request you to grant me permission to correct information on this important subject from randomly selected members of staff.

Please note that the study will be conducted as an academic research and the information provided will be treated in strict confidence. Strict ethical principles will be observed to ensure confidentiality and the study outcomes and reports will not include reference to any individuals.

Sincerely,
Bethelhem Kinfu

Part I: GENERAL INFORMATION

1. Gender: Male Female

2. Age
18-25 26-40 41-55 Above 55

3. Highest level of education:
Diploma BA/BSC Master’s PHD & Above

4. How many years have you worked with the Government Office?
Less than 5 Years 6 - 10 Years 11 - 20 Years Above 20years

5. For how long have you used IFMIS?
Less than 1 year 1-2 Years 2-5Years Above 5 Years

Part II: PROSPECTS

This section aims at establishing the prospect of IFMIS regarding report preparation, budgeting, service delivery and automating procurement in government offices. Please indicate to what extent the statement applies using the Likert scale. (On the scale of 1-5, indicate 1-Strongly Disagree; 2-Disagree; 3-Neutral; 4-Agree; 5-Strongly Agree)

IFMIS GENERAL STATUS AND REPORT GENERATION

Statement	1	2	3	4	5
1. IFMIS implementation has effective management systems through excellent planning					
2. IFMIS facilitates federal level consolidation through using single standard platform and unified chart of account across pubic bodies					

3. IFMIS promotes transparency and accountability					
4. IFMIS enables for effective information sharing (communication) and monitoring of transactions.					
5. IFMIS enhances budget implementation and expenditure control.					
6. IFMIS initiates for technological change and enhance productivity.					

BUDGETING

Statement	1	2	3	4	5
1. IFMIS has supported government offices budgeting process					
2. IFMIS has robust support towards procurement of government items					
3. IFMIS is highly reliable to manage the accounts payable.					
4. IFMIS has in build controls at each level to ensure strict authorization of government expenditure					
5. IFMIS easily supports customization of required management reports based on the user levels or various revenue and expenditure streams					
6. IFMIS has great capabilities of ensuring audit trails remaining intact for a considerable period					

GOVERNMENT SERVICE DELIVERY

Statement	1	2	3	4	5
1. The IFMIS has improved the record management in the organization					
2. The IFIMIS is a scalable system providing ability to add new additional services as the come up					
3. IFMIS has provided real time reports on customers services					
4. IFMIS is able to generate reports on number of services offered on daily basis per category					
5. IFMIS user interface is friendly to the users					

AUTOMATED PROCUREMENT

Statement	1	2	3	4	5
1. IFMIS has enhanced the level of accountability and responsibility in the operations					
2. IFMIS has supported reduction of unnecessary expenditure leading to public wastage					
3. IFMIS generated reports are error free as a result of manipulation					
4. IFMIS has ability to generate exceptional and suspicious reports per worker and per department					

5. IFMIS has reduced number of frauds in the organization					
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PART III: CHALLENGE

This section aims at establishing the challenges faced by the government offices towards implementing IFMIS. Please indicate to what extent the statement applies using the Likert scale. (On the scale of 1-5, indicate 1-Strongly Disagree; 2-Disagree; 3-Neutral; 4-Agree; 5-Strongly Agree)

STAFF RESISTANCE TO IFMIS

Statement	1	2	3	4	5
1. IFMIS system is resisted by majority of the senior officer of the organization					
2. IFMIS exposes corrupt officials that is why it is resisted					
3. Most employees resist IFMIS for fear of losing out control and jobs					
4. The system is resisted due lack of knowledge on how to use it.					
5. The system installation stage ignored staff involvement					

MANAGEMENT COMMITMENT

Statement	1	2	3	4	5
1. Top management lacks the drive to inspire the use of IFMIS					
2. The management is not well versed with IFMIS					
3. There is general lack of interest in IFMIS among top management					
4. Management is made accountable, so they are keen on the use IFMIS					
5. Majority of top management are nearing retirement age, thus are less keen					

COMPLEXITY OF THE SYSTEM

Statement	1	2	3	4	5
1. The system is very complex in its processing of information					
2. The systems complicates very simple manual processes					
3. The system is too complex for ordinary users like us					
4. The system components are too many and complicated					
5. IFMIS envisages government systems which are complicated					

CAPACITY AND TECHNICAL SKILLS

Statement	1	2	3	4	5
1. The Ministry lacks proper training program for the use of IFMIS					
2. The Ministry relies heavily on experts to run the system					
3. The users are not well trained to handle IFMIS					

4. Most users lack accounting background which is essential in the use of the system					
5. The ICT phobia is still an issue if IFMIS is to effectively used					