



ADDIS ABABA UNIVERSITY, COLLEGE OF BUSINESS & ECONOMICS

DEPARTMENT OF ACCOUNTING & FINANCE

FACTORS AFFECTING THE IMPLEMENTATION OF INTEGRATED FINANCIAL
MANAGEMENT INFORMATION SYSTEM IN ETHIOPIAN PUBLIC INSTITUTIONS: THE
CASE OF MINISTRY OF AGRICULTURE AND MINISTRY OF FINANCE, INTEGRATED
FINANCIAL MANAGEMENT INFORMATION SYSTEM PROJECT OFFICE.

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ADDIS ABABA. ETHIOPIA

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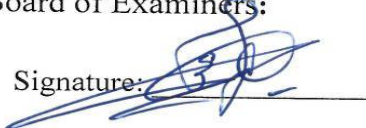
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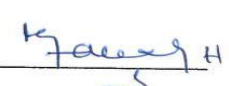
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Statement of Declaration

I, the undersigned declared that this study under the title of “**Factors Affecting the Implementation of Integrated Financial Management Information System in Ethiopian Public Institutions**” is my original work prepared under the guidance and support of my advisor Dr. Takele Fufa. I duly acknowledge all sources of materials that have been used for this study. Finally, I also confirm that this work has not been submitted or presented in any university for the purpose of earning any Degree.

Declared By:

Name: -Daniel Seifu

Signature: _____

Date: _____

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Above all, I would like to thank the almighty God for putting me in this position. It is a reason for all my strength and success throughout my life.

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Abbreviations and Acronyms

AG-.....	Accountant General
ERCA-	Ethiopian Revenue and Custom Authority
GADP-	Government Accounting Development Project
GFDRE-.....	Government of the Federal Democratic Republic of Ethiopia
IBDP-.....	Interim Budget Development Project
IBEX-.....	Integrated Budget and Expenditures
IFMIS-.....	..Integrated Financial Management Information System
IT-	Information Technology
MDA-.....	Ministries, Developments, Agencies
MOF-.....	Ministry of Finance
MPSHD-	Ministry of Public Service and Human Development
PFDM-.....	Public Finance Debt Management
SIDA-.....	Swedish International Development Agency

ABSTRACT

Gov't around the world aim at having efficient public financial management in order to efficiently manage the resources. Government of Ethiopia realized the importance of IFMIS towards efficient and effective service delivery to the public.

This study examines the factors affecting the effective implementation of IFMIS in the public sector, specifically at the Ministry of Finance (MOF), the IFMIS implementation project office, and the Ministry of Agriculture. The research design is mixed, using both qualitative and quantitative approaches. The target population includes the IFMIS project implementation office at MOF and all IFMIS users at the Ministry of Agriculture. Probability and purposeful sampling are used to identify relevant population members. Data was collected through questionnaires and analyzed using descriptive statistics like mean, standard deviation, and percentages using SPSS software version 25. The study analyzed data from Ethiopian public institutions, focusing on the implementation of integrated financial management information systems (IFMIS). The results showed that staff resistance, user capacity and technical skills, ICT infrastructure, top management awareness and support, and support provided by the IFMIS project office were significant factors affecting the performance of the two ministry offices. The normality test, multicollinearity test, and heteroscedasticity test were used to determine the correlation between the independent variables and the dependent variable. Multiple-linear regression was used to determine the factors affecting the implementation of IFMIS. The results showed that staff resistance, user capacity and technical skills, ICT infrastructure, top management awareness and support, and support provided by the IFMIS project office positively predicted the effective implementation of IFMIS on the performance of the two ministry offices.

Keywords: *Integrated Financial Management System Public Sectors, Staff Resistance, User Capacity, Technical Skills, ICT Infrastructure, Top Management Awareness, And Support.*

CHAPTER ONE

1.INTRODUCTION

1.1. Background of the study

The Integrated Financial Management Information System (IFMIS) is one of the latest public financial management reform programs that governments across world are implementing in an effort to ensure quality and transparency in public fund management. Failure to maintain financial transparency acts as a breeding ground for inadequate public accounting, poor regulation of spending, cash mismanagement and financial reporting misstatements. It is needful that Integrated Financial Management Information System is used as the main tool to ensure quality service delivery in the Gov't institutions. The study of Integrated Financial Management Information System and service delivery will ensure transparency and the enforcement of accountability in government (George B., 2021).

A number of developing countries have gradually embarked on automating their government activities over the past decade, mainly with regard to the public sector. This has aroused the interest of the donor community in the standard of public sector financial management (for example, in developing countries). In comparison, Allan and Hashim (2006) posited that funding was generous during the cold war, but only dispersed to political partners with limited questions. The interest in state affairs was restricted in the early years after the fall of the Berlin Wall in 1989, but the position of the state became increasingly prominent in development efforts after the World Bank's report, and especially in the motivation against poverty (World Bank, 2008).

Governments in most emerging economies continued to explore various systems and methods that can be used to renovate and strengthen public financial management. For instance, for some years now, the Integrated Financial Management Information System (IFMIS) has been delivered in many international locations as one of the most typical financial management practices which are anticipated to promote accountability, effectiveness, efficiency and transparency (Chado, 2015).

It is believed that IFMIS has great benefits in that, first, it improves recording and processing of government fiscal deals also allows prompt and effective access to dependable fiscal data. It helps

to improve transparency and responsibility of the superintendent to congress, the general public, and other external agencies. Second, IFMIS strengthens fiscal controls, easing a full and updated picture of commitments and expenditure on a continuous basis. Once a commitment is made, the system should be suitable to trace all the stages of the sale recycling from budget releases, commitment, purchase, payment request, reconciliation of bank statements, and account of expenditure. This allows a comprehensive picture of budget execution. Third, it provides the information to insure bettered effectiveness and effectiveness of government fiscal operation. Generally, increases availability of comprehensive financial information on current and past performance, assists budgetary control and improved economic forecasting, planning and budgeting. All payments made through the system are checked against the budget control functionality.

The Federal Government of Ethiopia (FGE) through the Ministry of Finance is being implementing IFMIS to improve Public Financial Management System and Property Administration; enhance greater accountability, timely financial and property information and transparency across Federal Ministries, Agencies, Regions, City administration, Zones and Woredas. It is an initiative of Expenditure Management Control Program (EMCP) of Public Financial Management reforms. It is believed to increase efficiency and reduce back-office costs with standardized processes for shared services. It will also allow the government to manage its finance from a single and integrated system. The IFMIS solution is the latest version of the ORACLE E-Business Suite (EBS) comprising the following nine modules: Public sector budgeting (PSB), Cash Management (CM), Account Receivables (AR), Account Payables (AP), General Ledger (GL), Purchasing, Inventory, Fixed Asset and Payroll.

From the financial information that we put on the system; the users can generate the different reports for the purpose they require. Balance sheet, statement of Income and expenditures, aging of receivables and payables, cash flow projections, budget utilization status report, and performance reports are some of the reports that we can generate from the system. Managers can use this information for a variety of purposes: to plan and formulate budgets; to review the progress of their achievements against their plan, manage cash balances; track the status of debts and receivables; monitor the use of fixed assets; monitor the performance of specific departments or units; and make revisions and adjustments as required.

The implementation of IFMIS in Ethiopia started since 2011 taking the 1st 3 years as a preparation period that includes developing regulation, structure, procedures, guiding manuals and customization to the Ethiopian context. The actual roll out was started in 2014. The overall actual implementation process across the country has been divided into four phases to be realized in five years' time.

In phase I- it was planned to roll out the system to the Federal sites in Addis Ababa in two years' time. In phase II to the Federal branch offices within one year time. Phase III- to the regional sector bureaus in one year time and finally phase IV for Zones and woredas planned to roll out the system with in one-year time and a total of 5 years to implement the system across the country. **(IFMIS project office roll out strategy, 2017)**

Although there are many achievements in implementing the system, its overall implementation process has been delayed and affected by a number of factors such as internal IT infrastructure issue, staff turnover, parallel system recording, lack of commitment and change resistance as stated in the IFMIS project office rollout strategy report, 2017.

It has been almost 9 years since the actual implementation started but they are still in the first two phases. Phase III & IV not yet started. **(Mc Carthy Phiri, IFMIS reform strategic plan 2021-2025, Nov. 2020).**

Therefore, this study examined the effect of different factors that determine the implementation of IFMIS in Ethiopia focusing on the two Gov't offices, MOA and MOF.

1.2. Statement of the problem.

The Ministry of Finance has been assigned with the responsibility of ensuring appropriate management of government financial resources in terms of budgeting and expenditure. In this context, the ministry has consistently endeavored to enhance financial management systems by implementing different reform programs in the public financial sector. These programs aim to strengthen transparency, accountability, and responsiveness of public financial resources, thereby improving the volume and standard of public service provision to fulfill evolving priorities.

The current financial management system in Ethiopia especially in the Gov't sectors is not responding to the needs of all stakeholders involved. The Ethiopian Government has long been deeply concerned about the consistent underperformance in financial management resulting from the absence of dependable and prompt information for decision-making. Since 2011, the Ethiopian Government initiated the implementation of the Integrated Financial Management Information System (IFMIS) to enhance and fortify the finance and accounting operations of the government (Wussien, 2017).

IFMIS has a number of advantages in improving the public financial management system. It helps to get timely and accurate financial information. It increases confidence and credibility of the budget through greater comprehensiveness and transparency of information. It improves budget planning and execution by providing timely and accurate data for budget management and decision making. The implementation of process workflow management has provided another opportunity for further transactions scrutiny before the payments are finally made.

Easy consolidation and reporting, flexibility of report writing, full process of integration, easy to manage different funds, interfacing standards, automated bank reconciliation are some of the features of IFMIS which the current system, IBEX lacks. **(Ministry of Finance, IFMIS Project office effectiveness review March 2017)**

Though, the Ethiopian government has made various steps in adopting and effectively implementing IFMIS, a lot of issues are still hampering it from its progress.

This program was intended to be rolled out in all the government ministries at Federal level, Agencies, Regions, City administrations, Zones and Woredas across the country. The period 2011-2015 was a period of preparation to develop regulation, structure, procedures, guiding manuals, customization to the Ethiopian context and also piloting the system into six selected federal ministries namely Ministry of Finance, Ministry of Health, ERCA, Ministry of Education, MPSHD and Ethiopian Road Authority. Then the first strategic plan for implementing the system to other Gov't offices across the country was developed from 2016-2020. However, the achievement during this period was not satisfactory which is only 34% of the targeted plan and as a result the

revised strategic plan which runs from 2021-2025 was developed. **(McCarthy Phiri, IFMIS reform strategic plan 2021-2025, Nov. 2020).**

Three years already elapsed since the development of the second strategic plan which runs from 2021-2025 with a mission to implement and institutionalize a modern IFMIS system to all federal and regional Gov't institutions and with the Vision to see IFMIS fully adopted and used as the main system of recording, consolidation, reporting and repository for all fiscal management operations of the Government of Ethiopia though the implementation status is still at federal and their branch level.

There have been several studies conducted before mainly focusing on the challenges of implementing IFMIS from the users' side. The lack of staff with required IT-knowledge, Issue related to ICT infrastructures, Staff resistance to the system, Gov't policy, Capacity and skill of IFMIS users, Top management commitment were identified as challenges for the effective implementation of IFMIS (Mohammed A., 2017, Bethlehem K. , 2020, Henok T., 2017) .

In addition to these, the challenges that exist from the IFMIS project implementation office side is other issue that have not yet been studied in detail in the previous studies which requires further investigation.

This study tries to investigate the factors that affect the effective implementation of IFMIS focusing on two Gov't offices namely MOF, IFMIS implementation project office and MOA.

1.3 Objectives of the Study

1.3.1. General objectives

The Factors Affecting Implementation of Integrated Financial Management Information System in Ethiopian Public Sectors

1.3.2. Specific objectives.

1. To examine the effect of staff resistance to the implementation of IFMIS.
2. To investigate the capacity and technical skills of staff on the effective implementation of IFMIS.
3. To examine the effect of ICT infrastructure on implementation of IFMIS.

- 4.To investigate the effect of the top management support and awareness on the effective implementation of IFMIS.
- 5.To assess the effectiveness of the support given by the support team from the project office.

1.4 Hypothesis of the study.

(H1)-Staff resistance has statistically significant and negative effect on implementation of IFMIS.

The changes associated with the implementation of IFMIS should be communicated to the staff in order for them to embrace it (Peterson, 1998). Any reform's effectiveness is determined by an institution's ability to adapt, manage change, and endure change. He also warns that change opposition may come from a variety of organizational stakeholders. People with vested interests, such as employees who benefitted from prior techniques or public servants who see the change as a direct danger to their employment, may be among them. However, for individuals who resist change simply because they dread the unknown.

(H2)-The capacity and technical skill of the staff have statistically significant and positive effect on effective implementation of IFMIS.

Staff with the relevant knowledge and abilities are required for the practical implementation, operation, and maintenance of IFMIS (Hendriks, 2012). However, he claims that a lack of capacity hampers IFMIS's efficacy.

(H3)-ICT infrastructure has statistically significant and positive effect on effective implementation of IFMIS in public sectors.

McCarthy (2019) in his study stated, while adopting IFMIS, adequate hardware and network infrastructure is required for the effective implementation, operation and maintenance of the system. Hardware and network infrastructure requires planning and procuring early to allow sufficient time for setup and test runs to ensure that there is seamless connectivity prior system go-live. IFMIS implementation requires reliable power supply to ensure that the system operation is not frequently interrupted.

(H4)-Awareness and support of top management has statistically significant and positive effect on effective implementation of IFMIS.

Management commitment is hypothesized to play an essential role in IFMIS implementation. Wabala. S. (2017) recognize that project leadership significantly influence the successful implementation of IFMIS projects.

(H5)-The support provided by IFMIS project office to public bodies has statistically significant and positive effect on the effective implementation of IFMIS.

McCarthy (2019), Project governance, management, operational and technical leadership and support are some of the critical components to the success of IFMIS project.

1.5. Significance of the study

It is obvious that the effective implementation of the system will contribute a lot for the realization of effective public financial management and property administration system. For this to happen the participation of various researchers in identifying factors affecting the implementation of the system and recommending the improved way of doing things is very important.

This Research Project will assist for the public sectors as it highlighted the challenges of the staff are going through while implementing IFMIS, especially capacity building needs and availing adequate equipment with this information, the government will be able to develop a strategy to bridge the identified gaps and improve implementation of the IFMIS.

The research project also adds to the existing literature by bridging the gap on the implementation and impact of IFMIS on accountability and transparency. The findings of the research project are beneficial to future researchers since it highlighted areas requiring further research.

The findings of this study may be helpful to the researchers and academicians as it will form a basis for conducting further future research, especially those who will be interested in public financial management reforms in public sectors. It will also be of great use and application in providing valuable insights to the policy makers, as it will help in addressing the many bottlenecks affecting the implementation of IFMIS in the public sector in the country.

1.6. Scope of the Study

This research project mainly examines the status of IFMIS implementation in Ethiopia's public sectors with a focus on the factors that affect the implementation of IFMIS in two Gov't offices, namely MOF, IFMIS project office and Ministry of Agriculture.

The research project will cover time period from April to June of the year 2023/24, focusing on how top management support and awareness, technical staff, and ICT infrastructure influence the implementation of IFMIS in Ethiopia's public sector focusing on the above two Gov't offices.

1.7. Organization of the Paper

The study organized in five chapters. The first chapter introduced the background of the study which deals with introduction and contextualization of the research topic, statement of the problem, the objectives of the study, research questions, significance, scope and organization of the study. Chapter two about literature reviews and theoretical frameworks, and it presents the literature review and the theoretical foundation of the study. The applicable literature to the design content and theoretical model employed in the entire work presented and discussed in order to develop abstract frame to estimate the exploration findings in the case of the study area of the factors affecting perpetration of IFMIS. In chapter three research designs, description of the study area, sampling technique and sample size determination, data type and sources, data collection methods, data processing, analyzing and interpretation, model specification, dependent and independent variables have been discussed. Chapter four focused on discussion on the findings of the collected data. Eventually, the last chapter deals with conclusion and recommendations which is the final chapter of the project that provides general conclusion and recommendations.

1.8 Limitation of the study

Due to time constraint the study is limited to two Gov't offices, MOF and MOA.

Reluctance of the respondents is also another limitation of the study. The researcher approached the respondents through their supervisors but most of them were reluctant to fill in the information they are provided. This is due to either they are too busy at their work or not interested in filling.

Especially the senior officials are busy with frequent meetings. But most of this issue managed through approaching the respondents directly. But took unnecessarily extra time in getting the required information.

Carelessness in filling the questionnaires. Some of the respondents are filling the questionnaires so carelessly and some are partly filled and as a result the responses they are providing do not reflect the real situation and do not serve for the purpose. This has impacted on the quality of the data collected and the response rate as they are not part of the analysis due to their problem. In addition, the high staff turnover in the project office has impacted the data collection process. During my visit there were a number of new employees and difficult to get the required information from these new staff. Again, this had an effect on the quality and number of responses expected from the project office.

Another limitation is the IFMIS system is still very new in Ethiopia and data from local sources for literature review was not readily available and the research had to rely on literature from outside the country.

CHAPTER TWO

2.Review of Related Literature

2.1. Introduction

In this section we explore the literatures and such relevant scholarly materials on IFMIS to be able to derive maximum benefits from IFMIS and to reveal any gaps that exist in the literatures. Relevant literature on the key concepts and the theories that are relevant to the research topic will be reviewed.

It examines what other scholars and authors have said about the benefits & different challenges in the effective implementation of IFMIS. It covers the theoretical review of literature, conceptualization of research problems, and empirical review of the literature.

2.2. Theoretical review

2.2.1. IFMIS as a Tool for PFM Implementation

2.2.1.1 Public Financial Management (PFM)

PFM is a central element of a functioning administration and the basis for all government activities. It is the process of collection, managing and spending of public finance throughout the Economy. The main objective of PFM is to improve citizen's lives through better management of public money. It encompasses the mobilization of revenue; Many PFM topics are highly specialized and have their cadre of experts—on issues such as financial management information systems, payroll reform or procurement for public works, for example. But whether one is engaged in the gritty details of cash advance procedures or works on public policy at a broad level, it remains valuable to consider the PFM system as a whole. It is important to understand how various functions fit into a broader system of rules and regulations that govern the management of public resources, and what these functions are ultimately intended to achieve (Rebecca Simson, Natasha Sharma & Imran Aziz 2011).

2.2.2. System Theory

According to Wang (2005), information may be defined as "patterns circulating (due to feedback) in the system that do not necessarily include any conscious mind." In other words, information may be defined as stuff that has the potential to be interpreted as representation but was not generated or provided for that reason. According to Kang" ethe (2002), a system is a group of related and Interacting components, which work together to achieve the desired purpose or set of objectives. Opiyo (2017) asserts that in order to achieve the objectives of office secretarial management, there is a need for efficiency and effectiveness, which necessitates ensuring harmony and synergy between the human resource as the core resource that controls other resources on the one hand, and the other tools of the trade, in particular, modern ICT on the other. As a result, there is an obvious need to comprehend human resource perceptions and areas of possible conflict in the context of human resource engagement with modern ICT.

Information technology systems, or "InfoTech," are created when computer and communication technologies are integrated. Information technology is a broad word that encompasses any technology that aids in the creation, manipulation, storage, communication, and dissemination of data. When discussing information technology in general, it is likely that the usage of computers and information are linked (Wang, 2005). Emerging Information and Communication Technology (ICT) can play a critical role in combating corruption in public finance systems Opiyo (2017) by encouraging more data comprehensiveness and openness across government agencies.

2.2.3 Diffusion of Innovation Theory

Diffusion of Innovation (DOI) Theory, developed by E.M. Rogers in 1962, is one of the oldest social science theories. It originated in communication to explain how, over time, an idea or product gains momentum and diffuses (or spreads) through a specific population or social system. The end result of this diffusion is that people, as part of a social system, adopt a new idea, behaviour, or product. Adoption means that a person does something differently than what they had previously (i.e., purchase or use a new product, acquire and perform a new behaviour, etc.). The key to adoption is that the person must perceive the idea, behaviour, or product as new or innovative. It is through this that diffusion is possible.

Adoption of a new idea, behaviour, or product (i.e., "innovation") does not happen simultaneously in a social system; rather it is a process whereby some people are more appropriate to adopt the innovation than others. Researchers have found that people who adopt an innovation early have different characteristics than people who adopt an innovation later. When promoting an innovation to a target population, it is important to understand the characteristics of the target population that will help or hinder adoption of the innovation.

Rodger's theory of innovation's diffusion is the most appropriate in understanding the adoption of a given technology. Therefore, in the context of the current study, the aforementioned theory enables the investigation of adoption of IFMIS by Ethiopian government institutions. As Rodgers suggests, adoption is a decision of full use of an innovation as the best course of action available, while rejection is a decision not to adopt an innovation. This reasoning will be applied to explain embracing of resistance to IFMIS implementation in Ethiopian Government institutions.

It is recommended that, as one way of enhancing the diffusion of a technology (or innovation), it is of particular importance to understand the innovation decision process. The process entails five phases which include knowledge, persuasion, decision, implementation, and confirmation (Rogers, 2003). This study sought to investigate how the respective users are informed of the introduction of IFMIS in the system of Ethiopian Government institutions. Also, it would be rationed to understand how the elements of relative advantage, compatibility, complexity, trialability, and observability, are of essence in persuading the pertinent Ethiopian Government officials to embrace IFMIS in their operations. In addition, understanding, the decision made by the relevant personnel (if at all they have a choice on the same) and how the IFMIS is implemented will be of utmost importance. Conclusively, by applying the Rodgers theory, the researcher is in a position to confirm the potential effects of implementation of IFMIS by the Ethiopian government institutions. However, the theory has a number of limitations. The theory does not foster a participatory approach. It is therefore only able to work best with adoption of behaviors. Lastly, the theory does not take into account an organization's resources and social support in adoption of new methods (Rotich, 2015).

2.2.4 Social learning theory

Social learning theory is a theory of learning and social behavior which proposes that new behaviors can be acquired by observing and imitating others. It was proposed by Albert Bandura (1977). This is a theory of learning and social behavior which proposes that new behaviors can be acquired by observing and imitating others. It states that learning is a cognitive process that takes place in a social context and can occur purely through observation or direct instruction, even in the absence of motor reproduction or direct reinforcement. In addition to the observation of

behavior, learning also occurs through the observation of rewards and punishments, a process known as vicarious reinforcement. When a particular behavior is rewarded regularly, it was most likely persisting; conversely, if a particular behavior is constantly punished, it was most likely desisting. The theory expands on traditional behavioral theories, in which behavior is governed solely by reinforcements, by placing emphasis on the important roles of various internal processes in the learning individual. The above theory relates to the effect of training and experience on implementation of Integrated Financial Management Information System.

2.3. Review of Empirical Studies

Some proponents of implementing integrated financial management information systems argue that these systems can lead to significant cost savings, improved financial management, and increased transparency and accountability. They argue that IFMIS can streamline processes, reduce (Ameen & Ahmad, n.d.) bureaucracy, and strengthen financial controls (Wanyonyi & Theuri, 2021). On the other hand, critics argue that implementing IFMIS in Ethiopian public institutions may face various challenges and barriers. These challenges and barriers may include implementing an integrated financial management information system in Ethiopian public institutions may face various challenges and barriers. One significant challenge is the lack of adequate infrastructure and technological resources in some regions of Ethiopia. The uneven distribution of reliable internet connectivity and computer equipment could hinder the successful implementation of IFMIS in all public institutions across the country. (Tegegne & Wubante, 2022) (Tegegne & Wubante, 2022) (Sugebo & Sekhar, 2020)

2.3.1. Staff resistance as a factor of implementing of IFMIS.

The implementation of Integrated Financial Management Information Systems has been the subject of several empirical studies focused on understanding staff resistance and the support provided by the IFMIS project office. These studies delve into the complexities of organizational change and the challenges faced by staff when adopting new financial management systems. Researchers have examined the attitudes and behaviors of staff members, the effectiveness of training programs, and the role of the project office in providing necessary support during the implementation process. (Bhimani, n.d.) (Bhimani, 2003) (Financial Management Information Systems: 25 Years of World Bank Experience on What Works and What Doesn't, 2011)

Furthermore, the literature on IFMIS implementation highlights the critical role of effective change management strategies and the need for clear communication and stakeholder engagement. Studies have emphasized the importance of addressing staff concerns, providing ongoing support, and fostering a culture of collaboration and learning within the organization. By understanding the nuances of staff resistance and the support mechanisms offered by the IFMIS project office, organizations can better tailor their implementation strategies to ensure successful adoption and utilization of the system. The empirical studies also shed light on the specific factors that contribute to staff resistance, such as fear of job loss, uncertainty about new processes, and a lack of confidence in the system's capabilities. Moreover, they reveal the multifaceted nature of support provided by the IFMIS project office, including technical assistance, change management guidance, and resources for ongoing skill development. (Simpson et al., 2020)

In addition to the challenges and support mechanisms, the studies underscore the long-term impact of IFMIS implementation on organizational culture and performance. They explore how successful adoption of IFMIS can lead to enhanced transparency, accountability, and efficiency in financial management processes. Furthermore, the research delves into the role of leadership in driving organizational change and creating a conducive environment for IFMIS utilization (Hendriks, 2012)(Simpson et al., 2020)

By delving into these nuances, organizations can gain comprehensive insights into the complexities of IFMIS implementation, thereby enabling them to develop tailored strategies that

address staff resistance and leverage the support provided by the project office. This deeper understanding can ultimately lead to more effective and sustainable IFMIS utilization within organizations, paving the way for improved financial management practices and overall organizational performance. (Jugdev & Mathur, 2006)

2.3.2. Capacity and Technical skills staff as a factor of implementing of IFMIS.

The implementation of an integrated financial management information system is a complex process that requires the involvement and cooperation of various stakeholders, including staff (Micheni, 2017) from different departments within an organization. Staff resistance, capacity, and technical skills play a crucial role in the successful implementation of an IFMIS. Staff resistance can stem from fear of change, a lack of understanding about the benefits of the new system, or concerns about job security. Understanding and addressing these concerns are vital for the success of the implementation. (Simpson et al., 2020) (Micheni, 2017)

Capacity building is essential to ensuring that staff members have the necessary knowledge and skills to effectively use the IFMIS. This can involve training programs, workshops, and ongoing support to help staff adapt to the new system. It's important for the IFMIS Project Office to provide comprehensive support in this aspect to ensure a smooth transition. (Muwema & Phiri, 2020)

Moreover, technical skills are equally important. Employees need to be proficient in using the system, troubleshooting common issues, and understanding the technical aspects of the IFMIS. The project office should ensure that staff has access to technical resources and training to enhance their skills in this area. This will contribute to the overall success of the IFMIS implementation (Muwema & Phiri, 2020; Micheni, 2017).

2.3.3. ICT Infrastructure as a factor of implementing of IFMIS.

(Sugebo & Sekhar, 2020) (Sugebo & Sekhar, 2020) The practical applications of accurate weather forecasts in various industries and sectors are extensive, including: Practical applications of accurate weather forecasts include the following: Factors Affecting Implementing an Integrated Financial Management Information System in Ethiopian Public Institutions (Zhang et al., 2019)

(Mwenje & Mukanga, 2016) (Mwenje & Mukanga, 2016) The Impact of Technological Infrastructure on IFMIS Implementation The lack of adequate infrastructure and technological resources in certain regions of Ethiopia poses a significant challenge to the successful implementation of IFMIS in public institutions. Without reliable internet connectivity and sufficient computer equipment, the effective deployment and operation of an integrated financial management information system have become increasingly difficult. In regions where these resources are scarce, the potential benefits of IFMIS, such as streamlined processes and strengthened financial controls, may not be fully realized. (Analysis of the Critical Success Factors of Integrated Financial Management Information Systems in Selected Kenyan Counties, 2017)(Analysis of the Critical Success Factors of Integrated Financial Management Information Systems in Selected Kenyan Counties, 2017)

Furthermore, the uneven distribution of technological resources across the country can exacerbate disparities in the implementation of IFMIS. Public institutions in areas with better infrastructure may experience smoother transitions to the new system, while those in under-resourced regions may struggle to adapt. This disparity could widen the gap in financial management capabilities between different institutions, potentially affecting the overall efficiency and transparency of financial operations at a national level. (Kapaya, 2020)

Addressing these infrastructure challenges is crucial for the successful implementation of IFMIS in Ethiopian public institutions. Without adequate technological support, the potential advantages of IFMIS may remain inaccessible to a significant portion of the country's public sector, limiting the system's overall impact on financial management practices. (Muwema & Phiri, 2020) (Muwema & Phiri, 2020)

2.3.4. Top management support as a factor of implementing IFMIS.

Efficient and effective implementation of integrated financial management systems is crucial for organizations (Sori et al., 2015) to streamline financial processes, improve decision-making, and enhance overall financial performance. Empirical studies have identified several key factors that can affect the successful implementation of IFMS to streamline their financial operations and

improve transparency and accountability. Several factors have been identified in empirical studies that can significantly affect the successful implementation of IFMS.

One of the key factors is top management support and commitment. Research has shown that when top management is actively involved and supportive of the IFMS implementation, the chances of success are significantly higher. This support can manifest in various ways, including allocating adequate resources, providing clear directives, and fostering a culture of change and innovation. (Lee et al., 2014)

Furthermore, effective change management strategies have been shown to be crucial for mitigating resistance to change and ensuring a smooth transition to the new system. Communication, stakeholder engagement, and careful planning are all important components of successful change management in the context of IFMS implementation. Jay & Smith, n.d. In addition, the selection of the right vendor and technology is another influential factor. Empirical studies have emphasized the importance of thorough vendor evaluation, including factors such as system scalability, adaptability, and ongoing support services. (Omar et al., n.d.)(Omar et al., n.d.) Overall, empirical studies provide valuable insights into the multifaceted nature of IFMS implementation, shedding light on the critical factors that organizations should consider to ensure its successful adoption and integration. (Analysis of integrated management systems from various perspectives, 2014)

One of the critical factors is top management support and commitment. Research has shown that without strong support from top executives, the implementation of IFMS is likely to face resistance and challenges. Therefore, it is essential for organizational leaders to actively champion the adoption of (Alzayed & Khalfan, 2021).

In conclusion, the support provided by the IFMIS Project Office in addressing staff resistance, building capacity, and improving technical skills is crucial for the successful implementation of an IFMIS. (Muwema & Phiri, 2020) (Micheni, 2017) (Muwema & Phiri, 2020)

2.4. Study Justification

The implementation of IFMIS in every Gov't is to enhance the performance of financial operation and reporting of an organization as well as data management security. It also standardizes operation across the organizations.

The world bank asserts that IFMIS in addition to improving the public financial management, it also enhances the confidence and credibility of the budget through greater comprehensiveness and transparency of information. Budget planning and execution is improved by making available timely and accurate data for budget management and decision making.

Despite all these advantages the implementation process of the system is not simple especially in developing countries.

The study conducted by Diamond & Khemani, 2006 shows the successful implementation of IFMIS has been hampered by a number of factors and the major ones are classified as technological, user and organizational set up.

The case of Ethiopia is not different from other developing countries. The GFDRE through its MOF and with technical and financial support from world bank and other development partners is implementing IFMIS with the aim to strengthen and improve its PFM system in order to enhance overall fiscal management. In particular, the implementation of IFMIS is ultimately intended to contribute to the country's macroeconomic stability, enhanced delivery of public services, and improved accountability across budgeting, revenue collection and expenditure management.

The implementation process started in 2011, the first five years for preparation and piloting the system in six selected Federal ministries, Ministry of Finance, Ministry of Health, Ministry of Education, ERCA, Ethiopian Road Authority and MPSHD. Then the first strategic development which runs from 2015-2020 was developed with the aim of rolling out of the system across the country including regional and woreda offices. This plan was not successful with only 35% achievement of the targeted plan. Again, another strategic plan which runs from 2021-2025 was developed and the implementation process still on progress at federal level. Though there are many progresses in terms of rolling out of the system at federal and branch offices level the

implementation process at regional and woreda level have not yet started. (IFMIS reform strategic plan 2021-2025). A number of factors affected the effective implementation the IFMIS and that is why the researcher intended to investigate the factors that affects the implementation of the system focusing on the IFMIS implementation project office and MOA and suggest some important recommendations based on the findings.

2.5. Conceptual Framework.

A conceptual framework is a tool that researchers use to guide their inquiry; it is a set of ideas used to structure the research, a sort of map (Kothari 2004). It is the researcher's own position on the problem and gives direction to the study. It may be an adaptation of a model used in a previous study, with modifications to suit the inquiry. Aside from showing the direction of the study, through the conceptual framework, the researcher can be able to show the relationships between the different constructs that have to be investigated.

As Sammy (2013) asserts, a conceptual framework refers to a group of concepts that are systematically organized to provide a focus, rationale, and tool for the interpretation and integration of information (Balachander and Soy, 2003). This is usually achieved in pictorial illustrations. A conceptual framework in this seminar identifies both independent variables and dependent variables. The independent variables refer to the conceptualized factors or variables that may influence the outcome of the dependent variable. In this study, effective implementation of IFMIS is hypothesized to be affected by staff resistance to implementation of IFMIS, capacity and technical skills of staff, ICT infrastructure, awareness and support of top management, and support provided by the IFMIS project office depicted as follows.

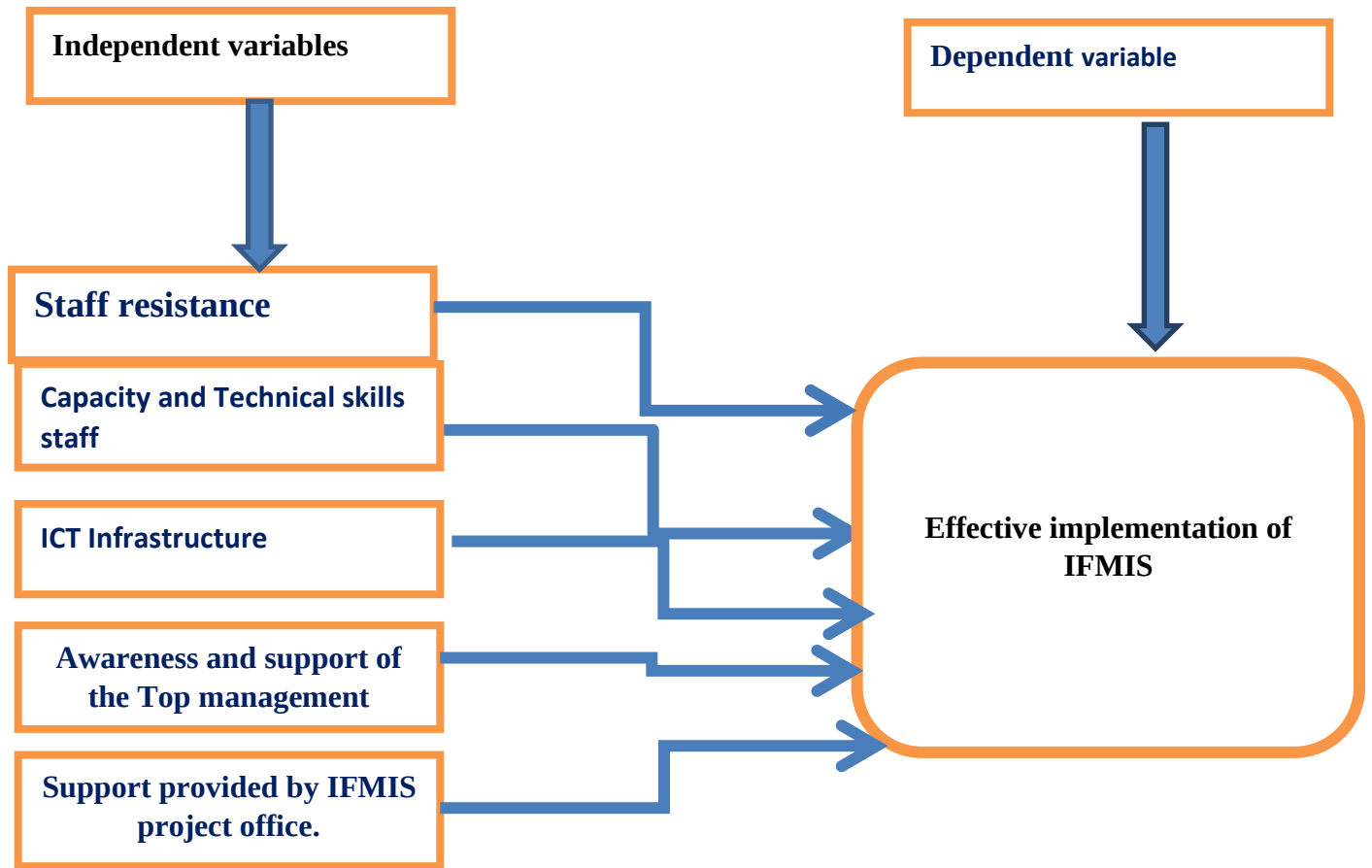


Figure 1: Conceptual framework of the study

Source: Md Asad Noor (2022), and modified by researcher

CHAPTER-THREE

3. Research Design and Methodology

3.1. Introduction

Research methodology is a specific technique for collecting and analyzing data in order to uncover new information.

This section details the logical and systematic plan to resolve the research problem. It shows the approach to research to ensure reliable and valid results that address the aim and objective of the study. It includes what data the researcher is going to collect and where from as well as how it is being collected and analyzed.

3.2 Research Design and Approach

Research design embraces the methodology and procedures employed to conduct scientific research. The design defines the study type: data collection methods and statistical analysis plan. This study was focused on a mixed research design since it seeks to evaluate the factors that affect the effective implementation of IFMIS through interviews and a five-item Likert scale questionnaire. The research design worked on a selected number of factors to get empirical data on the effective implementations of integrated financial management information systems in Ethiopian public institutions, particularly at the ministry of agriculture and the ministry of finance IFMIS implementation project office. So, the study utilized a cross-sectional survey design that used both qualitative and quantitative approaches (Mann, 2003). It was used largely because it helped to select a small sample of people from a larger population to act as an inference, since surveys are designed to provide a snapshot of how things were at a specific time, and because it allowed the use of many variables in the past (Levin, 2006). In this study, survey methodology will help in measuring variables and examining relationships among variables as recommended by Fowler (1993). Oso and Onen (2005) stress that cross-sectional survey design allows quick collection of raw data in addition to enabling the researcher to interact with people who have

practical experience with the subject of study (Kothari, 2004) and evaluate their perceptions, opinions, and feelings at a particular time. It is carried out among a few people to act as an inference to the majority. As such, the use of this design allowed the researcher to employ a relatively passive approach to making causal inferences based on their findings. Using a mixed research method of both qualitative and quantitative approaches is capable of giving a good understanding of the study (Cameron, 2009).

3.3. Population, Sample Size and Sampling Technique

3.3.1. Target Population of the study.

Investigating, for example, a problem will almost certainly require a research project in the academic sense. Researchers often have an interest in a particular group of people or items; this is referred to as the study population. Population is the total number of a defined class of people, objects, places, or events selected because they are relevant to one's research questions.

The target population to whom the study's findings will be generalized includes MOF, IFMIS project implementation office and all IFMIS users at Ministry of Agriculture.

MOF, IFMIS project office, is established for the implementation of the system across the country. It is also responsible to provide technical support for the users after implementation for the sustainability of the system. So, it is highly important the staff in this office have the required skill or qualification, be highly committed and motivated. If this is not the case, it will have an impact on the implementation of the system.

Ministry of Agriculture is a big organization mobilizing a huge amount of resources from Gov't and different development partners. The office has been using IFMIS for its regular budgets coming from Gov't sources and also grants coming from different development partners. This office is selected as it is managing different grants other than the Gov't regular budget using IFMIS and also as to my knowledge no previous study has been conducted in this organization.

From MOA, Finance, Budget and Planning, Procurement and Inventory and property administration departments are purposely selected based on their involvement and experience in using the system. IFMIS in these departments are fully operational and widely used from planning

to reporting. It is also believed that the team members in these departments have the required knowledge and information about the system as they have been using the system for the last three and half years.

Table 1: Population Dispersal Table

Department /level	Population per department	<i>Percentage</i>
Ministry of Finance, IFMIS project office technical team	193	60.124%
MOA- Finance team	50	15.576%
MOA-Budget and reporting team	38	11.838%
MOA-Inventory and property administration team	25	7.788%
MOA-Procurement with a team	15	4.67%
<i>Total population</i>	321	100%

3.3.2. Sample Size.

A sample is a selection of a group of people or events from a population to be able to find out true facts about the sample that will be true of the population. This becomes necessary as the entire population cannot be studied due to size, inaccessibility, time, and financial constraints. This study was estimated on a population of three hundred twenty-one (321) people, and this large size made it impossible for the researcher to test every individual member of the population. As such, a sample size of one hundred seventy-eight (178) respondents was chosen as a true reflection of the population for the study. Non-probability sampling procedures (purposive or judgmental) for managers and probability sampling (lottery system) techniques for non-managerial employees were used for selecting respondents. The purposive sampling technique was chosen in sampling for managerial employees because they can meet the criterion of belonging to the predefined group of top-level managers. In the sample size of 178, five (5) were top management staff of managers by the non-probability sampling method, and the remaining one hundred and seventy-three (173) respondents were non-managerial employees by simple random sampling techniques.

According to Mugenda and Mugenda (2003), it's impossible to study the whole targeted population, and therefore the researcher has to decide on a sample population. The sample size of

the study was 178, as presented in Table 2 below, and it was determined using Zemichael's (2019) adopted from Yamane's (1967), Yamane's (as cited in Sarmah), and Hazarika's (2012). The most simplified formula is shown below.

Where: -

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

n = sample size

N= total population

1 = constant value

e = level of precision or random error (0.05)

e² = constant standard error equal to 5% for 95% confidence level

The sample size distribution was determined as follows:

Sample size (n) = 178

Total population is 321.

Table 2: Number of Participants per Category

Department /level	<i>Population</i>	<i>Sample size</i>	<i>Percentage</i>	Sampling technique
Ministry of Finance, IFMIS project office technical team	193	107	60.11%	Purposive and Simple random sampling
MOA-Finance team	50	28	15.7%	Purposive and Simple random sampling
MOA-Budget and reporting team	38	21	11.8%	Purposive and Simple random sampling
MOA-Inventory and property administration team	25	14	7.9 %	Purposive and Simple random sampling
MOA-Procurement with a team	15	8	4.5 %	Purposive and Simple random sampling
<i>Total population</i>	321	178	100%	

3.3.3. Sampling Technique.

The study used purposive sampling to select the most appropriate teams (Directorates) in terms of their involvement, experience and exposure to the system. Then the respondents were selected from the purposely selected directorates using a simple random sampling technique. Simple random sampling is a form of respondents' selection that is done in order to avoid bias (Mugenda and Mugenda, 2003). As Levy & Lemeshow (2008) explain, simple random sampling is a probability sampling technique in which a random selection is made of the first element for the sample, and then subsequent samples or elements are selected using a fixed or systematic interval until the desired sample size is reached in the study. The target population is numbered, and a sampling frame is compiled. Simple random sampling is a stronger sampling procedure. A list of employees from each department was obtained from the human resources department to help in

determining the respondents. The names of respondents from each category were written on pieces of paper and contacted to be involved in the study. The study also used purposive sampling to select top managers for the intended purpose.

3.4. Source of data and its collection method

The study mainly used primary data to arrive at the required conclusion on the research problem. This is because it allows researchers to have direct access to the subject of this research, ensuring the reliability of the information obtained. Secondary data also used from published documents such as Journals, periodicals, magazines to support the primary data.

The required primary data collected from employees of Ministry of Finance, IFMIS project office and ministry of Agriculture through questionnaire and interview. A total of 34 questionnaires & 6 interview questions distributed to the two organizations.

3.5 Methods of Data management and Analysis

In this study the variables and respective attributes of the model are attitudinal and measured & expressed using a five-point Likert scale, a scale measuring the degree to which respondents agree or disagree with a statement in the following manner: Strongly Agree, Agree, Neutral, Disagree and Strongly Disagree. Five different scores assigned: 5, 4, 3, 2, 1, to represent this five-point scale. The 5-point Likert scale is preferred because it is simple to understand and use for survey administrators and respondents. It takes less time and effort to complete than higher-point scales.

Both qualitative and quantitative data analysis technique used where descriptive and inferential statistics computed with the help of Statistical software package called SPSS version 25.

To determine the correlation between variables in the study, the analysis done using correlation and multiple regression techniques. Correlation techniques is helpful in showing how the variables are related to each other, whether positively or negatively related, while multiple regression techniques are used to determine the portion of variations explained by the independent variables through the coefficient of determination (R^2). The results of the analysis presented using graphs, charts, and tables.

3.6. Model specification.

This study searches for the factors affecting the effective implementation of IFMIS in government public bodies in the case of Ministry of Finance and Ministry of Agriculture. The survey data collected from MoF, IFMIS project office and MOA. The research used OLS model specification to identify those determinants and their level of effect using 5-Point Likert scale data.

The econometric model that is OLS techniques applied. The primary data for the model collected by using of five-point Likert scale questionnaires for each variable and analyzed using quantitative technique such as descriptive statistics (mean, standard deviation,). The model specification is given as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \epsilon$$

Where: Y= Independent variable (Effective Implementation of IFMIS)

β_0 =Constant term

$\beta_1, \beta_2, \beta_3, \beta_4$ and β_5 : are coefficients of independent variable

X_1 =Staff resistance on implementation of IFMIS

X_2 = Capacity and technical skills of staff

X_3 =ICT Infrastructure

X_4 =Awareness and support of the Top management

X_5 =Support provided by IFMIS project office.

ϵ =Error term

3.7. Reliability and validity measurement

3.7.1. Reliability measurement

Reliability test measures the consistency of the results. It helps to assess the quality of the study, whether research method can produce the same results multiple times. If our research method can produce consistent results, the methods are likely reliable and not influenced by external factors. Most common measure of internal consistency reliability is "Cronbach's alpha. It is the most common measure of internal consistency or reliability. It is most commonly used when we have multiple Likert questions in a survey or questionnaire that form a scale and we wish to determine if the scale is reliable. Cronbach's alpha ranges from 0 to 1.

Zero indicates that there is no correlation between the items at all. They are entirely independent. Knowing the value of a response to one question provides no information about the responses to the other questions.

One indicates that they are perfectly correlated. Knowing the value of one response provides complete information about the other items.

Analysts frequently use 0.7 as a benchmark value for Cronbach's alpha. At this level and higher, the items are sufficiently consistent to indicate the measure is reliable. Typically, values near 0.7 are minimally acceptable but not ideal.

3.7.2. Validity Measurement

Validity is the accuracy and meaningfulness of inferences, which are based on research results. It is the degree to which results obtained from the analysis of the data actually represents the phenomenon under study. Therefore, validity looks at how accurately represented are the variables of the study (Mugenda, Mugenda 2003). Due to its characteristics, which are helpful to evaluate the stated thesis topic on IFMIS implementation strategy, the study adopted content validity that

means, the degree to which data collected using particular instruments represents a specific domain of indicators or content of a particular concept. To ensure validity in qualitative process, the researcher used respondent validation process. This was done by checking the results on completion of data collection for any missing responses and other aspects. The content validity index Formula was used as presented below.

$$C.V.I. = \frac{\text{No of right rated items}}{\text{Total no of items}} \times 100$$

3.8. Ethical Consideration

To carry out this research, ethical clearance was requested and granted from A.A.U. Accounting & Finance department office. A letter was issued allowing carrying out the study. Once this is obtained the research study has been preceded. Permission was obtained from MOF, IFMIS project management office and MOA. Participants were also given liberty to withdraw their consent at any time if not comfortable. All data and personal information have been kept confidential as no identifying information was required in the questionnaire. Participants may choose not to answer any questions that they may find not comfortable with. Returns were not being given for services. Privacy and wishes of the participants have been respected at all times.

CHAPTER FOUR

4. Data Analysis, presentation and Discussion

4.1. Introduction

This section focuses on the analysis of the results obtained from the respondents for the questionnaires and interview questions distributed for them. It tried to analyze how the selected factors affect the implementation of IFMIS. The data has been analyzed and interpreted using SPSS. The results of the findings form the basis of conclusion in the next chapter.

4.2. Respondents' Response Rate

A total of 34 questionnaires and 6 interview questions were distributed to 178 respondents to the two organizations out of which 132 respondents properly filled in and returned the questionnaires they are provided. This accounts for 74% of the targeted population.

According to Mugenda and Mugenda (2003), a response rate of 50 percent is adequate for data analysis and reporting; a rate of 60 percent is good and a response rate of 70 percent and over is excellent, this implies that the above 74 percent response rate for this study is suitable for data analysis and reporting.

4.3. Respondents' Demographic Description

Table 3-Demographic information					
I-Gender		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	73	55.3	55.3	55.3
	Female	59	44.7	44.7	100.0
	Total	132	100.0	100.0	

II-Educational background		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Diploma	14	10.6	10.6	10.6
	BSc/BA	70	53.0	53.0	63.6
	Masters	48	36.4	36.4	100.0
	Total	132	100.0	100.0	
III- Experience in using IFMIS		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 1 year	4	3.0	3.0	3.0
	1-2 Years	32	24.2	24.2	27.3
	3-5 years	46	34.8	34.8	62.1
	Above 5 years	50	37.9	37.9	100
	Total	132	100.0	100.0	

Source: survey data 2024

According to respondents' response rate on number and frequency based on gender distribution, which is tabulated and figured on table 3 above, the results revealed that more respondents male in number 73, which is 55.3% of the total sample size, whereas female respondents were 59 in number, which accounted for 44.7% of the sample in the study. The results implied that both genders participated and thus biases were avoided though there was evidence of gender imbalance of respondents.

According to the respondents' response rate on frequency and number distribution for respondents' educational background, which is tabulated and figured out in Table 3 above, their educational background was distributed accordingly. At the beginning of the questionnaires, there were four (4) educational background ranges. Based on the ranges, 14 respondents were in technical and vocational education (TVET or diploma), 70 respondents were undergraduates, and both in Bachelor of Arts degree and Bachelor of Science degree, and 48 respondents completed their post-graduate study and no PHD. This implies that the respondents have sufficient academic background and level of understanding to understand the questionnaires they are provided and respond accordingly.

Based on the respondents' response rate on frequency and number distribution for respondents' working experience in the two ministry offices, which is tabulated and figured out in Table 6

above, their working experience was distributed accordingly. At the beginning of the questionnaires, there were four (4) experiences with using IFMIS categories or ranges. Based on the category, 4 respondents have had less than one year of work experience in using IFMIS in the organization; 32 respondents have had work experience in using IFMIS in the range of 1–2 years; 46 respondents have had work experience in using IFMIS in the range of 3–5 years; and 50 respondents have had work experience in using IFMIS above 5 years in the ministry offices.

In general, all of the participants in the study have had good working experience using IFMIS, handling the study questionnaire, and assessing the implementation performance of the two ministry offices.

4.4. Reliability Statistics

Table 4: Reliability Statistics for all variables

	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
SIR	0.987	.987	6
CTS	0.989	.989	6
ICT	0.992	0.992	6
AST	0.990	0.990	6
SPIP	0.965	0.968	5
EI	0.967	0.968	5
overall	0.995	0.997	34

Source: SPSS data 2024

As per the above table 4 data, Cronbach's Alpha was applied so as to conduct the reliability analysis for this study, which was to measure the internal consistency of the research instrument. The reliability of a research instrument is preferable if it has a reliability coefficient value above 0.7. For this study, the alpha coefficient was between 0.965 and 0.990. The summary of the scales and items determining objective areas, as indicated in Table 8 above. Hence, the researcher very satisfied with the reliability and validity of the scale, and its capacity is very strong enough to be

reliable.

4.5. Descriptive Statistics

Before analysis, the collected data was checked for completeness and consistency. The data was analyzed using SPSS software version 25.0. Analysis was done using descriptive statistics showing the standard deviation, mean, frequency distribution, percentages, and Pearson correlation statistical tool to establish the strength and significance of the relationships between factors affecting the implementation of integrated financial management information systems in Ethiopian public institutions in the Ministry of Agriculture and the Ministry of Finance, Integrated Financial Management Information System Project Office. The presentation of this information was done by using the mean, frequency, and percentage of every respondent; accordingly, demographic information was calculated from the frequencies by using the analysis.

4.5.1 Descriptive statistics for Staff resistance on implementation of IFMIS.

Table 5: Descriptive statistics of Staff resistance on implementation of IFMIS

Descriptive Statistics				
	Items related to Staff resistance on implementation of IFMIS	N	Mean	Std. Deviation
1	Proper communication and training about the system have been made by the organization.	132	3.11	1.180
2	The required resources made available for the implementation of IFMIS.	132	3.27	1.205
3	The implementation of IFMIS result in loses of job for some employees.	132	2.69	1.167
4	IFMIS is a complex system that employees cannot easily understand and use it.	132	3.19	1.273
5	All stakeholders in the organization are actively participating in the process of IFMIS implementation	132	2.99	1.275
6	All employees in the organization are happy with the implementation of IFMIS.	132	3.24	1.218
	Valid N (listwise)	132		
Grand mean			3.08	1.2196

Source: SPSS data 2024

Based on the information shown by the descriptive data tabulated in Table 5, the mean statistics on four items are greater or higher than the arithmetic mean (3), specifically on items ‘The required resources made available for the implementation of IFMIS.’, ‘All employees in the organization are happy with the implementation of IFMIS.’, ‘IFMIS is a complex system that employees cannot easily understand and use.’ Proper communication and training about the system have been provided by the organization, with the mean values of 3.27, 3.24, 3.19, and 3.11, respectively. Whereas two mean statistics among six results under the arithmetic mean are: All stakeholders in the organization are actively participating in the process of IFMIS implementation with a mean of 2.99, and the implementation of IFMIS results in job losses for some employees with a mean value of 2.69. All in all, the relative importance of each questionnaire or item value is relatively high, and all the items can properly evaluate the Implementing and Integrated Financial Management Information System in Ethiopian Public Institutions in the Ministry of Agriculture and Ministry of Finance, Integrated Financial Management Information System Project Office, in each area of the job.

4.5.2. Descriptive statistics on the capacity and technical skills of the users

Table 6: Descriptive statistics on the capacity and technical skills of the users

Descriptive Statistics				
	Items related to capacity and technical skills of the users	N	Mean	Std. Deviation
1	Sufficient and appropriate trainings have been provided to IFMIS users.	132	3.05	1.235
2	The IFMIS guideline is well organized and can be used as a quick reference to fix issues encountered at work.	132	3.27	1.120
3	IFMIS is user friendly and can be easily understandable with short term training & work experience.	132	3.00	1.248
4	Key users of IFMIS are available in the office to closely support users.	132	2.88	1.260
5	Regular refresher training arranged by the office.	132	2.77	1.239
6	IFMIS users in the office have prior exposure of using other financial and property management system.	132	2.93	1.140
	Valid N (listwise)	132		
Grand mean			2.98	1.207

Source: SPSS data 2024

Based on the information shown from the descriptive data that has been tabulated in Table 6, the mean statistics for each item are listed accordingly. The data shows that the means statistics for capacity and technical skills of the users range from 2.77 to 3.27, compared to the arithmetic mean amount of 3.00.

It is observed that the first lowest mean was for the item “Regular refresher training arranged by the office’ (2.77). The second lowest mean was for item “Key users of IFMIS are available in the office to closely support users.” (2.88) and the third lowest mean were registered on item “IFMIS users in the office have prior exposure to using other financial and property management systems.” (2.93). The other items were around the arithmetic mean. This implies that users of IFMIS lack the capacity and technical knowhow to effectively use the system. This is because users are not well trained to manage the system. Capacity building is a major factor affecting the success of IFMIS implementation, especially in developing countries (Chêne 2009). An IFMIS project comprises more than only implementing a project. it also means planning for capacity building. These results show that the Implementing and Integrated Financial Management Information System in Ethiopian Public Institutions in the Ministry of Agriculture and Ministry of Finance, Integrated Financial Management Information System Project Office, needs adjustment according to the respondents’ point of view.

4.5.3. Descriptive statistics for ICT infrastructure

Table 7: Descriptive statistics of ICT infrastructure

Descriptive Statistics				
	Items related to ICT infrastructure	N	Mean	Std. Deviation
1	Adequate ICT infrastructures are available in the organization.	132	3.05	1.309
2	Strong and capable ICT team is available to properly manage the system.	132	3.06	1.203
3	There is strong network system that helps the effectiveness of the system.	132	2.80	1.277
4	New joiners are provided the required training about the system before they are assigned	132	2.89	1.167

5	Generator with adequate capacity is always ready to use during power interruption.	132	3.01	1.362
6	There is a strong and quick support from the IFMIS project office for any technical issues.	132	3.02	1.254
	Valid N (listwise)	132		
Grand mean			2.97	1.262

Source: SPSS data 2024

Based on the information shown from the descriptive data that has been tabulated in Table 7, the mean statistics for each item are listed accordingly. The data shows that the mean statistics for ICT infrastructure, the Implementing and Integrated Financial Management Information System in Ethiopian Public Institutions in the Ministry of Agriculture and Ministry of Finance, and the Integrated Financial Management Information System Project Office range between 2.80 and 3.06, compared to the general arithmetic mean amount of 2.97. It is observed that most of the descriptive means of the items are around the arithmetic mean. These results show that the Implementing and Integrated Financial Management Information System in Ethiopian Public Institutions in the Ministry of Agriculture and Ministry of Finance, Integrated Financial Management Information System Project Office, needs adjustment according to the respondents' point of view. Which means, based on the descriptive statistics on ICT infrastructure, the two ministries have not been thoroughly fulfilled yet. McCarthy (2019) in his study stated, while adopting IFMIS, adequate hardware and network infrastructure is required for the effective implementation, operation and maintenance of the system. Hardware and network infrastructure requires planning and procuring early to allow sufficient time for setup and test runs to ensure that there is seamless connectivity prior system go-live. IFMIS implementation requires reliable power supply to ensure that the system operation is not frequently interrupted.

4.5.4. Descriptive statistics for awareness and support of the top management

Table 8: Descriptive statistics for awareness and support of the top management

Descriptive Statistics				
	Items related to awareness and support of the top management	N	Mean	Std. Deviation
1	The top managements are well aware of the benefit of the system.	132	2.92	1.139
2	The top management regularly reviews the effectiveness of the system to utilize the most out of it.	132	2.73	1.111
3	The top management provides all the required support to improve the skill of the users in different units.	132	2.95	1.194
4	Top management ensures the required staff with the required skills is deployed to use the system.	132	2.94	1.184
5	The top management effectively utilizes the different reports generated from the system for their decision making.	132	3.05	1.265
6	The top management allocates sufficient budget to improve the ICT infrastructure in the office.	132	3.04	1.213
	Valid N (listwise)	132		
	Grand mean		2.938	1.184

Source: SPSS data 2024

Based on the information shown from the descriptive data that has been tabulated in Table 8, the mean statistics for each item are listed accordingly, The data shows that the mean statistics for awareness and support of the top management, the Implementing and Integrated Financial Management Information System in Ethiopian Public Institutions in the Ministry of Agriculture and Ministry of Finance, and the Integrated Financial Management Information System Project Office range between 2.73 and 3.05, compared to the general arithmetic mean amount of 2.938, It is observed that most of the descriptive means of the items are below the arithmetic mean. This implies that top management of the organizations are not committed. This means the Implementing and Integrated Financial Management Information System in Ethiopian Public Institutions in the Ministry of Agriculture and Ministry of Finance, Integrated Financial Management Information System Project Office, need adjustment for awareness and support from the top management, according to the respondents' point of view.

4.5.5. Descriptive statistics for Support provided by IFMIS project office.

Table 9: Descriptive statistics for Support provided by IFMIS project office.

Descriptive Statistics				
	Items related Support provided by IFMIS project office	N	Mean	Std. Deviation
1	There is sufficient support team in the project office to provide support to IFMIS users in the public bodies as required.	132	3.09	1.080
2	The IFMIS project implementation team in the project office are provided with regular upgrading training that helps for the effective implementation of the system	132	3.45	.868
3	The support team in the project office are sometimes challenged by the support requested by IFMIS users in the public bodies	132	3.23	.932
4	There is sufficient and updated users' guiding manuals that can easily be understood by trainees	132	3.57	1.005
5	ICT infrastructures in public sectors are a big challenge for the effective implementation of IFMIS.	132	3.80	1.032
	Valid N (listwise)	132		
	Grand mean		3.428	0.9834

Source: SPSS data 2024

Based on the information shown from the descriptive data that has tabulated from tables 9, the mean, and standard deviation of the statistics on each item is listed accordingly. The data shows that the mean statistics for Support provided by IFMIS project office ranges from (3.09 to 3.80), compared to the General Arithmetic mean amount of (3.428). It is observed that almost all the items mean are above the expected that is greater than the arithmetic mean. These results showed that Implementing and Integrated Financial Management Information System in Ethiopian Public Institutions in the Ministry of Agriculture and Ministry of Finance, Integrated Financial Management Information System Project Office are in a good condition for the Support provided by IFMIS project according to the respondents' point of view.

4.5.6. Descriptive statistics for Effective implementation of IFMIS

Table 10: Descriptive statistics for Effective implementation of IFMIS

Descriptive Statistics				
	Items related to Effective implementation of IFMIS	N	Mean	Std. Deviation
1	IFMIS Implementation process has been clearly identified and clear roles and responsibilities related to decision making have been agreed.	132	2.77	1.081
2	The required staff and financial resources have been secured to deliver your monitoring activities.	132	3.08	1.282
3	The different reports generated from IFMIS are comprehensive and more reliable for decision making.	132	3.41	1.146
4	Clear and effective governance structure has been set up to steer the effective implementation of IFMIS.	132	2.64	.958
5	Clear objectives have been defined for performance monitoring.	132	2.77	1.152
	Valid N (listwise)	132		
	Grand mean		2.934	1.1238

Source: SPSS data 2024

Based on the information shown by the descriptive data that has tabulated from tables 10, the mean statistics on three of five items are below the arithmetic mean (3). The respondents' mean ranges from 2.64 to 3.41. A mean of 3.41 shows respondents agreed that the two ministry offices can organize different reports generated from IFMIS are comprehensive and more reliable for decision making. From the statistics, respondents agreed that the ministries required staff and financial resources have been secured to deliver the employees monitoring activities, this is represented by a mean of 3.08. A mean of 2.77 indicates that the IFMIS Implementation process has not been clearly identified and clear roles and responsibilities related to decision making have not been agreed and Clear objectives have not been defined for performance monitoring. Most of the respondents also disagreed that the two ministry offices have Clear and effective governance structure to steer the effective implementation of IFMIS, this is shown by a mean of 2.64. The results show that lack of proper monitoring and evaluation mechanisms is one of the challenges affecting effective implementation of IFMIS. All in all, the relative importance of each questionnaire or item value is relatively high and the two ministry offices need to be committed

enough to implement management information system with the integration and implementation of the finance issues to be competent enough with other rivalry. ministry offices.

4.6. Interview Response Presentation.

To get more information about the factors that affect the effective implementation of IFMIS, it was required to get the view of the senior management staff in the project office in the form of interview questions. Below is some of the interview questions presented to them. When it is analyzed, the responses are summarized as follows:

- ✓ What is the current status of IFMIS implementation? Are you implementing the system in line with your original plan without any problem?

Some of the respondents are claiming that the implementation process is being carried out in line with the plan, though there are some challenges. Currently, most federal offices are using IFMIS as their financial management system. However, most respondents are replying that the implementation process is not being implemented in line with the original plan. There are many reasons for this. On the one hand, the original plan was overly ambitious. And other factors such as the infrastructure problem, especially at the branch and woreda level, the capacity of employees, and a lack of commitment from the top management are some of the factors contributing to not achieving the goal as planned. This is evidenced by the review made on the effectiveness of IFMIS implementation by Dr. McCarty Piri in 2019. In his review, he mentioned that the IFMIS implementation has been adversely affected by limited staff capacity in terms of numbers, skills, and competencies in IFMIS, both in the project management office and in public bodies. Poor IFMIS-supporting infrastructure is hampering the effective implementation of IFMIS. Connectivity constraints due to unreliable wide area networks (WANs)—Woreda Net and local area networks (LANs)—and intermittent power supply are some of the factors that are affecting the implementation of the system.

- ✓ What are the most challenging parts in implementing IFMIS as per the plan?

The most challenging part that most of the respondents agreed are staff turnover due to poor benefit packages to retain the most qualified and experienced staff, the infrastructure problem such as

internet, computers especially at branches and woreda level, lack of top management attention and commitment, lack of sufficient background about the basic computer skill especially those who are serving the organization for a long time using the old system, shortage of qualified IT staff, using parallel system recording like IBEX, Quick book, Peachtree etc.

According to Peterson Chebet (2013), one of the most commonly mentioned criteria determining the success or failure of an information system is senior management commitment. In his research on the Implementation of Integrated Financial Information Management Systems, Chêne (2009) argues that the Ethiopian case study has demonstrated that what counts most in the process is mid-level management's commitment to reform, as the changes must eventually be implemented at this level.

(Hendriks, 2012) stated in his study that Staff with the relevant knowledge and abilities are required for the practical implementation, operation, and maintenance of IFMIS. He claims that a lack of capacity hampers IFMIS's effectiveness.

High-level officials and individual agencies often have no incentive for IFMIS implementation and allocate inadequate funds to the project. Inadequate funding is also due to wide-ranging resistance to change towards IFMIS, from those who benefit from existing practices to end-users whose work might be radically transformed by new systems.

Finally the interviewee suggested that trained and committed man power, commitment from the top management, infrastructure facilities, allocation of the required resources and budgets, attractive benefit packages are key factors for the effective implementation of the system.

- ✓ Can we say the public sectors are sufficiently supported by your team? If not, what are the reasons for that?

Some explained that the public sectors are sufficiently supported. The support is provided both physically and remotely, but most of the respondents do not agree that they are supported as expected. This is mainly due to the lack of sufficient and most capable staff in the project office. A staff turnover is one of the most challenging parts to the project office. Most of the qualified and well-trained staff about the system from the start of the program left the project office and this has

created a big gap in supporting the users as expected. On the other hand, the lack of trained and experienced staff from the public body (users) side has also impacted the level of support expected from the project office. If there are no qualified and well-trained staffs, they are expecting more support from the project office which is not manageable with the available resource. So, for the effective implementation of the system highly motivated, trained and experienced staffs are required. For this to happen attractive benefit package and also regular refresher training both at project office and public body is required.

- ✓ Is cost of implementing IFMIS one of the challenges for the effective implementation of IFMIS?

Most of the respondents say the project is a big one to be implemented at the national level. When fully implemented, it has many advantages for managing public resources in a more efficient and effective way. Of course, it is a costly project that requires about 42.3 million USD for the implementation of the system during the second strategic plan, which runs from 2021 to 2025. The government has determined to finance this primarily from the central Treasury, supplemented by the World Bank and other potential development partners.

- ✓ Do you think the structure and arrangement of the project office has an effect on the effective implementation of IFMIS?

Dr. McCarty Piri, in his review study conducted in 2019, mentioned that project governance, management, operational, and technical leadership are some of the critical components to the success of every IFMIS project. In particular, project governance provides a framework within which project decisions are made. Most respondents recognized the importance of having good structure and arrangements for the effective implementation of IFMIS. With this in mind, they agreed that there is good structure and arrangements in the project office. However, the effectiveness of the structure is a concern for most of the respondents. This has been stated in the review study by Dr. McCarty in 2019 as a lack of demonstrated commitment and provision of the necessary strategic leadership to the project by different governance bodies, though there have been some improvements following the review report.

- ✓ Are the technical staffs in the project office happy with their job and achievements? If not, why?

According to the majority of respondents' responses, the staff are very happy with their achievements so far, despite all the challenges that they have. Currently, the system is operational at the federal level and across branches. However, due to the low benefit package and some facility problems, staffs are demotivated to achieve more. The existing low-benefit package is not able to either attract qualified and experienced staff from outside or retain the existing staff. This is one of the major factors that affect the effective implementation of IFMIS.

4.7. Inferential Statistics

4.7.1. Correlation Analysis of the Variables

In this research, the researcher conducted a correlation test to analyze the relationship between the variables as Factors Affecting Implementing an Integrated Financial Management Information System in Ethiopian Public Institutions: The Case of the Ministry of Agriculture and the Ministry of Finance, Integrated Financial Management Information System Project Office.

Table 11. Correlation Analysis of the Variables

Correlations							
		SIR	CTS	ICT	AST	SPIP	EI
SIR	Pearson Correlation	1	.989**	.986**	.985**	.978**	.986**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	132	132	132	132	132	132
CTS	Pearson Correlation	.989**	1	.989**	.988**	.972**	.988**
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	132	132	132	132	132	132
ICT	Pearson Correlation	.986**	.989**	1	.991**	.961**	.985**
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	132	132	132	132	132	132

AST	Pearson Correlation	.985**	.988**	.991**	1	.964**	.988**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	132	132	132	132	132	132
SPIP	Pearson Correlation	.978**	.972**	.961**	.964**	1	.973**
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	132	132	132	132	132	132
EI	Pearson Correlation	.986**	.988**	.985**	.988**	.973**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	132	132	132	132	132	132
**. Correlation is significant at the 0.01 level (2-tailed).							

Source: SPSS data 2024

Where:

- ⊙ SIR= Staff resistance on implementation of IFMIS
- ⊙ CTS= Capacity and Technical skills of the users
- ⊙ ICT= ICT Infrastructure
- ⊙ AST=Awareness and support of the Top management
- ⊙ SPIP =Support provided by IFMIS project office.
- ⊙ EI= Effective implementation of IFMIS

The result on Pearson product correlation of Staff resistance and implementation of IFMIS was statistically significant, strong positive correlation $r(130) = 0.986 = 0.000$

The result on Pearson product correlation of Capacity and Technical skills of the users and implementation of IFMIS was statistically significant, strong positive correlation $r(130) = 0.988 = 0.000$

The result on Pearson product correlation of ICT Infrastructure and implementation of IFMIS was statistically significant, strong positive correlation $r(130) = 0.985 = 0.000$

The result on Pearson product correlation of Awareness and support of the Top management and implementation of IFMIS was statistically significant, strong positive correlation $r(130) = 0.988 = 0.000$

The result on Pearson product correlation of Support provided by IFMIS project office and implementation of IFMIS was statistically significant, moderate positive correlation $r(130) = 0.973, p = 0.000$

4.7.2. Statistics for Regression Analysis

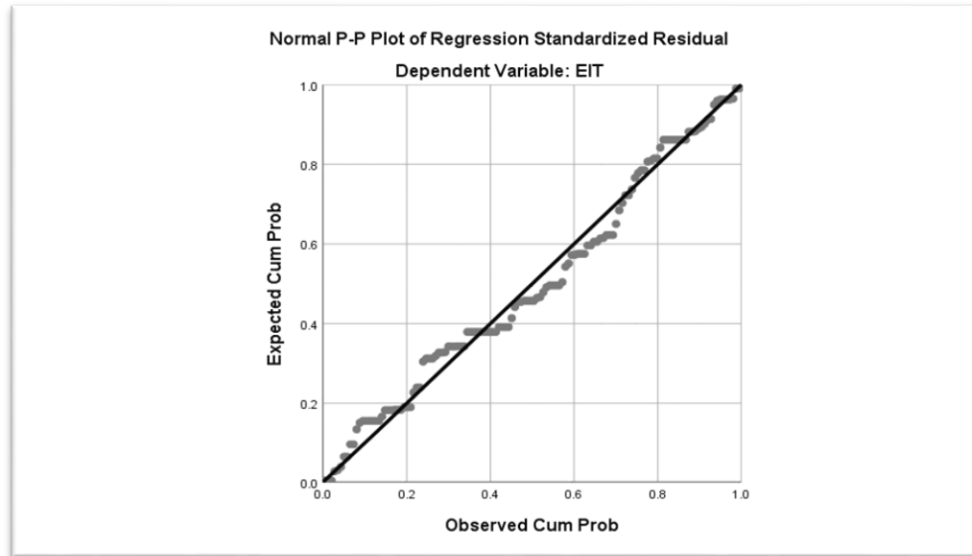
In this research, the researcher conducted multiple linear regression model analysis to assess the strength of a relationship between one dependent and independent variable(s).

4.7.2.1. Linearity of the regression

Linearity refers to the degree to which the change in the dependent variable is related to change in the independent variable. To determine whether the relationship between dependent variable and the independent variables is linear, plots of regression residuals through SPSS were used.

The points in the scatter diagrams are showing a tendency around a straight line. Therefore, the result of scatter plot of residuals suggests that there was a positive and linear relationship amongst all the variables with implementation of financial management information system and shows no large difference in the spread of the residual as we look from the left to the right side of the given figure. The relationship that is being predicted was linear.

Figure 2: Assumptions of linearity of the regression.



4.7.2.2. Normality Test

Table 12, normality test

Descriptive Statistics	Skewness		Kurtosis	
	Statistic	Std. Error	Statistic	Std. Error
SIR	-.140	.211	-1.104	.419
CTS	.008	.211	-1.109	.419
ICT	.029	.211	-1.189	.419
AST	.019	.211	-.966	.419
SPIP	-.390	.211	-.701	.419
EI	.042	.211	-.912	.419

Source: SPSS data 2024

A normality test is used to determine whether sample data has been drawn from a normally distributed population or not. As shown from the normality test Table above, the statistics of

Kurtosis and Skewness distribution were distributed as observed here above and, on the graph, below thus data were normally distributed and had a reasonable variance to use subsequent analysis (John, 2007).

4.7.2.3. Multicollinearity Test

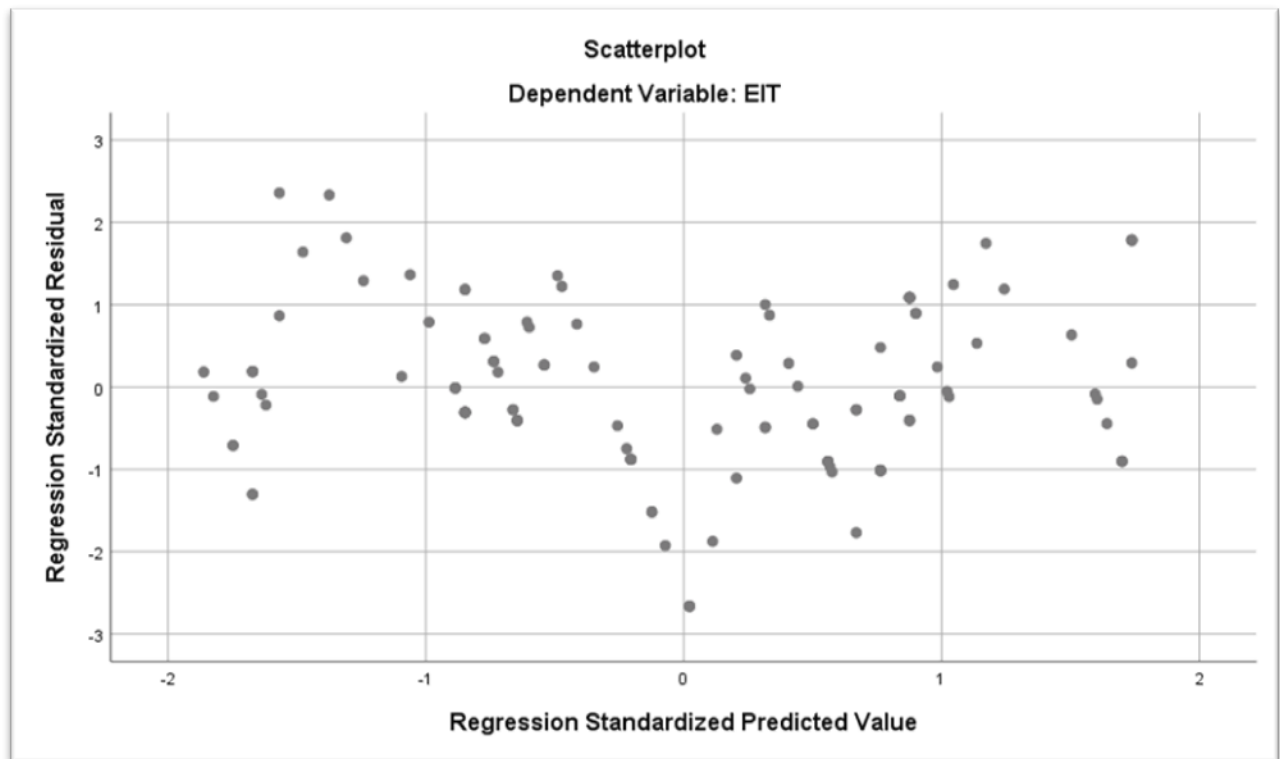
Table 13, Multicollinearity Test

Model or variables		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Staff resistance	.014	71.210
	capacity and technical skills of the users	.013	77.643
	ICT infrastructure	.013	74.373
	awareness and support of the top management	.015	68.085
	support provided by the IFMIS project office	.041	24.361
a. Dependent Variable: EI			

The researcher conducted a multicollinearity test to establish whether the variables were highly correlated. This was measured by using the variance inflation factor (VIF) to be a multicollinearity-based correlation; the VIF value should be less than 10, while the equivalent for tolerance should not be less than 0.1 (Okelo, Namusonge, and Iravo, 2015). The findings are as shown in Table 16. According to the table shown above, the value of tolerance for each independent variable (staff resistance, capacity and technical skills of the users, ICT infrastructure, awareness and support of the top management, and support provided by the IFMIS project office) is less than 0.10, and similarly, the value of variance inflation factor (VIF) ranges from 24.361 to 77.643, which means all values for each independent variable are greater than 10, implying that there is multicollinearity in all independent variables.

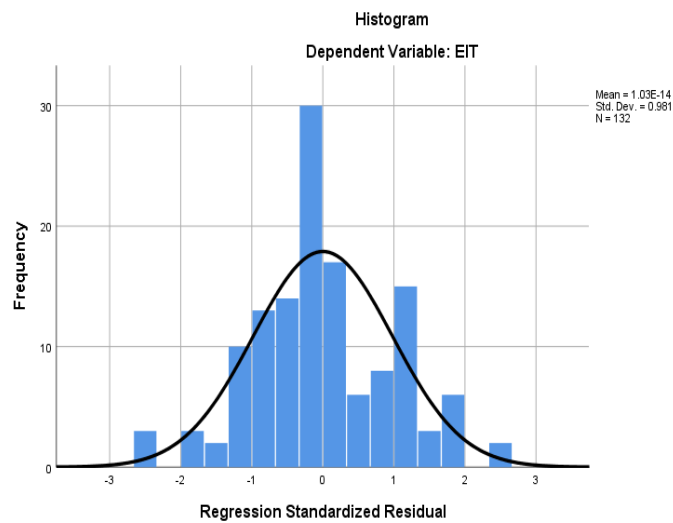
4.7.2.4. Heteroscedasticity test

Table 14, Heteroscedasticity test



The researcher conducted a heteroscedasticity test to establish whether the standard error estimates were biased. The researcher used scatter plots to establish the relationship and the presence of heteroscedasticity. The findings are as shown in the above figure. The findings in the figure show that the dataset was concentrated by forming a pattern vertically, diagonally, and, in some cases, horizontally. This implies that the datasets were not heteroscedastic; hence, it is homoscedastic. This implies that the data sets were not correlated, which is desirable for modeling another model, which is the regression model.

Figure 3: Summary of regression standardized residual.



4.7.2.5. Model Summary

Table 15: Regression Model Summary

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.992 ^a	.985	.984	.13401	.985	1613.913	5	126	.000
a. Predictors: (Constant), SPIP, ICT, AST, SIR, CTS									
b. Dependent Variable: EI									

Source: SPSS data 2024

The Adjusted R square indicates the extent that the independent variables can be explaining the variations in the dependent variable. From this study, the coefficient of determination (Adjusted R square) is 0.984, which indicated that independent variables (SIR, CTS, ICT, AST, and SPIP) can explain 98.4% of the variations in the dependent variable implementation of financial management information system, the rest 1.6 % of the factors which is not examined in this study.

4.7.2.6. ANOVA

Table 16: Regression of ANOVA

ANOVA						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	144.911	5	28.982	1613.913	.000 ^b
	Residual	2.263	126	.018		
	Total	147.173	131			
a. Dependent Variable: EIT						
b. Predictors: (Constant), SPIP, ICT, AST, SIR, CTS						

Source: SPSS data 2024

4.7.2.7. Regression Coefficients

Table 17: Regression Coefficients

Coefficients								
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.029	.074		.392	.696		
	SIR	.104	.084	.116	1.248	.214	.014	71.210
	CTS	.224	.088	.248	2.552	.012	.013	77.643
	ICT	.051	.082	.059	.623	.535	.013	74.373
	AST	.368	.084	.402	4.410	.000	.015	68.085
	SPIP	.199	.063	.174	3.185	.002	.041	24.361
a. Dependent Variable: EI								

Source: SPSS data 2024

Multiple liner regression is a method of estimating or predicating a value, on some dependent variable given the values of one or more independent variables, like correlations, statistical regression examines the association of relationship between variables. Table 17 shows parametric estimation of multiple liner regression. Therefore, this study was conducted by multiple linear regression models to determine the Factors affecting implementing integrated financial management information system in Ethiopian public institutions: the case of ministry of agriculture and ministry of finance, integrated financial management information system project office.

It was hypothesized that Staff resistance on implementation of IFMIS, Capacity and Technical skills of the users, ICT Infrastructure, Awareness and support of the Top management, Support provided by IFMIS project office will positively predict the Effective implementation of IFMIS on the two ministry offices performance.

The result on the table 17 shows us, the coefficient for Staff resistance on implementation of IFMIS is 0.104. So, for every unit increase in staff resistance, a 0.104 unit increase in implementation of IFMIS is predicted, holding all other variables constant.

The coefficient for Capacity and Technical skills of the users' Effective implementation of IFMIS is 0.224. So, for every unit increase in performance appraisal management practices, a 0.224 unit increase in implementation of IFMIS is predicted, holding all other variables constant.

The coefficient for ICT Infrastructure is 0.051. So, for every unit increase in ICT infrastructure, a 0.051 unit increase in implementation of IFMIS is predicted, holding all other variables constant.

The coefficient for Awareness and support of the Top management is 0.368. So, for every unit increase in Awareness and support of the top management, a 0.368 unit increase in implementation of IFMIS is predicted, holding all other variables constant.

The coefficient for Support provided by IFMIS project office is 0.199. So, for every unit increase in Support provided by IFMIS project office, a 0.199 unit increase in implementation of IFMIS is predicted, holding all other variables constant.

To examine the Factors affecting implementing integrated financial management information system in Ethiopian public institutions: the case of ministry of agriculture and ministry of finance, integrated financial management information system project office, the researcher used the following empirical equation of the multiple linear regression models.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \epsilon$$

Where: Y= Independent variable (Implementation of IFMIS)

β_0 =Constant term

$\beta_1, \beta_2, \beta_3, \beta_4$ and β_5 : are coefficients of independent variable

X_1 =Staff resistance on implementation of IFMIS

X_2 =Technical capacity of staff

X_3 =ICT Infrastructure

X_4 =Awareness and support of the Top management

X_5 =Support provided by IFMIS project office.

ϵ =Error term

$$Y = (\text{Implementation of IFMIS}) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + e$$

(Implementation of IFMIS) = 0.29 + 0.104(Staff resistance on implementation of IFMIS) + 0.224 (Technical capacity of staff) + 0.051(ICT Infrastructure) + 0.368 (Awareness and support of the Top management) + 0.199(Support provided by IFMIS project office, per one unit increase in each factor.

$$\beta_0=0.29, \beta_1=0.104, \beta_2=0.224, \beta_3=0.051, \beta_4=0.368 \text{ and } \beta_5=0.199$$

4.8. Hypothesis Summary Based on Effect and Significance Level

Table 18 hypothesis summary

Hypothesis	Parameters (Effect and significance level)			
	β value	Hypothesis status based on effect	p-value	Hypothesis status based on significance level
Employees resistance(H1)	.104	Positive Effect	.214	Statistically insignificant
Capacity and skill of the staff (H2)	.224	Positive Effect	.012	Statistically significant
ICT infrastructure (H3)	.051	Positive Effect	0.535	Statistically insignificant
Top mgt. support & awareness. (H4)	.368	Positive Effect	0.000	Statistically significant
Project office support. (H5)	.199	Positive Effect	0.002	Statistically significant

CHAPTER FIVE

5. Summary of Findings, Conclusions and Recommendations

5.1. Introduction

This chapter presents the summary of findings, conclusion and recommendation based on the research results that has presented and discussed under chapter four of this paper. And areas of future research were presented. This chapter was organized and analyzed in the following sections.

5.2. Summary of Findings

The study involved 178 respondents from two organizations, with 132 correctly filling out questionnaires. A response rate of 74% was considered suitable for data analysis. The gender distribution was 73 males (55.3%) and 59 females (44.7%), indicating a gender imbalance. Educational background was divided into three ranges: technical and vocational education (TVET), undergraduates, and post-study completions. Respondents experience in using IFMIS was distributed according to respondents' responses, with 4 respondents having less than one years of experience, 32 having 1–2 years, 46 having 3-5 years, and 50 having above 5 years of experience. Most participants have sufficient experience in using the system and able to handle the study questionnaire and assessing the implementation performance of the two ministry offices.

The reliability analysis was conducted using Cronbach's alpha, with an alpha coefficient between 0.965 and 0.990. Data was analyzed using SPSS software version 25.0, with descriptive statistics to establish relationships between factors affecting IFMIS implementation. The mean statistics on four items for staff resistance were greater or higher than the arithmetic mean, including required resources, employee satisfaction, system complexity, proper communication and training, and stakeholder participation. However, two mean statistics were lower than the arithmetic mean: all stakeholders actively participating on IFMIS implementation and job losses for some employees.

The study suggests that the implementation of IFMIS in Ethiopian public institutions needs adjustments to improve user capacity and technical skills.

The study reveals that the ICT infrastructure, awareness and support of top management, and support provided by the IFMIS project office are not fully fulfilled by the two Ethiopian ministries. The IFMIS project office's support ranges from 3.09 to 3.80, compared to the general statistical mean of 3.428. The respondents believe that implementing and integrating financial management information systems in Ethiopian public institutions is in good condition for the IFMIS project's support. The two ministry offices can organize comprehensive and reliable reports from IFMIS, but they require staff and financial resources for employee monitoring activities. The IFMIS implementation process has been clearly identified, with clear roles and responsibilities for decision-making and objectives for performance monitoring. A clear governance structure is set up to guide the implementation of IFMIS. Senior management staff in the project office interviewed revealed that the implementation is in line with the original plan, but there are challenges such as staff turnover, infrastructure problems, a lack of top management attention, and a shortage of qualified IT staff. The study emphasizes the need for the two ministries to be committed enough to implement a management information system and finance issues to successfully achieve the intended purpose.

The study analyzed the data from Ethiopian public institutions, focusing on the implementation of integrated financial management information systems (IFMIS). The results showed that staff resistance, user capacity and technical skills, ICT infrastructure, top management awareness and support, and support provided by the IFMIS project office were all significant factors affecting the performance of the two ministry offices.

According to (Peterson, 1998), the commitment of senior managers is one of the most frequently cited factors deciding the success or failure of an information system.

The findings of the study are also in agreement with literature review by Selfano&Serah (2014) who indicated that human resource capacity plays a significant role on the implementation of IFMIS in the organization. The effective implementation, operation and maintenance of an IFMIS requires staff with the necessary knowledge and skills. Sigei (2013) argues that low capacity for

system implementation at the organization level, is one of the major challenges in the implementation of an IFMIS in developing countries.

The normality test, multicollinearity test and heteroscedasticity test were used to determine the correlation between the independent variables and the dependent variable. The adjusted R square indicated that the independent variables explained 98.4% of the variations in the dependent variable. Multiple-linear regression was used to determine the factors affecting the implementation of IFMIS. The results showed that staff resistance, user capacity and technical skills, ICT infrastructure, top management awareness and support, and support provided by the IFMIS project office positively predicted the effective implementation of IFMIS on the performance of the two ministry offices.

5.3. Conclusions.

The implementation of integrated financial management information systems (IFMIS) in Ethiopian public institutions, such as the Ministry of Agriculture and the Ministry of Finance's project implementation office, is dependent on the ability to finance and maintain essential technology. Without these factors, the system will fail to provide decision-makers with valuable and timely information. Therefore, the Ministry of Finance should increase the budget for IFMIS implementation, conduct periodic capacity building, and conduct comprehensive M&E exercises. The study investigated factors affecting the implementation of IFMIS in Ethiopian public institutions, focusing on the case of the Ministry of Agriculture and the Ministry of Finance's project office.

The results showed that staff resistance is one of the factors negatively affecting the effective implementation of IFMIS. According to Rodin-Brown (2008), the greatest method to overcome resistance is to market the reform, with the message delivered via trustworthy national resources. Workshops, seminars, training sessions are all effective ways to sell.

Barcan (2010) describes change management as the creation, maintaining and systematic evaluation of changes in an organization. The objective of change management besides overcoming employees' resistance is to maximize the institution's capacity to achieve success through involved, educated and committed personnel.

Indeje and Zheng (2010) contend that the introduction of a new information system such as IFMIS fundamentally changes the way operations are carried out and, therefore, requires a carefully managed process in order to avert probable staff resistance. This process results in the creation of a new organizational culture, that is, change in the way the organization operates.

From the study the researcher noted that the two organizations have not sufficiently provided the technological infrastructure required for the implementation of IFMIS. According to Ameen & Ahmed (2011) the use of ICT in the public sector, or e-government as it is known, is playing a critical role in governments' efforts to revitalize their public sectors. Modern ICT is a significant strategic tool for lifting public sector performance, offering benefits of greater efficiencies and effectiveness in government operations and service delivery, improved communication and coordination across organizational boundaries and levels of government, and greater transparency and accountability in government functions.

The management support is very important towards the success of IFMIS implementation. This study showed that the top management of the organizations are not committed for the effective implementation of IFMIS. Diamond and Khemani (2005) recommended that IFMIS implementation should have a solid backing at the political level which will then trickle down to management level, citing this as the reason Tanzania's IFMIS implementation was the most successful in all Anglophone countries. The study by Kimwele (2011) concluded that the negligence of top management to support the use of the IFMIS system had affected its effective use by government employees. They failed to inspire and had little understanding of the use of IFMIS, further the study recommended that this problem could be addressed by providing more training to top management and other users of the system.

Staff resistance, Capacity and technical skills of users, ICT infrastructure, awareness and support of top management, and support provided by the IFMIS project office positively predicted the effective implementation of IFMIS on the performance of the two ministry offices. The coefficient for staff resistance to IFMIS is 0.104, predicting a 0.104 unit increase in staff resistance. The coefficient for capacity and technical skills of users' effective implementation is 0.224, predicting a 0.224 unit increase in IFMIS implementation. The coefficient for ICT infrastructure is 0.051,

predicting a 0.051 unit increase in IFMIS implementation. The coefficient for awareness and support of top management is 0.368, predicting a 0.368 unit increase in IFMIS implementation.

5.4. Recommendations

Based on the findings from the study, the researcher recommends the following to ensure the effective implementation of IFMIS in all government bodies across the country.

- ⊙ The government, through the Ministry of Finance, should promote users' awareness of the system, create capacity through on-the-job training, and provide staff facilitation and motivation to system users and other stakeholders.
- ⊙ The government should also hire professional corporations and experts to help with implementation and change management. According to Vickland and Nieuwenhuijs (2005), an IFMIS entails more than just project implementation; it also entails capacity-building planning. A robust training program is therefore critical to the project's success and should be developed as soon as possible. Training is vital for unlocking client preparedness and is the best approach to ensuring a system's long-term viability. As proven by the Americans' Accountability Anti-Corruption Project (2004), a sense of ownership among management, coordinating, and technical professionals, as well as national and sub-national officials, decreases possible resistance and generates a critical mass of support for the system.
- ⊙ Sufficient manpower and financial resources should be allocated, and the top management commitments should be implemented. An adequate project implementation team should be set up. The steering committee should actively participate in overseeing the implementation process and provide support in all aspects.
- ⊙ The top management should also change their attitudes towards IFMIS and provide more support and leadership; adequate resources should be allocated towards the implementation of IFMIS.
- ⊙ Strengthen the capacity of the help desk support team by providing more IFMIS functionality training and establishing a dedicated help desk call center to provide timely support to users. The training should include relevant Oracle certifications.

- ◎ Review the membership of the steering committee and technical committee and appoint members that could be committed and available for the project.
- ◎ The Project Management Office should consider engaging a long-term lead PFM/IFMIS technical advisor to conduct regular system and government operational reviews with a view to continuously improving the performance and ensuring responsiveness of IFMIS to government sector-wide operations.
- ◎ The Project Management Office should ensure that the capacity of the core project support team is fully developed to ensure system ownership and adequate support for users.
- ◎ The Project Management Office should develop and strengthen the capacity of the help desk support team by providing more extensive specialized IFMIS functionality training. In particular, the Project Management Office should ensure that the capacity of the core project support team is fully developed to ensure system ownership and adequate support for users.
- ◎ The Project Management Office should intensify training of IFMIS super users across PBs as the number of IFMIS users' increases for better continuity and to ensure minor technical and functional issues are resolved in a timely manner so as to prevent users from resorting to manual transaction processing due to minor IFMIS functional issues.
- ◎ It is imperative that the Project Management office undertake structured stakeholder mapping and analysis and develop a clear strategy and plan for engaging key stakeholders through the IFMIS implementation.
- ◎ The Project Management Office should review and adjust the user training approach to incorporate other skills and competencies that are necessary for effective IFMIS adoption and utilization across the Public Bodies.
- ◎ The Project Management Office should develop and implement a comprehensive IFMIS training and capacity-building strategy and plan to guide the implementation of all future training and capacity-building interventions within the Project Management Office and across the Public Bodies. The best way to overcome resistance to change will be through clear communication, education and training, as well as through 'quick wins' that demonstrate the benefits of the change (Rozner 2008)

5.5. Suggestions for Further Research

This research examined the factors affecting the implementation of integrated financial management information systems in Ethiopian public institutions, which are more applicable in the ministries of agriculture and finance. The integrated financial management information system project is based on five major factors that are believed to have a significant effect on the effective implementation of IFMIS: staff resistance to implementation of IFMIS, capacity and technical skills of the users, ICT infrastructure, awareness and support of the top management, and support provided by the IFMIS project office. Various studies, including this one, have focused mainly on federal offices based in Addis. The system is also being implemented at branch and regional offices outside Addis.

A similar study should be conducted to assess the remaining factors for the implementation of financial management information systems that are not included in this study, their effect on effective implementations, and the way to solve the problem in ministry offices. And future research can be directed towards identifying more implementation factors that affect the implementation of financial management information systems. So further studies could be undertaken by involving these branches and regional offices outside Addis through the level of ICT infrastructure, the skill and capacity of users, and the level of support at branch offices are very critical and require further studies, organizational changes, technological changes, customer satisfaction, financial and economic crisis management, and organizational structure, among other factors.

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Appendix-I

Questionnaires

I am MSc student in the field of Finance and Accounting at Addis Ababa University. I intend to do research on the Factors affecting implementing IFMIS in Ethiopia public sectors as part of partial fulfillment of the requirement of my MSc study.

This is to kindly request your cooperation to respond to these questionnaires designed for the purpose of gathering relevant information to address the research objectives.

You are selected for this as you are the one who are actively engaged in supporting and using IFMIS program.

The research is conducted only for academic purposes and the information you are providing will be treated with utmost confidentiality and all the ethical principles will be observed to ensure the confidentiality of the information provided. Hence your kind support in providing your genuine responses to this is highly appreciated. Your participation in this is vital for the successful achievement of the goal of the study. It takes not more than 30 minutes of your time to fill out this survey. For this purpose, you are not required to write your name or any identifying remarks in the questionnaire.

Finally, please return the completed questionnaire directly to the researcher.

Should you have any queries or need additional clarification on how to fill in the information please contact me with the following address.

Kind regards,

Daniel Seifu

Email ttsadik@yahoo.com

Cell phone 251-911870113,

Part I: GENERAL INFORMATION

1. Gender Male ☐ Female ☐
2. Highest level of school you have completed or the highest Degree you have received.
- Diploma ☐ BSc/BA ☐ Masters ☐ PHD ☐
- 3- Professional Qualification IT ☐ Accounting & Finance ☐
- Both IT & Accounting ☐ Other ☐
- 4- which category below includes your age?
- 20-30 ☐ 31-40 ☐ 41-50 ☐ Above 50 ☐
- 5- Total number of years of service in your profession _____ Years
- 6- How long have you been using IFMIS? _____
- 7- Related professional certification if any _____

Part -II Questionnaire

Indicate your level of agreement ranging from strongly agree to strongly disagree.

putting tick mark (✓) on the spaces that specify your choice from the options.

Key

1. Measures strongly disagree (SD)
2. Measures disagree (DA)
3. Measures Neutral(N)

4. Measures Agree(A)

5. Measures strongly agree (SA)

I-Staff resistance on implementation of IFMIS.

Items related to staff resistance	SD	DA	N	A	SA
1-Proper communication and training about the system have been made by the organization.					
2-The required resources made available for the implementation of IFMIS.					
3-The implementation of IFMIS result in loses of job for some employees.					
4-IFMIS is a complex system that employees cannot easily understand and use it.					
5-All stakeholders in the organization are actively participating in the process of IFMIS implementation.					
6-All employees in the organization are happy with the implementation of IFMIS.					
Items related to Capacity and Technical skills of the users					
1-Sufficient and appropriate trainings have been provided to IFMIS users.					
2-The IFMIS guideline is well organized and can be used as a quick reference to fix issues encountered at work.					
3- IFMIS is user friendly and can be easily understandable with short term training & work experience					
4-Key users of IFMIS are available in the office to closely support users.					
5-Regular refresher training arranged by the office.					
6-IFMIS users in the office have prior exposure of using other financial and property management system.					
Items related to ICT Infrastructure					
1-Adequate ICT infrastructures are available in the organization.					
2- Strong and capable ICT team is available to properly manage the system.					
3-There is strong network system that helps the effectiveness of the system.					

4-New joiners are provided the required training about the system before they are assigned					
5-Generator with adequate capacity is always ready to use during power interruption.					
6-There is a strong and quick support from the IFMIS project office for any technical issues.					
Items related to Awareness and support of the Top management					
1-The top managements are well aware of the benefit of the system.					
2- The top management regularly review the effectiveness of the system to utilize the most out of it.					
3-The top management provide all the required support to improve the skill of the users in different units.					
4- Top management ensure the required staff with the required skills are deployed to use the system.					
5-The top management effectively utilize the different reports generated from the system for their decision making.		ن			
6-The top management allocates sufficient budget to improve the ICT infrastructure in the office.					
Items related to Support provided by IFMIS project office					
1- There is sufficient support team in the project office to provide support to IFMIS users in the public bodies as required.					
2-The IFMIS project implementation team in the project office are provided with regular upgrading training that helps for the effective implementation of the system					
3-The support team in the project office are sometimes challenged by the support requested by IFMIS users in the public bodies					
4-There is sufficient and updated users' guiding manuals that can easily be understood by trainees					
5-ICT infrastructures in public sectors are a big challenge for the effective implementation of IFMIS.					
Items related to Effective implementation of IFMIS					

1-IFMIS Implementation process has been clearly identified and clear roles and responsibilities related to decision making have been agreed.					
2- The required staff and financial resources have been secured to deliver your monitoring activities.					
3-The different reports generated from IFMIS are comprehensive and more reliable for decision making.					
4-Clear and effective governance structure have been set up to steer the effective implementation of IFMIS.					
5-. Clear objectives have been defined for performance monitoring.					

Part III-Interview Questions

1. What is the current status of IFMIS implementation? Are you implementing the system in line with your original plan without any problem?

2. What are the most challenging parts in implementing IFMIS as per the plan?

3. Can we say the public sectors are sufficiently supported by your team? If not, what are the reasons for that?

4. Is cost of implementing IFMIS one of the challenges for the effective implementation of IFMIS?

5. Do you think the structure and arrangement of the project office has an effect on the effective implementation of IFMIS?

6. Are the technical staffs in the project office happy with their job and achievements? If not, why?

Thank you in advance for your cooperation.