

**THE EFFECTS OF INTEGRATED FINANCIAL MANAGEMENT
INFORMATION SYSTEMS, ON ACCOUNTING OPERATIONS OF
GOVERNMENT AGENCIES IN KENYA**

BY

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DECLARATION

This research project is my original work and has not been presented for an award of degree in any other University.

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ABSTRACT

A good Public Financial Management (PFM) system has been found to be a critical tool in economic growth and development by the government to collect revenue, manage, and appropriate public funds and resources in a manner that is both transparent and efficient with the aim of enhancing service delivery to the public at large. The Integrated Financial Management Information Systems (IFMIS) was introduced in Kenya through the former ministry of finance and the now National Treasury in 1998, while piloting of the system in line ministries took place in 2003. Public finance management practices had been characterized by challenges in revenue mobilization and lack of transparency and accountability amongst the custodians of public resources in the management of revenue. The aspect of misappropriation of funds and corruption had been rampant in many developing countries. In government institutions, IFMIS is referred more specifically to as the process of computerization of public accounting and financial management (PFM) processes. Some of the processes that are computerized include execution of accounting and reporting as well as budget preparation. An integrated information system for financial management of ministries, departments and other public sector operations has become an essential tool for transparency and accountability. This research study aimed at assessing the effects of IFMIS on accounting operations of government Agencies in Kenya. To achieve this objective, the research was guided by the following specific objectives: To established whether IFMIS use in government Agencies in Kenya has improved access to financial information and to establish whether IFMIS use in Government Agencies in Kenya has improved timeliness of financial reporting. The study adopted descriptive research design and it targeted 59 government agencies in Kenya. Data used in the study was collected by the use of questionnaires and secondary sources. SPSS was used to analyze data and the study findings were presented using Tables, Figures, means and standard deviation. The study found out that staffs understand the different modules under IFMIS, the staffs are computer literate, IFMIS system has minimal down time, IFMIS system allows staff to share financial information, the agency has adequate hardware to support IFMIS, IFMIS hardware use latest state of technology, the use of IFMIS has improved the timeliness in submitting financial reports and the use of IFMIS has brought about easy record storage. The study concludes that 58% changes in dependent variable (accounting operations of government agencies in Kenya) is contributed by the independent variables of the study (IFMIS system reliability, Staff Competency, ICT Infrastructure) while 42% is explained by other factors, ICT infrastrucure has a largest effect, then staff competency and lastly IFMIS system reliability. The study recommends that all the accountants and other officers in Government offices should ensure that their staffs understand the different modules under IFMIS, management of government agencies in Kenya should be aware that IFMIS system has minimal down time, management of government agencies should ensure that there is adequate hardware to support IFMIS, ICT departments in these government agencies should ensure that their IFMIS hardware use latest state of technology, the top maanement of government agencies should realize that the use of IFMIS improves the timeliness in submitting financial reports, there is also need for government agencies to ensure that records are easily stored and retrieved from the data bases using IFMIS and government agencies ought to enhance financial efficiency in their agencies by the use of IFMIS.

ABBREVIATIONS AND ACRONYMS

ANOVA	Analysis of Variance
ERP	Enterprise Resource planning
GIFMIS	Ghana Integrated Financial Management Information Systems
GOK	Government of Kenya
GDP	Gross Domestic Product
ICT	Information, Communication and Technology
IFMIS	Integrated Financial Management Information Systems
LPO	Local Purchase Order
LSO	Local Service Order
MDAs	Ministries, Departments and Agencies
MMR	Mixed Methods Research
PEOU	Perceived Ease of Use
PFM	Public Financial Management
TAM	Technology Acceptance Model
TRA	Theory of Reasoned Action
TPB	Theory of Planned Behaviour
UTAUT	Unified Theory of Acceptance and Use of Technology

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

An integrated information system for Public Financial Management (PFM) has been found to be a very important tool for economic growth and development by ensuring that government is able to mobilize revenue, manage, and appropriate public resources in a proper and in efficient way with the goal of enhancing service delivery to the citizens. However, Public finance management practices have been characterized by problems in revenue mobilization and lack of transparency and accountability in the use of public finance. These problems have contributed to persistent increases in budget deficits, public debts, and poor performance of the economy hence the need for adopting effective finance management systems (Shah, 2006).

The Integrated Financial Management Information Systems (IFMIS) was first introduced in Kenya by the former ministry of finance and the now National Treasury in 1998, while piloting of the system in line ministries took place in 2003. The system was Enterprise Resource planning software based on oracle. ERP software was an organization-wide application that integrated operations through a centralized database system, that accessed by the users using a secure network. Before the roll out of IFMIS, government financial management processes were affected by numerous challenges and weaknesses. Lack timely and relevant financial information for effective decision making was one of the major challenges face by the financial management processes in public offices. The financial management operations were also characterized by use of manual and semi-automated systems to performed routine tasks of planning, preparing budget estimates,

manual procurement and payment system through the use of vote books, manual reporting and storage of information which couldn't be retrieved with ease.

The study was anchored on a theory referred to as Unified Theory of Acceptance and Use of Technology (UTAUT). The UTAUT is a technology acceptance model formulated specifically to give a comprehensive view in use of technology and to help Users acceptance the use of information technology. The UTAUT tries to explain user willingness to use an information system and tracks user behaviour in using technology and its associated benefits. The Technology Acceptance Model (TAM) explains how the process through which individuals accepts and use technology in their day to day operations. The four key components of the diffusion of innovation are time, social system, communication channels and innovation (Greenhalgh *et.al*, 2004). Technology diffusion theory explains how information technology skills are acquired and utilized by employees for better performance. It explains how government agencies can enhance technology adoption among its employees.

1.1.1 Integrated Financial Management Information Systems (IFMIS)

IFMIS is computer based information system that computerizes various aspects of budget preparations and accounting operations in the Government Ministries, Departments and Agencies (MDAs). There is a general acceptance that a fully functioning IFMIS can enhance governance by in giving timely financial information that accounting and financial managers and various users can use on their daily functions to formulate budgets, and effectively manage public funds through centralized treasury operations. According to Reneau & Grabski, (1987), IFMIS can reduce political problems and reduce

corruption and fraud. Rozner(2008),stated that the function of an IFMIS can range from automation of ledger accounting functions to a detailed system covering cash management, budgeting, and accounts payable, accounts receivable, commitment control, debt management, revenue management, procurement and purchasing, , assets management, liability management and payroll.

Heeks (2008) stated that, an effective financial management information system (IFMIS) should be able tracked financial transactions and events, record and summarized them in a way that it can give financial information. Heeks continued to insist that IFMIS performed more functions that a normal accounting system configured to operate address the needs of the users and according to the specifications of the operational environment in which the system is implemented. IFMIS comprises the use of financial information and communications technology for financial management. It supports financial management through automation of budget preparation, revenue collection, and effective and timely preparation of key financial reports and statements.

1.1.2 Accounting Operations of Government Agencies

Millichamp (1990) viewed accounting and financial information as the output of data processed from various source documents generated during business transactions. These source documents may include payment vouchers, original receipts, invoices, Local purchase order (LPO), Local Service Order (LPO), and books of original entry. These must be tested to determine their accuracy (trial balance) for the purpose of preparation of final financial accounts. According to Mburu and Ngahu (2013), a good financial system, requires a strong legal and regulatory framework as well as well trained,

competent and productive employee. The IFMIS system allows higher degree of data quality which in turn improves workforce performance hence boosting business results.

Accounting and financial management practices are guided by the principles of transparency, accountability, predictability, reliability and flexibility. These principles serve to strengthen accounting and financial systems and therefore enabling effective and efficient allocation of financial resources in public offices (Edelberg, 2006). IFMIS automates the configuration and generation of key financial reports thus strengthening regulatory financial control requirements. Additionally, through the click of a button, managers can provide detailed, reliable and timely financial reports consistent with the requirements of parliament, prosecutorial agencies, internal auditors and office of the Auditor General. Implementation of controls in IFMIS system improves the process of recording, accounting, analyzing and reporting practice by making timely and accurate financial information available to those who need it in a format that is consistent with standard accounting and financial management reporting practices.

A strong, efficient and effective PFM requires compliance with existing legal and regulatory frameworks. Additionally, well trained, skilled, competent and productive public service workers serve to strengthen the system. Public financial management reforms are the key drivers of enhanced service delivery. Additionally, they support creation of wealth through efficient revenue collection and increase employment for citizens.

IFMIS is designed to share accounting and financial information as well as improving the quality of such information. Consequently, it has been found to be a necessary and

effective tool for various financial and accounting processes such as revenue collection, budgeting, auditing, accounting and treasury management (Dorotinsky & Matsuda, 2001).

The system is design to allow only authorized users within the IFMIS network to access it and perform specific tasks and operations based on the privileges provided. The system is able to generate different types of financial reports to address the various operations such as cash flow management, day-to-day operations, accounting operations, treasury functions, funding and budgeting (Rozner, 2008).

1.1.3 Relationship between IFMIS and Accounting Operations of Government Agencies

The Ministry of Finance in Kenya has played a key role in improving and strengthening the use of financial management systems. It has initiated numerous Public Financial Sector Reforms Programmes which were intended to improve access to financial information, enhance accountability and improve transparency through real-time payment and audit trails. The ministry's effort have yielded improved responsiveness of public funds and resources in general and service delivery to the public has considerably improved, thus aligning the public service towards the development priorities of the Kenya.

According to Dorotinsky and Matsuda (2001),IFMIS systems are designed to enhance accessibility of quality financial information that is critical to the various processes in public financial management such as auditing activities, accounting, treasury

management and budgeting. The current study therefore intends to determine the impact of IFMIS on accounting operations of the various government Agencies in Kenya.

In the past, Budget execution and accounting processes in Ministries, Departments and Agencies (MDAs) in Kenya were either manual or had tailor-made systems based on their unique operations and organization culture. The MDAs stand - alone accounting systems performed various Accounting operations including; budgeting, revenue receipting, payment processes, monitoring of vote allocations, Reconciliations and financial reporting. However, according to the Accountant Generals Report of 1996, these stand - alone systems had the following challenges; Poor accounting record management, delay in submission of financial reports, poor accountability of funds, over spending and inefficiency. In view of the above, the researcher seeks to determine the effects of IFMIS on accounting operations of Government Agencies in Kenya.

1.1.4 Government Agency

The IFMIS in Kenya was introduced through the former ministry of finance and the now National Treasury in 1998 while piloting of the system in line ministries took place in 2003. The system was an Enterprise Resource planning (ERP) software that was based on Oracle and it was applied in all organizations. This ERP system integrated accounting operations through a centralized database which was accessed by authorized users using a very secure network. The Oracle based IFMIS which was implemented in 2003 had various modules that included, budgeting, procurement, purchase ordering, accounts payable and receivable, cash management, general ledger (GL), and commitment. Other two analytical tools that were implemented were added, these are the Oracle Financial

Analyzer and the financial statements generator. Various changes were made to fit the system to the government processes. By the year 2011, the ministry of finance embarked on an aggressive re-engineering process that sort to change the IFMIS to full cycle end-to-end processes from modular system.

Before the roll out of IFMIS, government financial management procedures were normally characterized by various financial challenges and weaknesses. These included lack of consistent, timely and relevant financial information for various decisions making. The financial management tasks were also characterized by use of manual or semi-computerized tedious tasks of financial planning, preparing budget estimates, manual procurement system, manual payment process, manual vote books, manual reporting and storage of information which couldn't be retrieved with ease.

IFMIS is fully operational in all Ministries, Departments, Agencies (MDAs) and all the 47 County Governments .The key objective was to improve the overall accounting and financial functions in the MDAs and the County governments. Government Agencies are mainly the Commissions and other semi-autonomous organizations that are responsible for the oversight and administration of specific functions that includes; Tax collections, auditing , intelligence, teachers service, public service and other spending agencies of the Government.

1.2 Research Problem

Public finance management practices had been characterized by challenges in revenue mobilization and lack of transparency in its use and accountability. The aspect of misappropriation of funds and corruption had been rampant in many developing

countries. This led to governments of these countries be unable to achieve their intended outputs as well as partial delivery of the objectives due to funds misuse, wastage and inefficiency in managing resources .In government institutions, IFMIS is known as the computerization of financial management activities in the public sector, from revenue collection, budget automation, to accounting, reporting and auditing, with the assistance of an integrated financial management system for all public sector operations. A more detailed and integrated financial management system would give accurate, timely and consistent and relevant financial information for the purpose of management and decision-making functions. Additionally, such a system supports government-wide as well as government agencies policy decisions, integrated preparation and execution of budgets, efficient financial monitoring and reduce cases of misuse of public funds, provided financial information for planning, analysis and timely reporting. The system also gives a detailed audit trail to facilitate financial audits to meet legal and statutory requirements (Mobegi, 2009).

The Kenyan Government has been improving on its financial management function way back from 1997. It has undertaken a numerous FM reforms targeting at creating transparency and accountability. These reforms have focused more on the core functions of PFM systems which include budget preparation and management, revenue mobilization, public procurement, internal and external audits, public debt management, parliamentary oversight, accounting activities, payroll and pensions, and financial reporting. The introduction of the Integrated Financial Management system, Public debt management systems, the Pension system, and Electronic Funds Transfer among others, have been based on the findings that the government can considerably improved

efficiency in financial management through the use of advanced technology and speed up reforms (IFMIS strategic plan, 2011-2013).

Many research studies have been carried out on the problems that were to be solved through the use of an integrated financial management information system. Mobegi (2009) carried out a survey of the impact of IFMIS as a tool for achieving sustainable financial management in public sector. The researcher aimed at investigating whether IFMIS had achieved the targeted benefits though its implementation was lacking behind. The study showed that the government of Kenya had highly gained from the benefits of an automated accounting system which is faster and reliable compared to the former stand-alone type of applications. Hendriks (2012) did a research on IFMIS by looking at the various steps to involved in the adoption by the public sector of South Africa. The study highlighted that problems that can be occur in the adoption of the system. The challenges can hinder the achievement of the aimed functionality and negatively affect financial management in the public sector that was initially targeted. Problems like lack of support from top management, shortage of resources for capacity building, lack of capital, and organizational and technical shortcomings increase risks to the successful adoption of IFMIS. Rodin-Brown (2008) stated that an IFMIS gives relevant, accurate, timely, and consistent information for financial management and decision-making.

Most of the researchers have dwelt more on the process of IFMIS implementation and the level of adoption of the system, especially in Kenya. Therefore, the researcher seeks to expand the knowledge by establishing the effects of IFMIS on accounting operations of Government Agencies in Kenya, whether it has addressed the problems in financial and accounting operations that includes: Lack of financial record management, lack of proper

audit trail, poor accountability of public funds, lack of timely submission of financial reports, and inefficiency. To achieve end the research aimed to answer one research question: What are the effects of IFMIS on accounting operations of government Agencies in Kenya?

1.3 Research Objectives

To establish the effects of IFMIS on accounting operations of government Agencies in Kenya. To achieve this objective, the research study was guided by a number of objectives which are:

1. To determine whether IFMIS use in government Agencies in Kenya has improved access to financial information.
2. To establish whether IFMIS use in Government Agencies in Kenya has improved timeliness of financial reporting.

1.4 Significance of the Study

The research would expand the existing knowledge on the effects of integrated financial management information systems on financial and accounting operations. It would also suggest areas of studies for future researchers besides being cited as empirical evidence by future scholars and researchers.

The study would be relevant to accountants and other officers in Government offices in realizing the benefits of computerized financial and accounting operations in the use of integrated financial management information systems and the skills required. This would

help them understand the role of IFMIS on operational efficiency and overall employee productivity.

The study would help the Government of Kenya in formulation and implementation of policies on IFMIS for operational efficiency. Through the findings of this study, the Government agencies would find the benefits realized and how more benefits can be realized for optimal operational efficiency. In addition, the government would be able to know the areas of improvement in IFMIS Re-engineering Strategic Plan (2013-2018). The aim of the Strategic Plan was to ensure maximum utilization of the system in all MDAs in contribution towards efficient and effective management of public assets and resources. This Strategic Plan also addresses the objectives of Public Financial Management Reforms (PFMR).

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section of the study discusses existing literature that supports the study on effects of IFMIS on accounting operations of government Agencies in Kenya as presented in journals and other write ups. It provides a theoretical review, empirical literature and a summarizes the literature.

2.2. Theoretical Review

The study was supported by three theories: Unified Theory of Acceptance and Use of Technology, Technology Diffusion Theory and Technology Acceptance Model (TAM). These theories are explained in details below:

2.2.1 Unified Theory of Acceptance and Use of Technology

Unified Theory of Acceptance and Use of Technology (UTAUT) is one of the technology acceptance models designed to assist users in accepting and using information technology in a unified manner. The UTAUT explains user motivation for adopting and using information system and explains user behaviour.

The theory identifies four key elements (social influence, performance expectancy, effort expectancy and facilitating conditions) as factors that directly affect of usage motive and usage behaviour. Experience, age, gender, and ability to volunteer are believed to act in impacting the four important constructs on usage motive and behaviour. This theory was consolidated from eight components model used earlier by scholars to explain information systems motivation for use (motivational model, theory of reasoned action, a

combined theory of planned behaviour, technology acceptance model, theory of planned behaviour /technology acceptance model, model of personal computer utilization, social cognitive theory and diffusion of innovations theory).

Technology acceptance by users is a widely research subject. The studies revolve around the concept of behavioural intention. The approach of behavioural intention insists that the decision to accept and use a particular technology is made consciously by the user. Behavioural intention theory is based on Theory of Reasoned Action (TRA) which was advanced by Fishbein and Ajzen (1975). It suggests that user's beliefs inform attitudes which influence and shapes behavioural intention, thus making a user behave in a given manner.

The Theory of Planned Behaviour (TPB) expands the TRA and incorporates perceived behavioural control to account for cases where a user lacks the control or resources important for carrying out a given behaviour, despite having a positive attitude toward it. The Technology Acceptance Model (TAM) and TRA share a common thread that connects the attitude to behavioural intention, but are different in their theorized elements of attitude and behavioural intention (Venkatesh, 2000). This theory has been applied in this study because it helps in explaining how users of technology go about in accepting to use a system in their day to day operations. It helped explain the differences in implementation of IFMIS across different Government agencies.

2.2.2 Technology Diffusion Theory

Technology adoption process has been the subject of research for more than 3 decades. Diffusion of Innovations is a technology adoption model that is widely used to explain

adoption of technological innovations (Sherry & Gibson, 2002). Consequently, most researchers have used the model as a basic framework for explaining the technology adoption process. Dooley (2006) and Stuart (2000) highlighted the areas where the model has been effective which include public health, political science, history, education, technology, communications and economics. Additionally Rogers' theory has been used widely as a theoretical framework for explaining technology adoption process and technology diffusion.

Rogers' theory has been widely cited by researchers as effective in understanding technology adoption in public institutions especially in revenue collection agencies (Medlin, 2001; Parisot, 2006). A considerable number of researches involve the concept of diffusion of technological innovations. Consequently, Rogers used the terms "innovation" and "technology" interchangeable. Rogers used technology to mean a tool for action which reduces uncertainty when seeking desired outcomes in a cause and effect relationship (Parisot, 2006). Technology consists of two critical components, software and hardware. Software comprises the information, which forms the basis of action for the tool. On the other hand, hardware is the box that houses the technology. Hardware takes the form of a physical device or tangible components of the technology (Rogers, 2003). It is critical to point out that software components generally have low level observability. Consequently, their rate of adoption is generally low.

Hashim (2015) indicated that Rogers' adoption is a decision to use innovation as the best available option that guides action. Consequently, avoiding innovation is avoiding to use the best course of action. Rogers used the term diffusion to mean the process of spreading

or communicating an innovation to potential users normally in a social set up. From the definition, it is evident that time, innovation, communication channels and a social system are critical factors that support diffusion of innovations (Hashim, 2015). Technology diffusion theory explains how information technology skills are acquired and used by employees/users for better performance. It explains how government agencies can enhance technology adoption among its employees/ officers. It has been chosen in this study because it helps in explaining the adoption of technology in the Government Agencies especially accounting operations.

2.2.3 Technology Acceptance Model (TAM)

Davis (2001) illustrated that the technology acceptance model consisted of two independent components. These were the ease of use and perceived use and perceived usefulness. These two components determined the depended component which is the user's intention to use. Venkatesh (2003) noted that TAM was developed specifically to project acceptance of information technology and use in the workplace. The perceived usefulness refers to extent to which a user feels that the new technology or innovation will assist him or her in making his or her work more efficient and effective. Perceived ease of use determines the required effort that a user needs to apply when using the technology or innovation (Chuttur, 2009). Both perceived usefulness and perceived ease of use are affected by external factors. Venkatesh and Davis (2000) developed the model further by explaining what influences perceived usefulness and perceived ease of use. The new model included the factors that affect perceived usefulness and perceived ease of use (Moore, 2010).

The components that affect perceived usefulness included quality of output, subjective norms, relevance of the task and result demonstrability. Further, subjective norm is affected by experience and the capacity to volunteer. Consequently, image can be seen as essential to an individual feeling when they adopt a new type of technology (Feuerlicht, 2010). Government policy on information technology has recently focused on establishing electronic systems which give administrators and employees online access to various learning materials and government publications. The move is informed by changes in demographic factors, service deliver market factors and innovation in technology (Geels, 2002). However, many challenges have to be overcome in the process of integration of technology that is instrumental to improving accounting operations. These challenges range from staff competencies, technology satisfaction, faculty effort and technology infrastructure (Surry, Ensminger & Haab, 2005).

Many government institutions have failed in delivering services primarily due to poor decisions, high cost of technology, lack of a serious business strategy and competition (Elloumi, 2004). Most of the universities have been facing enormous difficulties in trying to implementing strategies, these including effectiveness, delivery, and acceptance of the courses (Saadé, 2003). Simply by replicating classroom experience online and offering any conceivable course cannot meet the students' requirements and may cause unexpected problem (Kilmurray, 2003). Public satisfaction due to continuous frustration in web-based online remittances of taxes more so in sub-Saharan countries has gone down due to users' inability to make their payments. This theory is relevant for this research because it helped elaborate how perceived ease of use and perceived usefulness determine the intention to use and ultimately the usage behavior of Government agencies.

2.3 Factors influencing Accounting operations of Government Agencies

A number of factors have been found to affect the accounting operations among Government agencies across the world. These are discussed below:

2.3.1 Information communication System

According to Rao (2012), communication technology comprises the physical devices and software that connects numerous computer hardware components and transmit data from one point to another. Omokonga (2014) found out that financial managers used IFMIS tools in generating financial planning information which contributed to efficiency of their financial decision making and that managers were making capital budgeting decisions based on information generated from IFMIS. Similarly, Mobegi (2009) locally sought to establish whether IFMIS had been successfully implemented in Kenya where the findings pointed out that GOK had benefited immensely from the benefits of computerizing accounting operations which was more reliable than semi-automations systems.

2.3.2 Staff Competency

The ability of the system to enable the use of staff competencies is also important for achieving satisfaction. Success in the use of technology within the organization is contingent upon the willingness and ability of users/employees to engage with the technology and maximize the use of technology as designed to meet the requirements of the organization. A range of skills and competencies will need to be developed in public-entities in order to implement and manage e-Government (Settles, 2005). It is important to note that implementation of e-Government requires more than technical skills. General

managers require decision making skills on key technologies in addition to an understanding of information management.

Basic ICT skills include the skills that use of a PC, standard software programs; mobile devices, and Specialist IT skills that include the skills such as system development, database design, web design, use of specialized programs; also the ability to perform maintenance operations on hardware and software systems; resolving challenges reported by system users and the technical support. Others include training of system users to effectively use technology and designing the right software tools as a continuous computer literacy strategy (EIPA, 2005).

2.4 Empirical Literature

Bhatnagar and Singh (2010) did a study to assess the effect of e-government using a case study of e-government projects done in India. The research sought to develop a framework that identifies critical stakeholders, dimensions on which the impact requires to be measured with , and the methodology of measurement. Client value was measured in two dimensions: cost incurred by the client in accessing services, and the client's perception on quality of the service and governance. The study outcomes showed a tentative affirmation that there were significant improvements through the use of ICTs in delivering government services to the public majority of developing countries. General impact showed numerous variation across projects, highlighting the necessity to invest more on process reform in designing of e-government projects. Measurement of monetary benefits to the clients provides a basis for estimating the service fees that could be chargeable. An assessment of incremental costs of processing a transaction can assist evaluate the feasibility of the public-private partnership model.

Aminatu (2012) carried out a research on the effect of integrated financial management system on economic development, based on a case of Ghana. The study notes that the implementation of IFMIS was a failure in most countries as a result of lack of capacity building and over ambitiousness of these nations. The researcher both qualitative and quantitative data. Regression analysis was applied as a statistical tool to analyze data accumulated over the last ten years by the Ministry of Finance and Economic Planning. This study looked at the impact of GIFMIS on Ghana's economic development by looking at gross domestic product (GDP), economic growth, and resource allocation to major sectors of the economy. It was noted from the analysis that some sectors of the economy contributed immensely to GDP growth whereas other sectors had an adverse effect. Analysis of results also showed that GDP growth did not have a direct impact on economic growth.

Matavire, Roode, Chigona, Sewchurran, Mukudu, Davids, and Boamah-Abu (2010). studied on the challenges faced when adopting e-Government project in South African. The study found that perceived value of Information Technology, leadership, project fragmentation, task co-ordination and citizenship inclusion were among the important inhibitors that made e-Government to be successful in the Western Cape Province. The link between the factors leads to successful adoption and use of e-Government were also studied. The study further pointed out to further areas of research that could provide knowledge on the critical concerns within e-Government discourse

Bwalya and Mutula (2015) did a study on the conceptual framework for the development of e-government in resource-constrained countries, based on a case study carried out in Zambia. Many governments across the world have moved to implement IFMIS following

increased benefits accruing from e-government. However, most e-government projects fail as a result of failure to incorporate the multi-dimensional factors in designing implementation and monitoring strategies. A Mixed Methods Research (MMR) was adopted where both qualitative and quantitative methods were employed for data gathering. A questionnaire survey was the main data collection tool for quantitative data, whereas semi-structured interviews were employed to fill gaps in the quantitative data. The factors included: Intention to use, Perceived Usefulness, ICT Infrastructure, Perceived Ease of Use (PEOU), language and content and Computer Self efficacy. The findings show that implementation of e-government should not only be centered on technology but also take into perspective other aspects such socio-economic and managerial conceptualizations.

Locally, Mburu and Ngahu (2013) examined the influence of integrated financial management systems on effectiveness of financial management of county government of Nakuru, Kenya using descriptive research design. The study collected primary data using a questionnaire from County Government of Nakuru staff. The study acknowledged that a good system, a legal and regulatory framework, well trained and competent staff are critical for an efficient PFM regime. This is because it enhances availability of detailed financial information on the organization financial performance which helps on budgetary controls and improves planning and economic forecasting. The findings showed that IFMIS plays a critical role in increasing efficiency in financial controls by developing comprehensive, reliable, relevant and timely financial reports available to the management, Auditor General, prosecutorial agencies and parliament, among others users. Additionally, it improves accounting operations and reporting practices by the

provision of relevant, timely and accurate financial information, through an integrated financial management and accounting system.

Cherotich and Bichanga (2016) studied the factors influencing effective implementation of integrated financial management systems, in different county governments of Kenya. This study aimed at examining how change management, technological infrastructure, human capital development and top management commitment affected the effective implementation of IFMIS by the county governments. The scope of the study was five counties namely: Bomet, Kericho, Narok, Nyamira and Kisii. The theoretical framework for this study was built on the New Public Management Model, Technology Acceptance Model and Theory of Change. The study used a descriptive research approach. Target population for the study was users of IFMIS in the county governments. A census of the 180 county employees who use IFMIS in the five counties was done. Research data was then collected by means of a questionnaire and later analyzed using descriptive statistics. The findings revealed that most counties did not manage change to IFMIS effectively; the technological infrastructure for the roll out to the sub counties had not been availed; some aspects of human capital development had not been addressed; the political class is not supportive of IFMIS and the counties have not allocated enough resources towards of IFMIS.

Oduyo, Adero and Chumba (2014) studied the impact of integrated financial management information systems on the cash management in Eldoret West District Treasury, Kenya. The research used a descriptive survey research approach and was based on the Contingency theory. The study focused on 70 junior officers and senior management at the Eldoret West District treasury. Both questionnaires and interview methods were

applied to collect primary data. The collected data collected was then analyzed by use of descriptive statistics, regression models and correlation methods were applied. The study findings indicated that the flexibility and reliability of IFMIS directly affected the cash management. The study findings further showed that a reliable information system was characterized by accurate, timely, relevant on the job, complete and consistent in collection of data. Additionally, the study noted that security of the infrastructure which supports the IFMIS secure was necessary to curb unauthorize access, corruption, destruction and breach of information confidentiality. These were critical for efficient cash management and accountability. The flexibility of the design of IFMIS could decrease opportunities of interruptions in the cash management process. The study findings further revealed that the adoption of IFMIS has not fulfilled its main objective in totality since the top down management present in many public entities. In addition, there should be sufficient controls in IFMIS to reduce tampering of the system. Public sector improve on IFMIS to make it more flexible to adapts to the developments in cash management with minimum changes in changes in the system.

Karanja and Ng'ang'a (2014) sought to establish factors influencing implementation of IFMIS of government ministries in Kenya. This is because establishment of an IFMIS has been seen as a critical to the country's budget reforms agenda that is often identified as the first condition for effective management of the national budgetary. The study was conducted in the Ministry of Finance, in Meru County. It covered all the management officers' in different roles. The study adopted a descriptive research design. The study also employed correlation analysis to analyze the data using SPSS, which gave a correlation coefficient on the variables. One of the challenges that is affecting the

implementation of IFMIS was identified to be inadequate funding. The research findings revealed that the technological cost for implementation was a major challenge. Consequently, the study recommended that the ministry of finance should include the budget for IFMIS implementation in order to implement the system in all government ministries.

Another study by Kaindi (2012) established that IFMIS has any significant impact on internal financial control systems and financial performance in public institutions. The research findings showed that IFMIS can greatly enhance public financial management in numerous of ways. Generally, it enhanced credibility and confidence of the budget by ensuring that it is detailed and transparent with all the financial information. The aim of adopting and using IFMIS is to help in budget preparation and management by giving relevant , accurate and timely data for the purpose of decision-making. A standard budget preparation process is accepted for enhanced control over budget management. This is done by fully integrating the budget execution data. However, this study failed to show the specific advantages of adopting IFMIS particularly on public sector financial management systems and how its benefits improves the financial performance of Government agencies.

2.5 Summary of the Literature Review

Several studies have been examined in the empirical review above. On the global front, Bhatnagar and Singh (2010) conducted an assessment on the impact of e-government by using case study of projects in India. Aminatu (2012) examined the effects of integrated financial management system on economic development by using case of Ghana.

Matawire et al. (2010) researched on the factors influencing the implementation of e-Government projects in South African. Bwalya and Mutula (2015) developed a conceptual framework for implementation of e-government in a resource-constrained countries by using case from Zambia. These studies have been conducted on the international perspective with different operating environment and macro-economic settings which limit their application in the local context.

Locally, Mburu and Ngahu (2013) examined influence of the integrated financial management systems on financial management in the context of county government of Nakuru; Kenya. The study used descriptive research design. Cherotich and Bichanga (2016) researched on the factors influencing effective implementation of integrated financial management systems in county governments of Kenya. Odoyo, Adero and Chumba (2014) study the effects of integrated financial management information system on cash management of Eldoret West District Treasury, Kenya. Karanja and Ng'ang'a (2014) assessed the factors affecting implementation of IFMIS in Kenya government ministries. Kaindi (2012) found that IFMIS has a major impact on the internal control systems and financial performance of public entities. These studies concentrated on implementation, internal control, cash management and not how it affects accounting operations of government agencies which is the case for the current study.

2.6 Conceptual Framework

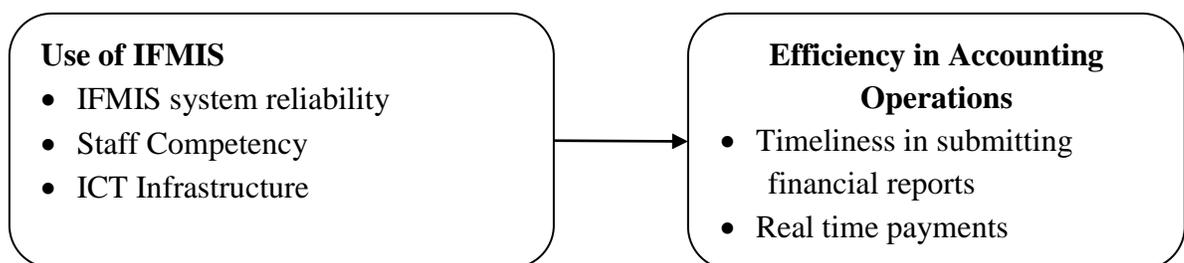


Figure 2. 1: Conceptual Framework

The independent variable in this study is use of IFMIS which has been operationalized in terms of IFMIS system reliability, staff competency and ICT Infrastructure. The extent to which these are implemented affects the level of efficiency in accounting operations among Government Agencies.

2.7 Null Hypotheses

- i. The relationship between use of IFMIS and timeliness in submitting financial reports is not significant.
- ii. The relationship between use of IFMIS and real time payment is not significant.
- iii. The relationship between use of IFMIS and record storage and retrieval is not significant.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This section presents the methods that were used by the researcher in ensuring maximum coverage of the research objective. It shows the research design, targeted population, research sample and sampling methods, data collection method, validity and reliability and data analysis. These are discussed in detail below:

3.2 Research Design

The researcher used a descriptive research design. According to Mugenda and Mugenda (2003), a descriptive research approach is a systematic, empirical inquiring that a researcher has no direct control of independent variable. Consequently, descriptive researches are concerned with the where, what, and how of an event thus more relevant to build a profile on that event (Mugenda & Mugenda, 2003). They bring out clearly the cause and effect of a phenomenon. A descriptive research design was deemed relevant because the study tries to add on the profile about the effects of IFMIS, on the accounting operations of government agencies in Kenya.

3.3 Population

The population comprises of 59 Government Agencies that use IFMIS as shown in the appendix II. The study targeted chief accountants in each agency because of their key role in accounting operations.

3.4 Data Collection

The research used both primary and secondary data. A questionnaire (appendix I) was used to collect primary data. It was divided into distinct sections including demographic information in section 1; and the rest addressed the study independent and dependent variables. On the other hand, secondary data was collected from past financial statements and other financial reports at the respective Government agencies. The study collected data on workloads in terms of transactions handled; trainings offered to staff relevant for IFMIS, asset registers to confirm the quantity of computer hardware. This study strived to collect the research data with reference to a period of 5 years between 2010 to 2015.

3.5 Validity and Reliability

A pilot study was done to test the validity and reliability of the data collection tools. Validity is defined as the level to which a data collection tool measures what is expected to measure. Consequently, data should be reliable and relevant, true and accurate. If a data collection instrument is correct/valid, it is also reliable (Joppe, 2000). The pilot study consisted of five chief accountants/ accountants in five government agencies. In order to ensure that research findings were not compromised, the pilot research results were excluded from the final study. Content validity was ascertained through consultations with the supervisors.

Reliability is concerned with the consistence, stability, or dependability of the data collected, (Cooper & Schindler, 2003). To determine the reliability of the data collection tools used in the study, an internal consistency method using Cronbach's alpha was introduced to the gathered data (Kothari, 2004). The Cronbach's alpha is a coefficient whose value is an indicator of reliability and provides a good determinant of

generalizability of the study. An alpha coefficient of 0.70 or higher means that the collected data is reliable and has a reasonably high internal consistency. Consequently, it can be generalized to give opinions of respondents in the population (Zinbarg, Revelle, Yovel & Li, 2005). The correlation test only provide estimates of the reliability of each half of the test. Therefore, it was important to use correlation to determine the reliability of the whole test.

3.6 Data Analysis

The data collected was analyzed by use of descriptive measures of central tendency for example means, standard deviation, maximum, minimum, skewness, and multiple regression analysis. The researcher employed Statistical Package for Social Sciences Version 22.0 to assist in data analysis. Analysis was done at 0.05 level of significance.

Table 3.1: Operationalization and Measurement of Variables

Variable	Indicator(s)	Operational definitions	Measurement scale	Questionnaire item
Independent variables				
IFMIS system reliability	Compatibility with other operating systems used in the agency. Minimal down time. Allows staff to share financial information. Rights limitations depends on job descriptions.	The extent of agreement on compatibility of IFMIS to other operating systems in the agency. The extent of agreement that IFMIS down time is minimal. The extent of agreement that IFMIS allows sharing of financial information by staff. The extent of agreement that rights limitations depends on job descriptions.	4 statements on a 5-point scale was used to reflect the descriptive norm of the extent of agreement on IFMIS reliability.	Section C (7)
Staff Competency	Staff are conversant with the IFMIS. Staff understand the different IFMIS Modules. Staff are computer skilled. Staff are trained on IFMIS prerequisites from time to time.	The extent of agreement that the staff are conversant with IFMIS The extent of agreement that the staff understand IFMIS Modules. The extent of agreement that the staff are computer literate. The extent of agreement that the staff are trained from time to time on IFMIS prerequisites.	statements on a 1-5-point scale was used to reflect the descriptive norm of the extent of agreement on IFMIS and staff competency.	Section B (5)
ICT Infrastructure	Adequate Computer hardware. Hardware are	The extent of agreement that there are adequate computer hardware. The extent of	3 statements on a 1-5-point type of scale was used to reflect the	Section D (9)

	well maintained. Use of the latest technology.	agreement that the hardware is well maintained. The extent of agreement that the IFMIS use the latest technology.	descriptive norm of the extent of agreement on IFMIS and ICT Infrastructure.	
Dependent variables				
Efficiency in Accounting Operations	Accuracy of financial reports. Timeliness of submission of financial reports. Real-time payments. Ease of record storage. Ease of record retrieval.	The extent of agreement that IFMIS has improved the accuracy of financial reports. The extent of agreement that IFMS has improved the timeliness in submission of financial reports. The extent of agreement that use of IFMIS has enabled real- time payments. The extent of agreement that IFMIS has easen the record storage and retrieval.	5 statements on a 1-5-point Likert scale was used to reflect the extent of agreement on use of IFMIS in efficiency of accounting operations.	Section C (11)

3.6.1 Analytical Model

Multiple regressions were also applied so as to establish the effects of IFMIS on accounting operations of government agencies in Kenya. The regression model to be adopted was as follows;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon$$

Where; Y = Accounting Operations (Accuracy, financial Efficiency), is the mean score of the indicators of the three variables below;

- X₁ = IFMIS system reliability
- X₂ = Staff Competency
- X₃ = ICT Infrastructure
- β₀ = Constant
- β₁, β₂, and β₃ = Coefficients

3.6.2 Test of Significance

To determine the significance of the model in establishing the effects of IFMIS use on accounting operations, an Analysis of Variance (ANOVA) was carried out. The F significance value was then obtained from the ANOVA statistics. The research was analyzed at a 95% confidence level and 5% significant level. If the value of the F statistic was greater than the pre-determined critical value of 2.4, then the researcher concluded that model was significant in giving the relationship between the independent variables and the dependent variable of the study.

CHAPTER FOUR

DATA ANALYSIS, INTERPRETATION AND PRESENTATION

4.1 Introduction

This section of the study evaluates the outcomes of the study findings of data analysis. Data for the study was exclusively gathered through the questionnaire. Statistical package for social sciences assisted in the analysis process. The findings are presented in figures, tables, means and standard deviation.

4.1.1 Response Rate

59 accountants from the Government Agencies that use IFMIS were targeted. Out the 59 questionnaires that were issued to respondents, 43 of them were fully filled and successfully returned to the researcher. A response rate of 73% was achieved. This response rate concurred with the stipulation of Babbie (2004) who stated that return rates above 50% are acceptable for analysed and publish, 60% is a good responds and 70% is very good. Above 80% is considered excellent. The research findings are summarised in Table 4.1 below.

Table 4.1: Response Rate

Response Rate	Frequency	Percentage
Response	43	73
Non Response	16	27
Total	59	100

4.2 General Information

The aimed to established demographic data of the respondents who were interviewed in the study. The findings are presented in subsequent sections.

4.2.1 Respondents' Position in Government Agency

The study sought to examine the role that respondents played in the agency. The findings are presented in Figure 4.1.

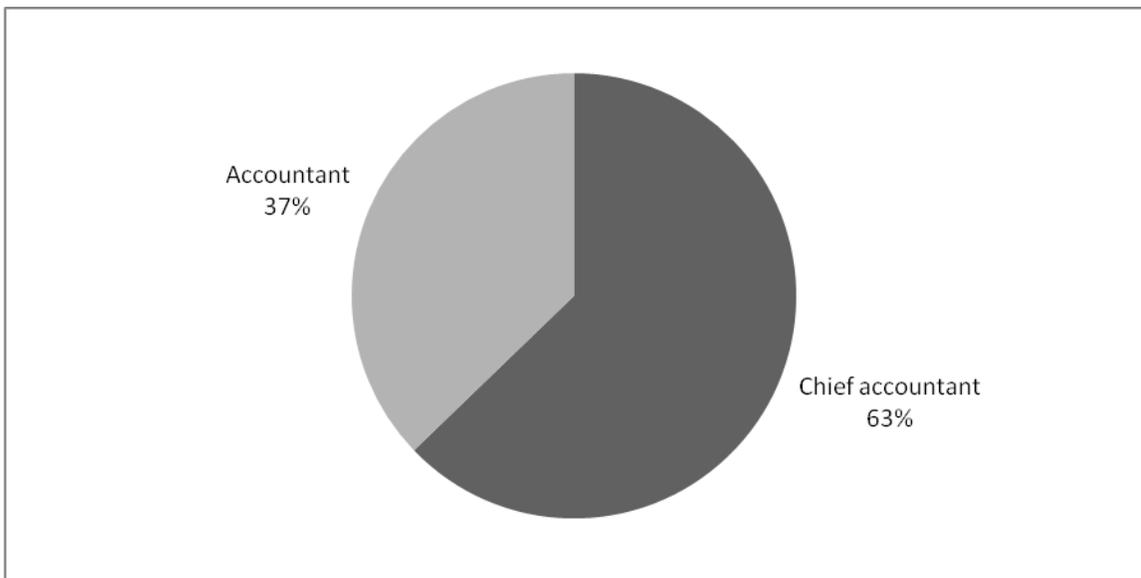


Figure 4.1: Respondents' Position in Agency

The study findings in Figure 4.1 showed that 37% of the respondents were accountants and 63% were chief accountants. These finding implies that the study involved key informants who have a crucial role to play in accounting operations. This therefore implies that reliable information was sought for the study.

4.2.2 Period Worked in Agency

The researcher further aimed to know the number of years that respondents had worked in the current government agency. The findings are summarised in Figure 4.2 below.

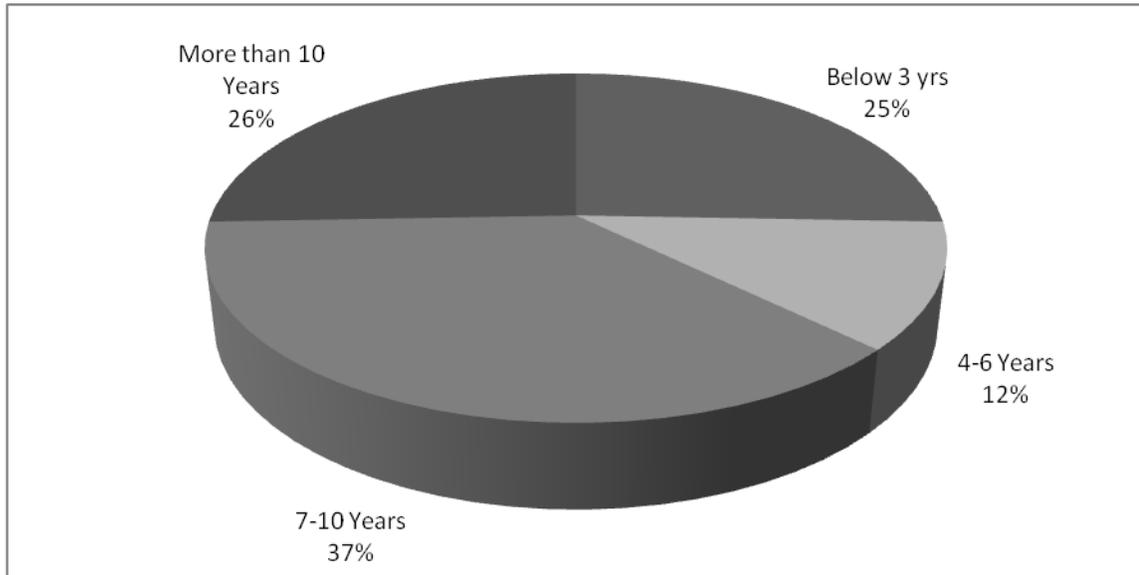


Figure 4.2: Period Worked in Agency

From Figure 4.2, 25% of the respondents had worked in the agencies for less than 3 years, 12% for 4-6 years, 37% for 7-10 years and 26% for more than 10 years. These findings indicate that majority of the respondents had worked with the agencies for a relatively longer period and therefore they were more knowledgeable on effects of integrated financial management information systems, on accounting operations of government agencies in Kenya.

4.2.3 Period of IFMIS Use

The study also tried to determine the number of years that respondents had been using IFMIS. This would help the researcher to assess the level of exposure of respondents to the system.

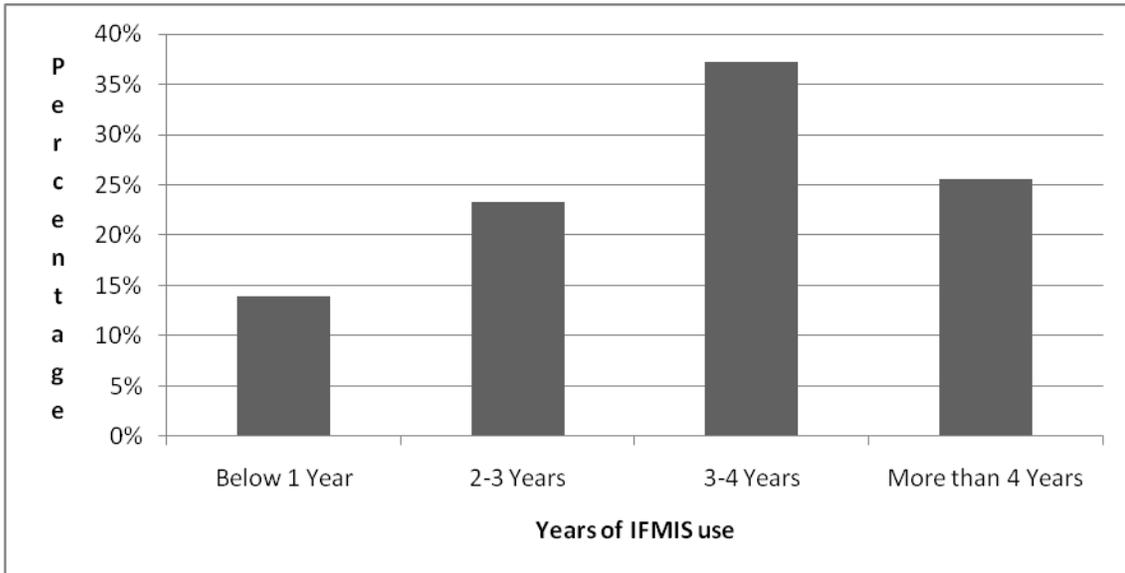


Figure 4. 3: Period of IFMIS Use

The findings from Figure 4.3 indicate that 14% of the respondents had worked with IFMIS for less than 1 year, 23% for 2-3 years, 37% for 3-4 years and 26% of the agencies have been using IFMISN for more than 4 years. The findings showed that most of the respondents have been using IFMIS system for a relatively longer period and therefore they were relevant for the study.

4.3 Staff Competency

Several statements on the effects of staff competency in IFMIS on accounting operations in government agencies were carefully identified. Respondents were then requested to indicate the extent of their agreement with each statement in regard to their agency. A type of scale of 1-5 where 1= Strongly disagree, 2= Disagree, 3= Neither agree nor disagree, 4= Agree and 5= Strongly agree was applied.

Table 4.2: Staff Competency

Staff Competency	Mean	Std. Dev
Our IFMIS staff are conversant with the way the system works	2.0698	1.05549
Our staff understand the different modules under IFMIS	4.3488	.71991
Our staff are computer literate	4.2326	.42746
Our staff are given prerequisite IFMIS training from time to time	2.5581	1.46876

The findings of the study revealed that IFMIS staffs are conversant with the way the system works as supported by a mean of 2.0698 of the results and standard deviation of 1.05549. The research study further found that offices understand the different modules under IFMIS as the mean was 4.3488 and standard deviation was 0.71991. The study also established that the staffs are computer literate for the mean on the statement was 4.2326 and standard deviation was 0.42746. It was also established that staffs are given prerequisite IFMIS training from time to time for the mean was 2.5581 and standard deviation was 1.46876.

4.3.1 Extent of Effect of Staff Competency on Accounting Operations of Government Agencies in Kenya

The study sought to investigate how staff competency affects accounting operations of government agencies in Kenya.

Table 4. 3: Extent of Effect of Staff Competency on Accounting Operations of Government Agencies in Kenya

	Frequency	Percentage
Moderate extent	11	26
Great extent	16	37
Very great extent	16	37
Total	43	100

The findings of the study from Table 4.3 showed that 26% of the respondents agreed that staff competency affects accounting operations of government agencies in Kenya by a moderate extent while 37% established a great extent or very great extent effect. These findings indicate that staff competency as a variable affects accounting operations of government agencies in Kenya.

4.4 IFMIS System Reliability

A number of statements on the IFMIS System Reliability on accounting operations in government agencies were identified and respondents were asked to indicate the extent of their agreement with each of the statement in respect to their agency. A scale of 1-5 points was used. where 1= Strongly disagree, 2= Disagree, 3= Neither agree nor disagree, 4= Agree and 5= Strongly agree was applied.

Table 4.4: IFMIS System Reliability

IFMIS System Reliability	Mean	Std. Dev
IFMIS system is highly compatible with other operating systems used in the agency	2.9767	1.24381
IFMIS system has minimal down time	4.2791	.82594
IFMIS system allows staff to share financial information	3.6744	1.24825
IFMIS system has rights limitations for staff depending on their job descriptions	4.3953	.69486

The study established that IFMIS system is highly compatible with other operating systems used in the agency for the mean was 2.9767 and standard deviation was 1.24381.

The findings of the study revealed that IFMIS system has minimal down time as the mean was 4.2791 and standard deviation was 0.82594. The study also revealed that IFMIS system allows staff to share financial information for the mean was 3.6744 and

standard deviation of 1.24825. It was also established that IFMIS system has rights limitations for staff depending on their job descriptions as the mean was 4.3953 and standard deviation of 0.69486.

4.4.1 Extent of Effects of IFMIS System Reliability on Accounting Operations of Government Agencies in Kenya

The study sought to examine the effect of IFMIS System Reliability and Accounting Operations of Government Agencies in Kenya. The findings are presented in Table 4.5.

Table 4.5: Extent of Effect of IFMIS System Reliability on Accounting Operations of Government Agencies in Kenya

	Frequency	Percentage
Moderate extent	11	26
Great extent	17	40
Very great extent	15	34
Total	43	100

The research showed that 26% of the respondents agreed that IFMIS system reliability affects accounting operations of government agencies in Kenya by a moderate extent, 40 % indicated great extent and 34 % indicated very great extent.

4.5 ICT Infrastructure

Several statements on ICT Infrastructure in support of IFMIS in government agencies were carefully selected and respondents were requested to tick the level of extent of their agreement with each of the statement in regard to their agency. In a scale of 1-5 point, where 1= Strongly disagree, 2= Disagree, 3= Neither agree nor disagree, 4= Agree and 5= Strongly agree was applied.

Table 4.5: ICT Infrastructure

ICT Infrastructure	Mean	Std. Dev
The agency has adequate hardware to support IFMIS	4.2558	.65803
The IFMIS hardware are well maintained	2.3953	1.11568
The IFMIS hardware use latest state of technology	4.2791	.66639

The study revealed that the agency has adequate hardware to support IFMIS for the mean on the statement was 4.2558 and standard deviation was 0.65803. It was also established that IFMIS hardware are well maintained as the mean was 2.3953 and standard deviation was 1.11568. The study further revealed that IFMIS hardware use latest state of technology as supported by a mean of 4.2791 and standard deviation of 0.66639.

4.5.1 Extent of Effect of ICT Infrastructure on Accounting Operations of Government Agencies in Kenya

The study sought to assess the effect of ICT Infrastructure on accounting operations of government agencies in Kenya. The findings are summarised in Table 4.7.

Table 4.6: Extent of Effect of ICT Infrastructure on Accounting Operations of Government Agencies in Kenya

	Frequency	Percentage
Great extent	27	63
Very great extent	16	37
Total	43	100

From the findings, 63% of the respondents indicated a great extent of effect between ICT Infrastructure and accounting operations of government agencies in Kenya and 37% indicated a very great extent of effect.

4.6 Accounting Operations

Several statements on accounting operations in government agencies following the use of IFMIS were identified and respondents were requested to indicate the extent of their agreement with each statement in regard to their agency. A scale of 1-5 where 1= Strongly disagree, 2= Disagree, 3= Neither agree nor disagree, 4= Agree and 5= Strongly agree was used.

Table 4.7: Accounting Operations

Accounting Operations	Mean	Std. Dev
Use of IFMIS has improved the level of accuracy of financial reports	2.2093	.96506
Use of IFMIS has improved the timeliness in submitting financial reports	3.9070	1.06489
Use of IFMIS has enabled real time payments	2.6744	1.14893
Use of IFMIS has brought about easy record storage	4.1395	.60085
Use of IFMIS has brought about easy record retrieval	4.2326	.68443
Use of IFMIS has improved the level of financial efficiency in the agency	4.4884	.50578

The study revealed that the use of IFMIS has improved the level of accuracy of financial reports for the mean was 2.2093 and standard deviation was 0.96506. It was further established that the use of IFMIS has improved the timeliness in submitting financial reports as supported by a mean of 3.9070 and standard deviation of 1.06489. Furthermore, use of IFMIS has enabled real time payments since the mean on the statement was 2.6744 and standard deviation was 1.14893. It was also established that use of IFMIS has brought about easy record storage for the mean was 4.1395 and standard deviation was 0.60085. The study revealed that use of IFMIS has brought about easy record retrieval for the mean was 4.2326 and standard deviation was 0.6843. It was also revealed that the use of IFMIS has improved the level of financial efficiency in the agency as the mean was 4.4884 and standard deviation was 0.50578.

4.7 Regression Analysis

The researcher applied a multiple regression analysis of the study to established the correlation between (IFMIS system reliability, Staff Competency, ICT Infrastructure) as independent variabls and the dependent variable accounting operations of government agencies in Kenya. The findings are presented in subsequent Tables.

Table 4.8: Model Summary of the study

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.762^a	.580	.548	1.40681

From the Model Summary, the value of R is 0.762, R square is 0.580 and adjusted R square is 0.548. The findings indicate that 58% changes in dependent variable (accounting operations of government agencies in Kenya) is contributed by the independent variables of the study (IFMIS system reliability, Staff Competency, ICT Infrastructure) while 42% is explained by other factors.

Table 4.9: ANOVA analysis of the study

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	106.582	3	35.527	17.951	.000
Residual	77.185	39	1.979		
Total	183.767	42			

The findings of the ANOVA analysis at 95% confidence level and the 5% significant level shows that F calculated is 17.951 while F critical is 2.85. Since the value of F calculated (17.951 IS greater than 2.84, this means that the overall model of the study was significant and hence a reliable estimate between the variables was investigated.

Table 4.10: Regression Coefficients

Model	Unstandardized Coefficients		Standardized t Coefficients		Sig.
	B	Std. Error	Beta		
(Constant)	4.577	3.781		1.2105	.052
IFMIS System Reliability	.012	.180	.008	.067	.047
Staff Competency	.245	.153	.175	1.605	.017
ICT Infrastructure	1.008	.153	.747	6.600	.000

The resultant equation becomes:

$$Y = 4.577 + 0.012X_1 + 0.245X_2 + 1.008X_3 + \epsilon$$

$$\text{Where } Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \epsilon$$

Where; Y = Accounting Operations (Accuracy, financial Efficiency), X_1 = IFMIS system reliability, X_2 = Staff Competency and X_3 = ICT Infrastructure. This implies when all the variables are held constant, accounting operations of government agencies in Kenya would be at 4.577, a unit increase in IFMIS system reliability would increase accounting operations of government agencies by 0.012, a unit increase in staff competency would increase accounting operations of government agencies by 0.245 and a unit increase in ICT Infrastructure holding other variables constant would increase accounting operations of government agencies by 1.008. Moreover, all the p values (0.047, 0.017 and 0.000) are less than 0.05 and this means that there is statistically significant in relationship between the variables of the research study.

The findings therefore imply that; the relationship between use of IFMIS and timeliness in submitting financial reports is significant, the relationship between use of IFMIS and real time payment is significant and the relationship between use of IFMIS and record storage and retrieval is not significant.

CHAPTER FIVE

SUMMARY, DISCUSSION, CONCUSSION AND RECOMMENDATIONS

5.1 Introduction

This section of the study r gives a summary of the analyzed data from the field on each variable of the study. The chapter also presents the discussion of the outcome of the study. Moreover, the conclusion of the study according to the objectives of the study is also presented in the chapter. There is also the recommendation of the study to other scholars and the areas for further research is also highlighted.

5.2 Research Findings

The subsection below provides a summary of the research study findings presented based on each of the variables of the study.

5.2.1 Staff Competency

The study found out that staffs understand the different modules under IFMIS as the mean was 4.3488 and standard deviation was 0.71991. The study also established that the staffs are computer literate for the mean on the statement was 4.2326 and standard deviation was 0.42746. The study further showed that 26% of the respondents is in agreement that staff competency affects accounting operations of government agencies in Kenya by a moderate extent while 37% found a great extent/ very great extent effect.

5.2.2 The IFMIS System Reliability

The study established that IFMIS system has minimal down time as the mean was 4.2791 and standard deviation was 0.82594. The study also revealed that IFMIS system allows staff to share financial information for the mean was 3.6744 and standard deviation of 1.24825. It was also established that IFMIS system has rights limitations for staff depending on their job descriptions as the mean was 4.3953 and standard deviation of 0.69486. The research findings further indicated that 26% of the targeted respondents agreed that IFMIS system reliability affects accounting operations of government agencies in Kenya by a moderate extent, 40 % indicated great extent and 34 % indicated very great extent.

5.2.3 ICT Infrastructure

The study revealed that the agency has adequate hardware to support IFMIS for the mean on the statement was 4.2558 and standard deviation was 0.65803. The study further revealed that IFMIS hardware use latest state of technology as supported by a mean of 4.2791 and standard deviation of 0.66639. The findings of the study further established that 63% of the respondents indicated a great extent of effect between ICT Infrastructure and accounting operations of government agencies in Kenya and 37% indicated a very great extent of effect.

5.2.4 Accounting Operations

The study established that the use of IFMIS has improved the timeliness in submitting financial reports as supported by mean of 3.9070 and a standard deviation of 1.06489. It

was also noted that the use of IFMIS has brought about easy record storage for the mean was 4.1395 and standard deviation was 0.60085. The study revealed that use of IFMIS has brought about easy record retrieval for the mean was 4.2326 and standard deviation was 0.6843. It was also revealed that the use of IFMIS has improved the level of financial efficiency in the agency as the mean was 4.4884 and standard deviation was 0.50578.

From Regression analysis results, 58% changes in dependent variable (accounting operations of government agencies in Kenya) is contributed by the independent variables of the study (IFMIS system reliability, Staff Competency, ICT Infrastructure) while 42% is explained by other factors. Furthermore, when all the variables are held constant, accounting operations of government agencies in Kenya would be at 4.577, a unit increase in IFMIS system reliability would increase accounting operations of government agencies by 0.012, a unit increase in staff competency would increase accounting operations of government agencies by 0.245 and a unit increase in ICT Infrastructure holding other variables constant would increase accounting operations of government agencies by 1.008. Moreover, all the p values (0.047, 0.017 and 0.000) are less than 0.05 and this implies that there is statistically significant association between the variables of the study.

5.3 Discussion

The study found out that staffs understand the different modules under IFMIS. The study also established that the staffs are computer literate. The finding concurs with EIPA (2005) that found out that basic ICT skills include the skills such as use of mobile devices, PCs, standard programs; and Specialist IT skills which include the skills for example system development, database design, web-design, the use of specialized

programs and others. In addition, other skills include the ability of maintenance of hardware and software systems; resolving challenges reported by the users and the providing technical solutions; and user training to make an appropriate use of technology as well as developing a continuous computer skills policy. It was also established that staff competency affects accounting operations of government agencies in Kenya.

The study established that IFMIS system has minimal down time. It was also established that IFMIS system has rights limitations for staff depending on their job descriptions. The study also revealed that IFMIS system allows staff to share financial information. The results were consistent with the research findings of Oduyo, Adero and Chumba (2014) whose findings showed that a reliable system was actually one that is relevant to the job, accurate, complete in collection of information, timely, and a secure infrastructure to support the IFMIS to ensure unauthorised, corruption, and breach of confidentiality of information is guaranteed so that there is an efficient cash management. The study findings also indicated that IFMIS system reliability affects accounting operations of government agencies in Kenya by great extent.

The study revealed that the agency has adequate hardware to support IFMIS. This finding concurs with Rao (2012) who held that the communication technology includes the hardware devices and software which links numerous computer hardware components and transfer data from one point to another. The study further revealed that IFMIS hardware use latest state of technology. The findings of the study further established ICT Infrastructure affects accounting operations of government agencies in Kenya to a very great extent.

It was also shown that the use of IFMIS has improved the level of financial efficiency in the agency. The study also established that the use of IFMIS has improved the timeliness in submitting financial. It was also established that use of IFMIS has brought about easy record storage. The study revealed that use of IFMIS has brought about easy record retrieval. The findings are consistent with the study of Mburu and Ngahu (2013) found that IFMIS is aimed at increasing efficiency of controls by making detailed, reliable, and timely, financial reports available to parliament, the Auditor General, management, parliament and prosecutorial agencies, among others, as they enhance accounting operations and reporting processes by providing timely and accurate financial reports through an integrated financial management and accounting system.

5.4 Conclusion

The study concludes that staffs understand the different modules under IFMIS. Furthermore, the staffs are computer literate. Staff competence affects accounting operations of government agencies in Kenya.

The study also concludes that IFMIS system has minimal down time. Furthermore, IFMIS system allows staff to share financial information. IFMIS system has rights limitations for staff depending on their job descriptions. IFMIS system reliability also affects accounting operations of government agencies in Kenya.

The study further concludes that the agency has adequate hardware to support IFMIS. IFMIS hardware use latest state of technology. Furthermore, ICT Infrastructure affects accounting operations of government agencies in Kenya.

The study comes to a conclusion that the use of IFMIS has improved the timeliness in submitting financial reports. The use of IFMIS has brought about easy record storage. The use of IFMIS has brought about easy record retrieval. The use of IFMIS has also improved the level of financial efficiency in the government agencies.

The study also concludes that 58% changes in dependent variable (accounting operations of government agencies in Kenya) is contributed by the independent variables of the study (IFMIS system reliability, Staff Competency, ICT Infrastructure) while 42% is explained by other factors. ICT infrastructure has a largest effect, then staff competency and lastly IFMIS system reliability.

5.5 Recommendation for the Study

The study recommends that all the accountants and other officers in Government offices should ensure that their staffs understand the different modules under IFMIS. Computer literacy skills and training should be offered to all staffs in government agencies operating in Kenya.

The study further recommends that management of government agencies in Kenya should be aware that IFMIS system has minimal down time. Staff in government agencies should also be aware that IFMIS system allows them to share financial information. Furthermore, management of government agencies should ensure that their IFMIS systems have rights limitations for staffs depending on their job descriptions.

The researcher also recommends that management of government agencies should ensure that there is adequate hardware to support IFMIS. Furthermore, the ICT departments in

these government agencies should ensure that their IFMIS hardware use latest state of technology.

Moreover, the top management of government agencies should realize that the use of IFMIS improves the timeliness in submitting financial reports. There is also need for government agencies to ensure that records are easily stored by the help of IFMIS. Furthermore, management of government agencies in Kenya ought to ensure that their records are easily retrieved from the data bases using IFMIS. Moreover, government agencies ought to enhance financial efficiency in their agencies by use of IFMIS.

5.6 Limitations

The researcher faced some challenges in data collection as some respondents were not willing to fill the questionnaire due to the confidentiality of their information because most of Government Agencies have just used the IFMIS system for less than 5 years.

Other challenges were that few empirical studies have been carried out in Kenya especially on establishing whether IFMIS system has actually met its main Objectives of Playing a critical role in Public Financial Management.

The researcher restricted the study to the various Governments but IFMIS application has also been rolled out to all the 47 counties hence due to time constraint, the researcher was not able to cover more Government entities on the identified variables

5.7 Further Areas of Research

The study was conducted to establish the impact of integrated financial management information systems, on accounting operations of government agencies in Kenya. The study used both primary and secondary data. Future studies should be undertaken to cover both private and public sectors of the economy. Further studies should also be

conducted in devolved units of government in Kenya. This study covered only three aspects: staff competency, IFMIS system reliability and ICT infrastructure. Future studies should however involve a large number of variables.

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APPENDICES
APPENDIX I: LETTER TO RESPONDENTS

DATE 20/09/2016

TO WHOM IT MAY CONCERN

The bearer of this letter SARAH C. CHERONO

Registration No. D61/77142/2015

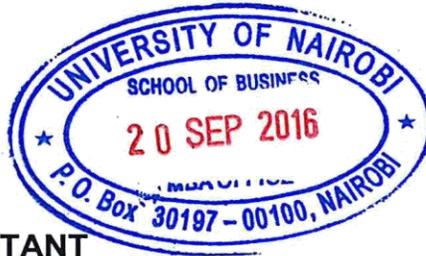
is a bona fide continuing student in the Master of Business Administration (MBA) degree program in this University.

He/she is required to submit as part of his/her coursework assessment a research project report on a management problem. We would like the students to do their projects on real problems affecting firms in Kenya. We would, therefore, appreciate your assistance to enable him/her collect data in your organization.

The results of the report will be used solely for academic purposes and a copy of the same will be availed to the interviewed organizations on request.

Thank you.


PATRICK NYABUTO
SENIOR ADMINISTRATIVE ASSISTANT
SCHOOL OF BUSINESS



APPENDIX II: DATA COLLECTION AUTHORISATION

Sarah C. Cherenó
P. O. Box 30197
University of Nairobi
NAIROBI

RE: RESEARCH AUTHORISATION

Your request to collect data to inform your academic study titled “**The effects of Integrated Management Information Systems on accounting operations of government agencies in Kenya**” has been granted.

You are advised to proceed to Accounts Directorate or any other relevant service area to assist in providing information as required.

On completion of the exercise, you are expected to submit **two hard copies** and **one soft copy in pdf** of the research report to our office.



E. A. WANYANGA
FOR SECRETARY/ CHIEF EXECUTIVE

APPENDIX III: QUESTIONNAIRE

SECTION A: GENERAL INFORMATION

- 1) Name of the Government Agency (Optional) _____
- 2) Your position in the agency
 Chief Accountant [] Accountant []
- 3) How many years have you worked in this Agency?
 Below 3 years [] 4-6 years []
 7-10 years [] More than 10 years []
- 4) For how many years have you been using IFMIS? _____

SECTION B: STAFF COMPETENCY

- 5) Below are several statements on the effects of staff competency in IFMIS on accounting operations in government agencies. Kindly tick the extent of your agreement with each statement in relations to your agency. Use a scale of 1-5 where 1= Strongly disagree, 2= Disagree, 3= Neither agree nor disagree, 4= Agree and 5= Strongly agree.

Statement	1	2	3	4	5
Our IFMIS staff are conversant with the way the system works					
Our staff understand the different modules under IFMIS					
Our staff are computer literate					
Our staff are given prerequisite IFMIS training from time to time					

- 6) To what extent has staff competency affected accounting operations in your agency?
- Very great extent []
- Great extent []
- Moderate extent []
- Little extent []
- No extent []

SECTION C: IFMIS SYSTEM RELIABILITY

7) Below are several statements on the IFMIS System Reliability on accounting operations in government agencies. Kindly tick/indicate the extent of your agreement with each of the statement in regard to your agency. Use a scale of 1-5 where 1= Strongly disagree, 2= Disagree, 3= Neither agree nor disagree, 4= Agree and 5= Strongly agree.

Statement	1	2	3	4	5
IFMIS system is highly compatible with other operating systems used in the agency					
IFMIS system has minimal down time					
IFMIS system allows staff to share financial information					
IFMIS system has rights limitations for staff depending on their job descriptions					

8) To what extent has System Reliability affected accounting operations in your agency?

- Very great extent []
- Great extent []
- Moderate extent []
- Little extent []
- No extent []

SECTION D: ICT INFRASTRUCTURE

9) Below are several statements on ICT Infrastructure in support of IFMIS in government agencies. Please, indicate the extent of your agreement with each statement in relations to your agency. Use a scale of 1-5 where 1= Strongly disagree, 2= Disagree, 3= Neither agree nor disagree, 4= Agree and 5= Strongly agree.

Statement	1	2	3	4	5
The agency has adequate hardware to support IFMIS					
The IFMIS hardware are well maintained					
The IFMIS hardware use latest state of technology					

10) To what extent has ICT infrastructure affected accounting operations in your agency?

- Very great extent []
- Great extent []
- Moderate extent []
- Little extent []
- No extent []

SECTION E: THE ACCOUNTING OPERATIONS

11) Below are several statements on accounting operations in government agencies following the use of IFMIS. Please, indicate the extent of your agreement with each statement in relations to your agency. Use a scale of 1-5 where 1= Strongly disagree, 2= Disagree, 3= Neither agree nor disagree, 4= Agree and 5= Strongly agree.

Statement	1	2	3	4	5
Use of IFMIS has improved the level of accuracy of financial reports					
Use of IFMIS has improved the timeliness in submitting financial reports					
Use of IFMIS has enabled real time payments					
Use of IFMIS has brought about easy record storage					
Use of IFMIS has brought about easy record retrieval					
Use of IFMIS has improved the level of financial efficiency in the agency					

THANK YOU

APPENDIX IV: LIST OF GOVERNMENT AGENCIES OF KENYA

1. Administration Police
2. Kenya Airports Authority
3. Attorney General of Kenya
4. Kenya Civil Aviation Authority
5. Central Bank of Kenya
6. Capital Markets Authority of Kenya
7. Betting Control and Licensing Board
8. Insurance Regulatory Authority
9. Sacco Societies Regulatory Authority
10. Commission for the Implementation of the Constitution
11. Commission on Administrative Justice
12. Commission on Revenue Allocation
13. Commissions and Independent Offices of Kenya
14. Communications Authority of Kenya
15. Kenya National Disaster Operation Centre
16. Kenya Economic Stimulus Program
17. Medical Practitioners and Dentists Board
18. National Environment Management Authority
19. Ethics and Anti-Corruption Commission
20. Export Promotion Council
21. Kenya Film Commission
22. Kenya Flower Council
23. Clinical Officers Council
24. Kenya Forest Service
25. General Service Unit (Kenya)
26. Kenya National Commission on Human Rights
27. Information and Communication Technology Authority (Kenya)
28. Judicial Service Commission (Kenya)
29. Kenya Anti-Corruption Commission
30. Kenya Bureau of Standards

31. Kenya Judges and Magistrates Vetting Board
32. Kenya Law Reform Commission
33. Kenya Medical Supplies Agency
34. Kenya National Bureau of Statistics
35. Kenya National Examination Council
36. Local authorities of Kenya
37. Kenya Plant Health Inspectorate Services
38. Kenya Army
39. Kenya Defence Forces
40. National Cohesion and Integration Commission
41. National Hospital Insurance Fund
42. National Intelligence Service (Kenya)
43. National Land Commission
44. National Police Service Commission
45. Kenya Navy
46. Office of the Auditor-General (Kenya)
47. Office of the Controller of Budget (Kenya)
48. Parliamentary Service Commission
49. Permanent Presidential Commission on Soil Conservation and A forestation
50. Permanent Presidential Music Commission
51. Kenya Police
52. Kenya Police Reserve
53. Kenya Ports Authority
54. Public Service Commission (Kenya)
55. Registrar of Trade Unions
56. Kenya Revenue Authority
57. Salaries and Remuneration Commission
58. Teachers Service Commission
59. Kenya Wildlife Service