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**FACTORS INFLUENCING THE USE OF INTEGRATED FINANCIAL  
MANAGEMENT AND INFORMATION SYSTEMS IN PUBLIC SECTOR.**

**A CASE OF SELECTED GOVERNMENT MINISTRIES IN KENYA.**

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**D53/PT/CTY/13799/2009**

**A RESEARCH PROJECT REPORT SUBMITTED IN PARTIAL FULFILMENT OF  
THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF  
BUSINESS ADMINISTRATION OF KENYATTA UNIVERSITY**

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*Factors influencing  
the use of integrated*

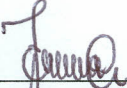


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## DECLARATION

The research project is my own work and has not been presented for examination in any other university.

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## SUPERVISORS APPROVAL

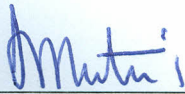
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## **DEDICATION**

I dedicate the project to my fiancée Julieth, my mother, brothers and friends for their steadfast support and inspiration.

## ACKNOWLEDGEMENT

My sincere appreciation goes to Mr. Dominic K. Ngaba and Mr. James Muturi for accepting to supervise and guide me through this very involving process to the final end, to Mr. Dominic K. Ngaba, you critiqued my work and offered useful guidelines. I would also wish to appreciate other Kenyatta University lecturers that immensely changed and transformed my creativity through the whole course, you forever remain my heroes, and may God bless you all.

My fellow students, you tickled me by your creative thinking through various discussions both in the class room and outside, may this fire of inspiration forever burn. My utmost gratitude is to almighty God who enabled me to accomplish this by his grace.

## ABSTRACT

The need for reform of the public finance management system in Kenya was emphasized in the Economic Recovery Strategy for the Wealth and Employment Creation, the ERS for 2003-2007, as a crucial element in order to achieve sustainable economic growth, alleviate poverty, and improve public sector performance. Consequently, the Government of Kenya implemented the Integrated Financial Management and Information System (IFMIS) as part of public finance management system reform. The IFMIS implementation requirement in Kenya originated from the Ministry of Finance and Economic Planning's ICT Master plan 2001-2005, which highlighted gaps and weakness within the SIBET system that was being used at the time. While the benefits of IFMIS in government cannot be disputed, there are a number concerns about its success as well as the strategies adopted in implementation of the system in line ministries.

This research project addressed the characteristic challenges that users of the IFMIS face by investigating factors that influence use of IFMIS in government ministries. It presented results of literature review experiences of other countries having IFMIS from both developed and developing countries and preliminary studies grounded in the Kenya Government reality. The study targeted a total population of 134 senior government accountants in 25 government ministries already using the IFMIS. However, for purposes of sampling, a stratified random sampling was used, each ministry being considered as a stratum. A sample ratio of 0.3 was employed to draw a sample from each stratum consequently generating a total sample size of 40 respondents to be studied. The focus was on four factors that influence the use of IFMIS, namely, staff resistance, management commitment, system complexity, as well as capacity and skills of users. The significance of the influence of the independent variables on the dependent variable was achieved through correlation of variables.

Data was collected using a questionnaire administered to all sample respondents. Analysis and presentation of data was done using descriptive statistics for example, graphs and frequency distributions. The study established that use of the IFMIS is affected largely by sabotage and resistance. The study also established that management support is lacking and top management does not inspire the user. The capacity and technical knowhow was found to be low due to lack of training and the hurried implementation of the system. The study recommended that the government employs a change agent to oversee the implementation of the IFMIS and that the users of the system to undergo on the job training, in order to improve their skills and capabilities to use the system. This study is of great benefit to the Government of Kenya in its pursuit of reforming the public finance management system.

## TABLE OF CONTENTS

DECLARATION .....	ii
DEDICATION .....	iii
ACKNOWLEDGEMENT .....	iv
ABSTRACT .....	v
LIST TABLES AND FIGURES .....	viii
LIST OF ABBREVIATIONS .....	ix
CHAPTER ONE .....	1
INTRODUCTION TO THE STUDY .....	1
1.1 Background of the Study .....	1
1.2 Statement of the Problem .....	4
1.3 General Objective of the Study .....	5
1.3.1 Specific Study Objectives .....	6
1.3.2 Research questions .....	6
1.4 Scope and Limitation of the Study .....	6
1.5 Significance of the Study .....	7
CHAPTER TWO .....	8
LITERATURE REVIEW .....	8
2.1 Introduction .....	8
2.2 ICT and IFMIS in the Public Sector .....	8
2.3 Integrated Financial Management and Information System (IFMIS) .....	10
2.4 Staff Sabotage and Resistance .....	13
2.5 Management Commitment .....	17
2.6 Complexity of the System .....	19
2.7 Capacity and Technical skills .....	20
2.8 Main Review .....	21
2.9 Research Gaps .....	21
2.10 Conceptual framework .....	22
CHAPTER THREE .....	25
RESEARCH METHODOLOGY .....	25
3.1 Research Design .....	25
3.2 Target Population .....	25
3.3 Data Collection Instruments and Procedures .....	25
3.4 Data Analysis and Reporting .....	26
3.5 Ethical Consideration .....	26
CHAPTER FOUR .....	27
DATA ANALYSIS, INTERPRETATION AND PRESENTATION .....	27
4.1 Introduction .....	27
4.2 Response Rate .....	27
4.3 General information of the Respondents .....	28
4.4 Staff resistance and its Effects to Implementation of IFMIS .....	30
4.5 Management Commitment on Use of IFMIS .....	33
4.6 Complexity of the System .....	35
4.7 Capacity and Technical skills .....	37
4.8 Effective Use of the IFMIS System .....	39
CHAPTER FIVE .....	41
SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS .....	41
5.1 Overview .....	41
5.2 Summary of Findings .....	41

5.2.1 General Information.....	41
5.2.2 Resistance and sabotage.....	41
5.2.3 Management commitment.....	42
5.2.4 Complexity of the system.....	42
5.2.5 Capacity and technical knowhow.....	42
5.2.6 Effective use of IFMIS.....	43
5.3 Conclusions.....	43
5.4 Recommendations.....	45
5.5 Suggestions for Further Research.....	45
REFERENCES.....	46
APPENDICES.....	48

## LIST OF TABLES AND FIGURES

### TABLES

Table 4.1	Response Rate.....	27
Table 4.2	Knowledge of IFMIS by Respondents.....	30
Table 4.3	Staff Resistance to IFMIS.....	31
Table 4.4	Opinion on how Resistance Affects use of IFMIS.....	32
Table 4.5	Management Commitment to the use of IFMIS.....	33
Table 4.6	Significance of various aspects of Management Commitment to use of IFMIS...	34
Table 4.7	Complexity of the IFMIS.....	35
Table 4.8	Significance of various aspects of System Complexity on use of IFMIS.....	36
Table 4.9	Capacity and Technical Skills.....	37
Table 4.10	Significance of various aspects of Capacity of Users of IFMIS.....	38
Table 4.11	Descriptive Statistics on the Safe use and Security of IFMIS.....	40

### FIGURES

Figure 1.1	Features of a Typical IFMIS.....	11
Figure 2.1	Conceptual Framework.....	24
Figure 4.1	Gender Representation.....	28
Figure 4.2	Age Bracket.....	29
Figure 4.3	Work Experience.....	29
Figure 4.4	Level of Management Resisting IFMIS.....	31
Figure 4.5	Reasons for Resistance and Sabotage to IFMIS.....	33
Figure 4.6	Impact of IFMIS.....	39

## LIST OF ABBREVIATIONS

IFMIS	- Integrated Financial Management and Information System
ERS	- Economic Recover Strategy
DFID	- Department for International Development
UK	- United Kingdom
GOK	- Government of Kenya
AG	- Accountant General
MTEF	- Medium Term Expenditure Framework
MOF	- Ministry of Finance
KIPPRA	- Kenya Institute for Public Policy Analysis
CAGD	- Center for Accountability, Governance and Development

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## CHAPTER ONE

### INTRODUCTION TO THE STUDY

#### 1.1 Background of the Study

Public finance management in various developed and developing countries, Kenya included, face a number challenges (DFID, 2003). These challenges include, but are not limited to, poor management of financial information, non-compliance to principles of good governance such as transparency and accountability, lack of internal control and adherence to key regulations, failure of the budget in fulfilling its role as a political steering instrument, and non-conformity of public procurement procedures to existing market best practice. Consequently, overall, resources fail to be adequately applied to economic development and poverty reduction.

It is due to these public finance management challenges that the Government of Kenya has for a long time been very much concerned with availability of real-time, reliable financial information that financial managers can use to administer programs effectively, formulate budgets, and manage resources from an informed point. A review by the Department of Accountant General at Treasury on financial management, accounting systems and role of audits (KPMG/ Accountant General Report; June 1997), revealed weaknesses in the management of financial information. The review focused on the need to develop a strategic plan aimed at improving the financial management system, skills and capacity within the government financial operation units. It also reviewed how timeliness of financial information, if improved, could form the basis for improving control of expenditure against budget.

This follows a growing interest in the quality of public sector finance management in developing countries by the Donor Community. In contrast, during the cold war, aid was generously, but often doled out to political allies with few questions. In the early years after the fall of the Berlin Wall in 1989, interest in the state was limited. However, following the World Bank's Report (World Bank, 1994), the role of the state has become

increasingly prominent in development efforts, and particularly in the drive against poverty. The new agenda recognized that, while there may be too much state intrusion in the economy, there was also often too little government capacity to make policy, perform basic administrative functions, work with private partners, and ensure the provision of infrastructure and public services. In 2001, the UK's Department for International Development (DFID, 2003) issued its guide on public expenditure management which noted that, there had been a dramatic surge of interest in public expenditure issues amongst governments, development agencies and the wider public. This shift offered Africa that chance to leapfrog intermediate stages of development.

As a result, consultants and other advisors of governments in Africa started toying with the idea of introducing a modern information technology – The Integrated Financial Management and Information System (IFMIS). More narrowly defined, a Financial Management Information System, or an Integrated Financial Management and Information System (IFMIS), is an information system that tracks financial events and summarizes financial information. In its basic form, an IFMIS is little more than an accounting system configured to operate according to the needs and specifications of the environment in which it is installed.

Since 1997, the Government of Kenya has been implementing wide ranging public finance reforms aimed at improving financial management, accountability, and transparency of public funds, (GoK, 1997). During the first two phases over the first three years, a number of diagnostic reviews were conducted and an Integrated Financial Management and Information System developed. The project was implemented in phases, with the initial phase targeting the accounting and procurement modules at the Treasury and two line ministries during the financial year 2003/2004, (GoK, 1999).

The roll-out of these two modules has since been done for all ministries and departments across government. However, the budgeting, asset management, debt management, external resources and the human resources are yet to be implemented. While benefits of this new system cannot be disputed, the road to implementing a successful IFMIS is paved with obstacles. For instance, an investigation carried out by Accountant General

Office, (GOK/KPMG, 1997) found out that computer upgrade in the various ministries including treasury suffered from persistent problems, limiting the departments' capabilities.

In a similar vein, DFID also commented more generally that in Kenya there is a lack of political or bureaucratic will to use the budget as the authoritative tool in resource allocation or to use the output of the IFMIS to hold people to account. Similarly, at an absolute minimum, DFID also noted that the Ministry of Finance/Accountant General's Department may not be willing and able to substantially influence the accounting operations of spending ministries. This confirms the fears that the implementation of the IFMIS in Kenya could be facing serious doubts among the top management, and employees using it are resisting in their own ways. The system has been seen as too complex to handle daily routine work and the experts in the ministry of finance doubt the adequacy of the solution provided by the new system.

In addition and perhaps because of the other problems, there has been some resistance and sabotage to the project, and hence the challenge of dealing effectively with resistance to implement it (World Bank, 2004). Another indicator is the gap between formal and informal rules in Public finance. The management commitment for change is questionable if the gap is too large. If existing rules are ignored or manipulated by powerful interest groups, it is difficult to imagine that this behavior will fundamentally change with a new IFMIS, which is based on compliance with formal rules. There is increasing concern on IFMIS effectiveness, at a time when a few ministries are about to roll out the system when they come out of the pilot stage soon.

The final users of the system have not been properly prepared to handle a system of such magnitude. This is attributed to the fact that training in ministry is supply, rather than demand driven (KPMG/ AG Report, June 1997). The introduction of an IFMIS by any government should be regarded as part of a long process of reform. This process takes years to fully implement, costs millions of dollars, and has a substantial recurring operating cost. Thus IFMIS should be regarded as a major project requiring a structured project management approach. However, a hurried installation of the system may be the

governments' undoing (Gibson and Nolan, 2003). Information Technology Systems that are started small and are iteratively expanded are less likely to fail or underperform because the associated risk can be managed.

Generally, the term "IFMIS" refers to the use of information and communication technology in financial operations to support management in financial accounting, preparation of financial reports and statements, budgeting and holding management to account in terms of fiduciary responsibilities. In government realm, IFMIS refers more specifically to the computerization of public finance management (PFM) processes, from budget preparation and execution to accounting and reporting, with the help of an integrated system for financial management of line ministries, spending agencies and other public sector operations. The principal element is integration, that is, IFMIS is a common, single, reliable platform or database (or a series of interconnected databases) to and from which all data expressed in financial terms flow.

Integration is the key to any successful IFMIS. Integration oftentimes applies only to the core financial management functions that an IFMIS supports, but in an ideal world it would also cover other information systems with which the core systems communicate, such as human resources, payroll, and revenue (tax and customs). At the minimum, the IFMIS should be designed to interface with these systems. An IFMIS is one way to address the problem of "stove-piped" financial systems that do not talk to each other and do not produce a timely and comprehensive picture of a country's financial position.

## **1.2 Statement of the Problem**

Many reasons have been put forward for the problems associated with the implementation of the IFMIS in Kenya. Rapid implementation of the system has been constrained by significant technical, institutional and capability barriers. "Most importantly, ownership and drive for the project have been constrained by a lack of qualified staff" (World Bank, 2004). However, the over-riding reason appears to be the complexity of the initial design, which includes a large pilot and multiple user platform (MOF, 2007).

Despite substantial time spent in developing and customizing the software application, the pilot implementation and the roll-out of the IFMIS in various government ministries, the system has not progressed well. The MOF and the CAGD are not fully satisfied with the IFMIS reporting system, and this has been a major area of dispute between the government and the software team (GOK/KPMG Report, 1997). There were also problems with the management commitment to the new system. The overriding concern is the significant, limited involvement and ownership of the system by the various government staff in the design and development of the IFMIS. Somehow, the development process was largely driven by consultants and donors in the formative period of the project.

On the other hand, the Oracle team has not been able to make much progress in this area because of lack of clear specifications on the government reporting requirements. The complex nature of the system has encountered significant design and implementation problems and delays. The capacity and know-how of the government staff has always been and is still the major issue, and the government still relies on the assistance of consultants. Consequently several significant issues need to be addressed before IFMIS can effectively be used.

In general, the implementation phase has not progressed well, primarily because of clearly limited involvement and some neglect of the system by the main players, including the MOF, AG and pilot ministries (World Bank, 1994). With the aforesaid in mind, effective use of IFMIS may be at stake in spite of the colossal amount of tax payers' money invested in this project as the government tries to roll out this system to computerize fully its operations. It's against this background that the researcher empirically investigates the factors influencing effective use of the IFMIS system in government ministries.

### **1.3 General Objective of the Study**

The general objective of the study was to establish factors influencing effective use of Integrated Financial Management Information System (IFMIS) in government ministries.

### **1.3.1 Specific Study Objectives**

The specific objectives of the study were to;

- i. Establish the extent to which capacity and technical skills affect use of IFMIS
- ii. Evaluate how the complexity of IFMIS system is a factor affecting the users
- iii. Establish the extent to which staff resistance influence the use of IFMIS
- iv. Establish the extent to which management influence effective use of IFMIS

### **1.3.2 Research questions**

- i. To what extent does the capacity and technical skills affect use of IFMIS?
- ii. Is the complexity of IFMIS a factor affecting the users?
- iii. Does staff resistance influence the use of IFMIS?
- iv. To what extent does management influence effective use of IFMIS?

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

The study covered 25 government ministries currently implementing the IFMIS system in Nairobi. This is because Nairobi serves as the headquarters for line ministries. The subjects of the study were all senior accountants heading the various accounting and finance functions. The variables of study were; capacity and skills of the staff using the system, complexity of the IFMIS making it difficult for users to make use of it, staff interference or resistance, management commitment to the new system, and how these factors affect use of the IFMIS in government ministries. The use of a sample in the study was as a result of various limitations among them, being the sample suffering from non-response and response errors. The fact that not all accountants using the IFMIS were subjected to the study meant that conclusions were based on the once included in the sample.

## **1.5 Significance of the Study**

The findings of the study will be important to the government policy makers, in identifying the shortcomings of the Integrated Financial Management Information System which is a crucial element in the Economic Recovery strategy for Wealth and Employment Creation and how the system can be improved to be more effective. In addition, government policy makers may use the research findings in formulating and enforcing legislation that would facilitate accountability and transparency through effective regulations and procedures as well as reliable financial and accounting system.

It cannot go without saying that the general public and stakeholders (Funding Nations and Agencies) need to build confidence in the financial information from government departments and line ministries. By the government acting upon the findings, the general public and other stakeholders will appreciate the government's commitment in sound public finance management consequently boosting confidence in government financial information.

Finally, academic researchers may need the study findings to stimulate further research in this area of Integrated Financial Management and Information System in government and as such forms a basis of good background to further research.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 Introduction

Integrated Financial Management and Information System (IFMIS) is a computer based system that automates and store key financial information of large organizations like governments, multinational corporations and large non-profit oriented institutions. The system is based on selected Enterprise Resource Planning (ERP) software that enables it to integrate all data and processes of an organization into a unified system, housed in a centralized database accessible through a secure network. The goal of these system is to increase access to information while decrease long term decision making timeframe. This section is structured along the following themes: ICT and IFMIS system, staff sabotage and resistance, management commitment, complexity of the system, capacity and technical skills, empirical review, research gaps and conceptual framework.

#### 2.2 ICT and IFMIS in the Public Sector

Emerging experience from the public sectors in both developed and developing countries suggests that the greater the complexity and the scale of an information technology (IT) platform to support financial systems, the greater the risk of failure or under-performance of the platform, and by extension the system as a whole. IT systems that started small and are iteratively expanded are unlikely to fail or underperform because the associated risks can be managed better. Public sector budgeting systems can encourage the funding of large and highly visible IT projects that often fail. A radical approach increasingly adopted in the private sector is to avoid large projects altogether, opting for small projects instead. One expert has called this change, a shift from 'whales to dolphins'. Adopting 'dolphins' does not mean breaking big projects into small modules, rather, it involves a shift to a different way of working and thinking, with total project timeframes of no more than six months, technical simplicity, modest ambitions for business change, and teamwork driven by business goals.

The vision of an IFMIS is appealing to many. It seems all, at the time, to install international standards, instill discipline, improve efficiency and strengthen control by connecting all the financial sub-systems. The menu of features offered is attractive and seems to provide a one-stop-shop for public financial sector reform. Indeed, it is not an exaggeration to say that, in the minds of many authorities, an IFMIS raises the bar of financial management and lifts it out of reach of corruption. The apparent virtues of IFMIS in aid dependent countries are very attractive to donors and creditors concerned with fiduciary risk as well as governments that wish to fulfill conditions in order to gain access to foreign aid resources.

The adoption of IFMIS is viewed as international best practice and seems to have become a tangible indicator of a government's commitment to reform. In his comparative study of information systems in developing countries, Richard Heeks (1999) found that systems with 'design divisibility' that feature modularity and incrementalism promoted 'improvisation'. That is, they fit information systems design (imported from developed countries) to local conditions rather than local conditions to fit system design. 'Improvisation' approaches were more successful than standardized approaches that were rigidly integrated.

The design divisibility meant staff could learn from early, relatively small failures and could address subsequent improvisations of both design and actuality to manageable project components. They would not be overwhelmed as they would have been by a single, whole system design. Design divisibility is therefore a frequently cited prophylactic against failure that should be adopted more widely. However, many donor funded information system projects in developing countries take the opposite approach partly because of short donor time scales and attention spans. Where design comes as this single whole, 'big bang' implementation, opportunities for local improvisation are reduced and risks of failure correspondingly increase.

The conventional IFMIS approach may be characterized as a 'big bang' reform which usually imposes standardized procedures from developed countries and often from commercial (not public) applications. The rigidity, limited capacity and high customization cost of such systems means that public bureaucracies must adapt to the

system rather than evolve the system to fit their needs. Indeed it is worth noting that some specialists are emphatic that a decision to procure an IFMIS application must be a decision not to customize. Customizing an IFMIS application they contend, is no cheaper and no less risky than building a system from scratch.

### **2.3 Integrated Financial Management and Information System (IFMIS)**

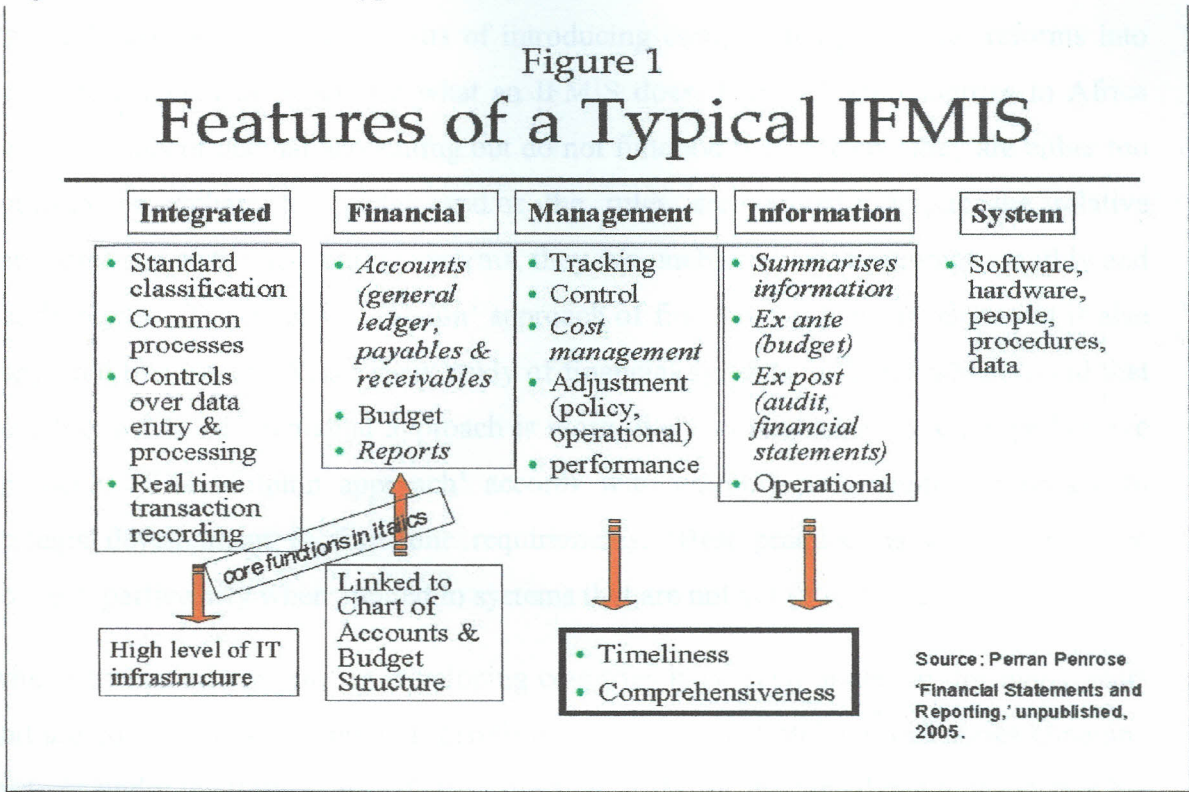
An IFMIS provides governments with a tool that support financial control, management and planning. By managing a core set of financial data and translating this into information for management, these three financial functions are supported. Integrated Financial Management System (IFMIS) is an information system that tracks financial events and summarizes financial information. It refers to the use of information and communication technology in financial operations to support management and budget decisions, fiduciary responsibilities, and the preparation of financial report and statements.

In the government realm, IFMIS refers more specifically to computerization of public finance management (PFM) processes, from budget preparation and execution to accounting and reporting, with the help of an integrated system for financial management of line ministries, spending agencies and other public sector operations. An IFMIS is one way to address the problem of disjointed financial systems that do not talk to each other and do not produce a timely and comprehensive picture of a country's financial position. Figure1 presents features of a typical IFMIS with core and non-core financial functions of IFMIS identified. While public finance management is a broad field with multiple systems, it is striking how limited the commonly cited specification of the core functions of an IFMIS are.

A conventional specification of the IFMIS core is accounting and reporting function, while non-core functions include revenue management, budgeting, procurement management, inventory management, human resources management, information management, property management and performance management functions. The common specification of the core functions does not include all of the components needed for effective financial control and by definition, therefore, will increase risk. The

limited comprehensiveness of the conventional core functions of an IFMIS stems in large part from the private sector origin of IFMIS technology. In short, IFMISs do not ‘get the basic rights’ for public sector financial management. This raises the question of how they can constitute ‘best practice’

Figure 1.1 – Features of a Typical IFMIS



Source: Perran Penrose - Financial Statements and Reporting ‘unpublished, 2005

For example, many authorities have recently demonstrated the near universal failure of IFMIS systems to meet their objectives. The IMF has also found IFMISs to be disappointing and significantly diverts its technical assistance staff in developing countries (IMF, 2006). According to Dorsey, 2002, large scale information systems are risky with estimated failure rates from fifty to eighty percent in private sector in developed countries. Whether one can extend Lienert’s (2002) argument to other developing countries is an empirical question. Experience from selected Latin American countries highlights the virtues of existing procedures and the inappropriateness of new procedures imposed by a technology solution. “An original design option for a new

hospital information system in Guatemala was to reengineer administrative processes to make them more efficient. But in reality, hospital directors supported current procedures and wanted controls to remain in place to ensure corruption was held in check. The design was therefore amended to ensure that these current work processes were supported by the new system”

Research also points out the limits of introducing complicated procedural reforms into developing countries which are what an IFMIS does. Francophone countries in Africa have elements of accrual accounting but do not function well because they are either too complex or archaic to operate and/or the rules are flouted. Despite the relative sophistication of the accounting systems, they are unable to deliver prompt monthly and yearly reports. The iterative ‘dolphin’ approach of financial systems development is also supported by a recent World Bank study of financial systems in Africa which found that well focused and incremental approach is more likely to succeed than a comprehensive approach. The ‘dolphin approach’ accords with extreme programming approach to systems development to fine tune requirements. ‘Best practice’ is a much misused concept, particularly when applied to systems that are not yet fully proven.

After all, financial reforms in developing countries have been underway for many years and are continually evolving and therefore it would be a mistake to categorize changing systems under the static rubric of ‘Best practice’. IFMISs are considered best practice but generally don’t work. It should also be noted that IFMISs are not common practice in most developing countries, (Wynne and Andy, 2005). For developing countries, the virtue of improvisation rather than standardization is emphasized. It is advisable for the developing countries not to change the local conditions to fit the information system design, rather, change the design to fit the situation. Conventionally accepted IFMIS core functions are; General ledger, accounts payable, cash management and receivable and may include financial reporting, and cost management.

The non-core functions are; human resources/payroll, budget formulation, revenue (tax and customs), procurement, inventory, property management, and performance and information management. The Tanzania reform had to customize at considerable expense the IFMIS (Epicor) to include budgeting and commitment, Wynne, (2002). In Kenya

reform, four modules (budget, commitment/vote book, cashbook and accounts) were automated with a standalone system. Since the reform was in a sector ministry, the cash management component was not automated. It was assumed that Treasury would fund the warrants, an assumption that was often not forthcoming in the fourth and even third quarters of the fiscal year. The accounting system was stand alone.

One weakness of the Ugandan IFMIS was the absence of parallel manual system, (World Bank, 2002). A further virtue of developing a robust manual system is that you start the not so insignificant translation of procedures into local languages and you develop user guide and training manuals. The accounts manual for Oromia in Ethiopia took two years to translate. By proceeding early with this step, the computer application which had internationalization capability could be quickly modified to operate in this language. A virtue of having a manual system is that it puts structural architecture to the system. Many developed countries do not have comprehensive integrated financial system and even comparatively large and advanced transitional developing countries (China and India) which have the technological capability to develop and operate large scale information systems, have opted for simpler custom systems. China currently uses custom system though it is reviewing IFMIS solutions, India adopted an innovative 'middleware' solution which linked its legacy systems together (Andhra Pradesh, 2001).

#### **2.4 Staff Sabotage and Resistance**

In the 1940's, social psychologist Kurt Lewin first introduced the idea of managing and removing "resistance" to proposed changes occurring within organizations. His early work focused on the aspects of individual behavior that must be addressed in order to bring about effective organizational change. Kurt Lewin suggested that any potential change is resisted by forces in the opposite direction. The idea is similar to the dialectical principle that everything generates its opposite. But within Kurt Lewin's framework, the forces tend to be external to the change, holding situations in states of dynamic equilibrium. His solution was to advocate that successful change rests in "unfreezing" an established equilibrium by enhancing the forces driving change, or by reducing or removing resisting forces, and then "refreezing" in a new equilibrium state

The first known published reference to research on resistance to change in organizations was a 1948 study conducted by Lester Coach and John R. P. French entitled, "Overcoming Resistance to Change." Their research, which generated a large body of work on the importance of employee involvement in decision making, was conducted at the Hardwood Manufacturing Company, a pajama factory located in Virginia. This study focused on the main questions, one being, why do people resist change so strongly and two, what can be done to overcome this resistance? In 1950, Alvin Sander wrote, "Resistance to Change - Its Analysis and Prevention." His article made an early distinction between the symptoms of resistance, like hostility or poor effort, and the underlying causes for the behavior.

Diamond and Khemani (1999) state that, rather than providing a systems model, Sander equates resistance in organizations to that of a psychotherapist and a patient. His primary advice for practicing managers is to know what the resistance means so that they may reduce it by working on the causes rather than the symptoms. Alvin Sander, who was a close colleague of Kurt Lewin and leaned heavily on his work, offered six primary reasons for resistance to change.

One of them was that if the nature of the change is not made clear to the people who are going to be influenced by the change. Second, if the change is open to a wide variety of interpretations. Third, if those influenced feel strong forces deterring them from changing. Fourth, if the people influenced by the change have pressure put on them to make it instead of having a say in the nature or the direction of the change. Fifth, when the change is made on personal grounds and finally, if the change ignores the already established institutions in the group.

#### **2.4.1 The Nature and Causes of Resistance**

Symptoms are the specific behaviors individuals' exhibit when they are resistant to change. According to Sundh (1995), it is important to distinguish between the symptoms of resistance to change, and the causes behind it. These behaviors fall into two categories; - active-resistance or passive-resistance. Symptoms of active-resistance include finding fault, ridiculing, appealing to fear, and manipulating. Passive-resistance symptoms

include agreeing verbally but not following through, feigning ignorance and withholding information.

Sundh also argues that there is always the danger of identifying a symptom of resistance when you are really looking for its cause. To diagnose the causes, we must understand a person's state of mind. The most important factors that go into a person's state of mind are his or her facts, beliefs, feelings, and values. The list of reasons why individuals might be resistant to organizational change has grown since Alvin Sander's initial six published in 1950. Employees resist change because they have to learn something new. In many cases there is no disagreement with the benefits of the new process, but rather a fear of the unknown future and about their ability to adapt to it. Strassman (1985) argues that most people are reluctant to leave the familiar behind. We are all suspicious of the unfamiliar and are naturally concerned about how we will get from the old to the new, especially if it involves learning something new and risking failure. Low tolerance for change is defined as the fear that one will not be able to develop new skills and behaviors that are required in a new work setting.

According to Miranda and Keefe (1998), if an employee has a low tolerance for change, the increased ambiguity that results as a result of having to perform their job differently would likely cause a resistance to the new way of doing things. An employee may understand that a change is needed, but may be emotionally unable to make the transition and resist for reasons they may not consciously understand. Moussa and Schware (1992) investigated resistance to change as a response to the treatment employees receive in the change process. Specifically they focus on resentment-based resistance behaviors by disgruntled employees regarding the perceived unfairness of the change. They claim that "resent-based resistance behaviors, which can range from subtle acts of non-cooperation to industrial sabotage, are often seen by the perpetrators as subjectively justifiable, that is, a way to "get even" for perceived mistreatment and a way for employees to exercise their power to restore perceived injustice".

Moussa and Scwhare (1992) describe a psychological dynamic called a "competing commitment" as the real reason for employee resistance to organizational change. The change is not challenged, but rather it is resisted, or not implemented at all because the

employee faces additional issue or concerns related to the change. When an employee's hidden competing commitment is uncovered, "behavior that seems irrational and ineffective suddenly becomes stunningly sensible and masterful - but unfortunately, on behalf of a goal that conflicts with what you and even the employee are trying to achieve"

Competing commitments should not be viewed as a weakness, but as a version of self-protection. If these competing commitments are a form of self-protection, then what are employees protecting themselves from? Moussa and Schware believe the answer usually lies in what they call "big assumptions" - deeply rooted beliefs people have about themselves and the world around them. Many rarely realize they hold big assumptions because they are woven into the very fabric of people's existence, and thus they accept them as reality. "These assumptions put an order to the world and at the same time suggest ways in which the world can go out of order. Competing commitments arise from these assumptions, driving behaviors unwittingly designed to keep the picture intact".

#### **2.4.2 Positive Resistance**

Managers often perceive resistance negatively, and employees who resist are viewed as disobedient and obstacles the organization must overcome in order to achieve the new goals. However in certain instances, employee resistance may play a positive and useful role in organizational change. Insightful and well-intended debate, criticism, or disagreement do not necessarily equate to negative resistance, but rather may be intended to produce better understanding as well as additional options and solutions. Strassman (1985) argues that the idea of anyone who questions the need for change has an attitude problem is simply wrong, not only because it discounts past achievements, but also because it makes us vulnerable to indiscriminate an ill-advised change.

Hopelain (2004), points out that what some managers may perceive as disrespectful or unfounded resistance to change might be motivated by an individual's ethical principles or by their desire to protect what they feel is the best interests of the organization. Employee resistance may force management to rethink or re-evaluate a proposed change initiative. It also can act as a gateway or filter, which can help organizations select from all possible changes the one that is most appropriate to the current situation. According to

Strassman (1985), resistance is simply a very effective, very powerful, very useful survival mechanism. Miranda and Keefe (1998) claim that not all interventions are appropriate as implemented - the organization might be changing the wrong thing or doing it wrong. Just as conflict can sometimes be used constructively for change, legitimate resistance might bring about additional organizational change.

## **2.5 Management Commitment**

The experience of advanced countries is that managing complex IFMIS projects requires considerable management skill. However, this is typically in short supply in developing countries. Senior managers in developing countries rarely delegate responsibility and frequently are overloaded with work. Moreover, top managers may not be computer literate. The consequence is that often the binding constraint when introducing IFMISs is not the technical capacity to create them but the capacity to manage them. Nor is it clear that there is always a good alignment in the incentive structure facing managers.

Bugler and Bretchsneider (1993), from the experience of IT reforms in state and local governments in the United States, concluded that the reforms were most likely to succeed if they have the following features: they are easy to use by the manager, they address an external reporting requirement by the manager, and they are confined to the manager's area of concern. These requirements are hard to attain in a public service where top government managers lack experience in computerized accounting and are therefore unable to grasp its possibilities for financial management. In public service, in the absence of computer literacy there is a tendency to leave the system development to the computer supplier, with minimal user involvement. In such an environment there is likelihood that systems will not be user friendly, will not match the needs of the managers, and will not have a required level of management ownership.

To get IFMIS reforms accepted, decision makers must first be sold the idea that the benefits exceed risk. However, government officials tend to be risk averse - introducing computer technology is an innovation that is perceived as risky. It is complex, it demands skilled staff, and it needs procedural changes. There is plenty of evidence of

past failure. At the same time, in public service, information technology is usually introduced by expatriates, so there is room for distrust, even hostility. Second, decision makers must be convinced it is needed, that is, there is a problem that exists and, therefore, needs to be addressed. Basing a reform on conditions imposed by donors, as has sometimes been the case in Africa, does not increase success.

Third, decision makers should recognize the urgency of the reform or the need for prompt implementation - often this perception is lacking at the top. Fourth, managers may steer away from difficult personnel issues. Almost inevitably, moving from manual systems to an IFMIS allows government to fulfill the same function with fewer staff. To operate the new system will also typically require different types of skill. However, most public service managers in government cannot reduce staff and are severely limited in their capacity to change them. In such situations information technology is not necessarily seen as a benefit to management, if anything from human resource viewpoint it could make their task greater and more complex. In early 2001, the Government of Kenya initiated an ambitious project to implement comprehensive integrated financial management information system (IFMIS). The Accountant General noted in early 1997, that the IFMIS was an ambitious project. Whilst funding the first phase of the project, the World Bank appeared to be rather critical of the fact that a large comprehensive approach had been adopted.

The project has been associated with considerable capacity building in the Ministry of Finance. The first professional accountant joined the Ministry in 1994. In 2001, professional accountants were hired to assist with the IFMIS and other projects. By early 2004, there were over 30 professionally qualified accountants in the Accountant General's Office. Kenya is at the pilot stage of a large and complex project to provide an integrated computer platform and financial system for the whole of central and local government. So far, the project has suffered only a limited delay relative to the original yearly timetable. However, the possibility that the country would not achieve the benefits from the investment, estimated to be around \$30million, is high, unless all the inherent risks are regularly addressed, particularly regarding the provision of financial support.

## 2.6 Complexity of the System

In its main report on the 2004 Country Integrated Financial Assessment, the World Bank noted that the IFMIS is highly complex, sophisticated, and expensive. Having chosen this route, the Government of Kenya must overcome a number of major challenges to fully realize the benefits of the system, while ensuring that security is not compromised. From an accounting and financial reporting perspective, failure to address specific issues relating to the sustainability, functionality, and extension of the system are liable to result in higher rather than lower levels of fiduciary risk.

In particular there is a need to ensure that, either internally or externally, there is sufficient capacity to manage the ongoing implementation process, funds are available for the maintenance of the system, the government can retain staff at all levels that have the capacity to utilize the system effectively, the coverage of the system is comprehensive, and funding is available to facilitate any future rollout. Furthermore, the associated Country Financial Accountability Assessment reported the following risk; 'Should the IFMIS fail, there is no current backup at the moment other than the continued use of existing systems in parallel' (GAO, 2004).

The Government of Kenya is implementing private sector information technology package, for their main financial systems. In Kenya it is the sophisticated Oracle Financials, whereas Tanzania used the Epicor package. Each of these systems required significant customization in order to provide key public sector systems such as budgetary control. In contrast, relatively simple information technology systems designed specifically for the public sector are available, for example, Free Balance that is being implemented in Sierra Leone and the southern region of Sudan. Diamond and Khemani (1999) in a World Bank study on the introduction of an IFMIS in five African countries recommended that a careful evaluation of the salaries and packages for the relevant staffing both public and private sector should be done including an assessment of the implications of improved salaries for the broader public sector environment. Such a strategy would aim at striking balance between the need to attract/retain qualified staff.

## 2.7 Capacity and Technical skills

A greater constraint on sustainability of IFMIS arises from inadequate human resources. However to overcome this constraint may require a major training program, which again will take time, but may not necessarily deliver the pay-off anticipated. In most public service, there is a general shortage of skilled labor, and efforts to improve skills in government are often frustrated by the migration of labor to the private sector for higher pay when workers have acquired sufficient skills. It is necessary to get the pay structure right before embarking on such a training program. This consideration is particularly important for in-house information technology capacity, and is a concern faced by developed and developing countries alike.

While most IFMIS tenders specify a requirement for the vendor to maintain the system for an initial period (usually up to three years), there is also a need for information technology capacity in government. Expertise is required for interacting with vendors, to maintain the system and to have adequate data management skills to optimize the system once established. Often this is insufficient to provide the required service to users. Faced with the poor pay scales mentioned previously, one solution is simply to pay retention bonuses to information technology staff, another is to outsource the management of information technology to a local firm, while yet another one is to establish a dedicated government unit to provide information technology services to the public sector that allows higher salaries than the average in the public sector.

None of these solutions is without problems, which tend to be exacerbated in the public service context, where there is often a lack of competition in this area. Thus, while recognizing IFMISs may be the medium-term solution to many public finance management problems, it is likely to be important to first spend the time in the short run in creating a solid base for success. In Kenya, the experience of the design, development and pilot implementation of the IFMIS has not been satisfying. In the design of IFMIS, the existing manual budget execution and accountability processes seem to have been automated to a large extent without consideration of whether there was a better and more efficient method of achieving the required results (Kinyeki, et al, 1996).

The Government of Kenya has experienced problems with the new managers hired by the government. The overarching concern, local capacity and know how has always been and is still the major issue. A fast review of the system conducted by the AG in Kenya, with the help of an outside expert in July 2004 revealed a number of problems with the functionality of the system resulting into a delay of the roll out.

In general, the implementation phase has not progressed well, primarily because of clearly limited involvement and some neglect of the system by the main players, including MOF, AG and pilot ministries. The pilot implementation has brought forth a number of issues. The engagement of internal and external audit staff has been inadequate resulting in limited quality control assurance. There is need that introduction of an IFMIS be accompanied by strong commitments, sufficient manpower and financial resources, widespread internal support and an agenda for effective change management (World Bank, 1994)

## **2.8 Main Review**

There are various studies on the use of ICT by governments. Such studies focused on how ICT primarily makes the delivery of government services more efficient (Oliver, 2001), How ICT causes a paradigm shift introducing the age of network intelligence reinventing businesses, governments and individuals (Kodres and Laura,2001), The relationship between traditional bureaucracy and internal productive efficiency, functional rationality, departmentalization, hierarchical control and rule-based management in government (World Bank, 2001). The focus of ICT on customer driven strategies, coordinated network building, external collaboration and customer services (Oliver, 2001).

## **2.9 Research Gaps**

From the review of literature, it's clear that very little, if at all there is, has been done to explain the factors that influence effective use of IFMIS. First, this is new phenomenon in Africa. Secondly, there are no studies within a Kenyan context for the same reasons that, IFMIS is a new phenomenon in the country. The integration of government financial

operations is yet to take root, and research is yet to be done in this area. This research therefore wishes to bridge the gap by empirically investigating the factors that influence the use of IFMIS in government ministries in Kenya.

## **2.10 Conceptual framework**

The IFMIS provides a critical financial management solution for countries whose administrative and economic infrastructure is obsolete or has been destroyed (Oliver 2001). Employees resist change because they have to learn something new. In many cases there is no disagreement with the benefits of the new process, but rather a fear of the unknown future and about their ability to adapt to it. Strassman (1985) argues that low tolerance for change is as a result of the fear that employees will not be able to develop new skills and behaviors that are required to work with IFMIS. According to Miranda and Keefe (1998), the increased ambiguity may result into sabotage or just ineffective use of the new system.

Management must therefore be fully committed, to dissuading the staff from resistance. It's therefore critical that management commitment take center stage, during introduction and implementation of new systems. This is because; management commitment serves as the impetus for change by providing leadership, moral and financial support for a successful project (Murphy, 2002). Adverse results may result from management neglect and lack of commitment. However, the capacity and technical skills of the users is equally an important component to effective utilization of the IFMIS. This is because the users form the key ingredient for a successful operationalization of the system as they provide a 'human face' to the system (Kodres and Laura, 2001). In addition, information technology projects should be adequate for the solution and simple to understand by the users.

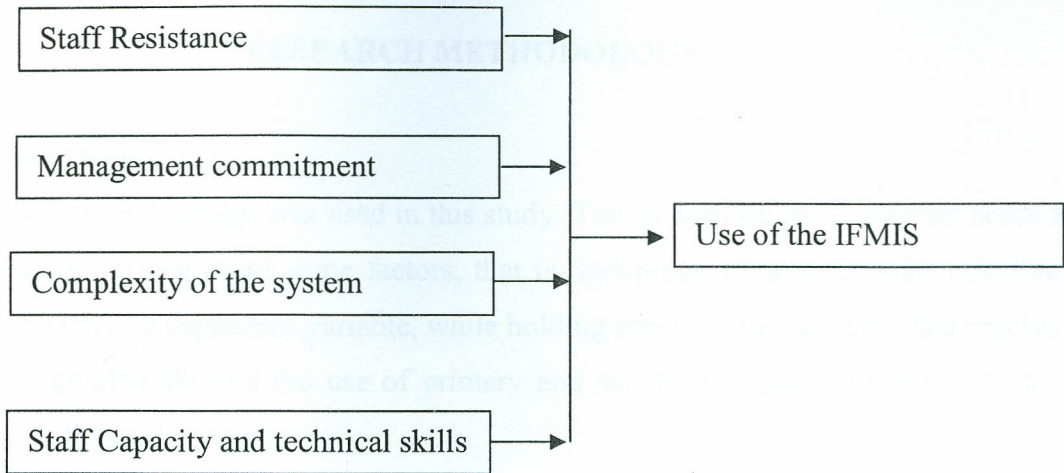
The adequacy of the solution of the IFMIS lies in its ability to improve governance by providing real-time financial information that financial and other managers use to administer programs effectively, formulate budgets and manage resources. Sound IFMIS, coupled with the adoption of centralized treasury operations cannot only help governments gain effective control over their finances but also enhance transparency and

accountability, reducing political discretion and acting as a deterrent to corruption and fraud (World Bank, 1994). The IFMIS allows for the preparation of detailed reports on costs by activity and program, but there is still a problem of limited capacity in the Ministry of Finance to specify and analyze IFMIS reports.

The complex nature of the IFMIS is in itself a deterrent to successful implementation of IFMIS in public service (Gibson and Nolan, 2000). This is because the phased implementation is posing great complexity. For instance, "revenue is not yet included on the IFMIS system in any form, in the initial stages" (GAO, 2004). Initially, the IFMIS covered only non-pay revenue expenditure of the capital city. An independent evaluation carried out in 2000 concluded that by June 2000, an IFMIS had been installed, with a common chart of accounts for budgeting and accounting purposes, and incorporating a central payments system and control over expenditure commitments. The system of accounting for public debt could not have been improved, and bank accounts were hard to rationalize. This supports common knowledge that, before the potential benefits of the IFMIS are fully realized, complex definitions and applications of the system will have to be addressed before the project is complete (Kinyeki, et al, 1996). In 2001, the IFMIS was rolled-out to the sub-treasuries in each ministry.

Oliver 2001 observes that, if not well handled, there exist control loopholes in the system which further complicates the control aspect of the IFMIS system. This is because whilst the IFMIS controls expenditure against releases from the Exchequer, it cannot do so directly against the relevant budgetary ceiling. Accounting Officers can therefore allow expenditure in excess of the relevant budget head, thus this informally diverting funds from the priority areas for which they were originally intended (Diamond and Khemani, 1999). Furthermore, as the Oracle software package, was originally developed for commercial companies, some modules had to be customized, for example, for budgeting and committing funds.

Figure 2.1 - Conceptual Framework



**Independent Variables**

**Dependent Variable**

Source: (Researcher, 2012)

## CHAPTER THREE

### RESEARCH METHODOLOGY

#### 3.1 Research Design

A descriptive research design was used in this study. This is because the researcher needed to establish the association of some factors, that is, independent variables with effective use of the IFMIS as a dependent variable, while holding other factors constant. Descriptive research design also allowed the use of primary and secondary data and gave room for application of the study results.

#### 3.2 Target Population

The study targeted a total population of 134 senior government accountants of the 25 government ministries implementing the IFMIS as shown in appendix 3. The personnel records of each ministry studied aided in identifying the relevant respondents (senior government accountants).

##### 3.2.1 Sample and Sampling Procedure

For purposes of sampling, a stratified random sampling was used, each ministry under study was considered as a stratum. A sample ratio of 0.3 was employed to draw a sample from each stratum consequently, generating a total sample size of 40 respondents studied. This method also ensured equal representation from each ministry implementing IFMIS.

#### 3.3 Data Collection Instruments and Procedures

Data was collected using structured questionnaire with multiple choice questions covering each variable of the study. According to Kotler (1998), the use of self-administered questionnaire ensures privacy of responses and therefore it records a high response rate. The questionnaire used to collect data is shown as Appendix 2. This is necessitated by the need for detailed primary data. The questionnaires were sent to senior accountants sampled in each ministry implementing the IFMIS and were then collected after they were fully

filled. To evaluate the effectiveness of the questionnaire as an instrument of data collection, the questionnaire was pilot-tested on 5 respondents. The results of the pilot test were then used to modify the questions as applicable. However those respondents who participated in the pilot study and their responses were excluded in the final analysis.

### 3.4 Data Analysis and Reporting

Data was checked for accuracy and completeness of recording. It was then classified and coded using statistical software, analyzed using descriptive statistics that presented quantitative descriptions of variables or associations that connect one variable with another in a manageable form and the findings interpreted. Findings were then presented in tabular form and in the form of charts.

### 3.5 Ethical Consideration

The data collected in this project was purely intended for academic purposes and not for any ill motive or otherwise endanger the respondents' position in any way.

## CHAPTER FOUR

### DATA ANALYSIS, INTERPRETATION AND PRESENTATION

#### 4.1 Introduction

This chapter explains the results of the findings. The research sought to establish how selected factors (staff resistance/sabotage, management commitment, system complexity and capacity of users of IFMIS) influence the use of IFMIS in Government Ministries. The data has been analyzed and presented in frequency distribution and ANOVA tables, with brief discussions on the findings. The results of findings forms the basis of conclusions well explained in the next chapter. The chapter is structured based on the variables of the study.

#### 4.2 Response Rate

In total, 40 questionnaires were issued to the respondents and the response rate is shown in table 4.1 below.

Table 4.1: Response rate

Variable	Frequency	Percentage
Filled and returned questionnaires	30	75
Not returned questionnaires	10	25
Total	40	100

Source: Research Data, 2012

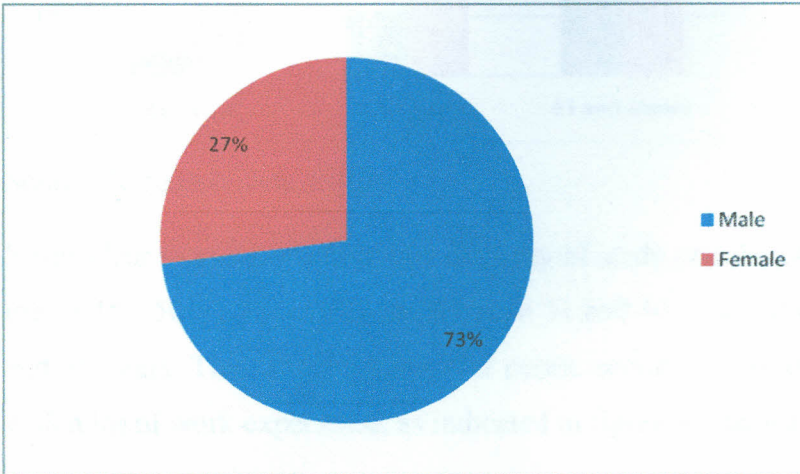
The field responses were that out of 40 questionnaires administered, 30 were filled and returned. Therefore the response rate was 75% (30/40) as shown in table 4.1 above, which was satisfactory to make conclusions for the study. This response rate can be attributed to the data collection procedure, where the researcher personally administered questionnaires and waited for the respondents to fill, and picked the filled questionnaires.

### 4.3 General information of the Respondents

#### 4.3.1 Gender Representation

The respondents were asked to indicate their gender and the from them results are shown in figure 4.1 below.

Figure 4.1 – Gender Representation



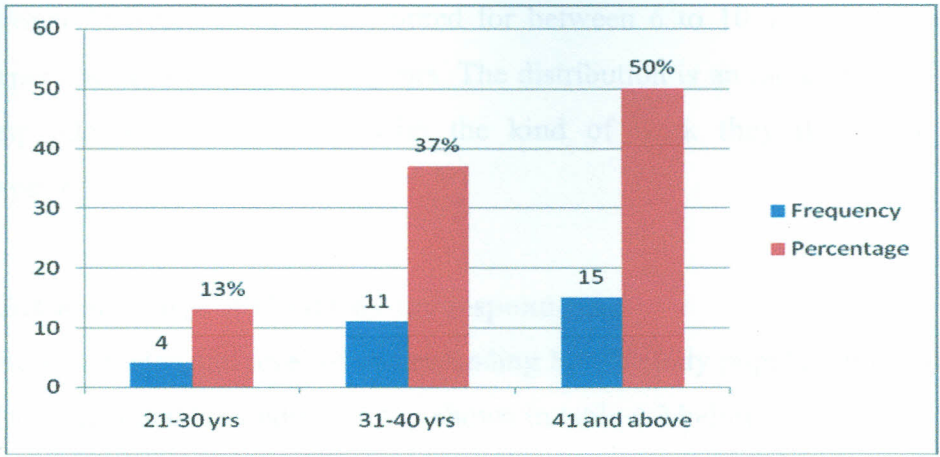
Source: Research Data, 2012

From the findings, respondents' gender representation was as follows; 73% male and 27% female as illustrated in figure 4.1 above. This enabled the researcher obtain information from both genders, although male were slightly more than female, they were appropriate to provide reliable information.

#### 4.3.2 Age bracket

The age bracket of respondents was considered necessary and therefore the study further sought to establish the age of the group under study. The results from the respondents are shown in figure 4.2 below.

Figure 4.2 – Age bracket



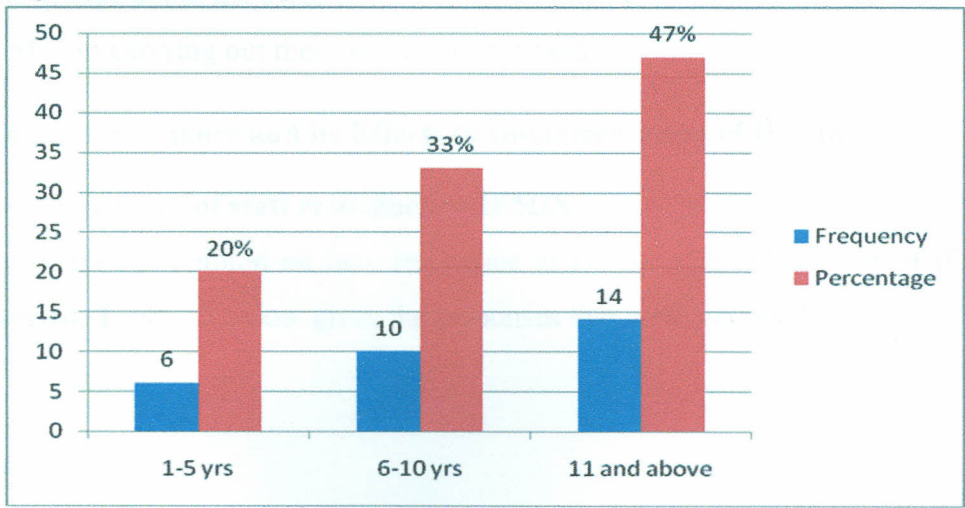
Source: Research Data, 2012

It was clear from the findings that majority of study population was of age above 40 years that is 15, (50%), 11, (37%) are between 31 and 40 years while 4, (13%) are between 21 and 30 years. This was evidence that public service is still dominated by elderly group, with a lot of work experience, as indicated in figure 4.2 above.

### 4.3.3 Working experience

The study sought to find out the duration which the study population has worked for the government. The findings are presented in figure 4.3 below.

Figure 4.3 – Work experience



Source: Research Data, 2012

Figure 4.3 above shows clearly that 47% of the respondents have worked for a period that is over 11 years, 33% have worked for between 6 to 10 years while 20% have work experience of between 1 to 5 years. The distribution is an indication that majority of the respondents are conversant with the kind of work they do and have satisfactory experience.

#### 4.3.4 Knowledge of IFMIS by the respondents

The knowledge and level of understanding by the study population about the IFMIS was also sought and the findings are as shown in table 4.2 below.

Table 4.2 – Knowledge of IFMIS by respondents

Statistics	Knowledge about IFMIS and its key components	Dependence on IFMIS at work
n	30	30
Mean	1.03	1.07
Mode	1	1
Percentage Frequency	70%	60%

Source: Research Data, 2012

From table 4.2 above, it was clear that majority, (70%) of them are aware and have knowledge about the system. It was also found out that 60% asserted that they depend on IFMIS in carrying out their day to day operations.

#### 4.4 Staff resistance and its Effects to Implementation of IFMIS

##### 4.4.1 Existence of staff resistance to IFMIS

Respondents' opinion on how resistance to IFMIS affected the use of IFMIS was also queried. Table 4.3 below gives the responses that were obtained.

Table 4.3 – Staff Resistance/Sabotage to IFMIS

Variables	Yes		No		Total (N)
	freq.	%	freq.	%	
Is there any resistance experienced from staff towards the IFMIS implementation?	21	70%	9	30%	30
Is the implementation of IFMIS being sabotaged in any way?	16	53%	14	47%	30

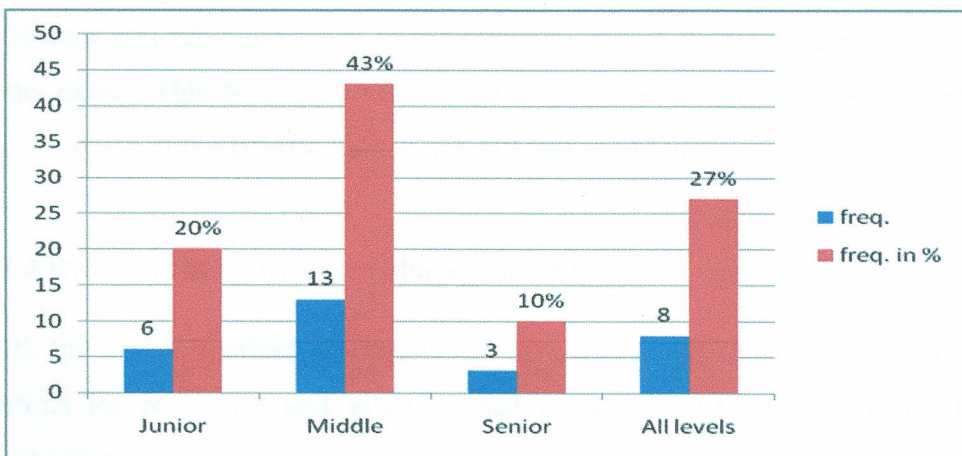
Source: Research Data, 2012

From the above table, majority, 21, (70%) of the users feel that there exists resistance. At same time, 16, (53%) of them confirmed that there has been sabotage on the implementation of IFMIS.

#### 4.4.2 Resistance and level of management

The study sought to find out the level of management that showed resistance to implementation and use of IFMIS and the findings obtained as indicated in figure 4.4 below.

Figure 4.4 – Level of management that resisting IFMIS



Source: Research Data, 2012

From the findings, middle management has mostly been pinpointed with a lot of resistance, 13, (43%), while 8, (27%) of the respondents said it is all levels. 6, (20%) said junior levels and lastly, 3, (10%) said senior management.

#### 4.4.3 Resistance and Use of IFMIS

Respondents' opinion on how resistance to IFMIS affected the use of IFMIS was also queried and the findings are captured in table 4.4 below.

Table 4.4 Opinions on how Resistance affects Use of IFMIS

Knowledge of IFMIS	Extent to which resistance and sabotage affects effective use of IFMIS				Total
	To a greater extent	To a moderate extent	To a lesser extent	Do not affect at all	
Total	22	4	4	0	30
Percentage	73%	13.5%	13.5%	0%	100

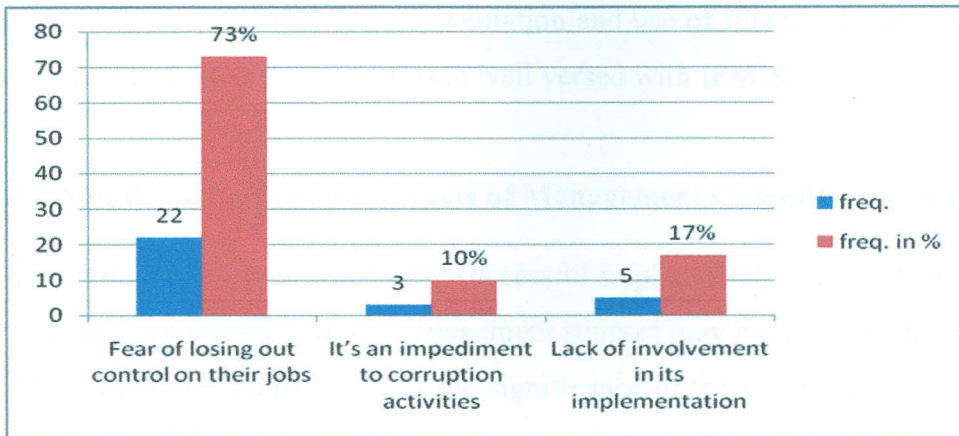
Source: Research Data, 2012

From the findings, majority, 73%, of the users feel that resistance and sabotage affects to greater extent the effective use of the system. This confirms the figures on the low level use of the system by the government system users. Only a combined 27% feel that resistance and sabotage affect to the effective use of IFMIS to a moderate extent or to a lesser extent. This does confirm that, indeed there are negative effects of resistance on the effective use of the IFMIS, however small this could be.

#### 4.4.4 Reasons for resistance/ sabotage to IFMIS

With the negative effects of resistance/ sabotage to the IFMIS having been confirmed, reasons for resistance and sabotage had to be established. Figure 4.5 below clearly illustrates the findings.

Figure 4.5 – Reasons for resistance and sabotage to IFMIS



Source: Research Data, 2012

Figure 4.5 indicate that staff resistance/sabotage to IFMIS is attributed to fear of losing control on their jobs. This was confirmed by 22 (73%) respondents. While 5 (17%) of the respondents were of the opinion that resistance/sabotage is due to lack of involvement in implementation of the system. Few of the respondents cited impediment to corruption activities as the reason for resistance/sabotage.

## 4.5 Management Commitment to the Use of IFMIS

### 4.5.1 Management commitment

Respondents were asked to give their opinion on management commitment and support on use of IFMIS. Table 4.5 below gives their responses.

Table 4.5 – Management commitment on use of IFMIS

Variables	Yes		No		Total (N)
	freq.	%	freq.	%	
Do you receive any support from top management to boost your confidence on the use of IFMIS?	21	70%	9	30%	30
Is top management well versed with IFMIS system?	17	57%	13	43%	30

Source: Research Data, 2012

Table 4.5 above indicates that majority, 21, (70%) of the users feel that management has provided full support on the implementation and use of IFMIS. At same time, 17, (57%) confirmed that top management were well versed with IFMIS.

#### 4.5.2 Significance of various aspects of Management Commitment on use of IFMIS

Management support is critical for successful implementation of projects. The extent to which the respondents receive management support may have a bearing on the use of the IFMIS. Table 4.6 below indicates the significance of the various aspects of management on the use of IFMIS in government ministries that was established.

Table 4.6: Significance of various aspects of Management Commitment on use of IFMIS

Management commitment	Sum of Squares	d.f	Mean Square	F	Sig.
Top management is well versed with IFMIS	0.436	1	0.436	1.239	0.275
Management lacks the drive to inspire use of IFMIS	0.728	1	0.728	0.917	0.047
Management is made accountable, so they are keen on the use of IFMIS	0.019	1	0.019	0.052	0.021
There is general lack of interest in IFMIS among top management	0.048	1	0.048	0.120	0.032
Majority of top management are nearing retirement age, thus are less keen	0.001	1	0.001	0.001	0.077

Source: Research Data, 2012

From the Table above, the following management attributes were found to have significant effect on the use of the IFMIS; Top management being well versed with IFMIS (F= 1.239, p = 0.275), Lack of drive by management to inspire (F= 0.917, p = 0.047), Management is made accountable, so they are keen on the use of IFMIS (F= 0.052, p = 0.021).

The suggestions of these results are that respondents agree that management laxity in supporting the IFMIS largely affects the use of the system by employees. Factors cited as

lacking in the top management is the inspirational drive, understanding of the system and how it works, and general lack of support to the user as expected from the top management. These statistics further confirm that user of IFMIS are not getting enough support from the top management.

However other aspects of management confirmed as statistically insignificant were management nearing retirement and the notion that the attitudes of management towards the IFMIS were negative therefore prompting laxity on the part of management in supporting the users of the system as indicated in table 4.5 above.

#### 4.6 Complexity of the System

Respondents' opinion on the complexity of the IFMIS was sought and the response received captured in table 4.7 below.

Table 4.7 – Complexity of the IFMIS

Variables	Yes		No		Total (N)
	freq.	%	freq.	%	
Is IFMIS complex system for the ordinary staff and transactions of the government ministry?	18	60%	12	40%	30
Are there consultants that guide the ministry staff to understand the IFMIS system complexities?	10	33%	20	67%	30
If the system is complex, do you think it is serving its intended purpose effectively?	23	77%	7	23%	30

Source: Research Data, 2012

Table 4.7 above, indicates that majority, 18, (60%) of the users feel that IFMIS is very complex for the ordinary staff while 20, (67%) denied availability of consultants to guide the ministry staff to understand the IFMIS complexities. At same time, 23, (77%) of them confirmed that, although the system is complex, it is serving its intended purpose effectively.

#### 4.6.1 Significance of various aspects of IFMIS Complexity

System complexity is a function of design. The system is complicated by lack of involvement of the user during design stage and subsequent poor training on the system components. Significance of the various aspects of complexity of the system on the effective use of IFMIS in government ministries was sought and table 4.8 below shows the results obtained.

Table 4.8: Significance of System Complexity on Use of IFMIS

System Complexity	Sum of Squares	d.f	Mean Square	F	Sig.
IFMIS system lacks study and reference manuals for staff to read	2.819	1	2.819	7.778	0.009
IFMIS is very complex to understand its information processing	0.000	1	0.000	0.000	1.000
IFMIS complicates simple manual processes	0.027	1	0.027	0.122	0.730
IFMIS is too complex for ordinary users	0.076	1	0.076	0.066	0.799

Source: Research Data, 2012

From the table, the following attributes were found to have significant effect on the use of the IFMIS; Lack of reference materials for users of the system ( $F=7.778$ ,  $p= 0.009$ ). These statistics imply that the designers of the system did not provide reference or study manuals for the users of the system. Otherwise the system would be serving its purpose if it was made to look less complex in the eyes of the users by providing reference materials.

Other attributes advanced about causes of complexity of the system in the study were found to be statistically insignificant as to the influence of effective use of the system. They include; System was too complex for ordinary users, the system complicates simple manual processing and the system components are too many to understand and use.

#### 4.7 Capacity and Technical Skills

Respondents' opinion on availability of IFMIS staff capacity and technical skills was also sought and the findings obtained are indicated in table 4.9 below.

Table 4.9 – Capacity and Technical skills.

Variables	Yes		No		Total (N)
	freq.	%	freq.	%	
Did you receive proper training on the use of IFMIS during and after implementation?	15	50%	15	50%	30
Do you have qualified staff in your ministry to oversee the effective use of the system?	20	67%	10	33%	30
Does your ministry have the capacity to effectively promote use of the IFMIS system?	18	60%	12	40%	30

Source: Research Data, 2012

Table 4.9, indicated that half the population of the study, 15, (50%) received proper training on the use of IFMIS during and after implementation. Again, 20, 67% agreed to have qualified staff in the ministry to oversee the effective use of the system. At same time, 18, (60%) confirmed that the ministry has the capacity to effectively promote use of the IFMIS system.

#### 4.7.2 Aspects of Capacity of Users on the Use of IFMIS

Training and involvement in the design of the system is one way to gain deeper understanding of the system by users. This is because low levels of skills in Information Technology may hamper effective use of the IFMIS system.

Therefore the study sought to establish the significance of the various aspects of staff capacity and technical skills on the effective use of IFMIS system in government ministries and the findings obtained are illustrated in Table 4.10 below.

Table 4.10: Significance of Aspects of Capacity of Users on use of IFMIS

Capacity and technical knowhow	Sum of Squares	d.f	Mean Square	F	Sig.
The ministry lacks proper training program on use of IFMIS	0.001	1	0.001	0.002	0.016
The ministry rely on experts to run the IFMIS system	0.594	1	0.594	3.484	0.042
Most users lack accounting background key to effective use of IFMIS	1.673	1	1.673	0.412	0.026
The ICT phobia is an issue that affects effective use of IFMIS by users	0.092	1	0.092	0.348	0.560

Source: Research Data, 2012

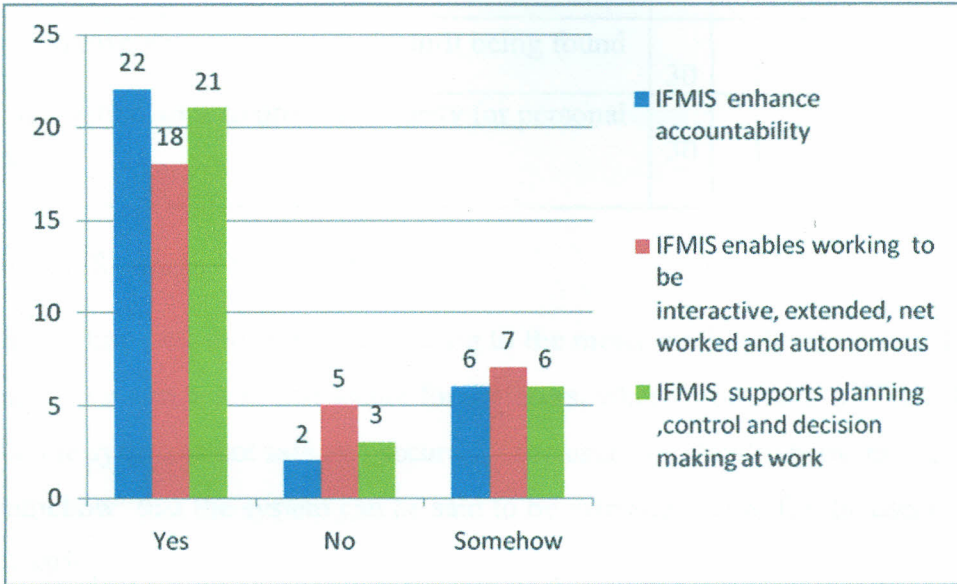
From the table above, the following attributes were found to have significant effect on the use of the IFMIS; Lack of proper training ( $F= 0.002$ ,  $p= 0.016$ ), Lack of experts to oversee the system ( $3.484$ ,  $p= 0.008$ ), and Lack of accounting background ( $F= 0.412$ ,  $p= 0.026$ ). These statistics imply that users of IFMIS do not have enough capacity and technical knowhow to effectively use the system. This can be attributed to the factors with high F- statistic and low p value. They include lack of training, lack of experts to guide users and some users have no accounting background. Other aspects of capacity of users were found to be statistically insignificant on the effective use of the IFMIS system.

## 4.8 Effective Use of the IFMIS

### 4.8.1 Impact of IFMIS on users

The study went further to find out the impact of IFMIS on users of this system and the results obtained are indicated in figure 4.8 below.

Figure 4.6 – Impacts of IFMIS system



Source: Research Data, 2012

From the above figure, it is clear that majority of the respondents, 22, agreed that IFMIS enhances accountability. They also asserted that IFMIS enables working to be interactive, extended and networked as confirmed by 18 respondents who replied to the affirmative. Again, majority of the respondents, 21, agreed that IFMIS provides support in planning, control and decision making at work.

### 4.8.2 Security and Safety of IFMIS to the Users

Security and safety of IFMIS to the users of the system was also studied by obtaining respondents' opinion. The results obtained are indicated in Table 4.11 below.

Table 4.11 - Descriptive Statistics on the Safe Use and Security of IFMIS

Safety and security	N	Min.	Max.	Mean	Std. deviation
The system aims to provide a high level of safety for its users	30	1	3	1.43	0.164
All known abuses are easily reported	30	1	3	1.31	.153
All known abuses lead to the culprit being found	30	1	3	1.30	0.167
The system aims to provide security for personal data	30	1	3	1.40	0.158

Source: Research Data, 2012

The findings are interpreted according to the means scale where, up to 1.45 implies 'yes' that the system is safe and secure for the users, whereas between 1.50 to 2.49 implies 'no' that the system is not safe and secure for the users and finally between 2.5 to 3.00 implies 'somehow' that the system can be said to be safe and secure for the users. This is a 50/50 scenario.

From Table 4.11 above, it is clear that a sizeable number of the respondents said 'yes' (1.43), that the system aims to provide a high level of safety for its users. Others indicated 'yes' (1.31), that IFMIS easily reports abusers of the system. It also showed that all known abuses are easily reported and culprit can be identified.

It offers security for personal data as shown by majority of the respondents who indicated 'yes' (1.40), to data integrity levels of the system. This statistics imply that IFMIS is safe to use and provides high levels of personal data integrity for the users. But this was accepted by only few of the respondents meaning that in some instances IFMIS is not safe enough to use in some ministries due to poor security and safety.

## CHAPTER FIVE

### SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Overview

The study investigated how select factors, that is, Capacity and Technical Knowhow, Complexity of the IFMIS, Staff Resistance/Sabotage, and Management Commitment, influence the use of IFMIS in government ministries. The study was a survey of the 25 government ministries using the IFMIS. This chapter highlights a summary of findings, conclusions made on the findings and recommendations which are meant to enhance effective use of the system.

#### 5.2 Summary of Findings

The summary of findings is broken down into the following subheadings; general information, resistance and sabotage, management commitment, complexity of the system, staff capacity and technical knowhow, and effective use of the IFMIS.

##### 5.2.1 General Information

It was found out that 73% of the staff using or relying on IFMIS in all ministries of government was male. The findings also indicated that majority of the staff interviewed were aware of the IFMIS components with 70% of them indicating a high level of awareness. However, only 60% had their departments using IFMIS to carry out their operations. This is evidence of limited use of IFMIS in most of the government ministries. Among those using the IFMIS only 60% are deeply involved in the use of IFMIS for their daily work.

##### 5.2.2 Resistance and Sabotage

The study established that 70% of the users felt that there was resistance against the IFMIS, while 53% confirmed sabotage on the implementation of IFMIS. Again, it was

found out that higher resistance to IFMIS originated from middle level managers who pooled at 43% compared to other levels of management. Seventy three percent said resistance and sabotage affected to a greater extent effective use of the system. Staff resistance resulted mainly from the fear of loss of their jobs. It is worth noting that having knowledge of why people resist make it easier to deal with resistance.

### **5.2.3 Management Commitment**

Management support was found to be critical for successful implementation of IFMIS. It was established that management commitment had significant effect on the use of the IFMIS. The study population also confirmed that management provided support and commitment on the implementation of IFMIS in government ministries. They also confirmed that top management are well versed with IFMIS system ( $F = 1.239$ ,  $p = 0.275$ ) and therefore have committed a lot of resources on it.

### **5.2.4 Complexity of the system**

System complexity is a function of design. The system is complicated by lack of involvement of the user during the design stage and subsequent poor training on the system components. It was found out that various aspects of a complex system had significant effect on the use of the IFMIS. Among them were; Lack of consultants to guide the users on the system ( $F = 4.267$ ,  $p < 0.05$ ) and Lack of study reference materials for users on the system ( $F = 7.778$ ,  $p = 0.009$ ). Nevertheless, despite the system complexity noted, it was found out that the system serves the intended purposes.

### **5.2.5 Capacity and Technical Knowhow**

Training and involvement in the design of the system is one way to gain deeper understanding of the system by users. This is because low levels of skills in IT may hamper effective use of the IFMIS system. It was found out that various aspect of capacity and technical knowhow had significant effect on the use of the IFMIS. These

were; Lack of proper training ( $F = 0.002$ ,  $p = 0.016$ ), Reliance on experts to run the system ( $F = 3.484$ ,  $p = 0.042$ ) and lack of accounting background by system users. Nevertheless, it was found out that some of the users of the system were given proper training during implementation. It was also found out that ministries have qualified staff to oversee use of the system, and to have the capacity to effectively promote the use of IFMIS in their respective ministries.

### **5.2.6 Effective use of IFMIS**

On the use of IFMIS, it was found that IFMIS enhances accountability. It also enables work to be interactive, extended and networked. Again, majority of the users confirmed that it provides support in planning, control and decision making at work. Finally, this study found that IFMIS had inbuilt security that is accessed through a single log on and that it provides a high level of safety for its users. It also reports abusers of the system and offers security for personal data as a result, ensures high levels of data integrity.

### **5.3 Conclusions**

The first objective sought to establish how the staff resistance/sabotage influences the use of IFMIS, and a hypothesis asserting that there is significant influence of staff resistance on the use of the system formulated. The study concludes that the IFMIS is not available to all the employees because not entire government ministries employees were using it as a result of staff resistance. This does confirm that, indeed there are negative effects of resistance on the use of the IFMIS, however small. It is clear that resistance and sabotage was passive but its undercurrents were frustrating use of the system.

There are various reasons for such resistance but one concludes that resistance does exist among the staff in the ministries of government and was found to be statistically significant on the effective use of the system. The hypothesis that staff resistance had significant influence on the use of the IFMIS was accepted.

The second objective sought to establish how the management commitment influences use of the IFMIS, and hypothesis asserting that there is significant influence of management commitment on the use of the system formulated. The study concludes that management laxity in supporting the IFMIS had largely affected the effective use of the system by employees. Factors cited as lacking in the top management was the drive to inspire, understanding of the system and how it worked, and general lack support to the user as expected from the top management. The staff was not getting enough support from the top management and therefore accepted the hypothesis that management commitment had significant influence on the use of the IFMIS.

The third objective sought to establish how the perceived system complexity influences the use of IFMIS. As a result, a hypothesis asserting that there is significant influence of system complexity on use of IFMIS formulated. The study further concludes that the IFMIS is seen as complex system by the users due to lack of consultants who would guide the users through the learning process and secondly the designers of the system did not provide a reference study manuals for the users .Otherwise the system would be serving its purpose if it was made to look less complex in the eyes of the users. The formulated hypothesis was accepted.

The fourth objective sought to establish how staff capacity and technical skills influences use of the IFMIS and hypothesis asserting that there is significant influence of staff capacity and technical skills on use of the system formulated. The study further concludes that users of IFMIS lack the capacity and technical knowhow to effectively use the system. This can be attributed to lack of training, lack of experts to guide users, and some user have no accounting background to be able to use the system effectively. The hypothesis formulated was accepted.

This study concludes that there is felt impact of IFMIS across the users of the system in government and that different departments or ministry have different experiences. Secondly, it came out clearly that IFMIS is promoting accountability but at lower levels

which are below 50%. It is also promoting integrated work environment, supports planning, control and decision making at work.

Finally, the study concludes that access to IFMIS by users is severely limited and may be a factor that affects negatively the effective use of the system. The fact that security is built for users is a good thing, access is limited to less than 20 % of the users. Secondly, users cannot access the system anywhere and anytime as this is quite restricted. However, the system provides high level of personal data integrity for the users.

#### **5.4 Recommendations**

Based on above findings and conclusions, the study recommends the following:

1. The government to undertake training of the users of the IFMIS system. This can be on the job, by experts who would stick with the employees till they are properly equipped to handle IFMIS.
2. To reduce resistance and sabotage, the government managers should discuss the benefits and the challenges of a project before undertaking such a project. Secondly, the employees should be involved at every stage of the project cycle right from initiation of the project till the close of the project.
3. It is important that management support their employees in the use of the system .The lethargy among top managers may be attributed to resistance to change. The government should engage a change agent preferably one of their own working together with an expert in the field
4. The complexity of the system was attributed to lack of sufficient reference materials for the user. The government must compel the supplier to provide such materials that should be put in their library for reference purposes.

#### **5.5 Suggestions for Further Research**

The study concentrated on the various government ministries headquarters in Nairobi. However, only a sample was used. To fully appreciate the factors that hinder effective use of the system in government ministries, further research can be done with an expanded scope and more variables included in the analysis. A census can also be taken.

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## APPENDICES

### Appendix 1:

#### LETTER OF INTRODUCTION – QUESTIONNAIRE

I am currently a graduate at Kenyatta University, studying for the degree of Masters of Business Administration (Finance Student option).

I am conducting a survey entitled ‘Factors Influencing the use of Integrated Financial Management and Information Systems in the Public Sector: A case of Selected government ministries in Kenya’ as a partial fulfillment of completion of my degree program.

Your participation in the exercise will be highly appreciated as an essential part of the study and hence the request for your assistance in filling out this questionnaire. It is my assurance that any information provided will be highly regarded, treated with confidentiality and for academic purposes only. The information so attained will give insights on the factors influencing the use of Integrated Financial Management and Information Systems in public sector. Furthermore a copy of the results so attained will be forwarded to you.

Sincerely,

F.I Kwena

Graduate Student- KU

## Appendix 2:

### Survey Questionnaire for Senior Accountants of the Government Ministries

Part one of this questionnaire requires that you tick the choice relevant to your personal demographics.

#### PART 1: RESPONDENT'S GENERAL INFORMATION

1. Gender

Male

Female

2. What is your age bracket?

21 – 30 years

31 – 40 years

41 and above

3. For how long have been working with the government?

1 to 5 years

6 to 10 years

11 and above

4. Do you know about IFMIS and key components?

Yes  No

5. Does your department depend on IFMIS in carrying out its duties?

Yes  No

**PART 2: STAFF RESISTANCE TO IFMIS**

6. Is there any resistance experienced from staff towards the IFMIS implementation?

Yes  No

7. Is the implementation of IFMIS being sabotaged in any way?

Yes  No  If No, go to part 3

8. At what level of management is the resistance/sabotage being experienced?

Junior Level  Middle Level  Senior Level  All Levels

9. Why is IFMIS being resisted or experiencing sabotage?

Fear of losing out control on their jobs

It's an impediment to corruption activities

Lack of involvement in its implementation

Other reasons (Please specify).....  
.....  
.....

10. To what extend would you say such resistance and sabotage affects implementation and effective use of IFMIS?

Grater Extend  Moderate Extend  Lesser Extend

### PART 3: MANAGEMENT COMMITMENT

11. Do you receive any support from top management to boost your confidence on the use of IFMIS?

Yes

No

Rarely

12. In your opinion, is top management well versed with IFMIS system?

Yes

No

I don't Know

13. In your opinion, would you attribute the following statements to explain the management commitment towards IFMIS? *Please circle where applicable. You can circle more than one choice.*

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

#### PART 4: COMPLEXITY OF THE SYSTEM

14. IFMIS is a complex system for the ordinary staff and transactions of the government ministry. Do you agree? *Please tick where applicable.*

Yes

No

May be

15. Are there consultants that guide the ministry staff to understand the IFMIS system complexities? *Please tick where applicable.*

Yes  No  I don't know

16. If the system is complex, do you think it is serving its intended purpose effectively?

Yes  No  Somehow

17. The following statements are attributed to the IFMIS system in your ministry. State the extent to which you agree or disagree.

*Use the scale where 1- Strongly Disagree, 2- Disagree, 3- Neutral 4- Agree 5- Strongly Agree, please circle where applicable.*

1. The system lacks a study and reference manual for workers to read 1 2 3 4 5

2. The system is very complex in its processing of information 1 2 3 4 5

3 IFMIS complicates simple manual processes 1 2 3 4 5

4. The system is too complex for ordinary users like us 1 2 3 4 5

## PART 5: CAPACITY AND TECHNICAL SKILLS

18. Did you receive proper training on the use of IFMIS during and after implementation?

Yes

No

19. Do you have qualified staff in your ministry to oversee the effective use of the system?

Yes

No

I don't know

20. Does your ministry have the capacity to effectively promote use of the IFMIS system?

Yes

No

I don't know

21. Based on the capacity and skills in the ministry, how would you relate that to the use of the IFMIS? Please use the following statements to explain your answer. **You can tick more than once.**

1. The Ministry lacks proper training program for the use of IFMIS

2. The Ministry relies heavily on experts to run the system

3. Most users lack accounting background which is essential in the use of the system

4. The ICT phobia is still an issue if IFMIS is to be effectively used

## PART 6: EFFECTIVENESS OF IFMIS

### 1. Impact

Impact includes the ability of the IFMIS to make a workplace worthwhile. The impact should be felt by users, the workforce and management. It should be judged in terms of information outcome and transformation. This section looks at the transformational impact IFMIS makes on users which is crucial to effective use of the system. *Indicate your opinion by ticking the applicable box.*

Attribute	Yes	No	Some how
1. IFMIS enhance accountability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. IFMIS enables working to be interactive, extended, networked and autonomous	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. IFMIS supports planning ,control and decision making at work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 2. Safe use and security

This section I concerned with how safe and secure the IFMIS environment is to the data, information being handled and the users of the system. *Indicate your opinion by ticking the applicable box.*

Attributes	Yes	No	Somehow
1. The system aims to provide a high level of safety for its users	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. All known abuses are easily reported	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. All known abuses lead to the culprit being found	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. The system aims to provide security for personal data	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Appendix 3:

#### List of Ministries Implementing IFMIS and respective Senior Accountant Sub-population

Code No.	Ministry	Senior Accountants
1	Ministry of Agriculture	6
2	Ministry of Cooperative Development and Marketing	5
3	Ministry of Local Government	6
4	Ministry of Education	6
5	Ministry of Energy	6
6	Ministry of Finance	7
7	Ministry of Foreign Affairs	4
8	Ministry of Housing	5
9	Ministry of Home Affairs	4
10	Ministry of Industrialization	6
11	Ministry of Information and Communication	4
12	Ministry of Internal Security and Provincial Administration	6
13	Ministry of Justice, National Cohesion and Constitutional Affairs	5
14	Ministry of Lands	5
15	Ministry of Livestock Development	4
16	Ministry of Medical Services	5
17	Ministry of Public Service	5
18	Ministry of Public Works	7
19	Ministry of Roads	6
20	Ministry of State for Immigration and Registration of Persons	6
21	Ministry of State for Planning, National Development and Vision 2030	5
22	Ministry of Trade	6
23	Ministry of Transport	5
24	Ministry of Tourism	5
25	Ministry of Water and Irrigation	5
<b>Total</b>		
<b>Population</b>		<b>134</b>