

**FACTORS AFFECTING EFFECTIVE IMPLEMENTATION OF INTERGRATED  
FINANCIAL MANAGEMENT INFORMATION SYSTEMS (IFMIS) IN GOVERNMENT  
MINISTRIES IN KENYA**

**BY**

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**DECLARATION**

This research is my original work that has not been presented for award of a degree in any other university.

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## **LIST OF ABBREVIATIONS**

IFMIS	Integrated Financial Management Information System
DFID	Department for International Development
UK	United Kingdom
GOK	Government of Kenya
AG	Accountants General
MTEF	Medium Term Expenditure Framework
MOF	Ministry of Finance
KIPPRA	Kenya Institute for Public Policy Analysis
CAGD	Center for Accountability, Governance and Development
ICTs	Information Communication Technology
CIDP	Computer Industry Development Potential
DCs	Developing Countries
NSIS	National Security Intelligence Service
KACC	Kenya Anti-corruption Commission

## **ABSTRACT**

The Kenya Government has implemented the Integrated Financial Management Information System (IFMIS) since the year 2005 as its sole accounting system. The reason why the Kenya Government adopted the use of this system was as a result of the numerous benefits envisaged from its effective use. However, for now over five years of implementation, this system has still not been able to fully provide the expected benefits of integrated financial planning, implementation and control of public expenditure. This research project has tried to investigate the factors have influenced slow implementation of the system. In particular, the researcher sought to establish through hypothesis testing, the major factors that have hampered effective implementation of the Integrated Financial Management Information System in Kenya public sector.

The study covered 42 Ministries where a sample of 30 respondents involved in the use of the Integrated Financial Management Information System was surveyed and data collected using a questionnaire. In this study, four factors studied, that influence effective use of the IFMIS system were Staff resistance, Management commitment, System complexity and Capacity and skills of users. To analyze the influence of selected factors on the use of the system, descriptive and inferential statistics were used. The arithmetic mean was used to analyze the user opinions on the select factors and the effective use of the system. The significance of the influence of the independent variables on the dependent variable was achieved through testing four hypotheses tested at 5% significance level.

The study established that effective use of the system 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 system and those users of the system to undergo on the job training in order to improve their skills and capabilities to use the system.

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# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the Study

According to Kaul and Odedra (1991) governments around the world have been engaged in the process of implementing a wide range of (ICT) applications. Countries have been classified by the United Nations according to their Computer Industry Development Potential (CIPD) as advanced or less developed (Mgaya, 1999). Advanced include for example, the United States, Canada, West European countries and Japan; less developed include for example Argentina, Brazil, India, Mexico, Kenya and Bulgaria. For all countries, use of ICTs for government reinvention is increasing not only in investment but also in terms of visibility with a number of high-profile initiatives having been launched during the 1990s. According to Heeks and Davies (2000), this reinvention has taken place especially in the advanced countries. Western countries are convinced that the information society will result in economic and social benefits (Audenhove, 2000).

The author quoting organization for Economic Cooperation and Development, notes that information infrastructures are expected to stimulate economic growth, increase productivity, create jobs, and improve on the quality of life. Heeks (2002) observes that there is a big difference between ICT implementation and use between developed and developing countries. However, Westrup (2002) observes that similarities can also be expected. These similarities include funds which are never sufficient, bureaucracy and user needs. The difference is how problems are addressed in different countries. It can be argued that, with their adequate resources and advanced technology, the Western countries have an easier way of implementing ICT projects than DCs. Most developing countries are characterized by limited computer applications in the public sector, inadequate infrastructure and shortage of skilled manpower (Odedra 1993). Odedra (1993, p.9) notes that “this situation exists not merely due to lack of financial resources, but largely due to lack of coordination at different levels in making effective use of the technology”. This uncoordinated efforts can only result in duplication if each department implements its own ICT projects without due regard to compatibility within the government.

The government of Kenya has for a long time been very much concerned over the persistent poor performance in financial management due to lack of reliable and timely information for decision making. A review by the Department of Accountant General at Treasury- Financial management, Accounting systems and Role of audits (*KPMG/ Accountants 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 systems; skills and capacity within the government financial operations 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 financial management in developing countries by the Donor Community. In contrast, “during the cold war, aid was generous, but often doled out to political allies with few questions” (Allan and Hashim, 1994). In the early years after the fall of the Berlin Wall in 1989, interest in the state was limited, but 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” (Hopelain,2004). In 2001, the Department for international Development (DFID, 2003) issued its guide on public expenditure management which noted that in "recent years, there has been a dramatic surge of interest in public expenditure issues amongst governments, development agencies and the wider public" (DFID,2003).This shift offers Africa a chance to leapfrog intermediate stages of development" (World Bank, 1994). As a result, consultants and other advisors of governments in Africa started toying with idea of the introduction of modern information technology -IFMIS.

### **1.1.2 Integrated Financial Management Information System (IFMIS)**

An IFMIS provides governments with a tool that can 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. More narrowly defined, an IFMIS is a computer application that integrates key financial functions; accounts, budgets, and promotes efficiency and security of data management and comprehensive financial reporting.

IFMIS are usually considered in terms of core and non-core financial functions. While public financial management is a broad field with multiple systems, it is striking how limited the commonly cited specification of the core functions of an IFMIS is. A conventional specification of the IFMIS core is accounting and reporting functions, while non-core functions include budgeting, commitment control, cash management and disbursement functions. The common specification of the core functions does not include all of the components needed for effective financial control and, by definition, therefore, will increase risk.

The limited comprehensiveness of the conventional core functions of an IFMIS stems in large part from the private sector origins of IFMIS technology. In short, IFMIS do not 'get the basics right' for public sector financial management. This raises the question of how they can constitute 'best practice'.

### **1.1.3 IFMIS Implementation in Government of Kenya**

Over the last five years, the Kenyan government has initiated some capital investment towards set up and installation of ICT infrastructure. Funding for these investments is achieved through partnerships between the government and development partners. The foreign funding component constitutes the largest percentage of this investment in terms of technology. The government contribution is usually in the form of technical and support staff and facilities including buildings.

So far, the Government Information Technology Investment and Management Framework is connecting all ministries to the Internet under the Executive Network (Limo 2003). The government is also connecting the Ministries to run integrated information systems for example

the Integrated Financial Management Information System (IFMIS) and the Integrated Personnel and Pensions Database (IPPD).

In Kenya, most ICT projects are initially donor funded and hence IFMIS was no exception. Again, some donations are made without prior consultation or carrying out a needs analysis by the recipient organization. Further, operational/running costs are met by the government with donor funding (capital and human resource requirements) ending with the first project phase. The budgets for such projects are inadequate but rising, there is lack of ICT policies and master plans to guide investment to the extent that, with different number donors funding several ICT projects, there has been cases of multiple investments for the same product due to lack of coordination. Finally, there has been lack of focus on ICT applications that support traditional administrative and functional transactions rather than on effective information processing and distribution within and without government departments.

IFMIS has now been rolled out to most of the Accounting units (Ministries) except Defense, NSIS, KACC and Northern Kenya which are almost ready for roll out with the system. Out of the five modules; General ledger, Accounts payable, purchasing orders, cash management and public sector budgeting, only the first three have been implemented.

However, each Ministry using this new system has experienced frequent problems with the introduction of new computer systems. For instance, an investigation carried out Accountants General office, (GOK/KPMG, 1997) found that the computer upgrade in the various Ministries including treasury has suffered from persistent problems, limiting the department's capabilities. In a similar vein, DFID has 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. At an absolute minimum, the Ministry of Finance Accountant General's Department may not be willing and able to substantially influence the accounting operations of spending Ministries" (DFID, 2003). This confirms the fears that the implementation of the IFMIS in Kenya is facing serious doubts among 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).

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 most Ministries have rolled out the system. 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 time 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 government undoing (Gibson and Nolan, 2003). IT systems that started small and are iteratively expanded are less likely to fail or underperform because the associated risks can be managed. IFMIS can be simply defined as a computer application that integrates key financial functions such as accounts and budgets and promotes efficiency and security of data management and comprehensive financial reporting. It provides a solution to 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**

The modern day challenge of organizations is to have in place information technology systems that can effectively service the needs of the organization, meet the rapid technological changes and be flexible to accommodate enhancements. It is imperative that a proposed new management information system should be adequately planned for and accommodates the needs of its myriad users to forestall the eventuality of system failure. (Ngibuini, 2005)

According to a similar study by Waruinge (2008), several factors have been identified 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 users (MOF, 2007)

Despite substantial time spent in developing and customizing the software application, the pilot implementation and the roll-out of the IFMS in various government Ministries 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 overarching concern is the significant limited involvement and ownership of the system by the various government staff in the design and development of the IFMIS. Somehow, the development process was largely driven by consultants and donors in the formative period of the project. On the other hand, the Oracle team has not been able to make much progress in this area because of lack of clear specifications on the government reporting requirements. The complex nature of the system has encountered significant design and implementation problems and delays. The capacity and know-how of the government staff has always been and is still the major issue, and the government still relies on the assistance of consultants. Consequently, several significant issues need to be addressed before IFMIS can effectively be used. In 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 invested in this project as the government tries to roll out this system to computerize fully its operations. Therefore, this study sought to answer the question; what factors influence effective implementation of IFMIS in government Ministries in Kenya?

### **1.3 Objectives of the Study**

1. Determine the effectiveness of IFMIS implementation in the Kenya Government Ministries.
2. Determine factors that influence successful implementation of IFMIS.

#### **1.4 Importance of the Study**

The findings of the study may be beneficial to the following groups:-

The government policy makers can now address the identified shortcomings of the system they are currently using to make it more effective. There is need for formulation and enforcement of legislation that would facilitate accountability and transparency through effective regulations and procedures and a reliable financial and accounting system.

The general public and stakeholders can now have confidence in the financial information being generated from GOK departments and line Ministries. This is because the study found the IFMIS reporting very secure.

The policy makers for the purpose of re-engineering the system. The results of study shows that IFMIS is still not being fully implemented to provide the management and other users timely and accurate information for decision making.

Finally, academic researchers can now carry out further research in this area of an integrated financial system in government as suggested in the concluding statements of the study.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

The chapter details out the existing theories regarding the study and supports new findings that have added to the existing knowledge. In this section, the researcher has reviewed cases from other countries that have implemented IFMIS. The chapter also looks at the methods that have been used in the ICT evaluation in the Kenya Public Sector including factors for IFMIS success and failure. Finally, the researcher has reviewed empirical Literature on Factors Affecting IFMIS implementation including Staff Resistance, Complexity of the IFMIS System, Capacity and Technical skills and made conclusion from these studies.

#### **2.2.1 IFMIS implementation in Tanzania**

According to the 2005 IMF working paper, the IFMIS in Tanzania appears to be the most successfully implemented system in an Anglophone African country. Within the framework of an ambitious public finance management reform initiated in 1994, Tanzania decided to introduce IFMIS in 10 ministries, departments and agencies in 1998. The IT-solution selected was a medium-sized management and accounting package, significantly less complex than the ones used in other countries like Ghana. The roll-out plan was based on an incremental approach and focused initially on the Accountant General's Department and 10 pilot Ministries. After a consolidation phase, the system was rolled out to all 43 ministries and departments in the capital, then progressively to the entire central government and progressively introduced at the local level.

The implementation process was distinguished since the Ministry started by an initial review of the public expenditure management processes affecting budget execution and the introduction of an improved expenditure control framework and chart of accounts. Secondly, they embedded the reform process in the Ministry of Finance with an emphasis on capacity building. Thirdly, they revised and developed an enabling legislation, accounting principles, systems and necessary organizational arrangements. Fourthly, the ministry selected a midrange commercial software

package supported by a high quality local consultancy company and finally, they established a structure of solid political backing which trickled down to the management level.

### **2.2.2 IFMIS implementation in Uganda**

According to the 2005 IMF working paper, Uganda chose to implement a comprehensive financial management reform programme to improve budget and expenditure processes both at the central and decentralized levels. The design and development phase of the IFMIS got considerably delayed and only in 2003 was a company awarded the contract for the provision of a turnkey solution including hardware, software, a Wide Area Network (WAN) and supporting training/change management. This constituted the second attempt to set up a government-wide IFMIS with World Bank financing.

The project encountered key design problems and the pilot run in six line ministries and four local governments brought out a number of issues in the system's functionality as well as treasury procedures. The main design problem was associated with the chart of accounts that the government had approved and the costs involved to rebuild the system were considerable. The system was put into operation with the defects unaltered. As a result, the Uganda IFMIS is performing under its potential with piecemeal, ad-hoc solutions that decrease the efficiency of the system.

Further problems encountered are common to the implementation of most IFMIS projects in public sector. To begin with there was inadequate planning, poor communication between implementers donors and government, shortage of management capacity and resources, changes in system design without full agreement of all and poorly implemented trainings. These examples illustrate the numerous challenges involved in implementing IFMIS. Lack of high level commitment, ineffective project coordination, loose project design and planning, institutional resistance to change, inadequate technology and lack of human resource capacity are some of the factors often cited for the failure of such schemes.

### **2.2.3 IFMIS implementation in Ethiopia**

A 2006 paper by the Kennedy School of Government presents a case study of Ethiopia as an illustration of a successful and to some extent unconventional approach to automating public financial systems. This case study is especially interesting as it challenges the traditional wisdom usually associated with such schemes.

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

### **2.3 ICT system evaluation in the Public Sector**

ICT evaluation can be defined as establishing by quantitative, and/or qualitative methods the value of the ICT to the organization Khalifa et al. (2004). Performance cannot be judged as good or bad without the successful implementation of the project. In this paper, the technical or operational implementation of ICT infrastructure is of interest.

Evaluating ICT projects can be quite problematic and can sometimes be quite subjective (Heeks 2002, Currie 1995, Bannister, Remenyi 2004, Irani 2002, DeLone and McLean 2002, Bannister and Remenyi 2000) and there is no single ICT evaluation method that can be applied to all situations (Khalifa et al. 2004). Currie (1995) justifies this position using various case studies drawn from businesses in various developed countries while Heeks (2002) observes that evaluation is subjective and can depend on circumstances including time. Evaluation leads to the determination of success or failure of an ICT project.

### **2.3.1 Factors for IFMIS success and failure**

While discussing factors for success and failure, it is necessary to clarify the “opposite” effect of most factors. This means if the presence of a factor encourages success, the lack of it encourages failure (examples are proper infrastructure and well motivated staff). The converse is true such that if presence of a factor causes failure, its absence will cause success (examples are bureaucracy, poor project, and change management among other factors).

### **2.3.2 Factors for success**

Factors for success are those occurrences whose presence or absence determines the success of an ICT project. They can be drivers or enablers as described by (Moran 1998, Riley 2000, Doherty et al. 1998, Heeks 2003b, Mugonyi 2003, Heeks 2004, Khaled 2003). Their absence can cause failure and their presence can cause success. *Drivers* are the factors that encourage or reinforce the successful implementation of ICT projects. Some of these include; Vision and strategy, government support, external pressure and donor support, rising consumer expectations, technological change, modernization, and globalization.

### **2.3.3 Factors for failure**

The factors for failure are those occurrences that constraint proper/smooth implementation of ICT projects in government. These can either be barriers or inhibitors as described by (Khaled 2003, Gakunu 2004, Aineruhanga 2004, Heeks 2003a, Ndou 2004, Bhatnagar 2003, Saul and Zulu 1994). Barriers can be considered as those occurrences that hinder ICT implementation. Some of these factors for failure include; poor infrastructure, resources, poor data systems and lack of compatibility, lack of skilled personnel, leadership styles, culture, bureaucracy and staff attitudes.

## **2.4 Literature on Factors Affecting IFMIS Implementation**

### **2.4.1 Staff 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. Murphy (2002) states that: 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 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 as to why do people resist change so strongly and what can be done to overcome this resistance? (Diamond and Khemani, 1999). 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, "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"

Sander, who was a close colleague of Kurt Lewin and leaned heavily on his work, offered six primary reasons for resistance to surface: If the nature of the change is not made clear to the people who are going to be influenced by the change, if the change is open to a wide variety of interpretations, if those influenced feel strong forces deterring them from changing, 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, if the change is made on personal grounds and lastly, if the change ignores the already established institutions in the group (Diamond and Khemani, 1999).

#### **2.4.2 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.

Sudh (1995) adds, "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, feeling and values." The initial six were published in 1950. Employees resist change because they have to learn something new. In many cases there is not a 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, "Most people are reluctant to leave the familiar behind. We are all suspicious about the unfamiliar; we 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 Keeefe (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 reactions 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 - 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 is it 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."

### **2.4.3 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) claims, “the idea that 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 and 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 reevaluate 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 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, in most public service managers in government cannot reduce staff and are severely limited in their capacity to change them. In such situations IT is not necessarily seen as a benefit to management, if anything from human resource viewpoint it could make their task greater and more complex.

## **2.5 Complexity of the System**

Another key condition of success is the need to make the right technical choices for the automation process. Ultimately, the effectiveness of IFMIS depends on the robustness and flexibility of the technological solution. The technology chosen must be flexible to adapt to evolving conditions and allow the system to be smoothly extended to other parts of government. In its main report on the 2004 Country Integrated Financial Assessment, the World Bank commented 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 is available for the maintenance of the system 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 Kenya government is implementing private sector IT 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 IT 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: “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.”

## **2.6 Capacity and Technical skills**

IFMIS implementation involves considerable human resources requirements and capacity building needs throughout the entire government. The low level of computer literacy in developing countries must first be adequately addressed before such projects can be truly viable.

The lack of staff with required IT-knowledge cannot be easily remedied by training and hiring. The current salary structure and terms of employment in the public sector are usually not attractive enough to compete with private sector employment conditions and to incentivise candidates with required IT-skills.

Similarly, in Kenya government Ministries, 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 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 (GAO, 2004). It is necessary to get the pay structure right before embarking on such a training program. This consideration is particularly important for in-house IT 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 IT 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 outsource the management of IT to a local firm, and yet another is to establish a dedicated government unit to provide IT 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 training may be the medium-term solution to many IFMIS 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, Mutai and Ngungu, 1996). The government of Kenya has experienced problems with the new managers hired by the government. The overarching concern being 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 & 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).

## **2.7 Summary of Literature Review**

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 not a 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 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 an impetus for change by providing leadership and 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 an important component to effective utilization of the IFMIS system. 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, IT 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 systems, coupled with the adoption of centralized treasury operations can 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 programme, but still "there is problem of limited capacity in the Ministry of Finance to specify and analyze IFMIS reports" (Kodres and Laura, 2001).

The complex nature of the IFMIS system is in itself deterrence to successful implementation in public service (Gibson and Nolan, 2000). This is because; the phased implementation is posing a 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 covers only the non-pay revenue expenditure. 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 systems 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 be addressed before the project is complete (Kinyeki, Mutai & Ngungu, 1996)

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 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.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

Research methodology refers to the analysis of principals of methods, rules and techniques. It involves the systematic study of methods which are to analyze a specific study. In order to make the research organized and to increase its reliability different methodologies are adopted.

#### **3.2 Research Design**

The study was exploratory in nature since it focused on identifying factors that influence successful implementation of IFMIS with questionnaires as the main instrument of collecting data. (Kathuri and Pals, 1993) assert that a survey research usually uses questionnaires in order to determine the opinions, attitudes, preferences and perceptions of groups of people of interest in the research.

#### **3.3 Target Population and Sample**

The population of the study was the 42 Government Ministries currently implementing the IFMIS. Stratified random sampling method was used to select a sample of 50 Senior Ministry representatives. The sampling frame was Senior Administrative Officers, Financial officers and Supplies officers. The stratified random sampling was appropriate because the size of the population of these officers in each ministry was known and its proportion to the total was determined and used for sampling purposes. Hence, the 50 sample units were based on proportionate representation of the total population.

#### **3.4 Data Collection**

The study was based on both primary and secondary data. Secondary data was obtained from IFMIS implementation review reports by the World Bank, government publications (especially the Ministry of Finance) and other published IFMIS data by development partners (donors). The researcher reviewed reports available for the period between 2005-2010. The years 2005 is when actual roll out of IFMIS was started to all government Ministries.

Primary data was collected using a structured self-administered questionnaire. According to Kotler (1998) the use of self-administered questionnaire ensured privacy of the responses and therefore recorded a high rate of response. The questionnaire used to collect data is shown as Appendix 1.

### **3.5 Data Analysis**

The study was based on both quantitative and qualitative data. Data was checked for accuracy and completeness of recording. It was then analyzed using descriptive statistics, whereby the arithmetic mean and standard deviation were used to interpret findings. Inferential statistics involved was done through univariate analysis where f-statistic showed the significance variation of the mean of each depended variable on the effective use of the IFMIS system- the independent variable. The analysis was done using SPSS program.

Qualitative data was analyzed as it was being collected. According to Mugenda and Mugenda (1999), content analysis enables the researcher analyze and make interpretations of the data simultaneously as it is obtained. Mugenda and Mugenda argued that content analysis was the systematic qualitative description of the composition of the objects or materials of the study. It involved observations and detailed description of items, objects or things that comprised the study. Content analysis has been used successfully by: Njau (2000), Kandie (2001), Kirui (2001), Koigi (2002), Musa (2003), Koske (2003) and Kipkore (2004).

#### **3.5.1 Data Reliability and Validity**

A research has high validity if the study only contains what one wants to study and nothing else. Validity is subdivided into three subgroups: construct-, internal and external validity. Construct validity refers to data collection procedure. The primary data collection was directed towards the Senior Ministry representatives implementing the IFMIS.

Internal validity was achieved through linkage between theory and empirical research since the study discovered factors that influence effective use of IFMIS by considering existing theories. External validity was achieved through the application of the domain of the study's findings being generalized.

## 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 (sabotage, management commitment, complexity and capacity of users of IFMIS) influence effective use of IFMIS system in Government ministries. The data has been analyzed and presented in frequency and ANOVAs tables, with brief discussion on the finding. 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

The field responses were that out of 50 questionnaires administered, 30 were filled and returned. Therefore the response rate was 60% (30/50), 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

##### 4.3.1 General information of the respondents

**Table 4.1: Gender and usage of IFMIS**

Statistics	Distribution of the gender of the respondent	Distribution of years of service of the respondent	Whether the respondents know IFMIS and its components	Whether department use IFMIS for recording transactions	Whether respondent is deeply involved in use of IFMIS
n	30	30	30	30	30
Mean	-	2.63	1.00	1.33	1.27
Mode	1	2	1	1	1
Percentage Frequency	86%	-	100%	70%	60%

**Source: Research Data**

Table 4.1 indicates that majority (86%) of the staff in charge of IFMIS in all ministries of government are male. Asked whether the respondents knew of the components of IFMIS, 100% said ‘yes’ and this indicates high level of awareness. However, the respondents indicated that only 70% had their departments using IFMIS for recording transactions. This is evidence of limited use of IFMIS in most of the government ministries .And finally, 60% of the respondents indicated that they are deeply involved in the use of IFMIS which for their daily work .That means a section of the employees are not using IFMIS which was found to be 40% of the entire government ministries.

#### 4.4 Staff Resistance

##### 4.4.1 Resistance and use of IFMIS

**Table 4.2 Opinions of respondents 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	To a greater extent
Whether the respondents know IFMIS and its components	yes	22	4	4	30
Total		22	4	4	30
Percentage		73%	13.5%	13.5%	

**Source: Research Data**

Respondents were asked to give their opinions on how resistance to IFMIS affected the its use. Table 4.3, indicates that majority (73%) of the users feel that resistance and sabotage affects to ‘greater extent’ on the effective use of system .This confirms the figures on the low level use of the system by the government users. Only a combined 27% feel that resistance and sabotage has either to a ‘moderate extent’ or just to a ‘lesser extent’ effect on the effective performance. This does confirm that, indeed there are negative effects of resistance on the effective use of the IFMIS.

It is clear that resistance and sabotage may be passive but its undercurrents are likely to frustrate effective use of the system. There are various reasons for such resistance and its significance on the use of the system has tabulated in Table 4.4.

#### 4.5 Testing the Hypothesis

##### 4.5.1 Hypothesis 1: Staff Resistance has significant influence on the effective use of IFMIS

**Table 4.3 Significance of the aspects of staff resistance on effective use of IFMIS**

Resistance	Sum of squares	df	Mean square	F	Sig
IFMIS is resisted by corrupt officials who have something to hide	.527	2	.264	1.666	.208
IFMIS was resisted for fear of losing job control	.867	2	.433	.275	.761
IFMIS was resisted due to lack of knowledge on how to use it	15.603	2	7.802	5.638	.009
IFMIS was hurriedly implemented so it was resisted	1.182	2	.591	2.525	.004
IFMIS implementation ignored staff involvement	.162	2	.081	.304	.041
IFMIS was resisted for the sake of it	2.958	2	1.479	2.135	.138
IFMIS is being sabotaged by technical and top management who use it	24.876	2	12.438	9.851	.001
There is passive resistance which is unnoticed among the users	24.859	2	12.430	18.298	.000
IFMIS is resisted by majority of staff in the ministry	14.932	2	7.466	4.735	.017

**Source: Research Data**

Table 4.4 indicates the significance of the various aspects of resistance on the effective use of IFMIS system in government ministries. Staff resistance may be result from different reasons which are referred here as the aspects. Knowing the reasons as to why people resist make it

easier to deal with resistance. From the table, the following attributes were found to have significant effect on the effective use of the IFMIS. Lack of knowledge on IFMIS use (F=5.638, p<.05), hurried implementation of the system (F=2.525, P=.004), sabotage by top and technical management (F=9.851, p=.001), passive resistance (F=18.298, p=.000) and finally overall resistance by the ministry staff has a significant effects on the effective use of the IFMIS system (F=4.735, P=0.017). These statistics mean that the above attributes of resistance does exist among the staff in the ministries of government and were found to be statistically significant .Other aspects of resistance were found to statistically insignificant on the effective use of the IFMIS system.

#### 4.5.2 Hypothesis 2: Management commitment has significant influence on the effective use of IFMIS

**Table 4.4: Significance of aspects of management commitment on effective use of IFMIS**

Management commitment	Sum of squares	df	Mean Square	F	Sig.
Whether respondent receive support on IFMIS from top management	.982	1	.982	1.423	.043
Whether attitudes on management towards IFMIS are negative	.776	1	.776	1.309	.262
Whether management is well versed with IFMIS	.436	1	.436	1.239	.275
Management lacks the drive to inspire use of IFMIS	.728	1	.728	.917	.047
Management does not understand IFMIS well so they do not inspire others.	.019	1	.019	.052	.021
Management lacks general interest in IFMIS	.048	1	0.48	.120	.032
Top managers are nearing retirement so are not keen on IFMIS	.001	1	.001	.001	.077

**Source: Research Data**

Table 4.5 indicates the significance of the various aspects of management on the effective use of IFMIS system in government ministries. Management support is critical for successful implementation of projects. The extent to which the respondents receive management support may have a bearing on the effective use of the IFMIS system. From the table, the following attributes of management were found to have significant effect on the effective use of the IFMIS. Top management support ( $F=1.423$ ,  $p<.05$ ), management lack of drive to inspire the use of the system ( $F=.917$ ,  $p=.047$ ), lack of understanding of IFMIS on the part of management ( $F=.052$ ,  $p=.021$ ) and the general lack of interest by top managers on use of IFMIS ( $F=.120$ ,  $p=.032$ ). The implication of this result findings are that respondents agree that management laxity in supporting the IFMIS system has largely affected the effective use of the system by employees. Factors cited as lacking in the top management such as the drive to inspire users, lack of understanding of the system and how it works, and general lack of support as expected from the top management are hence significant to IFMIS successful use. 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.

**4.5.3 Hypothesis 3: Perceived system complexity has significant influence on the effective use of IFMIS**

**Table 4.5: Significance of system complexity on effective use of IFMIS**

System complexity	Sum of squares	df	Mean square	f	Sig.
Whether IFMIS is a complex system to ordinary staff and government transactions	1.534	1	1.534	2.391	.133
Whether there are consultants guiding staff on effective use of IFMIS	.776	1	.776	4.267	.048
Whether IFMIS is a complex system is serving its purpose	.000	1	.000	.000	.1.000
IFMIS system lacks study and reference manuals for staff to read	2.819	1	2.819	7.778	.009
IFMIS is very complex to understand its information processing	.000	1	.000	.000	1.000
IFMIS complicates simple manual processes	.027	1	.027	.122	.730
IFMIS is too complex for ordinary users	.076	1	.076	.066	.799
IFMIS components are too many and too complicated	1.534	1	1.534	1.012	.323
IFMIS envisages all government systems operations which are complicated	.007	1	.007	.004	.949

**Source: Research Data**

Table 4.6 indicates the significance of the various aspects of complexity of the system on the effective use of IFMIS system in government ministries. System complexity is a function of design and is complicated by lack of involvement of the user during design stage and subsequent poor training on the system components.

From the table, the following attributes were found to have significant effect on the use of the IFMIS ;-lack of consultants to guide the users on the system use ( $F=4.267$ ,  $p<.05$ ) and lack of study reference materials for users on the system ( $F=7.778$ ,  $p=.009$ ).These statistics imply that the IFMIS is seen as complex system by the users due to the fact that there are no consultants who would guide the users through the learning process and secondly the designers of the system did not provide enough reference study manuals to the users .Otherwise the system would be serving its purpose if it was made to look less complex in the eyes of the users. Other attributes advanced about causing complexity in the study were in fact found to be statistically insignificant as factors influencing effective use of the system .Which include among others the perception that the system was too complex for ordinary users , the information processing was quite too complex to be understood , that the system complicates simple manual processing, the system components are too many to understand and use and finally that the system was too wide in terms scope and coverage.

#### 4.5.4 Hypothesis 4: Staff capacity and skills level has significant influence on effective use of IFMIS

**Table 4.6: Significance of aspects of capacity of users on effective use of IFMIS**

Capacity and technical knowhow	Sum of squares	d.f	Mean square	F	Sig.
Whether the respondent received training in the use of IFMIS	.303	1	.303	1.333	.028
Whether there are qualified staff to oversee effective use of IFMIS	.128	1	.128	.208	.002
There lacks proper training on use of IFMIS in the ministry	.001	1	.002	.002	.016
Ministry rely on experts to run the IFMIS system	.594	1	.594	3.484	.042
Users of IFMIS are poorly trained to handle it	.303	1	.303	1.333	.008
Users lack accounting background key to effective use of IFMIS	1.673	1	1.673	.412	.026
The phased roll out lead to fragmented training in the use of the IFMIS system	.048	1	.048	.747	.015
ICT phobia is an issue that affects effective use of IFMIS by users	.092	1	.092	.348	.560

**Source: Research Data**

Table 4.7 indicates the significance of the various aspects of staff capacity and technical skills on the effective use of IFMIS system in government ministries .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.

From the table , attributes found to have significant effect on the use of the IFMIS among others was lack of training of users (F=1.333, p<.05), lack of qualified staff (F=.208, p=.002), lack of proper training on use of IFMIS (F=.002, p=.016), lack of experts to oversee the system (F=3.484,p=.042), poorly trained of users on how to handle the system (F=1.333, p=.008), lack of accounting background (F=.412, p=.026) and finally phased rollout with fragmented training

(F=747, p=.015). These statistics imply that users of IFMIS lack the capacity and technical knowledge on how 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, poor training, lack of experts to guide users, some users have no accounting background and finally the fragmented training that resulted from phased roll out of the system. Other aspects of resistance were found to be statistically insignificant on the effective use of the IFMIS.

#### 4.6 Effective Use of the IFMIS system

##### 4.6.1 Impact of IFMIS on users

**Table 4.7: Descriptive statistics on the impact of IFMIS on Users**

Impact attributes	n	Min.	Max.	mean	Standard deviation
IFMIS is at the heart of our work	30	1	3	2.53	.142
We easily manage our own work	30	1	3	2.67	.130
IFMIS introduces users to new information	30	1	3	1.93	.117
IFMIS offers personalized working environment	30	1	3	2.40	.141
IFMIS promotes accountability	30	1	3	1.47	.157
IFMIS gives relevant feedback and support	30	1	3	2.20	.101
IFMIS enables working to be interactive, networked and autonomous	30	1	3	1.10	.056
IFMIS supports planning	30	1	3	1.17	.097

**Source: Research Data**

The findings are interpreted according to the means scale where, 1.45 implies 'yes' that the system has made positive impact on the users, and 1.50 to 2.49. Implies 'no' that the system has had no impact on the users and finally 2.5 to 3.00 implies 'somehow' that the system can be said to have somehow impacted on the users. This is a 50/50 scenario.

From Table 4.8, it is clear that majority of the respondents said 'somehow' (2.53) that IFMIS is at the heart of their work, IFMIS somehow easily allow users to select at will and manage their own work. However, respondents said 'no' when asked whether IFMIS introduces users to new information (1.93), if IFMIS provided a personalized working environment (2.40) and if the system provided relevant feedback and support to users (2.20). On the other hand the respondents agreed and said 'yes' that IFMIS promotes accountability (1.47), supports engagement and planning of work (1.17).

This statistics imply that when there is felt impact of IFMIS across the government users, different or ministries 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 engagement and planning of work and finally it enables an integrated work environment among the users. But from the responses, the system has failed to allow manipulation for work by users and it is not at the heart of every worker showing only a small proportion of the workers perhaps use the system for their every day work. The same can be said of the system that it has failed to personalize the working environment.

#### 4.6.2 User friendliness of the system

**Table 4.8: Descriptive statistics on user friendliness of IFMIS**

Performance	N	Min.	Max.	Mean	Standard deviation
IFMIS raises the aspirations of users	30	1	3	2.10	.088
Critical services are always available in core hours	30	2	2	2.00	.000
Users are not frustrated by IFMIS	30	2	2	2.00	.000

**Source: Research Data**

The findings are interpreted according to the mean scale where 1.45 implies ‘yes’ that the system was user friendly to the users , and 1.50 to 2.49 implies ‘somehow’ that the system can be said to be user friendly to the users. This is a 50/50 scenario.

From Table 4.9, it is clear that majority (78%) of the respondents said ‘no’ (2.10) to that IFMIS raises the aspirations of users, 64% also indicated ‘no’ (2.00) that IFMIS always provided critical services to the users and that users are not frustrated by the use of IFMIS. This statistics imply that the performance of the IFMIS system is wanting. Reasons are that the system does not inspire users; its critical services are not always available to users.

#### 4.6.3 Environment sustainability of IFMIS system

**Table 4.9: Descriptive Statistics on Environmental sustainability of IFMIS**

Environment and sustainability	n	Min.	Max.	Mean	Std.deviation
System educates users in appropriate working practices	30	1	3	2.50	.150
Users are able to utilize the system easily and with minimum central processing data	30	2	3	2.27	.082
IFMIS system is energy efficient with minimum cooling requirements	30	1	3	2.20	.121
IFMIS encourages paperless working	30	1	3	1.77	.079
System can be refreshed and upgraded easily	30	1	3	1.40	.149

**Source: Research Data**

The finding are interpreted according to the mean scale where, 1.45 implies ‘yes’ that the system is environmentally sustainable, and 1.50 to 2.49 implies ‘no’ that the system is not environment

ally sustainable 2.5 to 3.00 implies ‘somehow’ that the system can be said to be environmentally sustainable. This is a 50/50 scenario.

From Table 4.10, its clear that majority of the respondents said somehow (2.50) that IFMIS educates users in appropriate working practices, that IFMIS easily allowed paper less working environment(1.77) and finally that the system can be refreshed and upgraded easily (1.40). However, respondents said ‘no’ when asked whether IFMIS can be utilized with minimum cooling requirements (2.20).

These statistics imply that the IFMIS system educates users easily and encourages paperless working environment as well as that the system can easily be refreshed and upgraded. However, the system is not energy efficient and cannot be utilized by users with minimum central data processing .It therefore implies on average that the system is not supporting the environment and is not sustainable. This is confirmed by the low percentages indicating either ‘yes’ or ‘somehow’ as to aspects of environment and sustainability.

#### 4.6.4 System Accessibility

**Table 4.10: Descriptive statistics on access of IFMIS by Users**

Access	n	Min	Maxi	Mean	Std. Deviation
Access to all appropriate users at anytime from anywhere	30	2	1	2.00	.000
Access to appropriate users anytime with suitable devices	30	1	3	2.43	.157
Relevant security is inbuilt into the system to allow access rights with a single log on	30	1	1	1.00	.000

**Source: Research Data**

The findings are interpreted according to the mean scale where, 1.45 implies ‘yes’ that the system is easily accessible to the users, 1.50 to 2.49 implies ‘no’ that the system is not easily accessible to users and finally 2.5 to 3.00 implies ‘somehow’ that the system can be said to be easily accessible to users .This is a 50/50 scenario.

From Table 4.11, it is clear that majority of the respondents said ‘no’ (2.00) that IFMIS is accessible to all appropriate users anytime and anywhere, that IFMIS was accessible to appropriate users anytime anywhere with appropriate devices.

On the other hand, respondents agreed and said ‘yes’ (1.00) to the fact that IFMIS had inbuilt security that is accessed through a single log on. This statistics imply 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 inbuilt for users is a good thing. But access is limited to few users. Secondly, users cannot access the system anywhere anytime as this is quite restricted.

#### 4.6.5 Security and safety of IFMIS to the users

**Table 4.11: Descriptive statistics on the safe use and security of IFMIS**

Safely and security	n	Min.	Max.	Mean	Std deviation
IFMIS provides a high level of safety for its users	30	1	3	1.43	.164
IFMIS reports easily abusers of the system	30	1	3	1.31	.153
IFMIS offers security for personal data	30	1	3	1.30	.167

**Source: Research Data**

The findings are interpreted according to the mean scale where, 1.45 implies ‘yes’ that the system is safe and secure for the users, and 1.50 to 2.49 implies ‘no’ that the system is not safe and secure for the users, and finally 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 4.12, it is clear that at least a sizeable number of the respondents said ‘yes’ (1.43) that IFMIS provided a high level of safety for its users, that IFMIS easily reported abusers of the system, that it offers security for personal data. As shown majority of respondents who indicated ‘yes’ (1.30) 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 Introduction**

The study investigated the factors that influence effective implementation of IFMIS in government ministries. The study was a survey of all the 42 Government Ministries. This chapter highlights 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 and Discussions**

It was found that 86% of the staff in charge of IFMIS in all ministries of government was male. The result findings indicated that all the staff interviewed was aware of the IFMIS and its components. This is supported by the fact that 100% of the respondents said 'yes' to this question indicating a high level of awareness. However, only 70% had their departments using IFMIS for recording transactions. 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 its use in their daily work.

The study established that 73% of the users felt that resistance and sabotage affected to 'greater extent' the effective use of the system. Staff resistance resulted from different reasons hereby termed to as the aspects. Understanding these aspects of resistance makes it easier when dealing with such resistance. Study results indicated that lack of adequate knowledge by the users ( $F=5.638, p<.05$ ), hurried implementation of the system ( $F=.304, p=.041$ ), sabotage by top and technical level management ( $F=9.851, p=.001$ ) and passive resistance ( $f=18.298, p= .000$ ) had significant impact on the effective use of the IFMIS ( $F=4.735, p=0.017$ ).

Top management support was found to be critical for successful implementation of the IFMIS. Commitment by top management had significant effect on IFMIS has shown by the results ( $F=1.423, p=.05$ ), their lack of commitment ( $F=.917, p=.042$ ) and lack of proper understanding of IFMIS on the part of staff ( $F=.052, p=.021$ ).

Refers to a function of design and is complicated by lack of involvement during the design stage and subsequent poor training on the system components. The results show that various aspects of a complex system had a significant effect on the effective use of the IFMIS system among them being: lack of consultants to guide the users on the system ( $F=4.267$ ) and lack of study reference materials for users of the system ( $F=7.778$ ,  $p=.009$ ).

Involvement of users in the design of the system is one way to gain deeper understanding of the system by the users. This is because low levels of skills in IT may affect effective use of the system. The aspects of capacity and technical knowhow found to have significant effect on the use of the IFMIS was the lack of well trained users of the system ( $F=1.333$ ,  $p<.05$ ), lack of well qualified staff ( $F=.208$ ,  $p=.002$ ), lack of proper training on use of system ( $F=.002$ ,  $p=.016$ ), lack of experts to oversee the system use ( $F=3.484$ ,  $p=.042$ ), poorly trained users ( $F=1.333$ ,  $p=.008$ ), lack of proper accounting background ( $F=.412$ ,  $p=.026$ ), phased implementation with fragmented training ( $F=.747$ ,  $p=.015$ ) and finally ICT phobia ( $F=.348$ ,  $p=.56$ ).

Results indicated that 84% felt that IFMIS was at the heart of their work while 88% 'somehow' felt that IFMIS easily allowed users to select at will how to manage their own work. However, IFMIS did not expose users to new information and 80% doubted whether IFMIS provided a personalised working environment as much as providing relevant feedback and support to users. The results also found that only 49% felt that IFMIS did not provide an interactive networked environment and finally 37% said that IFMIS supported proper planning of work.

The results established that 83% of the respondents felt that IFMIS 'somehow' educated users while 59% indicated that IFMIS easily allowed paperless working environment. However, 76% doubted whether the system was easily utilized with minimum central processing of data and 73% doubted whether IFMIS use was efficient in energy saving with minimum cooling requirements.

The study found that 33% felt that IFMIS had inbuilt security that is accessed with a single log on and at least 50% felt that IFMIS provided a high level of safety to users. In addition 53% felt that IFMIS easily reported abusers of the system and felt it offered security for personal data as a result of data integrity levels.

### **5.3 Conclusion and Recommendations**

The study sought to establish what factors influenced effective use of the IFMIS in government ministries. Hence, the researcher tested four main hypothesised factors that seemingly affected use of the system. The first factor was the staff resistance and the researcher scientifically sought to establish whether this factor influenced effective use of the system.

The hypothesis test asserted that indeed there was significant influence of the factor to effective use of the IFMIS. The study concluded that IFMIS was not available to all employees because 40% of the entire government ministries' employees were not using the system as a result of resistance. This confirms that there are negative effects of resistance on the effective use of the system. It is clear that staff resistance and sabotage was passive but its effects were frustrating the use of IFMIS to the full. There are various reasons for such resistance but one concludes that resistance does exist among the staff in the ministries of government which were found to be statistically significant on the effective use of the system and accepted the hypothesis that staff resistance had significant influence on the effective use of the IFMIS.

The second factor tested for significance was the top management commitment to spearhead use of the IFMIS system and whether lack of this support had negative impact on the system effectiveness.

The study findings indicated that there was significant influence of lack of top management commitment on effective use of the system. The study concludes that management laxity in supporting the IFMIS system 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 of support as expected from the top management.

The third factor analysis was to establish how the perceived system complexity influences effective use of the IFMIS. The results of the hypothesis test asserted that there was significant influence of the perceived system complexity on effective use of the system.

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. Secondly, the designers of the system did not provide enough 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 fourth hypothesis test sought to establish whether staff capacity and technical skills influenced effective use of the IFMIS. The results established that there was significant influence of staff resistance on effective use of the system. 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, poor training, lack of experts to guide users; some users have no accounting background and finally the fragmented training that resulted from phased roll out of the system. The measurement of effective use of the IFMIS system was done based on the various aspects which were; impact, access, environmental sustainability, safety and security.

This study concludes that when there is felt positive impact of IFMIS across the government users, different departments or ministries such system would be said to be effective. 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 engagement and planning of work, and finally it enables an integrated work environment among the users. But from the responses, the system has failed to allow manipulation for work by users and it is not at the heart of every worker showing only 16% of the workers perhaps use the system for their every day work. The same can be said of the system that it has failed to personalise the working environment. It's also true that the performance of the IFMIS system is wanting. Reasons are that the system does not inspire users; its critical services are not always available to users. The overall effects have been frustrated workers. The system educates users easily and encourages paperless working as well as that the system can easily be refreshed and upgraded. However, the system is not energy efficient and cannot be utilized by users with minimum central data processing. It therefore means on average that the system is not supporting environment and is not sustainable.

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. But access is limited to less than 20% of the users. Secondly, users cannot access

the system anywhere, anytime as this is quite restricted. However, the system provides high levels of personal data integrity for the users among 50% of the users.

#### **5.4 Limitations of the Study**

The researcher analysed only the major factors (variables) that are believed to have significant influence on the effective use of the IFMIS. Factors which also had influenced the system effectiveness but in a less significant manner were not analysed because of the limited time frame of the study.

The researcher restricted the study to the various Government Ministries that are based at the Headquarters, Nairobi region. However, IFMIS application has also been rolled out to other departments in the field offices outside Nairobi -though at a lesser extent.

The Researcher used stratified random sampling technique to select a sample of fifty senior Ministry officials to obtain data from and generalise the findings as representing the whole population. This sample may not be fully representative of the population since more accountants than finance and procurement officers were selected.

When this research was on -going, Treasury started re-engineering the same system (IFMIS) to improve some of its modules. Therefore, the findings/conclusions made by the researcher could already be resolved by the re-engineering process or even other factors may become significant.

The researcher relied on secondary data obtained from Government publications for the period between 2005 to 2011. This data was used answer and make conclusions regarding the first research objective. Some of this data may not be valid since newer developments could have occurred especially since information technology is so dynamic.

## **5.5 Suggestions for Further Research**

The researcher analysed four major factors that were believed to have significantly affected IFMIS implementation. Further research could be conducted by incorporating more factors (variables).

The study population involved the Government Ministries based at the Head Offices in Nairobi. Further study could be undertaken by involving other regions or departments in the country.

The researcher obtained a sample composed of three senior officers from each ministry directly involved in IFMIS implementation. Perhaps a more expanded scope whereby all staff are involved, could form a basis for further research.

The Ministry of Finance in charge of IFMIS implementation across all Government Ministries started re-engineering this system when this research was still on-going. The results from this re-engineering process could possibly unearth other factors (variables) of significance. Hence, a further study can be carried out to establish any new developments in the system use. This study analysed factors that had hindered effectiveness of the system. Those factors behind its success, though limited, could form a basis for a further research.

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## **APPENDIX 1: Survey Questionnaire for senior staff of the Government Ministries**

Part one of this questionnaire requires that you tick the choices given relevant to your personal demographics. Every question has multiple choices and boxes alongside each choice. Please tick in the box, which is applicable to you.

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

1. Gender

Male       Female

2. What is your age bracket?

21 - 24 years

25-30

31-35

36-40

41 and above

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

1 to 5 years

6 to 10 years

11 to 15 years

16 and above

4. Do you know about IFMIS and key components?

Yes       No

5. Is your department involved in the use of IFMIS for recording and accounting transactions?

Yes  No

6. Are you deeply involved in the usage of IFMIS in your department?

Yes  No

## **PART 2: STAFF RESISTANCE TO IFMIS**

The following statements can be attributed to staff behavior at your place of work, indicate the extent to which you agree or disagree with each statement on staff stance to IFMIS.

The likert scale where, 1 – strong disagree 2 – disagree 3 – neutral 4 – agree 5 – strongly agree

- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| 1. IFMIS system is resisted by majority of the senior officer of the Ministry | 1 | 2 | 3 | 4 | 5 |
| 2. The system exposes corrupt officials that why it is resisted               | 1 | 2 | 3 | 4 | 5 |
| 3. Most employees resist IFMIS for fear of losing out control and jobs        | 1 | 2 | 3 | 4 | 5 |
| 4. The system is resisted due lack of knowledge on how to use it.             | 1 | 2 | 3 | 4 | 5 |
| 5. It was hurriedly implemented that's why its resisted                       | 1 | 2 | 3 | 4 | 5 |
| 6. The system installation stage ignored staff involvement                    | 1 | 2 | 3 | 4 | 5 |
| 7. Sabotage is by the technical personnel and top management                  | 1 | 2 | 3 | 4 | 5 |

To what extent would you say such resistance and sabotage mentioned above affects effective of IFMIS system? Please tick where applicable.

To a greater extent  To a moderate extent  To a lesser extent

**PART 3: MANAGEMENT COMMITMENT**

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

Yes  No  Rarely

2. Would you say that the general attitudes towards IFMIS by top management?

Yes  No  I don't know

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

Yes  No  I don't know

**In your opinion, would you attribute the following statements to explain the top management commitment towards IFMIS? PLEASE TICK where applicable. You can tick more than one choice.**

Use the likert scale where, 1 – strong disagree 2 – disagree 3 – neutral 4 – agree 5 – strongly agree

- 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 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**

1. IFMIS is a complex system for the ordinary staff and transactions of the government ministry.

Do you agree? PLEASE TICK WHERE APPLICABLE.

Yes

No

Maybe

2. Are there consultants that guide the ministry staff to understand the IFMIS system complexities? PLEASE TICK WHERE APPLICABLE

Yes  No  I don't know

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

Yes  No  Somehow

4. The following statements are attributed to the IFMIS system in your Ministry. State the extent to which you agree or disagree. Use the likert scale where 1- strongly disagree 2- disagree 3- neutral 4- agree 5 strongly agree .Please circle the applicable number on your RHS.

The system lacks a study and reference manual for workers to read	1	2	3	4	5
The system is very complex in its processing of information	1	2	3	4	5
The systems complicates very simple manual processes	1	2	3	4	5
The system is too complex for ordinary users like us	1	2	3	4	5
The system components are too many and complicated	1	2	3	4	5
IFMIS envisages government systems which are complicated	1	2	3	4	5

**PART 5: CAPACITY AND TECHNICAL SKILLS**

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

Yes  No

2. Are there qualified staffs in your ministry to oversee the effective use of the system?

Yes  No  I don't know

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

Yes  No  I don't know

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.

- 1. The Ministry lacks proper training program for the use of IFMIS
- 2. The Ministry relies heavily on experts to run the system
- 3. The users are not well trained to handle IFMIS
- 4. Most users lack accounting background which is essential in the use of the system
- 5. The phased roll out is to blame for fragmented training in the use of the system
- 6. The ICT phobia is still an issue if IFMIS is to effectively used

## PART 6: EFFECTIVENESS IN USE OF IFMIS (SYSTEM

### IMPACT)

Impact includes the ability of the IFMIS to make a work station a worthwhile place to work and learn. This impact should be felt by users, the workforce and management. It should be judged in terms of information outcomes and transformation. IFMIS is at the heart of working, and this section looks at the transformational impact of IFMIS makes on users which is crucial to effective use of the system. Indicate yes or no by ticking the applicable box.

Attribute	Yes	No	Some how
1. IFMIS is at the heart of our work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Users can select information at will and manage their own work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. IFMIS enables users to think in new ways	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. IFMIS introduces users to information from a range of scope beyond their previous experience	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. IFMIS introduces users to a range of information beyond their previous experience	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. IFMIS is at the heart of personalized working environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. IFMIS is a promotes accountability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. IFMIS enables users creativity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. IFMIS offers a wide range of choices for users	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. IFMIS gives relevant feedback and support when appropriate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. IFMIS enables working to be interactive, extended, networked and autonomous	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Environment and sustainability**

Sustainability relates to the maintenance and affordability of the IFMIS, including the opportunities available for the continued professional development of users. It is concerned with the ability to refresh and upgrade the system when appropriate but also account of environmental issues including energy efficiency and waste disposal.

	Yes	No	Somehow
1. The system educates users in appropriate working practices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. The system is energy efficient with very little requirement for additional cooling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Paperless working and other ways of saving energy such as video conferencing is encouraged	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. The system can be refreshed and upgraded as appropriate taking account of waste disposal issues with redundant hardware	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Functionality**

Functionality is concerned with the way the IFMIS works and meets the demands of the users. It covers access and use and focuses on the integrated digital devices that are available to users. Access covers who, where and when users can access IFMIS.

	Yes	No	Somehow
1. Access is available to all appropriate users at any time ( 24 hours), from anywhere	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Access is available to all appropriate users at any time, from anywhere, with any suitable personal device	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Relevant security is built into access rights with a single log-on	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### **Safe use and security**

This section is concerned with how safe and secure the IFMIS environment is for users.

	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"/>