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SCHOOL OF COMPUTING AND INFORMATICS

A FRAMEWORK FOR DETERMINING THE LEVEL OF SUCCESS IN THE IMPLEMENTATION OF IFMIS: A CASE OF THE NATIONAL TREASURY

BY:

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Declaration

I declare that this research is my original work and has not been presented for award of a degree in any other University.

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Finally I can't forget my fell work workmates for giving an opportunity to serve them while at the same time pursuing my studies.

Dedication

This work is dedicated to my daughter

Abstract

The Government of Kenya through the Ministry of Finance has implemented IFMIS as its sole accounting system since the year 2005 and from then the system has not been able to fully provide the expected benefits of integrated financial planning, implementation and control of expenditure. Some of the developing countries that have excelled in implementing IFMIS have measured their success through benchmarking with other countries (Tanzania ,Uganda, Slovakia republic among others) i.e. there is no harmonized approach for evaluating integrated financial management information systems successful implementation. The aim of this study was to come up with a frame work for determining the level of success in the implementation of IFMIS. The study focused on the use of the system as at tool for delivering services to the citizens who include public and internal customers in the National Treasury.

The target population included internal customers who work in Accounts, Finance, Procurement, and Human Resource Ministries departments. The stratified sampling was employed where the four departments formed the strata. A total sample size of 121 was employed. Primary data was collected through use of semi structured questionnaire. From the results three of the model variables were not significant at 5% level of significance including information quality, service quality and cultural influences. On the other hand system quality which has sub-variables, performance , usability, social factors which has sub-variables trust and openness and external factors which include change in technology were significant predictors of IFMIS implementation success. Among the three moderating variables used i.e. age, gender and experience, only social factors moderated by gender external factors moderated by experience were observed to influence the relationship between IFMIS success .

The study provides broader recommendations as follows; Government should ensure e-government timescales are customized to current realities and all stakeholders must be motivated to a great extent and also undertake more awareness programmes to create positive stance towards e-government projects amongst stakeholders where IFMIS falls. Now that IFMIS is ready to de deployed to the counties a lot of sentization needs to be done to the users and all stakeholders for it to be successful. More research should be emphasized on those parameters that seems to have a positive impact but not significantly influence level of success in the implementation of IFMIS and impact assessment done not only limiting ourselves to internal customers but also external customers such as suppliers.

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List of Acronyms

IS	Information Success
IFMIS	Integrated Financial Management Information System
IT	Information Technology
GCCN	Government common core network
ICT	Information Communication Technology
GPAY	Government Pay system
CBK	Central Bank of Kenya
CCP	Content, Context, Process
ERS	Economic Recovery Strategy
FMIS	Financial Management Information System
ERP	Enterprise Resource Planning

CHAPTER ONE: INTRODUCTION

1.0 Introduction

Developing countries have invested investing heavily in information management systems in order to benefit from advances in information technology which enables firms or organization to redefine business processes and develop new business models (Ssemaluulu, 2012). Public institutions whose major aim is to provide services to the public are also major investors in information management systems to improve on service delivery. The main objective of implementing information management system is to improve on operational efficiency and effectiveness .Information and Communication Technology (ICT) adoption and other emerging technologies have made it a reality to most of the organizations in the 20th century.

As the information systems grow in organizations they become complex and sometimes hard to measure the success in their implementation and use and their effectiveness to an organization. Ifninedo (2006) noted that assessing the success of ERP in adopting organization is difficult because of their complex in nature and that adopting organizations have given up hope of evaluating the benefits of success due to lack of knowledge of that exercise.

Financial management information system (FIMS) refers to computerization of public expenditure management process including budget formulation, execution and accounting with the help of a fully integrated system (Diamond and Khemani, 2005).

With the creation of Kenya e –Government strategy (2004) which led to the establishment of Information Communication Technology Department across the Government Ministries and Departments, the financial management system has undergone major transformations from manual systems such as ledger, vote book and cash management. Integrated Financial Management System (IFMIS Kenya) system development started in the year 1998 but full deployment in the year 2003 as contained in the IFMIS re-engineering strategic plan 2011-2013.The infrastructural growth in terms of Local Area Networks, Wide Area Networks, and the Government Common Core networks plays a key role towards the implementation. Capacity building among staff has led to a tremendous achievement on the way Government conducts its financial operations and speedy implementation of the system and is key driver for any reform (Ministry of Finance, 2011). An academy of Integrated Financial Management System (IFMIS) has been set to carry out regular training on all emerging issues and to address the upcoming technologies (Ministry of Finance, 2011, Kenya).

Public financial management system was one of the key areas under the Economic Recovery Strategy (ERS) 2003-2007 to achieve fiscal sustainability and balance, restructuring and re-allocations   among others. According to Heidenhof, Grandvounnet, Kianpour and Rezaian (2001), the use of information technology is considered as a key financial reform agenda whose benefits include improved public transparency, expediting of transactions, improved efficiency of financial controls and expenditure management and improved consistency of information on checks and balances.

The introduction of integrated financial management system (IFMIS) has been promoted as the core driver to public financial reforms in the developing countries and that factors behind successful implementation include clear commitment by the relevant authorities on financial objective reforms, ICT readiness, project phased implementation as well as adequate resources and human capacity (Chene ,2009) The Government of Kenya through the Ministry of Finance has undertaken a number of reforms on budget formulation and execution, public procurement, revenue collection, payroll and pension, accounting and reporting and macro fiscal framework (Ministry of Finance,2011).

The Government not only focuses on efficiency and effectiveness but also ensuring accountability and interactive access of information on public expenditure by the public and improvement to service delivery to internal customers (employees). According to Hendriks (2012), IFMIS forms part of the financial management reform practices of developing countries globally and holds benefits such as effective control over public finance, enhance transparency and accountability and serves as a deterrent to corruption and fraud.

Initially the IFMIS system was skewed to a few areas of operation but with the technology advancement it has undergone re–engineering to improve on public expenditure management and address some of the gaps that were realized in the first phase of the roll out. The system has grown to include the latest technologies of electronic payments, e –budgeting and procure to pay among others.

The study researched on the existing parameters that have been considered while evaluating the success and implementation of IFMIS in Kenya and also identified the most appropriate parameters that can be used in the National Treasury.

1.1 Problem Statement

The Government of Kenya through the Ministry of Finance has implemented IFMIS as its sole accounting system since the year 2005 and from then the system has not been able to fully provide the expected benefits of integrated financial planning, implementation and control of expenditure (Kimwele ,2011). Despite the continuous heavy investment in infrastructure in terms of hardware and software, the stakeholders who include internal customers who include government employees and external customers such as suppliers have not realized the full benefit the financial management system was to address. The main objective of implementing an IFMIS like any other Enterprise Resource Planning (ERP) system is to improve on public expenditure and service delivery among others. According to (Mumo ,2013) the Government launched an IFMIS re-engineering initiatative in 2011 and more than a decade the sytem is still facing challenges and key among this is the human element.Though previous studies have been done (Peterson, 2006; Mugambi, 2011; Mwaniki ,2013) they were only able to identify the factors that have contributed to or influenced implementation of IFMIS but could not determine the parameters which can be used to measure the success of implementation. So many aspects ranging from social, organization and technological aspects have been considered which might not be the best to factors to measure the success and the level of implementation .Some of the developing countries that have excelled in implementing IFMIS have measured their success through benchmarking with other countries (Tanzania ,Uganda, Slovakia republic among others).i.e. there is

no harmonized approach for evaluating integrated financial management information systems successful implementation .

1.2 The objectives of the research are:

 a. To investigate existing parameters for evaluating the level success in the implementation of IFMIS

 b. Propose a framework for testing and evaluating the level of success in the implementation of IFMIS in the National Treasury

 c. Test the proposed framework at the National Treasury.

1.3 Hypotheses:

H1: System quality has influence on the level of success in the implementation of IFMIS.

H2: Information quality has influence on the level of success in the implementation of IFMIS.

H3: Service quality has influence on the level of success in the implementation of IFMIS.

H4a: Social factors have influence on the level of success in the implementation of IFMIS.

H4b: Social factors moderated by age have influence on the level of success in the implementation of IFMIS.

H4c: Social factors moderated by experience have influence on the level of success in the implementation of IFMIS.

H4d: Social factors moderated by gender have influence on the level of success in the implementation of IFMIS.

H5a: External factors (change of technology) have influence on the level of success in the implementation of IFMIS.

H5b: External factors (change of technology) moderated by age   have influence on the level of success on the implementation of IFMIS.

H5c: External factors (change of technology) moderated by experience have influence on the level of success on the implementation of IFMIS.

H6: Organization factors have influence on the level of success in the implementation of IFMIS.

1.4 Rationale

The research will benefit the National Treasury and the Government of Kenya at large by determining the extent to which the integrated information management system has improved the services and also business with its citizens. National Treasury will be able to monitor the level of implementation. It will also justify the need for re-engineering of the systems to address some of the gaps that exist since the implementation started and also scaling it to other Government agencies.

Now that we have the forty eighty governments the study will investigate whether there is viability of implementing fully to all of them. The research will to try finding the level of success despite the shortcomings that have been known to have existed and provide a framework to address them.

1.5 Scope of study

The study will focus on the use of the system as at tool for delivering services to the citizens who include public and internal customers in the National Treasury. Like in the previous studies where the concentration has been the account department, the research will focus on the account, procurement, finance department and ICT department where selected staff from each department will be interviewed.

1.6 Limitations of the study

Some of the limitations that will be realized in the course of conducting the research are areas follows, users who might not give the correct positions on the usage of the system. Not all the customers can be reached during the study and the literature review available will be limited to implementation of the system.

1.7 Definitions of terms

Information system: the mechanism providing the means for collecting, storing, producing, and distributing information serving the information needs of an organization, while supporting its operations, both at managerial and operational level, at planning and decision-making level for the organization.

Success: is a multidimensional concept that can be assessed at different levels (such as technical, individual, group, organizational) and using a number of not necessarily complementary criteria such as economic, financial, behavioral and perceptual.

IS success:

- The extent to which a system given certain resources and means, achieves the goals for which it was designed. or

- Measure as to whether the information system achieves the intended objective. For this study it will be used similarly to management information system.

Financial management information system: refers to computerization of public expenditure management processes including budget formulation, budget execution, and accounting with the help of a fully integrated system for financial management of the line ministries (LMs) and other spending agencies.

Information Communication Technology: an umbrella term that includes any communication device or application, encompassing: radio, television, cellular phones, computer and network hardware and software, satellite systems and so on, as well as the various services and applications associated with them, such as videoconferencing and distance learning.

Enterprise resource planning system: business management software that allows organizations to use integrated applications to manage the business.

CHAPTER TWO: LITERATURE REVIEW

2.0 Introduction

The Government of Kenya has been enhancing its financial management since 1997and part of the effort was to integrate all financial related issues into one system Integrated Financial Management System (IFMIS) aims at enhancing sharing of information in the Ministry of Finance and other Ministries and other departments Wanyama and Zheng (2011) . According to Diamond and Khemani (2005), developing countries are either manual or supported by old or inadequate application systems which have impacted on the public expenditure system. This has resulted to poor commitment of Government resources. The National Treasury is solely responsible for public control expenditure and hence Kenya is not an exceptional.

According to economic recovery strategy paper (2003-2007) ,improving reporting and accountability by establishing regular reporting of flows in and out of Government accounts and implementing Integrated information management system is one of the measures towards achieving expenditure reforms.(office of the President,2004)

The idea of Integrated Financial Management System (IFMIS) was thought in the year 1998 but implementation started in the year 2003. Establishment of e-Government under e-government strategy (2003) which led to the establishment of Information communication technology units across the Governments' ministries and agencies, Improvement on infrastructure, local area networks and wide area networks has contributed significantly towards implementation.

There existed different manual systems with no infrastructure and massive loss of public funds and lack of control of expenditure. The systems run on standalone mainframe computers operated by an individual. The fast technology advancement in the country such as the fiber optic is a major driver towards achieving the same. Establishment of Government Common Core Network (GCCN) connecting all the Government ministries and agencies has fulfilled the realization of the benefits of the integrated information management system at the National Treasury.

Integrated Financial Management System (IFMIS), is an information system that tracks and monitors financial transactions and summarize the financial information. An enterprise resource planning system with many modules not limited to general ledger, purchase order and account payables. The system started with just three modules of general ledger and limited to account staff only hence operating parallel with the manual system still operating (Integrated Financial Management System (IFMIS) re-engineering strategic plan 2011-2013). Muigai (2012) IFMIS can improve governance by governance by providing real time financial information of which IFMIS treasury works on a real time basis to provide solution to the customers facilitated by the infrastructural support. The Government Common Core Network comprising of fiber connection and high bandwidth of internet connection play a key role.

Other components that have contributed towards successful implementation of IFMIS are capacity building among staff business and technical, perception towards IFMIS by users. There has been regular training towards user on any new development to both supporters of the system and the users of the system. Legal frameworks such as the legislations in place such as the constitution, Finance Act have greatly moved IFMIS to a higher level and to the least the donor component which does not play a key role as such.

2.1 Features of Integrated Financial Management Information System (IFMIS)

Heidenhof et al, (2001) modern integrated systems have two key features namely uniform classification of accounts used for the budget and expenditure management data and communication and data exchanges capabilities across the system or a across the Local Area Network and Wide Area Network, regardless of technology platform within the system. According to Diamond and Khemani (2005) IFMIS has got three characteristics that distinguish with other information system as follows:

- It's a management tool and supports change.

- It should provide a wide range of non financial information and financial information for decision making. IFMIS provides timely, accurate and consistent information for decision making. Various reports can be generated by the various modules of the system.

- It is a system where all the participants need to access it.

IFMIS Kenya is not different however; it's differentiated in terms of operations where we have the business people and the technical group. The business people comprise the all those who interact with the system drawn from the various units while the technical group comprise those who man the system or ICT team.

2.1 Countries Experience in Implementation of IFIMS

Chene (2009) Russian countries such as Slovakia Republic and Kosovo have the best IFMIS system implementation attributed by the political will and commitment. The implementation started back in the year 2004 and but picked very fast compared to Kenya which started in 1998 and still has challenges. The countries didn't have a budget system neither a treasury system to manage the inflow of resources. The implementation was largely funded by donors such as USAID and CIDA to manage their resources they were channeling to those countries after recover from post conflict wars. Tanzania appears the most successful country in implementing IFMIS in agrophone countries. The factors behind successful implementation were initial review of the public expenditure review process, reform process in the ministry of finance and capacity building, enabling legislations, donor funding and political goodwill trickling down to management level. Diamond and kheman (2005) the benefits of implementing IFMIS have been extensive ranging from restoring expenditure control, transparency and accountability.

Ethiopia had its own unique case in implementing IFMIS where it was realized that lack of political goodwill did not hamper the implementation of the system.

IFMIS implementation in South Africa is a new project and forms part of the broader financial management reforms which started in 1994 (Hendriks) 2012.Its objective was to enhance the integrity and effectiveness of expenditure management and performance reporting. Several traverse systems existed until the year 2009 when the Ministry of

Finance resolved to replace them with a single system. The system is under implementation under phases and modules both the national and provisional departments.

In Kenya the implementation has started but has raised a number of issues especially the engagement of internal and external audit inadequacy resulting to limited quality control assurance. The process of implementing IFMIS has faced challenges emanating from infrastructural support and also the institutional framework in place. Integrated financial management system is intended to automate key business functions and achieve full automation of the manual processes. According to Integrated Financial Management System (IFMIS) re-engineering strategic plan (2011-2013) accounts payables and general ledger systems are fairly implemented. Still captured IFMIS was meant to automate and seamlessly integrate key business functions, many key activities are carried outside the system such as approval of requests for procurement and payments, printing of purchase orders and payment of vouchers.

2.2: Challenges in measuring success in adoption/implementation of IFMIS

Imbuye (2013) where the net benefits of IFMIS in Government cannot be disputed there are a number of concerns about its success and the strategies adopted in its implementations of the system in the line ministries. Also Hendriks (2012) the size and complexity of IFMIS posses a significant challenges and risks that go beyond technological risk of failure. Common challenges that face the developing countries include the following:

2.2.1: Staff capacity

Staff with the relevant technical training capacity is a key factor in implementing any information management system. IFMIS requires staff with technical skills such as developing and administering the system. Diamond and Khemani (2006) lack of staff has been blamed for the slow implementation of IFMIS in countries like Ghana while in a country like Tanzania staff capacity is one of the main contributors of success . In Kenya the situation has changed over the years but not fully since the IFMIS system is still under consultancy who give much of the technical advice required on a daily basis. Poor pay of IT professional in the Government has contributed towards that. The Ministry of Finance spends a lot of money in training of IT personnel but the staff leaves the service for good packages in the private sector. Also there has no career progression for the IT staff and hence de-motivated. The internal Auditors still do pre-audit at IFMIS Ministry and the assurance they give is already in the system which is supposed to assist in auditing in computerized systems.

2.2.2: Lack of clarity ownership

Diamond and Khemani (2006) in agrophone African countries it's not clear whether the Ministry of Finance budget department or Accountant General Department is in charge of Financial Management Information system. Though a problem in most developing countries in Kenya the roles of the budgeting department is well defined and there is no overlap as to the functions .the budgetary department is responsible for allocating resources while the Accountant general department is responsible for utilization of funds.

2.2.3: Organization culture

Indeje & zheng (2010) organization culture can support linkages between technology adoption and organization growth and hence can be a critical factor in success of any implementation of information system. Any information

systems require the goodwill of the heads of department and support. Most of the heads have norms and culture in which make it hard to implement information systems

2.2.4: Infrastructure and system complexity

Due to the heavy investments involved in infrastructural development for IFMIS most of the activities relating to networks, hardware and software are carried out by the Ministry of Finance. There have been issues of network and system down which sometimes make the user feel not comfortable with the system. The system is undergoing re-engineering so fast which makes the users feel its complexity compared to the pace of training. System interface between IFMIS and other related interface such as the electronic payment is still a challenge as they run independently and no seamless integration.

2.2.5: Institutional Challenges

Failure to undertake parallel reforms required by IFMIS is one the reasons that impede successful implementation Chene (2009). Issues that fall under this category include the legal framework in place such the Constitution, Finance Act, Procurement Act among others. One of the challenges why the procurement module is not fully implemented in IFMIS is the way it has been defined in the procurement Act.

2.2.6: Political goodwill

Most of the systems fail because of clear guidance by the top management and especially resistance is given a chance. Change management becomes an issue which is very important aspect in any reform.

2.3: Theoretical framework considered by various scholars while evaluating success and implementation of information systems such as IFMIS

Peterson (2006) noted that success of IFMIS depend upon strong high level of commitment and Support and such commitment is not always to be found in developing countries where limited technical competence at the top and reluctance to change may all be factors.

According to Mugambi (2011) factors that saw integrated financial management information system succeed are effective training of technical staff, minimum resistance to change and commitment by the senior management. The research went further and found that funding, legal and regulatory framework and ICT infrastructure were catalytic in the implementation of IFMIS and a study should be carried out to establish whether IFMIS has been able to achieve for Governments.

Despite its introduction IFMIS has not achieved its key objective which led to re-engineering of the same in the year 2011 (Mwaniki, 2013). He further showed that organization capacity and organization change influenced the implementation and a number of concerns as well as strategies adopted in implementation of the system inline ministries .Use of sabotage and resistance ,lack of management support ,capacity technical knowhow found to be low due to the hurriedly implementation of the system and recommended that Government should employ change.

2.4 Information Success

Despite the large number of empirical studies in information success, what exactly is meant by "IS success has never been clear nor research found agreement (Garrity and Sanders, 1998). (Agourram & Talet,2006) Despite many attempts to model success (Delone and McLean, 1992, 2003), IS success definition and measure is still problematic for many factors. According to (Molla and Licker, 2001) information success is a multidimensional concept assessed at different levels such as technical, individual and group and not necessary using a complementary criteria. Below are the various models that have been used in the context of information of information sys and e-government projects where IFMIS falls. According to Iran and Love,(2008) a major challenge for IS evaluation is to develop framework that that are sufficiently generic to be applicable to a wide range of circumstances , but also sufficiently detailed to provide effective guidance.

2.4.1 Content, Context, Process Approach

The CPP was introduced by Pettigrew (1985) and reviewed by Symons (1991a) and proposed it for evaluation of IS evaluation in context. The model was modified again by Stockdale (2006) to include more factors under the context approach.

Divided into elements of:

Content- what is being evaluated.

Context- why and who evaluate information system evaluation.

The context approach has the internal and external environmental factors that influence the evaluation of the information system.

Process - how and when evaluation is being done.

It allows for the social, political and economic consequences of evaluating by examining the interplay of the elements including the many stakeholders perspective that influence the outcome of evaluation.

CCP model has two advantages .There is widespread of acceptance of CCP among leading contributions to IS evaluation theory and secondly the concepts are broad enough to accommodate the myriad ideas and arguments while providing the parameters for reviewing them. The framework advocates for the environment surrounding the information systems. IFMIS being one of them information systems can be evaluated using the content, context and process approach because it's not purely technical but has elements of social and political issues which should be accommodated under the context level of the internal environment .
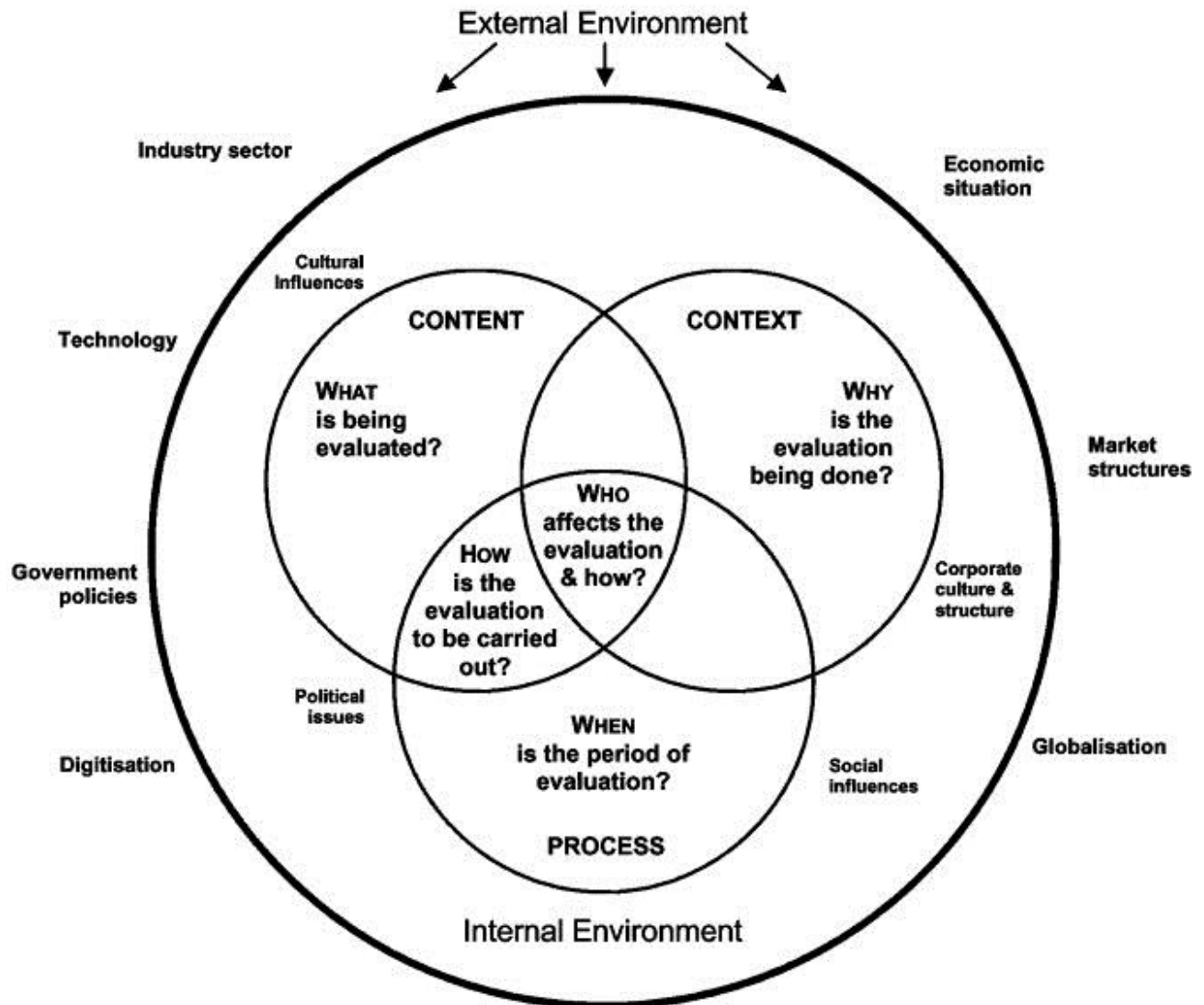
Figure 2.1: CCP model (Stockdale and standing 2006)

2.4.2: Proposed E-government Evaluation Criteria by Alshawi, Alahmary and Alalwany

(Alshawi, Alahmary and Alalwany, 2007) information systems evaluation and e-government evaluation are unable to reveal the full of e-government projects without considering the perspectives of all major stakeholders. They proposed an evaluation factor classified in two three groups as follows technical, economical and social.

2.4.2.1 Technical Group

Performance and accessibility were considered the first evaluation factors where performance measurement refers the measurement on a regular basis of the outcome of the services and efficiencies. Different ways to measure performance exists. Reilly et al. (2003) claims that performance in e-government services can be measured by the degree it can enable citizens to personalize information and services according to their own needs and circumstances and by how fast it can facilitate access to frequently used services.

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Wang et al., (2005) based their evaluation model of the performance by accessing the transaction between the citizen, the task the citizen is attempting to complete and the government website regarding the information task. Most of e- government services are going online and hence accessibility of the government websites is important. Most of the researchers have ignored this factor .However, if were to consider systems like IFMIS which online accessibility plays a role in it and it's supposed to be measured.

2.4.2.2 Economic Group

The economic group contains the traditional method of evaluating the information system which is limited the cost benefit analysis method such as the Net Present Value, Return on Investments, payback period. Despite the limitations they are still useful as evaluating factor by comparing the direct cost and benefits. However, this may be useful where we are interested with the total benefits which may be measured in terms of profits. The main aim of the Government is to improve on service delivery and hence this will have a little or no effect at evaluating information systems.

2.4.2.3 Social Group

Openness, trust and perceived ease of use and perceived usefulness were chosen for the third group of evaluators. Openness can be defined in terms of the amount of information that government organizations provide to the citizens and the value of the information as tool for citizen to see what government organizations are doing.
Trust is another evaluating factor under social group. In e-government context where IFMIS falls is associated with privacy and security. Citizen's trust requires maintain security in handling of information, protecting the privacy of citizens and assuring that their personal information will be treated with confidentiality.
Perceived ease of use and perceived usefulness forms the third issue in the social evaluation factors. Davis (1989) defines perceived usefulness as the degree to which a person believes that using a particular system would enhance his or her job performance and perceived ease of use as the degree to which a person a person believes that using a particular system would free of effort. Perceived usefulness and perceived ease of use are combined as one issue perceived ease of use. Perceived ease of use is predicted to influence perceived usefulness, since the easier a system is to use the more useful it can be.

2.4.3: Technology Acceptance Model

Technology Acceptance Model (TAM) is originally proposed by Davies in 1986.The theory models how users come to accept and use technology. The model suggests that when users of an information system are presented with a new technology a number of factors influence how and when they will use it notably the perceived usefulness   and perceived ease of use (Kim et al., 2009)

Perceived usefulness which measures the degree to what a system enhances the job performance.

Perceived ease of use which measures the degree to which a user believes that by using the system would relieve him some effort.TAM is said to be a valid, robust model of user to predict user acceptance.

Technical Acceptance Model demonstrates on how the information system is determined by the behavioral pattern intention and the behavioral pattern determined by person's attitude towards using the system. According to Davis the attitude of an individual is not only the factor that determines his use of a system but is also based on the impact on the performance. For example if a user who may be an employee does not welcome an information system the probability that he or she will use it is high if he or she perceives that it will improve his performance at work.

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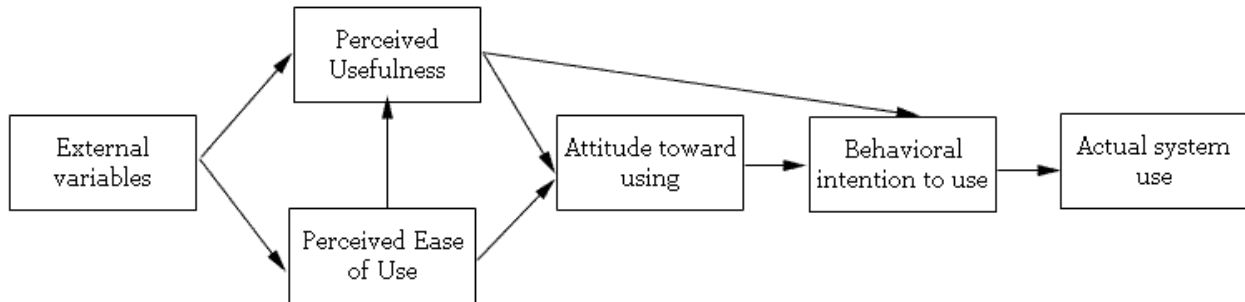
Figure 2.2: Technology Acceptance Model version 1 Davis (1989)

2.4.4: Delone and Mclean's Model of IS Success

The model is interpreted as follows: both system quality (technical quality) and information quality (output quality) affect both use and user satisfaction. Amount of use can affect user satisfaction and vice versa either positively or negatively. Use and user satisfaction are antecedent to individual impact which impact on organization of organization impact. (Daoud and Triki, (2013 cited in Mushyat 2000 and Ismail 2009) in their literature review identified Delone and McLean's model is used in accounting information systems . He went further and showed that this model is valid in one dimensional and can be applied in any accounting information systems context.

The D&M model of IS success has informed a number of previous studies such as Garrity & Sanders, 1998). The 1992 model has been criticized because of mixing the variances and processes models in one package.
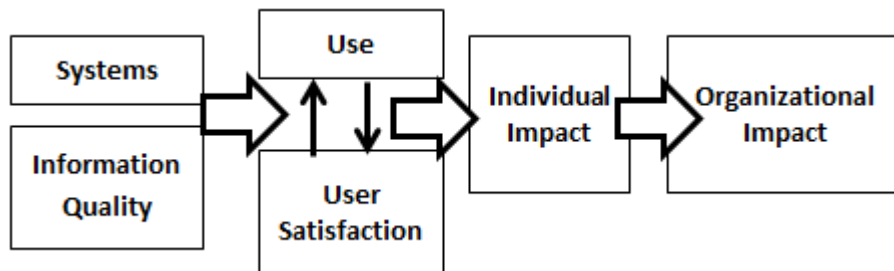
Figure 2.3 Delone and Mclean's Model of IS Success

  source: (**Delone and Mclean**, 1992: 87)

2.4.5: Gable et al.'s., 2003 model

Gable et al., 2003 were among the first authors to specify the dimensions of information systems success in an ERP context. They developed a model that redefined the model developed by Delone and McLean (1992) where they eliminated user and user satisfaction in their model. The dimensions retained are information quality, ERP system quality, individual impact and organization impact. Both Delone and McLean's (1992) and Gabble et al., 2003 have ignored the contextual influences Ifinedo, (2006). They recommended focusing not only on information systems success and but providing of information success external factors such as the organization structure. IFMIS Kenya is an accounting ERP system and hence qualify also be evaluated using the Gable et al., 2003 model. To consider factors such IFMIS system quality and information quality and other organization factors. However the model was used in the private organizations and not in the public sector.
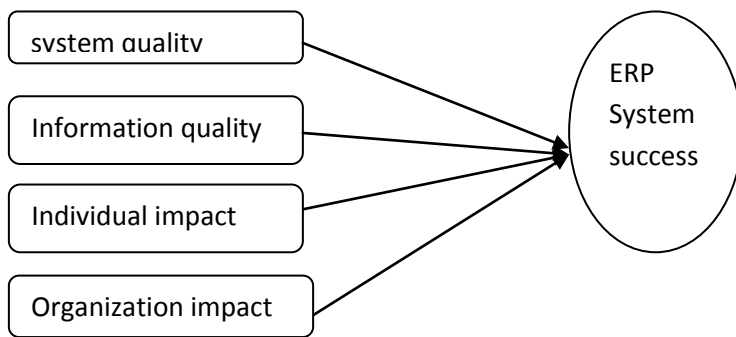
Figure 2.4: Gable et al., (2003) ERP system success measurement model

2.4.6: The Updated Delone and McLean's 2003 Model

The 1992 updated model was enhanced to support multi dimensional aspects that are integrated an IS success. Delone and McLean updated there IS successful models to include another dependent variable known as service quality
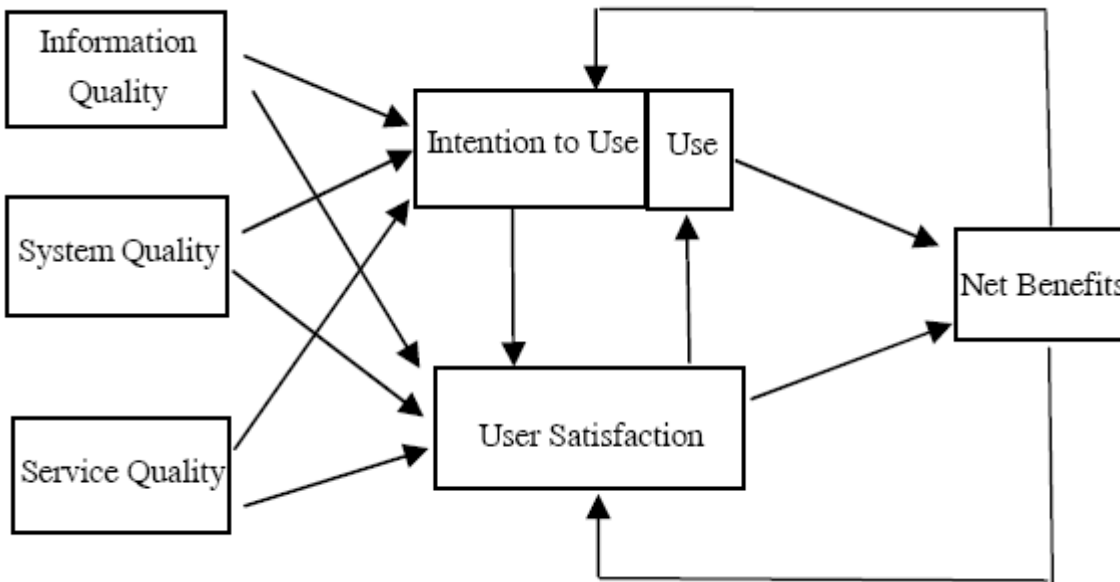
Figure 2.5: The Updated Delone and McLean's 2003 Model

Many empirical studies done by the information researchers have supported the updated Delone and Mclean updated model .The same realized and encouraged the Government and Private Authorities to include measures for information quality, system quality, service quality, system use, user satisfaction and perceived net benefits in their techniques of information system success, Zaied (2012).

The Government and corporate organizations are investing heavily in e-commerce applications which are internet based platform but faced with a situation on how to evaluate their success. The updated IS success model has been adapted to come up with e-commerce IS success model Zaied (2012).IFMIS system is an online system and hence qualify to be an e-commerce application. A lot of information can be borrowed from this where the primary system users are external customers or suppliers or the government employees. They use the system to make buying or selling and execute business transactions. The decisions made will impact the individual users, organizations and even the economy at large.

The only difference is that the system quality and information quality in the Delone and McLean model have been replace by e-commerce and content respectively. User satisfaction is also replaced with customer e-commerce satisfaction.

System quality measures the desired characteristics of an e-commerce system such as usability, availability, reliability, adaptability and online response time.

The content issue refers to the web content which should be completing, relevant easy to use and secure. In our proposed framework for IFMIS this can be IFMIS website.

Service quality refers to the support given the service provider whether delivered by the IS unit, organization or outsourced from an internet provider. In our proposed framework this can be the ICT unit of IFMIS department at Treasury and services provided by Oracle Corporation.

Usage may refer to navigation to the site to look for information or executing a transaction.

User satisfaction or customer e-commerce satisfaction refers to the customer experience through information retrieval, purchase, payment and other service available.

Net benefit which capture the impacts of e-commerce on customers, suppliers, employees and organizations.

*2.5 Comparisons of the various success models

Table .1 below shows the summary of the comparisons of the various models five information success models were reviewed in order to come with a model that can almost fit IFMIS Kenya. According to(Peter et al., 2008) the following criteria's can be used to analyze the various models ,users to have confidence with the theory where it has to be validated and tested ,application area which represent the flexibility of the theory or the model, simplicity and whether it captures all the factors relating the IS system being studied .

Critical analysis by the authors of the major approaches revealed that although each of these has its strengths and merits, none of them has covered the important spectrum of the main factors that affected IFMIS evaluation or IS success evaluation.

 The context, content approach has got most of the factors that can be used to measure information success or evaluating IT projects. However it's detailed with so many factors some of them are not useful as to the evaluation of IFMIS like the political issues. The model is well suited to evaluate systems in corporate organizations and not Government institutions.

Technical Acceptance Model is widely accepted as good model for measuring or evaluating information success however it considers only few factors which do not adequately qualify to form the basis for evaluating larger systems such IFMIS. However the factors are well captured in other models such as the criteria used by Alshawi under the social group factors.

 Updated Delone and Mc Lean model (2003) has six multidimensional factors which are used to evaluate the information success. According to (Petter et al., 2008) early attempts to define information systems success were not successful due to the complex nature and multidimensional nature of information success. The model has been modified by Delone and McLean by replacing the constructs such as the organization and the individual impact with net benefits at multi-level analysis .these has made the model to be applied to whatever of level of analysis considered by the researcher. The factors mentioned here such as system quality, system information and service quality, usefulness satisfaction and the net benefit can be fit well in evaluation of IFMIS success. All the characteristics used in the system quality such as the flexibility of the system, reliability, response time, ease of use all qualify in evaluating IFMIS. Information quality which includes the system output such management reports should be accurate and relevant and understandable.

Service quality especially in IFMIS is very important factor where we have key players such as IFMIS department, IT department that support IFMIS and the internet service provider who provide the connection. However, the model lacks the element of social factor which includes trust, openness and perceive usefulness.

Table 2. 1: comparison of the various IS success model and the Gaps

Parameters Considered	IS SUCCESS MODELS					
	Context content process approach	**Alshawy, Alahmary and Alalwany, 2007**	**Technology Acceptance Model**	**Deloine 1992**	**Gable et al ,2003**	**Deloine 2003**
Strength	Well tested and Validated however the model has considered so many factors that apply to corporate level and the public sector.	Also well and validated tested and Validated	Tested and Validated	Tested and validated	We tested and validated	Tested and validated
Simplicity	Complex	Simple to use	Simple to use	Simple to use	Simple	Simple to use
Flexibility	Flexible –provides a detailed constructs to be evaluated compared to Deloine and McLean 2003	Flexible – provide three detailed major factors	Not flexible	Not flexible	Flexible	Flexible – provides a construct of six multi-dimensional factors
Captures all factors related to IFMIS Kenya	Not all the factors have been captured	Not all the factors have been captured	Few factors captured and cannot fit well in IFMIS Kenya	Not all the factors have been captured	Not all the factors have been incorporated	Not all the factors have been captured.

2.6: Proposed Framework

IFMIS offers services to Government ministries, internal customers who include government employees, external customers who include suppliers. The system is also supposed to link to the Budget system and the Government pay system GPAY system in Central Bank of Kenya CBK.

According to Stockdale and Standing (2006) a major challenge for IS evaluation is to develop frameworks that are sufficiently generic to be applicable to a wide range of applications but also sufficiently provide effective guidelines. They also noted that Delone and McLean 2003 is the most tested model. The model has been used in evaluating information systems from the public sector with a few modifications (Zaied, 2012). From e-government perspective on implementation of the various systems developed and implemented the model is very useful by considering the first three dimensions system quality, information quality and services quality.

System quality will have desirable characteristics of the system such as performance, usability, reliability accuracy among others.

Information quality represents the desirable output of the system and will have the following characteristics such as relevancy, accuracy and understandability which will be evaluated.

Service quality refers to the degree of inconsistencies between service receiver's expectation of the service and the actual service received and will have the following characteristics IFMIS Support, IT support, network up/down time.

User satisfaction should be used as an overall measure according to (Gabriel et al., 2003) and hence not considered. However the model does not provide all the factors that can be used to evaluate the successful implementation of IFMIS Kenya.

Social group factors refer to the ethical factors that affect the implementation of the information system. They include openness and trusts are very critical in evaluating information system. This can borrowed from (Alshawi et al., 2007) where any information system must address the issues of privacy and security.

According to (Wanyama and zheng, 2011) introduction of new information system changes the way operations are carried out and results in creation of a new organization Culture .

Organization culture is the workplace environment while using the systems. People have different attitude towards implementation of any information system as it changes the way they operate and changing them might take time. IFMIS Kenya is not an exception to organization culture and from an experience perspective people had an altitude of their jobs being redundant .organization culture is one of the factors in the context level of the CCP model of evaluation which can fit in the evaluation of IFMIS Kenya. No other model has factored the culture aspect .CCP model cannot be holistically being applied in the proposed IFMIS success model as suits at corporate level.

IFMIS Kenya runs on oracle based platform which keeps changing with the emerging technologies in the market. To keep pace with the changes the National Treasury is supposed to upgrade the system and at the same time building

the capacity f the users. According to Stockdale (2005) political influence is one of the external factors under the context component under CPP model that affect the implementation of information systems. Though it may little significance on IFMIS Kenya it should not be ignored.

Most of the reviews that have been done have concentrated in developed countries where the level of the ICT skills is high or African countries which are ahead of Kenya in terms of IT technology. Hence the age and experience the users have in using the system will be moderating factors.

Figure 2.6: proposed IFMIS Success framework
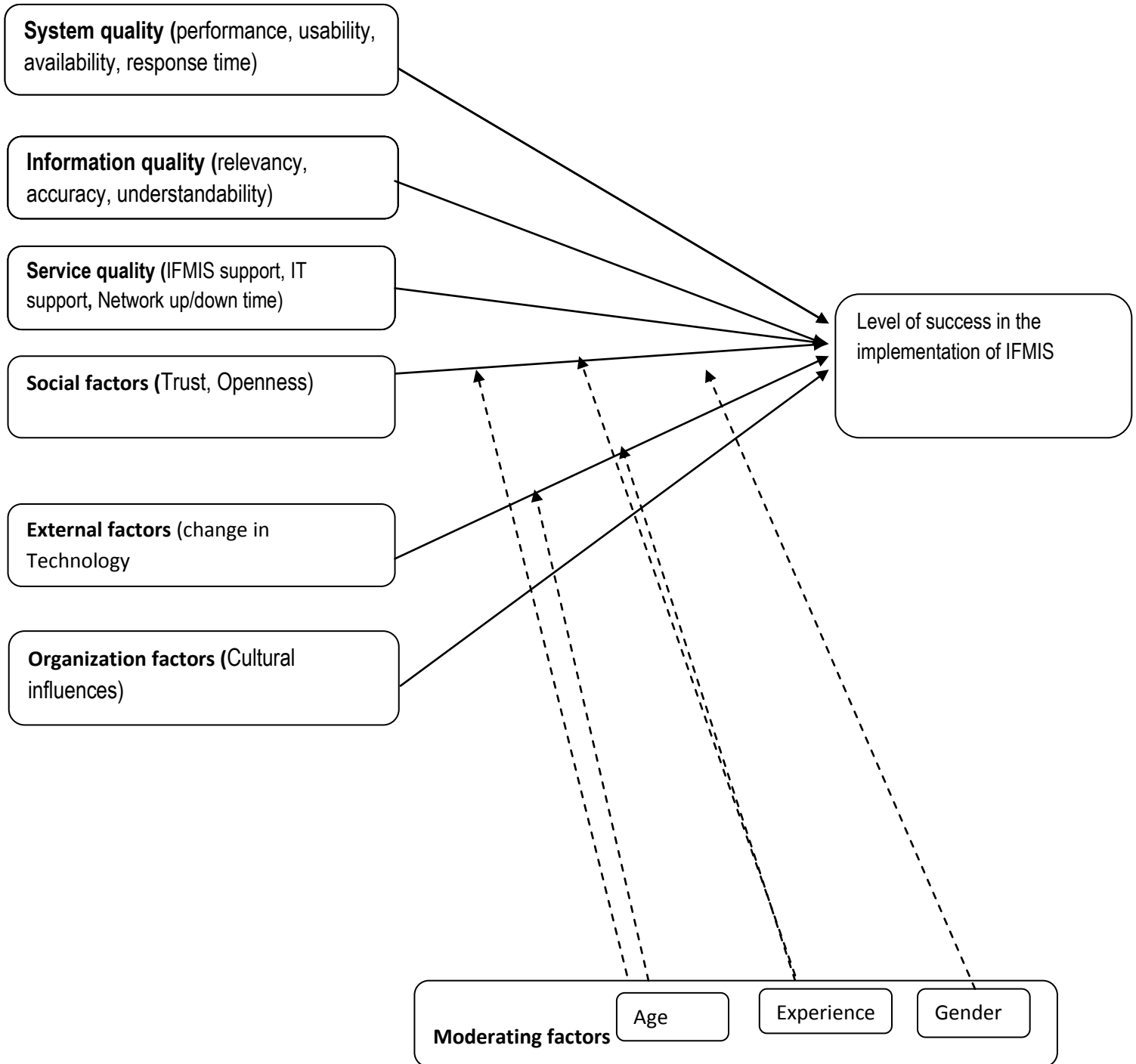
Table 2.2: A construct of the parameters to be evaluated

Factor	Evaluation parameter	Description
System quality	Performance	Measured by the time taken to complete a transaction or to respond Level of satisfaction from the customers Errors that occurs while using the system
	Usability	Interface efficient-navigating from one window of the system to another User friendly-quick use to query data Easy to learn Integrating to other systems such as GPAY systems in CBK and budget. Complexity of the system-easy to accommodate changes or not
	Availability	Services availability throughout No of times a system is up and down.
	Respose time	The time taken to respond when an interface is opened.
Information quality	Relevancy	Level of satisfaction from the customers
	Accuracy	Completed transaction without errors
	Understandability	Time taken to make decisions on completed transactions
Service quality	IFMIS support	Frequency or number of times users call IFMIS department for assistance
	IT support	Frequency or number of times users call IT department for assistance
	Network up/downtime	Frequency or number of time the network goes down in day
Social factors	Trust	Level of security in handling information and protecting details of suppliers and employees.
	Openness	Level of transparency and accountability enjoyed using IFMIS
Organization factors (Internal factors)	Organization culture	Altitude users have towards IFMIS
External factors	Change in technology	The time it takes to adapt to the new changes whenever a system changes.
Level of success in the implementation of IFMIS	User satisfaction	The overall level of satisfaction by the users of IFMIS Kenya

CHAPTER THREE : METHODOLOGY

3.0 Research design and Methodology

Kothari (2004) research design is defined as the arrangements for collection and analysis of data in a manner that aims to combine relevance to the research with economy in procedure. This study will employ crossectinal survey design. The research design to be used will provide quantitative evidence through data collection analyzing and reporting on the level of success in the IFMIS implementation. The research design will help plan in advance planning of the methods of collecting data considering resources given such as time and money. It's designed such the maximum duration for the entire should be one month and not less than two weeks. Questionnaires where required are to be printed in advance and handed to the participants to be collected towards the completion of the exercise. Those received after the maximum time has elapsed they will be considered non-responsive.

3.1 Target Population

Population is defined as a complete set of individuals or objects with some common observable characteristics (Mugenda and Mugenda, 1999). It's that population that the researcher is going to generalize the results. The National Treasury has a staff population of approximately six hundred who use and support IFMIS. Majorities are accountants and ICT officers, finance officers, procurement and human resource officers form the minorities of the IFMIS users. Other staff members are served through the system especially during payment of their salaries and other income that may accrue in the course of their duties. The target population will include internal customers who work in Accounts, Finance, Procurement, and Human Resource. There will be representation to all the ministries served with IFMIS Kenya.

Table 3.1: Distribution of IFMIS users to all the Ministries

	Ministry	Total No Of Staff In Various Departments Who Use or support IFMIS				
		Accounts	Finance	Procurement	Human resource	ICT
1	Labour Social Security And Services	19	3	3	2	5
2	Defense	9	1	1	1	3
3	Interior and Coordination	35	5	6	1	3
4	Devolution and planning	32	3	6	3	9
5	Agriculture Livestock and	35	6	6	3	6

	Fisheries				
6	Health	30	2	5	2	5
7	Mining	8	1	2	1	3
8	Environment water and Natural Resources	32	5	4	3	11
9	East Africa Affairs Commerce and Tourism	16	3	3	3	8
10	Industrialization & Enterprise Development	17	4	4	3	7
11	Transport and Infrastructure	22	4	5	2	6
12	Land housing and urban development	16	4	4	2	7
13	Education ,science and Technology	30	6	4	2	6
14	National Treasury	10	7	3	2	5
15	Foreign Affairs and International Trade	8	2	2	1	3
16	Information Communication Technology	12	2	2	1	4
17	Energy &Petroleum	10	3	2	2	3
18	Sport, Culture and Arts	10	2	2	1	4
Total		351	63	64	35	98

Table 3.2: Total number of staff who use or support IFMIS from all the Ministries

Departments	Accounts	Finance	Procurement	Human resource	ICT
Number of staff	351	63	64	35	98

3.2 Sampling Design

Kothari ,(2004) a sample design is definite plan for obtaining a sample from a given population. It refers to the techniques or the procedures to be adopted in selecting items for the sample. The population is going to be sampled from the whole population ensuring equal representation from the seven categories of users of the system who use or interact with the integrated financial management system on daily basis.

Since the number of users who interact with the system is approximately 600 a 20% representation of the population will form a good sample size according to Mugenda and Mugenda (2003). While designing the sample we are also going to consider the parameters of interest. Other factors to consider are the budget constraint since the amount to be allocated may not be adequate and timeline of one month. Lastly the sampling is going to be minimal and should also be of priority.

Table 3.3: Population to be sampled

Department	Total population	% representation	Population to be sampled
Accounts	351	20%	70
Procurement	64	20%	12
Finance	63	20%	12
Human resource	35	20%	7
ICT	98	20%	20
Total	611	100%	121

3.3 Developing research instruments and procedures

The data to be used will be primary data to be collected through the questionnaire and partly by interviewing the users. Each item in the questionnaire is to be designed such that it will address specific objective, research question or hypothesis of the study. The questionnaire is structured such that it has two sections with twenty nine questions to be answered. Section a will just the profile of the user or customer details while the other sections will address the objectives or the hypotheses of the study. The questionnaire is to be pretested to ensure that the questions are understood by the respondents, reduce inadequacies and biasness.

3.4 Limitations of the Methodology

One of the challenges likely to be experienced while using the questionnaire method of data collection will be, some of the respondents might ignore some of the questions that affect their areas .Also the respondents may feel limited to answering subject to the researcher choices given where they may have a different opinion or their own feeling.

To overcome this will the above problem we will try to reach as many respondents as possible in order to have a good representation .Another solution towards this will be to administer the questionnaire through interview method or face to face encounters where I can seek a more friendly relationship with the respondents prior to conducting the interview.

Table 3.4: Research design

Hypothesis	Variable	Indicator	Measurement	Measurement scale	Study design	Data collection tool	Expected no of respondents	Data analysis
	Independent variables							
The influence of system quality on the level of success in the implementation of IFMIS	System quality	Rating of system quality	Users who are using IFMIS system in the National Treasury	Ordinal (likert scales)	Exploratory research (survey)	Questionnaire	121	Chi-square test
The influence of information quality on the level of success in the implementation of IFMIS.	Information quality	Rating of information quality	Users who use information provided by IFIMS in the National Treasury	Ordinal (likert scales)	Exploratory research (survey)	Questionnaire	121	Chi-square test

The influence of service quality on the level of success in the implementation of IFMIS	Service quality	Rating of service quality	Users who IFMIS in the National Treasury	Ordinal (likert scales)	Exploratory research (survey)	Questionnaire	121	Chi-square test
The influence of social factors on the level of success in the implementation of IFMIS	Social Factors	Rating of the social factors	Users who are using IFMIS in the National Treasury	Ordinal (likert scales)	Exploratory research (survey)	Questionnaire	121	Chi-square test
The influence of social factors moderated by age ont the level of success in the implementation of IFMIS.	Social factors and age	Rating of the social factors and age	Users who are using IFMIS in the National Treasury	Ordinal (likert scales)	Exploratory research (survey)	Questionnaire	121	Linear regression
The influence of social factors moderated by experience on the level of success in the implementation of IFMIS.	Social factors and experience	Rating of the social factors and experience	Users who are using IFMIS in the National Treasury	Ordinal (likert scales)	Exploratory research (survey)	Questionnaire	121	Linear regression
The influence of social factors moderated by gender on the level of success in the implementation of	Social factors and	Rating of the social factors	Users who are using IFMIS in the	Ordinal (likert scales)	Exploratory research	Questionnaire	121	Linear regression

IFMIS.	gender	and gender	National Treasury		(survey)			
The influenceof external factors (change in technology) on the level of success in the implementation of IFMIS.	External factors	Rating of the external factors	Users who are using IFMIS in the National Treasury	Ordinal (likert scales)	Exploratory research (survey)	Questionnaire	121	Chi-square test
The influence of external factors (change in technology) moderated by age on the level of success in the implementation of IFMIS.	External factors and age	Rating of the external factors and age	Users who are using IFMIS in the National Treasury	Ordinal (likert scales)	Exploratory research (survey)	Questionnaire	121	Linear regression
The influence of external factors (change in technology) moderated by experience on the level of success in the implementation of IFMIS.	External factors and experience	Rating of the external factors and experience	Users who are using IFMIS in the National Treasury	Ordinal (likert scales)	Exploratory research (survey)	Questionnaire	121	Linear regression
The influence of the organization factors on level of success in the implementation of IFMIS	Organization factors	Rating of the organization factors	Users who are using IFMIS in the National Treasury	Ordinal (likert scales)	Exploratory research (survey)	Questionnaire	121	Chi-square test
Dependent Variable								

To identify the key independent variables that affect level of success in the implementation of IFMIS	Level of success and implementation of IFMIS	Rating of the level of success and implementation of IFMIS	Users who are using IFMIS in the National Treasury	Ordinal (likert scales)	Exploratory research (survey)	Questionnaire	121	Linear regression model

3.5 Research Instruments' Reliability and Validity

3.5.1   Instruments' Reliability

Reliability is the measure of the degree to which a research instruments yields consistent results or data after repeated trials(Mugenda and Mugenda,1999) A pilot study was conducted on a few personnel based at the Ministry of Labour to measure the validity and reliability of the research instrument. Those selected for piloting were not selected again for the main study.

The reliability (internal consistency) of the collected data in this study was assessed by calculating the Cronbach's Alpha coefficient. Although several measures of reliability can be ascertained in order to establish the internal consistency of an instrument, this method is considered to be the most general form of reliability estimation. In this method reliability is operationalized as internal consistency, which is the degree of inter–correlations among the items that constitute a scale. An alpha value of 0.60 and 0.70 or above is considered to be the criteria for demonstrating internal consistency of new scales and established scales respectively.

3.5.2 Instruments' Validity

(Mugenda and Mugenda ,1999) Validity refers to the accuracy and meaningfulness of inferences which are based on results. There are three ways of establishing the validity of a research instrument, that is, construct ,content and criterion –related evidence.
This study adopted both construct   and content evidence validity. To ensure content validity, the questionnaire was subjected to a panel of peers to assess whether each measurement question in the questionnaire is essential, useful or necessary.

3.6 Data analysis

After the questionnaires have been administered and responses given they will be checked for consistency accuracy and uniformity. Any non-responses are going to be addressed for example if they exceed 25% then they can be discarded . All analyses were done with the aid of Statistical Package for Social Sciences (SPSS V. 20). For easy management and longevity of the data, it was captured in Ms-Excel 2007 windows. All data was entered and verified after effective coding. Data was then be scrutinized in relation to the objective of the study, otherwise with a potential abundance data; vast numbers of irrelevance summaries would be produced. Analysis was majory descriptive in nature, however inferential statistics was also employed to test the hypotheses of the study. Descriptive statistics aimed at identifying the pattern of the data and consistency of the responses in each of the results from the survey. Results were then presented in tables and graphs.

4.0 Introduction

The study targeted a sample size of 121 respondents from which 117 filled in and returned the questionnaires making a response rate of 96.7%. The characteristics of the respondents sampled are presented in the first part of this chapter. The second part involved descriptive statistics of factors determining the level of success in the implementation of IFMIS.

4.1 Profile of the sampled respondents

4.1.1 Characteristic of the respondents

Table 4.1 presents the gender of the respondents who participated in the study. Majority of the respondent (55.1%) were males whereas 44.1% of the respondent were females, this is an indication that both genders were involved in this study and thus the finding of the study did not suffer from gender bias.

The level of the education can affect the efficiency of employee. The researcher sought to establish the highest level of education reached by the respondents who took part in the study. The level of education shows whether the respondents understood the concept under study. Majority of the study respondents had a diploma (43.2%) while a good number (34.7%) of them had a degree. A few of the respondents (8.5%) were also reported to have masters degree while the remainder 13.7% had certificate.

Duration of employment affects the experience of the respondents. This has a direct influence on the information given by the respondent. Almost half (43.2%) of the respondents had been in their department for more than 5 years.

Table 4. 1: Respondents profile

	Frequency	Percent
Gender		
Male	65	55.1
Female	52	44.1
Highest academic Qualifications		
Master	10	8.5
Bachelor	41	34.7
Diploma	51	43.2
Certificate	15	13.6
Department you work with		
HRM	8	6.84
Account	56	47.9
Finance	24	20.5
Procurement	13	11.1
ICT	16	13.7

How long you have worked in the department?		
2 years and below	31	26.3
3-5 years	35	30.5
5 years and above	51	43.2

4.2 Level of success in the implementation of IFMIS

Respondents were asked to state whether they had computer skills where majority (86%) reported to have the skills.

Figure 4. 1: Do you have computer skills?
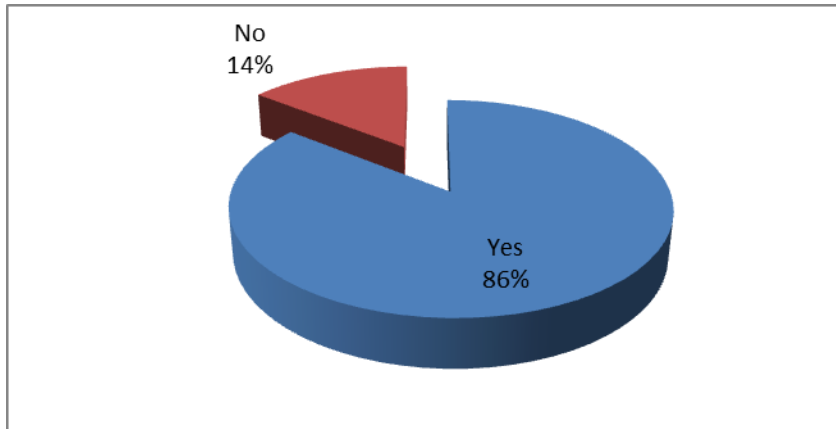
Respondents who reported to have computer skills were asked to rate their skills where the majority (63%) rated their skills as good and 24% as excellent.

Figure 4. 2: If yes how do you rate them?
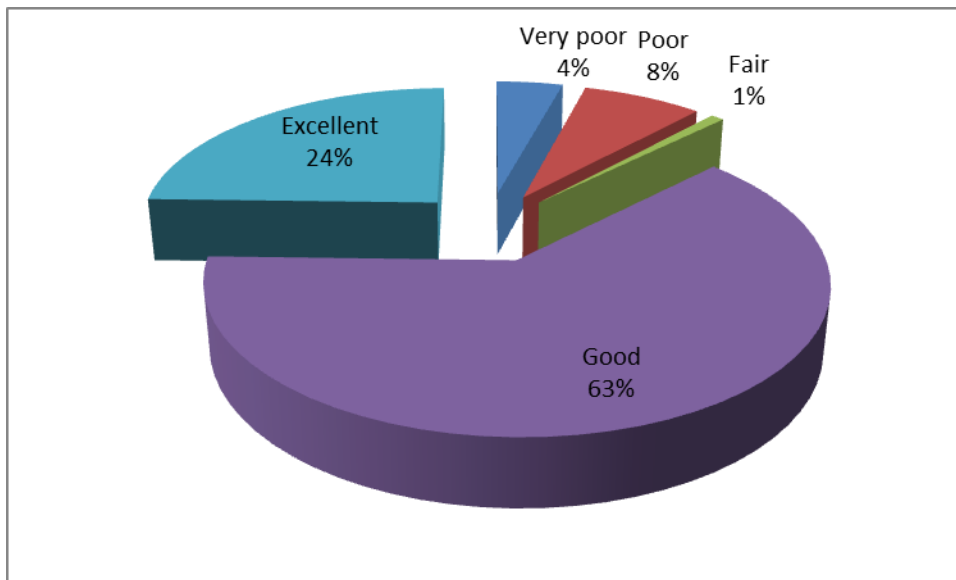
Respondents were asked to rate on a five point likert scale the success of IFMIS. Majority of the respondents (66%) agreed that the implementation of IFMIS has been very successful.

Figure 4. 3: Implementation of IFMIS has been very successful
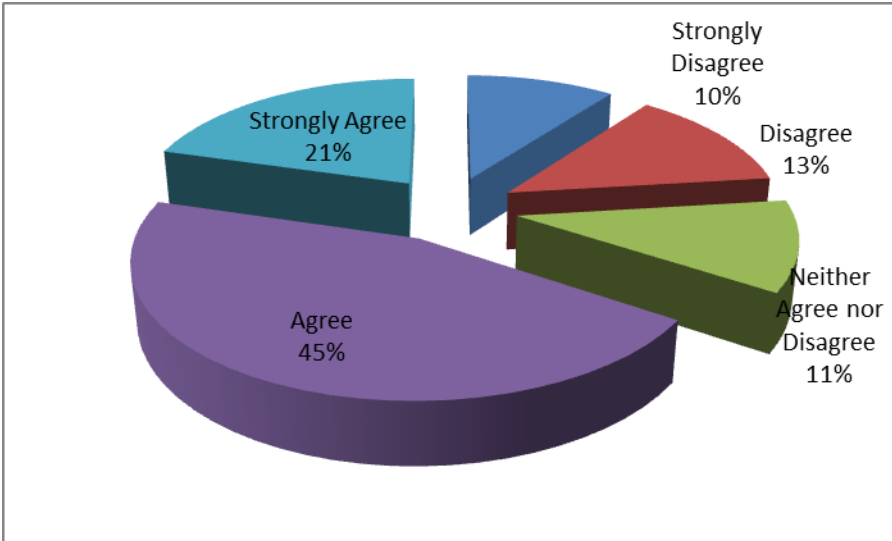
4.3 Parameters for evaluating the level success in the implementation of IFMIS

To investigate factors determining the level of success in the implementation of IFMIS, respondents were presented with ten categories of statements on a 5 point likert scale and asked to rank the statements by indicating how much they agreed with the statements. The statements were ranked with ranks ranging from "5- strongly agree" to "1- strongly disagree". Descriptive statistics was employed to describe the respondents' views.

4.3.1 System quality

4.3.1.1 Performance

Under performance of IFMIS most of the respondents agreed with the statements that using IFMIS information system would make it easier to do their job (82%) and using IFMIS system would improve their job performance (77%). On the other hand respondents disagreed with the statements that they encounter errors frequently while working or using IFMIS (61%).

Figure 4. 4: Performance
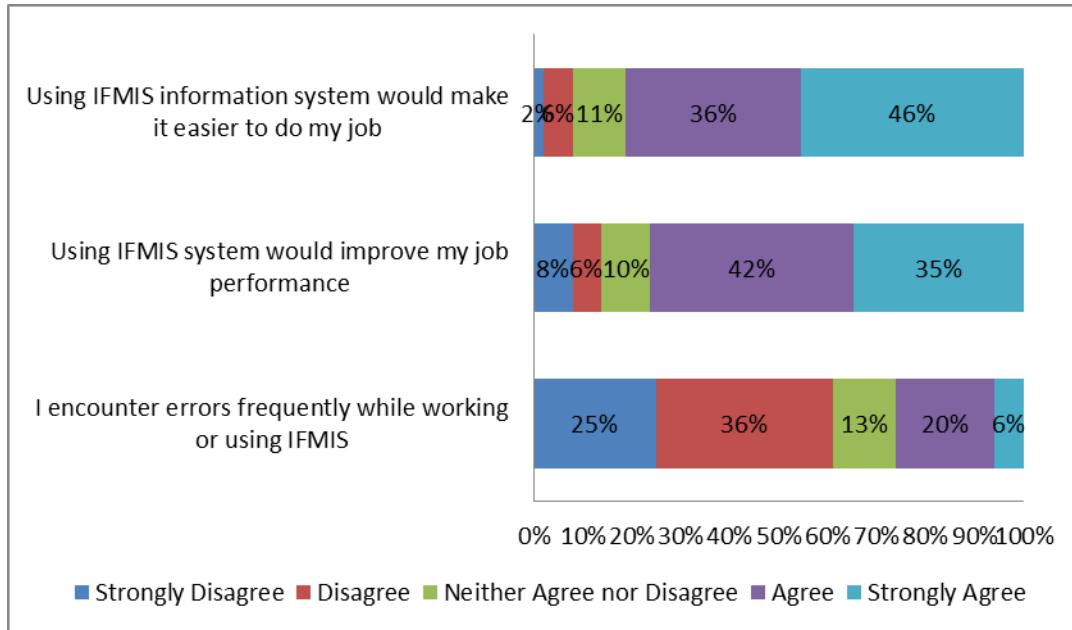
Chi-square test was used to determine the significance of association between performance and IFMIS success. The test measured the null hypothesis that there is no association between respondents' responses on performance and IFMIS success. All the p-values for performance indicators were less than the conventional 5% except for "I encounter errors frequently while working or using IFMIS" indicating that there was association between performance and IFMIS success.

Table 4. 2: Significance of performance by IFMIS success

	Pearson Chi-Square	df	p-value
I encounter errors frequently while working or using IFMIS by IFMIS success	17.174	16	.067
Using IFMIS system would improve my job performance by IFMIS success	28.592	16	.006
Using IFMIS information system would make it easier to do my job by IFMIS success	101.9	16	<.001

4.3.1.2 Response time

To investigate response time, respondents were presented with a statement that "the system takes long to complete a single transaction or to respond". Majority of the respondents (74%) disagreed with the statement.

Figure 4. 5: Response time
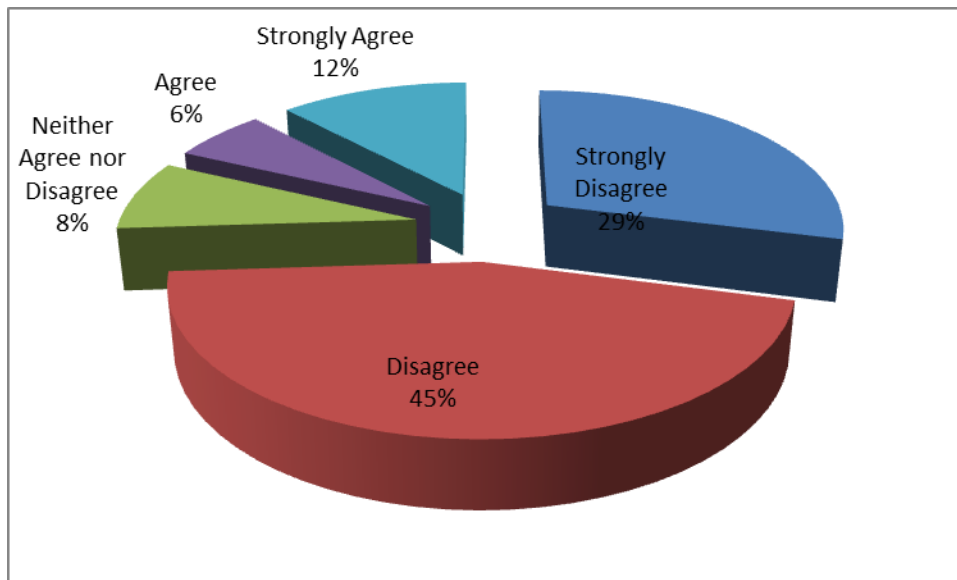
Chi-square test was used to determine the significance of association between response time and IFMIS success. The test measured the null hypothesis that there is no association between respondents' responses on response time and IFMIS success. The p-values for response time indicator was less than the conventional 5% indicating that there was association between response time and IFMIS success.

Table 4. 3: Significance of Response time by IFMIS success

	Pearson Chi-Square	df	p-value
The system takes long to complete a single transaction or to respond by IFMIS success	33.7	16	<.001

4.3.1.3 Usability

Six statements were used to assess usability of IFMIS. Respondents agreed with the statements that IFMIS system integrate with other interfaces of systems like GPAY, budget (81%), we find it friendly while working with IFMIS and the various interfaces contained in it (87%), the various interface contained in IFMIS are easy to use (91%) and they always do their job using the information system (52%). However, respondents disagreed with the statements that IFMIS system is a complex system (48%) and they find it difficult to update themselves with IFMIS when a new interface is introduced (77%).

Figure 4. 6: Usability
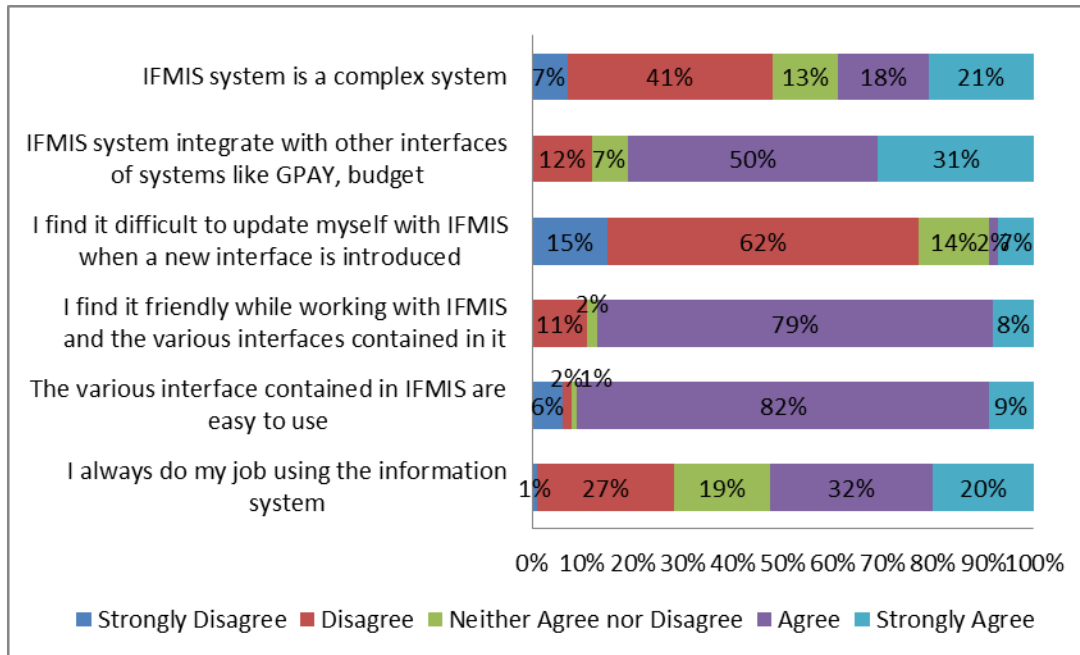
Chi-square test was used to determine the significance of association between usability and IFMIS success. The test measured the null hypothesis that there is no association between respondents' responses on usability and IFMIS success. All the p-values for usability indicators were less than the conventional 5% indicating that there was association between usability and IFMIS success.

Table 4. 4: Significance of Usability by IFMIS success

	Pearson Chi-Square	df	p-value
I always do my job using the information system by IFMIS success	35.7	16	<.001
The various interface contained in IFMIS are easy to use by IFMIS success	36.174	16	<.001
I find it friendly while working with IFMIS and the various interfaces contained in it by IFMIS success	39.292	16	<.001
I find it difficult to update myself with IFMIS when a new interface is introduced by IFMIS success	26.9	16	.010
IFMIS system integrate with other interfaces of systems like GPAY, budget by IFMIS success	71.9	16	<.001
IFMIS system is a complex system by IFMIS success	61.9	16	<.001

4.3.1.4 Availability

Three statements were used to assess availability of IFMIS. Respondents agreed with the statements that IFMIS system allows information to be readily accessible to them (83%) and IFMIS system is readily available 24 (69%). On the other hand respondents disagreed with the statements that network is down most of the time (75%).

Figure 4. 7: Availability
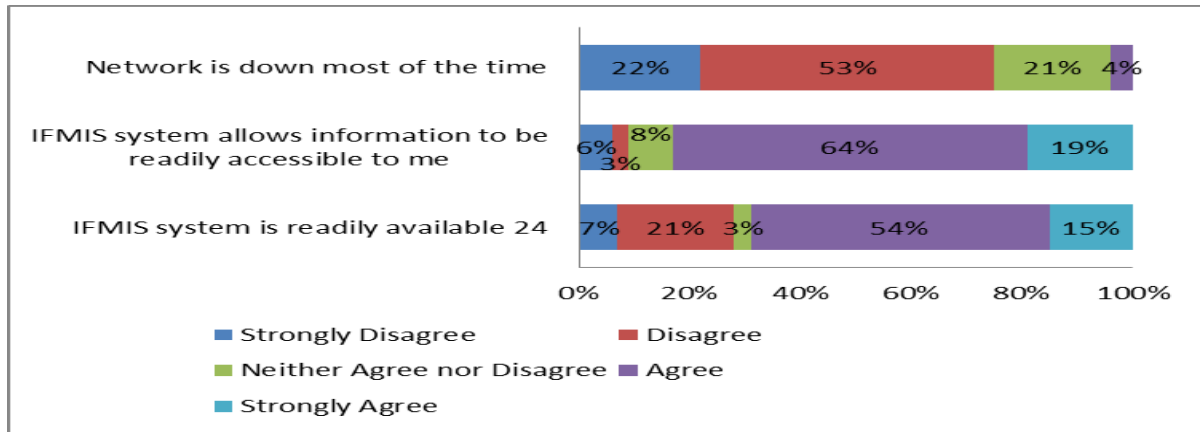
Chi-square test was used to determine the significance of association between availability and IFMIS success. The test measured the null hypothesis that there is no association between respondents' responses on availability and IFMIS success. All the p-values for availability indicators were less than the conventional 5% except for "Network is down most of the time by IFMIS success" indicating that there was association between availability and IFMIS success.

Table 4. 5: Significance of Availability by IFMIS success

	Pearson Chi-Square	df	p-value
IFMIS system is readily available 24 by IFMIS success	16.007	16	<.001
IFMIS system allows information to be readily accessible to me by IFMIS success	19.214	16	<.001
Network is down most of the time by IFMIS success	11.921	16	.056

Chi-square test was used to determine the significance of association between the overall indicators of system quality and IFMIS success. All the p-values for system quality indicators were less than the conventional 5% except for availability indicating that there was association between system quality and IFMIS success. However, usability had the largest Chis-square value indicating a stronger aggregate association with IFMIS success as compared to performance and Response time. Availability was disregarded at the final model.

Table 4. 6: Significance of System quality by IFMIS success

	Pearson Chi-Square	df	p-value
Performance by IFMIS success	33.207	16	.021
Usability by IFMIS success	39.314	16	<.009
Availability by IFMIS success	21.991	16	.094
Response time by IFMIS success	29.881	16	.045

4.3.2 Information Quality

Three items (Relevancy, Accuracy and Understandability) each with tree statements were used to assess IFMIS information quality.

4.3.2.1 Relevancy

Respondents agreed with the statements that the information provided by the IFMIS helps in making most the financial decisions (96%) and IFMIS information is relevant to our work (79%).

Figure 4. 8: Relevancy
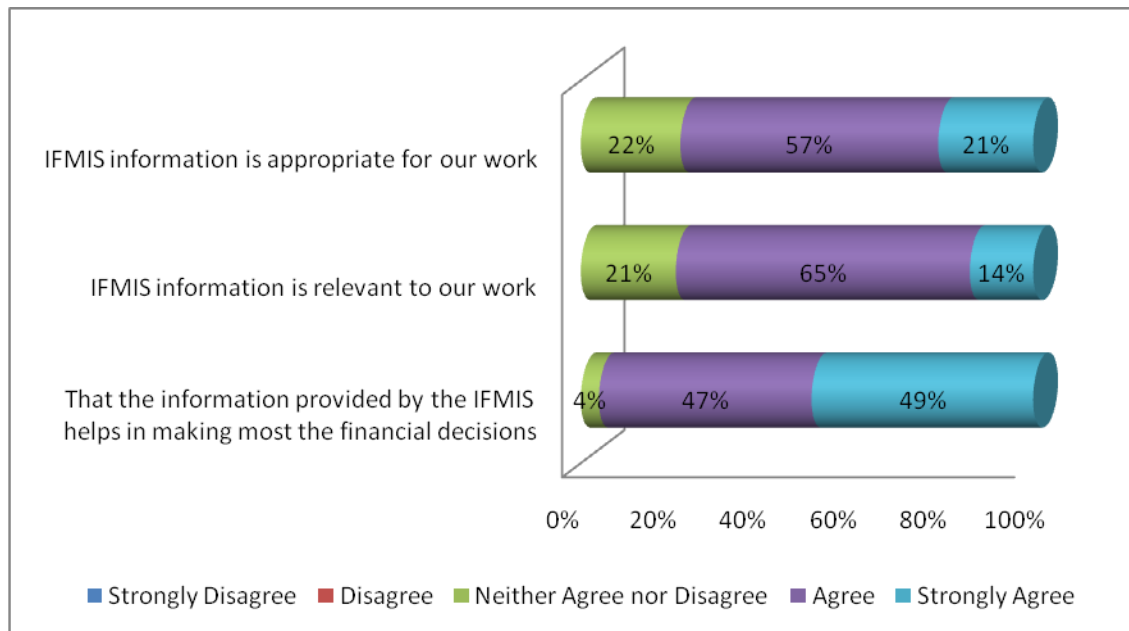
Chi-square test was used to determine the significance of association between relevancy and IFMIS success. All the p-values for relevancy indicators were less than the conventional 5% indicating that there was association between relevancy and IFMIS success.

Table 4. 7: Significance of Relevancy by IFMIS success

	Pearson Chi-Square	df	p-value
That the information provided by the IFMIS helps in making most the financial decisions by IFMIS success	30.007	16	<.002
IFMIS information is relevant to our work by IFMIS success	39.924	16	<.003
IFMIS information is appropriate for our work by IFMIS success	31.803	16	.001

4.3.2.2 Accuracy

Respondents agreed with the statements that the information provided by the IFMIS is correct (82%) and IFMIS information is accurate (59%).

Figure 4. 9: Accuracy
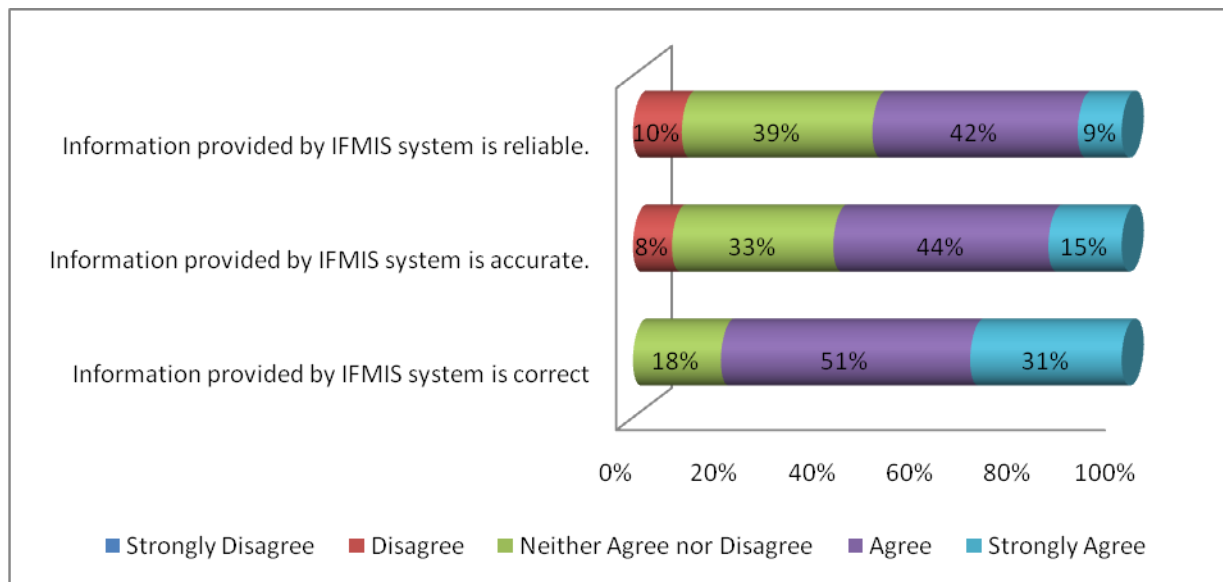
Chi-square test was used to determine the significance of association between accuracy and IFMIS success. All the p-values for accuracy indicators were greater than the conventional 5% except for "Information provided by IFMIS system is correct by IFMIS success" indicating that there was no association between accuracy and IFMIS success.

Table 4. 8: Significance of Accuracy by IFMIS success

	Pearson Chi-Square	df	p-value
Information provided by IFMIS system is correct by IFMIS success	31.907	16	<.001

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Information provided by IFMIS system is accurate by IFMIS success	20.924	16	<.182
Information provided by IFMIS system is reliable by IFMIS success	19.803	16	.191

4.3.2.3 Understandability

Respondents agreed with the statements that the output information of the IFMIS system is easy to understand (82%) and the output information of the IFMIS system is easy to comprehend. (76%).

Figure 4. 10: Understandability
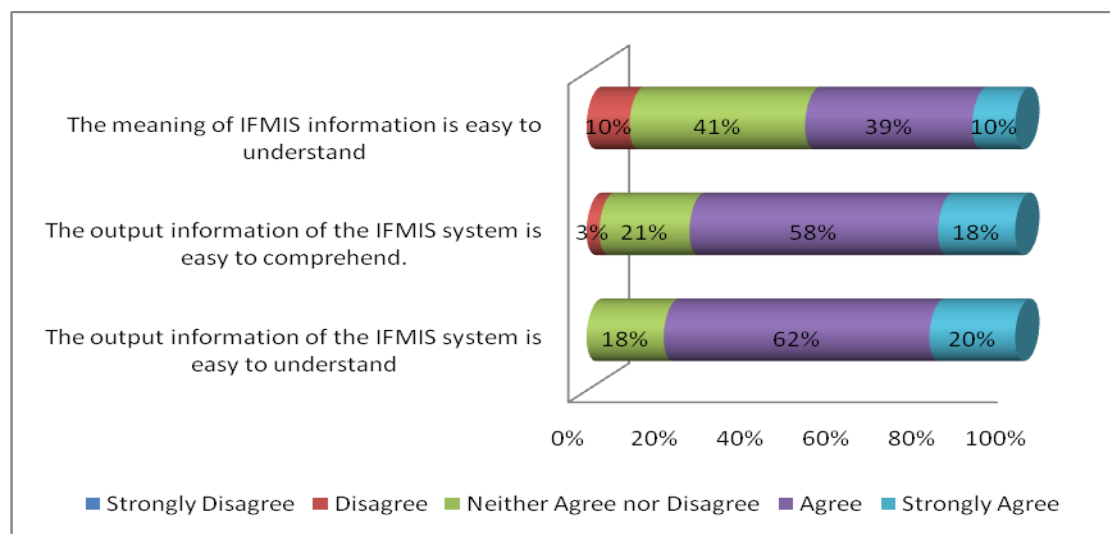
Chi-square test was used to determine the significance of association between understandability and IFMIS success. All the p-values for understandability indicators were less than the conventional 5% except for "The meaning of IFMIS information is easy to understand by IFMIS success" indicating that there was association between understandability and IFMIS success.

Table 4. 9: Significance of Understandability by IFMIS success

	Pearson Chi-Square	df	p-value
The output information of the IFMIS system is easy to understand by IFMIS success	38.703	16	<.001
The output information of the IFMIS system is easy to comprehend by IFMIS success	29.824	16	<.008
The meaning of IFMIS information is easy to understand by IFMIS success	23.903	16	.051

Chi-square test was used to determine the significance of association between overall information quality and IFMIS success. The test measured the null hypothesis that there is no association between respondents' responses on information quality and IFMIS success. All the p-values for information quality indicators were less than the conventional 5% except understandability indicating that there was association between information quality and IFMIS success. Understandability was exempted in final model.

Table 4. 10: Significance of Information quality by IFMIS success

	Pearson Chi-Square	**df**	**p-value**
Relevancy by IFMIS success	29.421	16	.021
Accuracy by IFMIS success	38.264	16	<.001
Understandability by IFMIS success	18.226	16	.611

4.3.3 Service quality

Three statements were used to assess service quality. Respondents agreed with statements that they get adequate support from IFMIS department (92%) and they experience network down while working with IFMIS frequently (55%). Respondents disagreed with the statement that the IT unit has the necessary skills to manage IFMIS (55%).

Figure 4. 11: Service quality
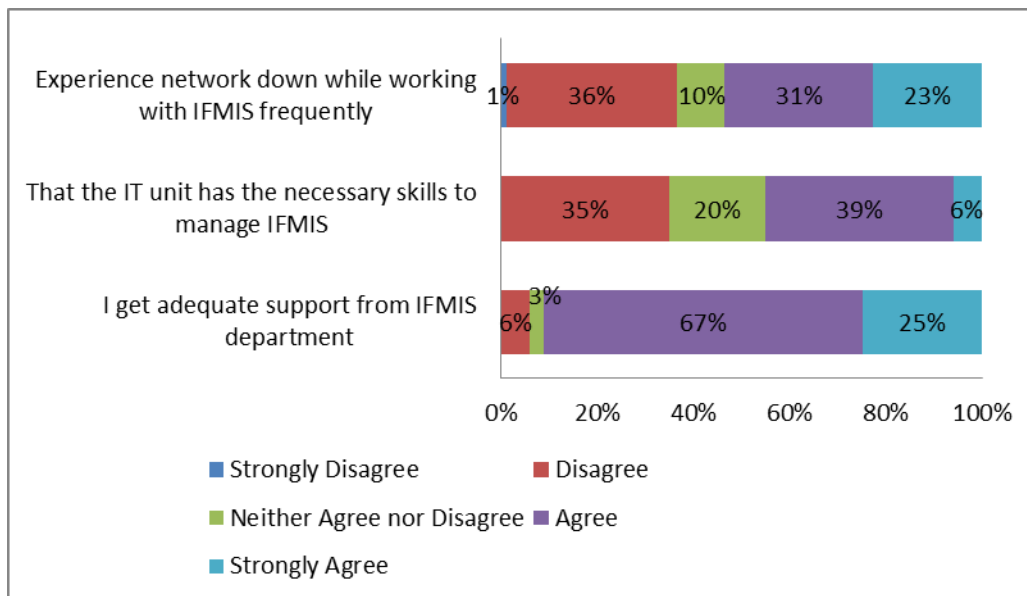
Chi-square test was used to determine the significance of association between service quality and IFMIS success. The test measured the null hypothesis that there is no association between respondents' responses on service quality and IFMIS success. All the p-values for performance indicators were less than the conventional 5% indicating that there was association between service quality and IFMIS success.

Table 4. 11: Significance of Service quality by IFMIS success

	Pearson Chi-Square	df	p-value
I get adequate support from IFMIS department by IFMIS success	13.117	16	.039
That the IT unit has the necessary skills to manage IFMIS by IFMIS success	12.354	16	.049
Experience network down while working with IFMIS frequently by IFMIS success	11.192	16	.023

4.3.4 Social factors

4.3.4.1 Trust

To assess whether respondents trust IFMIS five survey items were used. Most of the respondents agreed with all the five statements that they feel the infrastructure, LAN, WANS, and servers, are reliable and trustable, the system is fully protected against intrusion threats, there is no fear of hacking or other external threats, there is good back up system for the system, they feel very proud to work with IFMIS as it is considered the most efficient financial management system and the IFMIS system usually fulfills the commitments it assumes.

Figure 4. 12: Trust
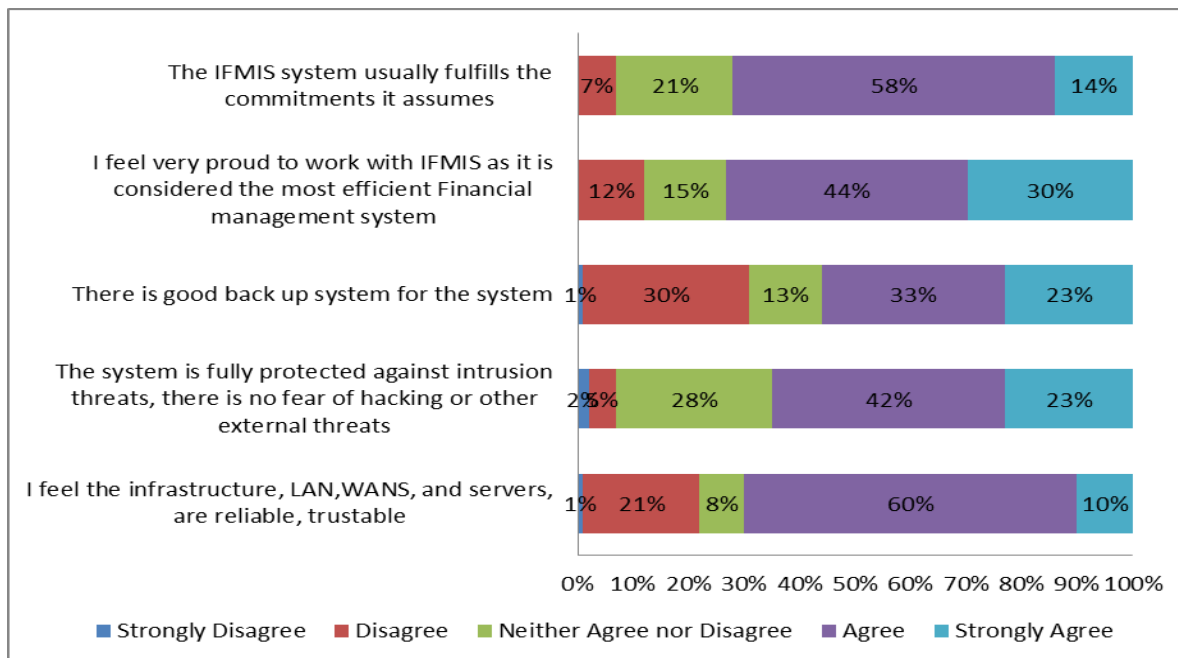
Chi-square test was used to determine the significance of association between trust and IFMIS success. The test measured the null hypothesis that there is no association between respondents' responses on trust and IFMIS success. All the p-values for trust indicators were less than the conventional 5% except indicating that there was association between trust and IFMIS success.

Table 4. 12: Significance of Trust by IFMIS success

	Pearson Chi-Square	df	p-value
I feel the infrastructure, LAN,WANS, and servers, are reliable, trustable by IFMIS success	36.127	16	.021
The system is fully protected against intrusion threats, there is no fear of hacking or other external threats by IFMIS success	17.204	16	.001
There is good back up system for the system by IFMIS success	18.112	16	<.001
I feel very proud to work with IFMIS as it is considered the most efficient Financial management system by IFMIS success	42.019	16	.010
The IFMIS system usually fulfills the commitments it assumes by IFMIS success	31.119	16	<.001

4.3.4.2 Opennes

To assess openness in application of IFMIS, respondents were asked to rate their agreement with the statement that IFMIS system is more transparent and open compared to the manual process. Majority of the respondents (79%) agreed with the statement.

Figure 4. 13: Openness

Chi-square test was used to determine the significance of association between social factors and IFMIS success. The test measured the null hypothesis that there is no association between respondents' responses on social factors and IFMIS success. All the p-values for social factors indicators were less than the conventional 5% indicating that there was association between social factors and IFMIS success.

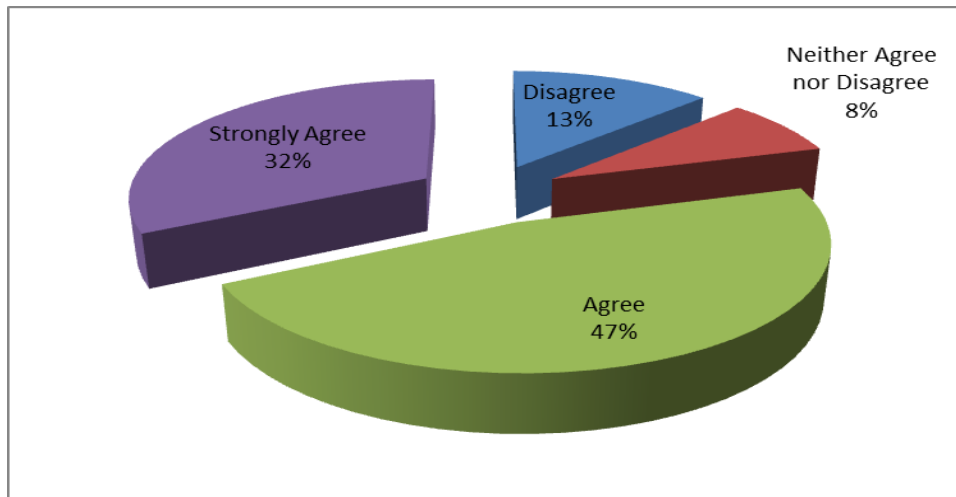**Table 4. 13: Significance of Social factors by IFMIS success**

	Pearson Chi-Square	df	p-value
Openness by IFMIS success	35.132	16	<.001
Trust by IFMIS success	28.198	16	.022

4.3.5 Change in technology

A likert question was presented to the respondents to assess their level of agreement with IFMIS and change in technology. Most of the respondents disagreed with the statement that it takes long to catch up with the changes in the IFMIS occasioned by the change in Technology (58%).

Figure 4. 14: Change in technology
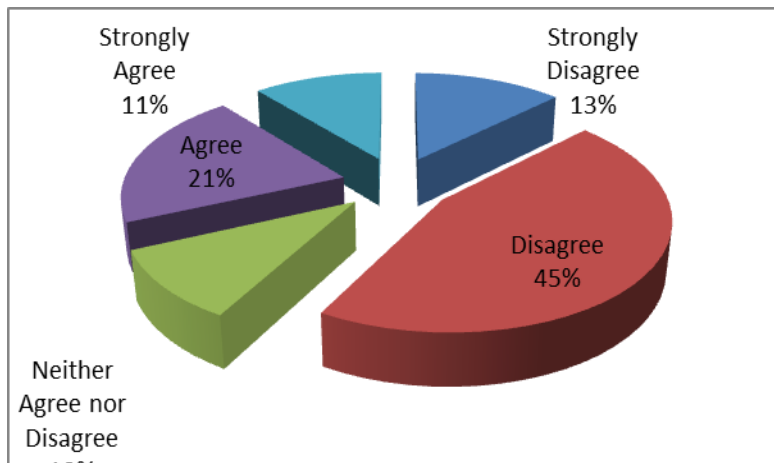
Chi-square test was used to determine the significance of association between change in technology and IFMIS success. The test measured the null hypothesis that there is no association between respondents' responses on change in technology and IFMIS success. The p-values for change in technology were less than the conventional 5% indicating that there was association between change in technology and IFMIS success.

Table 4. 14: Significance of Change in technology by IFMIS success

	Pearson Chi-Square	df	p-value
it takes long to catch up with the changes in the IFMIS occasioned by the change in Technology by IFMIS success	26.213	16	.002

4.3.6 Organization factors

Three statements were used to assess cultural influences. Most of the respondents agreed with the statements that, the IFMISI being an efficient financial management system, its life span should be elongated despite technological changes, IFMIS took long to be implemented and experienced users of IFMIS share information with new users.

Figure 4. 15: Cultural influences
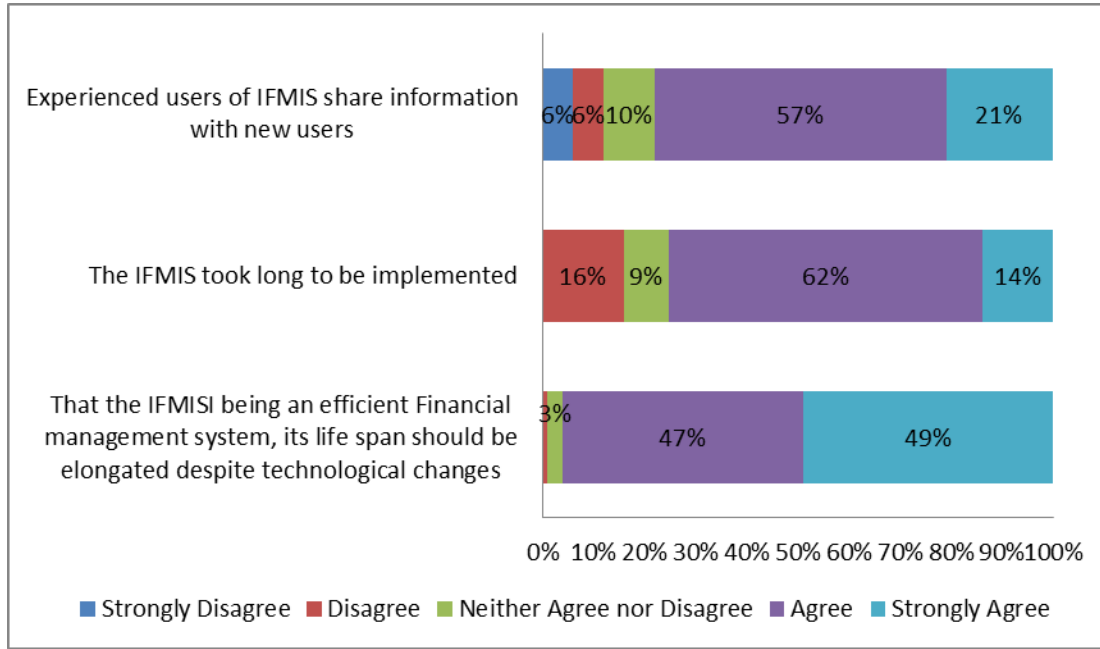
Chi-square test was used to determine the significance of association between cultural influences and IFMIS success. The test measured the null hypothesis that there is no association between respondents' responses on cultural influences and IFMIS success. All the p-values for cultural influences indicators were less than the conventional 5% except for indicating that there was association between cultural influences and IFMIS success.

Table 4. 15: Significance of Cultural influences by IFMIS success

	Pearson Chi-Square	df	p-value
That the IFMISI being an efficient Financial management system, its life span should be elongated despite technological changes by IFMIS success	39.213	16	<.001
The IFMIS took long to be implemented by IFMIS success	31.124	16	.009
Experienced users of IFMIS share information with new users by IFMIS success	36.122	16	<.001

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4.4 Effect of moderating variables on relationship between IFMIS success and independent variables

To assess effect of moderating variables on the relationship between the independent and dependent variables linear regression was employed. Data was categorized into the various classes of each moderating variable and linear regression ran to assess the individual contribution of each category of the moderating variables. The moderating variables investigated included gender, experience and age which were all categorized into two groups.

Effect of trust on IFMIS success was reported to be more pronounced by female as compared to males with $\beta=0.329$ which was significant at 5% level of significance. On the other hand effect of openess on IFMIS success was more pronounced by female respondents as compared to the male respondents with a $\beta=.639$ which was significant at 5% level of significance. Gender was reported to have a moderating effect on social factors on IFMIS success.

Table 4. 16: Effect of Gender on IFMIS success

		Gender	R^2	B	T	p-value
Social factors	Trust	Male	.632	.099	.932	.069
		Female	.746	.329	5.631	<.001
	Openess	Male	.512	.109	1.122	.052
		Female	.624	.639	4.261	.041

Effect of moderating effect of experience on the relationship between Social factors (Trust, Openness) and external factors (change in technology) and IFMIS success was investigated using linear regression for the two classes of experience. Both Trust and Openness effect on IFMIS success were insignificant for both categories of experience while effect of external factors (Change in technology) on IFMIS success was significant at under 5 years levels of experience. Therefore, the moderating impact for experience was significant for External factors and insignificant for social factors to the model.

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Table 4. 17: Effect of Experience on IFMIS success

		Experience	R^2	B	T	p-value
Social factors	Trust	Under 5 years	.599	.321	4.732	.159
		5 years and above	.663	.301	6.131	.089
	Openess	Under 5 years	.722	.609	4.232	.912
		5 years and above	.810	.559	5.161	.521
External factors	change in Technology	Under 5 years	.612	.269	1.132	.002
		5 years and above	.563	.152	4.621	.071

Effect of moderating effect of age on the relationship between Social factors (Trust, Openness) and external factors (change in technology) and IFMIS success was investigated using linear regression for the two classes of age. Both Trust and Openness factors effect on IFMIS success were insignificant for both categories of age while effect of external factors (Change in technology) on IFMIS success was significant at both levels of age. Therefore, the moderating impact for age was insignificant for External and social factors to the model.

Table 4. 18: Effect of Age on IFMIS success

		Age	R^2	B	T	p-value
Social factors	Trust	≤35 years	.511	.299	3.912	.059
		>35 years	.589	.346	4.231	.089
	Openess	≤35 years	.627	.526	4.992	.422
		>35 years	.675	.634	6.121	.059
External factors	change in Technology	≤35 years	.596	.396	.932	.042
		>35 years	.613	.292	1.561	.036

4.5 Framework for testing and evaluating the level of success in the implementation of IFMIS

4.5.1 Reliability Test

The reliability of the collected data in this study was assessed by calculating the Cronbach's Alpha coefficient. In this method reliability is operationalized as internal consistency, which is the degree of inter–correlations among the

items that constitute a scale. An alpha value of 0.60 and 0.70 or above is considered to be the criteria for demonstrating internal consistency of new scales and established scales respectively. Table 4.2 shows each main construct's related Cronbach Alpha and accordingly internal consistencies of main constructs of the model were considered acceptable since the Cronbach's Alpha related to each of them exceeded 0.70, confirming satisfactory reliability.

Table 4. 19: Reliability Test

Item	N of Items	Cronbach's Alpha
Performance	4	.701
Usability	6	.734
Availability	3	.862
Information quality	4	.839
Service quality	3	.821
Trust	5	.920
Cultural influences	3	.794

4.5.2 Multivariate Analysis

Linear regression analysis was conducted to predict the success of implementation of IFMIS. The dependant variable for this study is "Implementation of IFMIS has been very successful" which was measured on a five point likert scale.

The predictor variables were Social factors (performance, response time and usability), information quality (relevancy and understandability), service quality, Social factors (trust and openness) External factors and Organization factors. Table 4.20 displays the summary of the model with a coefficient of determination (R^2) of 79.7%. This indicates that more than 79% of the variation in successful implementation of IFMIS can be explained by the model.

Table 4. 20: Model Summary

R	R Square
.893	.797

Table 4.21 presents the ANOVA test results that tests the significance of R2. A p-value less than the conventional 5% indicates that the R2 is significant.

Table 4. 21: ANOVA

Model		Sum of Squares	df	Mean Square	F	p-value
1	Regression	29.404	9	3.267	2.308	.021
	Residual	151.485	107	1.416		
	Total	180.889	116			

Table 4.5 shows the model coefficients. Three of the model variables were not significant at 5% level of significance including information quality, service quality and cultural influences. On the other hand performance, usability, availability, trust, openness and change in technology were significant predictors of IFMIS implementation success.

Table 4. 22: Coefficients of regression model

Model	Unstandardized Coefficients		Standardized Coefficients	t	p-value
	B	Std. Error	Beta		
(Constant)	5.620	1.500		3.747	.000*
System quality	.283	.116	.289	2.428	.017*
Information quality	.090	.168	.065	.537	.092
Service quality	.306	.281	.173	1.091	.078
Social factors	.908	.155	.006	5.049	.041*
External factors	.659	.100	.059	6.593	.014*
Organization factors	.189	.259	.092	.729	.068

Dependent Variable: Implementation of IFMIS has been very successful
* Significant at 5% level of significance

**CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATION**

5.1 Introduction

The overall purpose of this study was to investigate factors determining the level of success in the implementation of IFMIS in the national treasury. The study was guided by three objectives including investigating existing parameters for evaluating the level of success in the implementation of IFMIS, proposing a framework for testing and evaluating the level of success in the implementation of IFMIS in the National Treasury and testing the proposed framework at the National Treasury.

5.2 Summary

The results showed that the level of success in the implementation of IFMIS was predicted by

System quality ($\beta= .283$, $p<0.05$), Social factors ($\beta= .908$, $p<0.05$) and External factors ($\beta=.659$, $p<0.05$). The effects of the mentioned antecedents of success in the implementation of IFMIS totally explained 79.7% of the variance in success in the implementation of IFMIS ($R^2=0.797$, coefficient of determination). This was an indication of the good explanatory power of the model for success in the implementation of IFMIS, which was much higher comparing to other IT acceptance studies such as Gable et al., (2003) model. As for the moderators, only the moderating influence of gender on social factors and experience on external factors respectively and the relationship between IFMIS implementation success was accepted. The figure below shows the summarized model.

Figure 4. 16: IFMIS Success Model
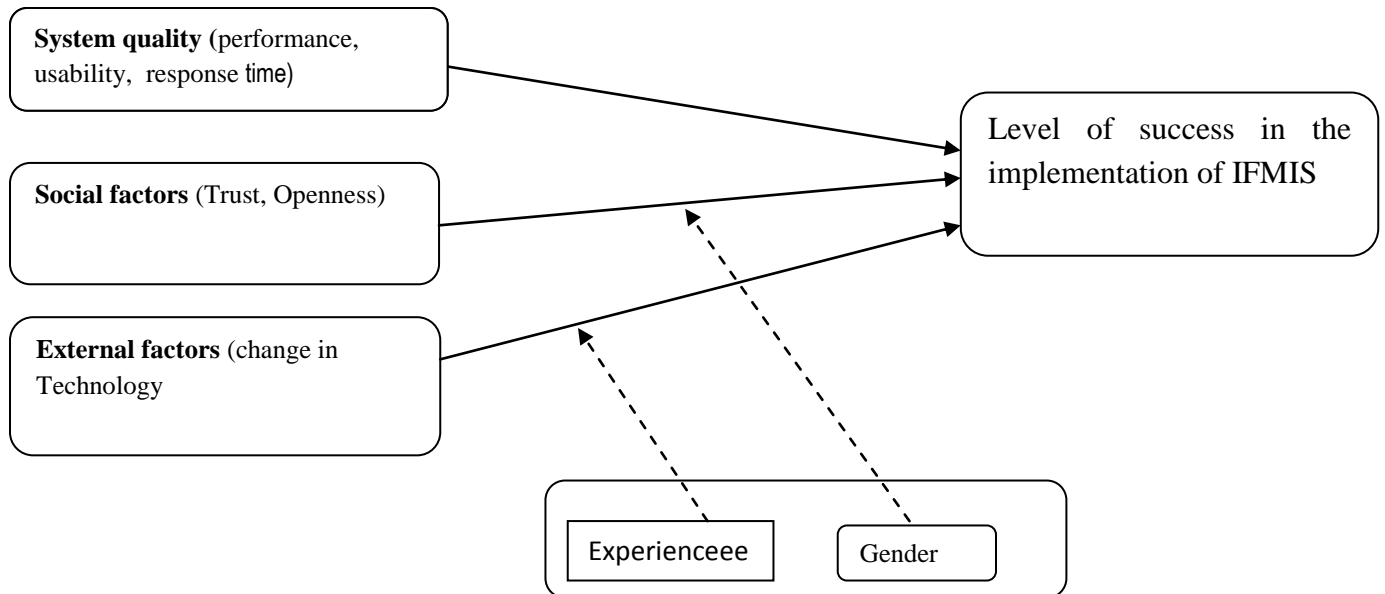
System quality was measured by performance, usability,availability and response time which all had a significant effect except availability on the level of success in the implementation of IFMIS, with 95% significance level and thereby "System quality positively influences the level of success in the implementation of IFMIS'. Short time taken to complete a transaction or to respond, IFMIS system improving job performance and few errors while using the system were strongly supported. This was consistent with the findings of Venkatesh et al. (2003), who reported the

existence of a significant relationship between performance expectancy and behavioral intention in the domain of IT acceptance. Regarding the related coefficient value (β=0.283), performance had the fifth strongest effect on the level of success in the implementation of IFMIS, confirming the important role of performance.

Information quality was measured using, relevancy, accuracy and understandability which did not have a significant effect on the level of success in the implementation of IFMIS, with 95% significance level. However, information provided by the IFMIS helps in making most the financial decisions and it is easy to find what you're looking for when using the IFMIS were strongly supported by the respondents. On the other hand, respondents disagreed with the statements that the information provided by IFMIS system is accurate and free from errors.

This finding contradicted the results reported by Venkatesh et al. (2003), who claimed that there was a strong relationship between information quality and success in the domain of IT acceptance.

Social factors were measured using trust and openness "Social factors influence positively the level of success in the implementation of IFMIS' which was accepted with 95% significance level, showing that social influence had a significant effect on IFMIS success. This result was consistent with the findings of Venkatesh et al. (2003), who reported the existence of a significant relationship between social influence and success in the domain of IT implementation. According to the related coefficient value (β=0.908), for trust had the strongest effect on IFMIS success while the openness had the second strongest effect with β=0.739.

Service quality which was measured by IFMIS Support, IT Support and Network did not have significant effect on the level of success in the implementation of IFMIS, with 95% significance level. Getting adequate support from IFMIS department was strongly supported by the respondents. However, experiencing network failure while working with IFMIS frequently and the IT unit having the necessary skills to manage IFMIS were refuted.

Change in technology had a significant effect on the level of success in the implementation of IFMIS, with 95% significance level and thereby "Change in technology positively influences IS success'. It takes long to catch up with the changes in the IFMIS occasioned by the change in Technology was strongly disagreed by the respondents. This result strongly supported both Limayem et al. (2000) and Boyle and Ruppel (2004) contentions indicating that there was a significant relationship between change in technology and behavioral intention in the domain of IT success. Regarding the related coefficient value (β=0.659), change in technology had the third strongest effect on the level of success in the implementation of IFMIS, confirming the strong influence of Change in technology on users intention to adopt IFMIS.

5.3 Limitations

The major limitation in this study of IFMIS success implementation is that it focused on selected Government ministries under the National Treasury and left other Government agencies ,thus it may not generalize for all Government agencies. This should be replicated in all Government agencies. The study also focused on the user of IFMIS who are limited to the Accountants ,human resource officers, ICT ,finance and procurement officers only while majority who other Government employees interact with the system.

5.4 Conclusion

The purpose of this study was to investigate factors determining the level of success in the implementation of IFMIS in the National Treasury. The study found dominance of system quality , external factors and social factors the most likely causes of IFMIS implementation success. Subsequently, external factors , system quality and social factors as the most critical factors to encourage successful implementation of IFMIS project based on the respondents' perceptions in Kenya.

The findings of this study have a number of important policy implications; the Government must take a leading role to promote e-government projects through more public awareness initiatives with the Private-Public Partnerships to provide technical assistance. Furthermore, using the findings of this study, the Government cant focus on reviving existing projects (turn failures into successes) and pay attention to causal factors for future projects to change them from constraints to enablers/drivers.

Finally, from Republic of Korea's case study, Kenya and other developing countries can learn from its successful e-government implementation through collaborative activities instead of re-inventing the wheel. Korea's e-government which ranked number 1 for 2 consecutive UN surveys (UN 2010) heavily relied on streamlined, systematic and phased implementation approach. Thus, this study concludes that strong leadership, coupled with clear IFMIS implementation model, IT governance structures and performance based management can be keys to successful e-Government projects implementation. Therefore, Government must take a leading role to promote e-Government projects with more public awareness initiatives and Private-Public Partnerships must provide technical assistance to reduce donor dependence and increase projects ownership. This can be achieved by development cooperation in ICTs to learn from model countries through collaborative initiatives instead of re-inventing the wheel.

5.5 Recommendations

The study found that system quality, external factors and social factors are the most significant factors to successful implementation of IFMIS. In order to address these critical factors to implementation of IFMIS, this study provides a number of broad recommendations as follows:

Firstly, the Government should ensure e-government timescales are customized to current realities and all stakeholders must be motivated to a great extent.

Secondly, Unrealistic/ineffective project design; is the lack of phased approach such as clear objectives, stakeholder involvement and understanding of human factors, local culture and values. The government must address this constraint by: (1) take an interactive and incremental approach for e-government project designs; (2) stakeholder involvement is a must by ensuring all general staff are incorporated into the design.

Lastly, Government should undertake more awareness programmes to create positive stance towards e-government projects amongst stakeholders where IFMIS falls. Now that IFMIS is ready to be deployed to the counties a lot of sentization needs to be done to the users and all stakeholders for it to be successful.

5.6 Future research

Now that the IFMIS system is growing in terms of Modules and more users brought on borad further research can be carried to establish the impact assessment and where were are at the implementation .More research should also be emphasized on some of the parameters or factors that seems to have a positive effect but not significantly affect the level of success in the implementation of IFMIS. The study also concentrated with the internal users of the system and the internal customers and future research should be carried to include external users who interact with the system such as the suppliers .

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Appendix

UNIVERSITY OF NAIROBI

SCHOOL OF COMPUTING AND INFORMATICS

LEVEL OF SUCCESS IN THE IMPLEMENTATION OF IFMIS QUESTIONNAIRE

My name is Augustine Kanyugi, a student at the University of Nairobi, School of Computing and Informatics undertaking a research project titled: A framework to determine the level of success in the implementation of IFMIS in the National Treasury.

Questionnaire

- Be assured that the information given is only for the purpose of this research and will be kept confidential
- Please do not write your name
- Feel free to get any clarification
- Please indicate the appropriate option by a tick (   )   ✔
- Kindly respond to all items

Section A: personal data

1 .Indicate your gender: Male [ ] Female [   ]

2. Highest academic Qualifications: Master [   ] Bachelor [   ] Diploma [   ] Certificate [   ]

3. Department you work with HRM [   ] Account [   ] Finance [   ] Procurement [   ]   ICT [ ]

4. How long you have worked in the department? 2 years and below [   ] 3-5 years [   ] 5 years and above [   ]

5. Do you have computer skills Yes [   ] No [   ]

If yes how do you rate them (a) Very poor [   ] (b) Poor [   ]   (c) Fair [   ] (d) Good [   ] (e) excellent [   ]

SECTION B:

1. The extent to which you agree or disagree with the following statements about IFMIS?

System quality	Strongly Agree	Agree	Neither Agree nor	Disagree	Strongly Disagree
Performance	5	4	3	2	1
1) That the system takes long to complete a single transaction or to respond.					
2) I encounter errors frequently while working or using IFMIS?					
3) Using IFMIS system would improve my job performance.					

2. To what extent do you agree with the following statements on IFMIS usage?

(i) Do you use IFMIS to do your job? Yes [ ] No [ ]

 If Yes

.	Strongly Agree	Agree	Neither Agree nor	Disagree	Strongly Disagree
Usability	5	4	3	2	1
1) Do you find it friendly while working with IFMIS and the various interfaces contained in it?					
2) Do you find it difficult to update yourself with IFMIS when a new interface is introduced?					
3) IFMIS system is a complex system					

3. To what extent do you agree with the following statements?

	Strongly Agree	Agree	Neither Agree nor	Disagree	Strongly Disagree

Availability	5	4	3	2	1
1) That the IFMIS system readily available 24/7?					
2) That the IFMIS system allows information to be readily accessible to you?					

4. To what extent do you agree with following statements?

Information quality	Strongly Agree	Agree	Neither Agree nor	Disagree	Strongly Disagree
Relevancy	5	4	3	2	1
1) That the information provided by the IFMIS helps in making most the financial decisions					
Accuracy					
2) That that the information provided by IFMIS system is accurate and free from errors.					
Understandability					
3) The output information of the IFMIS system is easy to understand					

5. To what extent do you agree with following statements?

Service quality	Strongly Agree	Agree	Neither Agree nor	Disagree	Strongly Disagree
IFMIS Support	5	4	3	2	1
1) I get adequate support from IFMIS department					
IT Support					
2) That the IT unit has the necessary skills to manage IFMIS					
Network					

3) Experience network down while working with IFMIS frequently					

6. To what extent do you agree with the following statements?

Social factors	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
Trust	5	4	3	2	1
1) I feel the infrastructure (LAN,WANS, and servers) are reliable(trustable)					
2) The system is fully protected against intrusion threats. There is no fear of hacking or other external threats.					
3) There is good back up system for the system					
4) That the IFMIS is efficient and usually fulfills the commitments it assumes.					

7. To what extent do you agree with the following statement?

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
Openness	5	4	3	2	1
1) That the IFMIS system is more transparent and open compared to the manual process					

8. To what extent do you agree with the following statement?

External l factors	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
Change in technology	5	4	3	2	1
1) It takes long to catch up with the changes in the IFMIS occasioned by the change in Technology.					

9. To what extent do you agree with the following statement?

Organizational factors	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
Cultural influences	5	4	3	2	1
2) That the IFMISI being an efficient Financial management system, its life span should be elongated despite technological changes					
3) The IFMIS took long to be implemented.					

10. How do you agree with the following statement? Implementation of IFMIS has been very successful: strongly agree [ ], agree [ ], Neither Agree nor Disagree [   ] Disagree [   ], strongly disagree.