THE EFFECT OF INTEGRATED FINANCIAL MANAGEMENT INFORMATION SYSTEM ON THE PERFORMANCE OF PUBLIC SECTOR ORGANIZATIONS

BY

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UNITED STATES INTERNATIONAL UNIVERSITY

SUMMER 2014
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A Project Report Submitted to the Chandaria School of Business in Partial Fulfilment of the Requirement for the Degree of Masters of Science in Business Administration

UNITED STATES INTERNATIONAL UNIVERSITY

SUMMER 2014
STUDENT’S DECLARATION

I, the undersigned, declare that this is my original work and has not been submitted to any other college, institution or university other than the United States International University in Nairobi for academic credit.

Signed: ____________________  Date: ____________________
Stella B. Omokonga (ID No.630544)

This project has been presented for examination with my approval as the appointed supervisor.

Signed: ____________________  Date: ____________________
Dr. George Achoki

Signed: ____________________  Date: ____________________
Dean, Chandaria School of Business
ABSTRACT

The purpose of the study was to determine the effect integrated financial management information system on the performance of public sector organizations. The study was guided by the research questions as follows; what is the effect of Integrated Financial Management Information System (IFMIS) on financial reporting in public sector organizations? What is the effect of Integrated Financial Management Information System on financial transaction processing in public sector organizations? What is the effect of Integrated Financial Management Information System on financial control and governance in public sector organizations?

Descriptive research design was used because of its ability to provide a snapshot of the current state of affairs. The population of the study was 1066 staffs of the Ministry for East Africa, Commerce and Tourism. The target population comprised of 94 staff working in the finance, accounts, procurement and audit departments. A census technique was used and therefore, the sample size was 94 respondents, representing 100% of the target population size. The data collection method used in this study was a questionnaire and the response rate was 75.5%. The data was analyzed using Spearman’s Rank Correlation Coefficient, made possible by the use of SPSS (Statistical Package for the Social Sciences). The findings were presented in tables.

The study found that in terms of the effect of IFMIS on financial reporting in public sector organizations, there was a statistically significant positive correlation between IFMIS and improved financial reporting. Concerning the effect of IFMIS on financial transaction processing in public sector organizations, the relationship between IFMIS’ and improvements in financial transaction processing was statistically significant. Regarding the effect of IFMIS on financial control and governance in public sector organizations, there was a significant positive correlation between IFMIS’ and better control/governance.

The study concluded that IFMIS led to improvements in reporting of true cost per activity, easy data extraction and presentation, improved access to specific financial information, easy trend analysis of fiscal operations, real time reconciliation of data, accurate disclosure of financial position, generation of custom reports, easy access to non-
fiscal information and quick provision of year-to-year balances. IFMIS also leads to reduction in wasteful expenses and irregular expenditure, streamlined procedures, execution of budgets according to rules, automated procedures and internal controls, enabled tracing of all stages of transaction processing, closer monitoring of bills and cash and friendly and convenient interaction with the public. Similarly, IFMIS has led to reduced jurisdictional problems, reduced cases of fraud, enhanced transparency, increased accountability, auditable financial statements, enhanced credibility and confidence of the ministry, enhanced security of information and improved efficiency of public expenditure.

The study recommended that the Ministry of Finance should both appeal to and support the adoption of the system within the county government system. Public sector organizations such as the Ministry of East Africa, Commerce and Tourism should leverage on the efficiency and effectiveness gains of the system to consolidate stakeholder confidence through more awareness and publicity of the achievements. The government should integrate non-financial information into the system so that other functions within the organizations can also benefit from the advantages of IFMIS. In order to validate the findings of this study, a future study could use tools based on specific quantitative measures of improvement in financial performance realized with the introduction of IFMIS.
ACKNOWLEDGEMENT

I wish to acknowledge my Supervisor, Dr. George Achoki for patiently guiding me through the development of this report.

I also thank Dr. Kaol, my business research methods lecturer, for guiding me to come up with the proposal that eventually led to the development of this report.
DEDICATION

First and far most all glory and honour goes to the Almighty God for the strength, the patience and spiritual guidance He has accorded me towards this worthy cause.

This work is dedicated to my late husband, Kennedy Ondara, My daughter Melanie Ondara, my parents Mr and Mrs Omokong’a and my friends especially Sylvance for their spiritual, emotional support and love. To my siblings, Albert, Victor, Jessica, John, Elizabeth and Benjamin for their encouragement and support. Thank you for being there for me.
# TABLE OF CONTENT

STUDENT’S DECLARATION ........................................................................................................... ii
ABSTRACT ................................................................................................................................... iii
ACKNOWLEDGEMENT ................................................................................................................ v
DEDICATION ................................................................................................................................ vi
TABLE OF CONTENT ................................................................................................................... vii
LIST OF TABLES ........................................................................................................................ ix
LIST OF ABBREVIATIONS AND ACRONYMS ........................................................................... x

CHAPTER ONE ................................................................................................................................. 1
1.0 INTRODUCTION ......................................................................................................................... 1
1.1 Background to the Study .............................................................................................................. 1
1.2 Problem Statement ...................................................................................................................... 4
1.3 Purpose of the Study ................................................................................................................... 5
1.4 Research Questions .................................................................................................................... 5
1.5 Scope of the Study ....................................................................................................................... 6
1.6 Significance of the Study ........................................................................................................... 6
1.7 Definition of Terms .................................................................................................................... 7
1.8 Chapter Summary ....................................................................................................................... 7

CHAPTER TWO ................................................................................................................................ 9
2.0 LITERATURE REVIEW .............................................................................................................. 9
2.1 Introduction ................................................................................................................................. 9
2.2 The Effect of IFMIS on Financial Reporting in Public Sector Organizations ......................... 9
2.3 The Effect of IFMIS on Transactions Processing in Public Sector Organizations ................. 14
2.4 The Effect of IFMIS on Financial Control and Governance in Public Sector Organizations .... 19
2.5 Chapter Summary ....................................................................................................................... 25

CHAPTER THREE .......................................................................................................................... 26
3.0 RESEARCH METHODOLOGY ................................................................................................. 26
3.1 Introduction ............................................................................................................................... 26
CHAPTER FOUR ..............................................................................................................32
4.0    RESULT AND FINDINGS ......................................................................................32
4.1    Introduction ........................................................................................................32
4.2    General Information ..........................................................................................32
4.3    The Effect of IFMIS on Financial Reporting ...................................................35
4.4    The Effect of IFMIS on Financial Transactions Processing ..........................40
4.5    The Effect of IFMIS on Financial Control and Governance in the Public Sector 45
4.6    Chapter Summary .............................................................................................50

CHAPTER FIVE ................................................................................................................51
5.0    DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS ........................51
5.1    Introduction ........................................................................................................51
5.2    Summary ..............................................................................................................51
5.3    Discussions .........................................................................................................52
5.4    Conclusions ........................................................................................................57
5.5    Recommendations .............................................................................................58

REFERENCES ..................................................................................................................60

APPENDICES ..................................................................................................................65
Appendix I: Cover Letter ..............................................................................................65
Appendix II: Questionnaire ..........................................................................................66
LIST OF TABLES

Table 3.1: Population Distribution

Table 3.2: Sample Size Distribution

Table 4.1: Response Rate

Table 4.2: Gender

Table 4.3: Age Bracket

Table 4.4: The Level of Education

Table 4.5: Distribution of Respondents by Department

Table 4.6: Distribution of Respondents by Tenure

Table 4.7: Frequency of IFMIS Use

Table 4.8: Correlation between IFMIS and Financial Reporting Variables

Table 4.9: Perceptions of the Effect of IFMIS on Aspects of Financial Reporting

Table 4.10: Correlation between IFMIS and Transaction Processes Performance

Table 4.11: The Respondents’ Views on IFMIS’ Effects on Transaction Processing

Table 4.12: Correlation between Financial Control and Governance IFMIS

Table 4.13: The Respondents’ Views on the Effect of IFMIS on Control/Governance
**LIST OF ABBREVIATIONS AND ACRONYMS**

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FMIS</td>
<td>Financial Management Information System</td>
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<tr>
<td>IFMIS</td>
<td>Integrated Financial Management Information System</td>
</tr>
<tr>
<td>SPSS</td>
<td>Statistical Package for the Social Sciences</td>
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<td>DCs</td>
<td>Developing Countries</td>
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<td>IT</td>
<td>Information Technology</td>
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<td>PFM</td>
<td>Public Financial Management</td>
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</table>
CHAPTER ONE

1.0 INTRODUCTION

1.1 Background to the Study

Financial management system refers to the operation of those systems and processes designed for budget making and budget implementation; the maintenance of accounting system which records financial decisions, flows and transactions, and the auditing of all aspects of these accounts (Pollitt, 2008). Financial management information systems (FMIS) on the other hand is the 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 line ministries and other spending agencies (Diamond & Khemani, 2005).

In most developing countries (DCs), budget execution and accounting processes are either manual or supported by very old and inadequately maintained software applications (McKinney, 2004). The consequent lack of reliable and timely revenue and expenditure data for budget planning, monitoring, expenditure control and reporting has negatively impacted budget management. The results have been a poorly controlled commitment of government resources, often resulting in a large build up of arrears, excessive borrowing, pushing up interest rates and crowding out private-sector investment; and misallocation of resources, undermining the effectiveness and efficiency of service delivery. In response, most governments have made substantial investments in capacity building and technology for the development of IFMIS (Dener & Min, 2013).

McKinney (2004) identifies three main activities relate to financial management. Firstly, it determines the scope and content of fiscal policies; which is a process in which agency, community or relevant political parties set forth programs and provide the appropriation or resources required to accomplish them. Secondly, it establishes general guidelines and standards to ensure that funds are spent honestly and wisely to achieve publicly determined purposes. Thirdly, it provides organizational structures and controls to effectively carry out fiscal duties and responsibilities.
Because of integration requirements, the FMIS is commonly characterized as an integrated financial management information system (Diamond & Khemani, 2005). According to Beschel and Ahern (2012), integrated financial management information systems (IFMIS) can facilitate timely and accurate reporting; allow internal controls to be exercised through the IFMIS, and therefore support more consistent compliance; and allow central agencies to oversee budget execution by line ministries, therefore facilitating the devolution of responsibilities to front line managers while retaining information at the centre.

Beschel and Ahern (2012) make the observation that governments have sought to develop either a sophisticated fully integrated IFMIS or a simple customized IT system to support budget execution. They highlight that the fully integrated IFMIS approach has been followed by the Republic of Yemen, Iraq, Egypt, Syria and Jordan. Khan and Pessoa (2010) also assert that development partners also encourage governments to implement these systems in the expectation that such systems would lead to a significant improvement in the governments’ capacity for fiscal management and reporting. Diamond and Khemani (2005) for instance narrated that in the late 1990s, the Tanzanian government decided to introduce an Integrated Financial Management System in the selected government agencies. Under this system, a central server was placed at the treasury to which users were connected by a dedicated network. Also work stations were provided for each of the agencies from which they could access the system. Each agency had its own database held in the omnibus database in the central server. Agency’s transactions automatically update the database in real time, and thus the general ledgers reflect the real position of balances at any particular point. By the end of 2000 there were over 500 users of the system at more than 85 sites throughout Tanzania. The system has now become the generic public sector financial management system used by the entire public sector.

According to Watkins and Dorotinsky (2011), comprehensive FMIS projects take a minimum of 6-7 years to complete (including the project design, procurement, development of information systems, and capacity building) and countries typically undergo at least one election cycle within this period. Elections may have a significant impact on such reform projects due to changes in key management positions and priorities. Another challenge to Public Financial Management (PFM) reform programmes
is weak capacity among the technical staff charged with managing the PFM system, and poor remuneration and incentive structures that discourage the civil service from performing well (Simson, Sharma & Aziz, 2011).

In Kenya, The National Treasury (2013) acknowledges that public financial management by government has gone through fundamental changes in the past decade, and is still under transition. The Government of Kenya has identified public financial management reforms as the key drivers to efficient public service delivery and creation of wealth and employment, ensuring that the government and its departments raise, manage and spend public resources in an efficient and transparent way with the aim of improving service delivery.

Diamond and Khemani (2005) observed that since 1997, the government of Kenya has been implementing a project for the “strengthening of government finance and accounting functions” to improve financial management, accountability, and transparency of public funds. During the first two phases over the first three years, a number of diagnostic reviews were conducted and a Financial Management Information Systems Strategy was developed. Following a procurement delay of almost two years, a contract for the purchase of the software implementation was finally awarded during late 2002. The pilot phase started with the setting up of core procurement and accounting modules in the treasury as well as two pilot ministries during 2003/04.

One of the major reform initiatives rolled out by the government of Kenya was the automation of public financial management processes through the establishment of Integrated Financial Management Information System (IFMIS). According to (Ministry of Finance, 2013), IFMIS was first launched in 2003 in Kenya and the IFMIS Re-engineering Strategic Plan (2011-2013) was launched in 2011.

The Ministry of Finance (2013) defines IFMIS as an automated system that interlinks planning, budgeting, expenditure management and control, accounting, audit and reporting. It is intended to ensure a higher degree of data quality, improve workforce performance for improved business results and link planning, policy objectives and budget allocations. It is also intended to enhance reporting capabilities to support budget planning, automate the procurement process such as requisition, tendering, contract award
and payment. Further, it is also intended to facilitate auto-reconciliation of revenue and payment, automated revenue collections and automated bank reconciliation.

1.2 Problem Statement

In February 2011, the Ministry of Finance formulated the IFMIS Re-engineering Strategic Plan 2011-2013 to provide a structured methodology to stabilize the existing IFMIS while facilitating the development of a comprehensive IFMIS which would allow the government to realize the full benefits of a fully integrated end-to-end financial management information system (National Treasury, 2013). However, it is not clear from publicly available documents what quantitative efficiency gains IFMIS has so far yielded. Surveys of IFMIS experiences in other developing countries such as Ghana, Tanzania and Uganda have yielded mixed results (Allen, 2009). Beschel and Ahern (2012) reports that while there are some small successes to-date, sophisticated IFMIS projects have been problematic.

A research undertaken by the World Bank (2011) in 51 countries found that the design and implementation of effective FMIS solutions is challenging and requires the development of country specific solutions to meet a number of functional and technical requirements associated with the public financial management agenda. Reviewing the experiences regarding the application of IFMIS to developing countries, Wescott, Bowornwathana and Jones (2009) noted that IFMIS can facilitate recurrent/capital budget integration and improve accounting and reporting systems, but only if the country’s budget and accounts classification is reformed and the system is appropriately phased and adapted to a country’s capacity to maintain it.

For the reengineering strategy in Kenya to realize full acceptance by its key stakeholders, it is important to show evidence of the significance of the system in management of public finance. One study by Wamuyu (2013) on the effect of IFMIS on public financial management and service delivery in selected government ministries reported significant improvement in both public financial management and service delivery in government ministries in Kenya. While this study by Wamuyu offers some pointers to the specific gains accrued since the implementation of IFMIS in government ministries, the
performance metrics used were not clearly specified, hence the need to conduct another study.

Conrad (2013) also undertook a study to evaluate the implementation of IFMIS by the national government of Kenya. However, the research specifically focused on the extent of IFMIS adoption by the national government of Kenya, the challenges or constraints in the adoption of IFMIS in the national government and the drivers of IFMIS adoption. It was found in this study that exchequer budget release of funds not coinciding with the manual funds release process was a challenge. This finding implied that the research on the impact of IFMIS on public financial management was not conclusive. Of particular acknowledgement in the study by Conrad was that IFMIS was still new in Kenya and data from local sources of literature was not readily available, implying the need for more studies locally. Therefore, knowledge gap still exists as concerns the usage of specific metrics that denote performance impact of IFMIS on the management of public finance. Responding to Watkins and Dorotinsky’s (2011) recommendation for future studies to explore the impact of FMIS introduction on public financial outcomes such as timely reporting and better decision making, this study sought to use quantitative metrics to evaluate the effect of IFMIS on the management of public finance by government agencies.

1.3 Purpose of the Study

The purpose of the study was to determine the effect of IFMIS on the performance of public sector organizations.

1.4 Research Questions

The study was guided by the following specific research questions which depicts key elements of financial management:

i) What is the effect of IFMIS on financial reporting in public sector organizations?

ii) What is the effect of IFMIS on financial transaction processing in public sector organizations?
iii) What is the effect of IFMIS on financial control and governance in public sector organizations?

1.5 Scope of the Study

The research was limited to the findings drawn from the Ministry of East Africa, Commerce and Tourism headquarters in Nairobi. Departments from which the study was undertaken include Finance, Accounts, audit and Procurement. The sampling unit included management staff working in these departments. Field work was undertaken in the month of May 2014.

1.6 Significance of the Study

This study is of significance to the following stakeholders:

1.6.1 Ministry of East Africa, Commerce and Tourism

The study would inform the process of IFMIS re-engineering towards sustainability of the project. It identifies gaps in the performance outcomes of IFMIS and issues that arise in the process of its implementation that could be looped back into the implementation process.

1.6.2 National Treasury

Quantitative feedback from the study would help identify deviations between expected performance and actual performance of the ministry in order to take corrective actions towards better management of public finance.

1.6.3 Public Sector Organizations

The research will provide insights from a single case study which would provide a benchmark with which continuous improvement can be made in other ministries.

1.6.4 Future Researchers

Future researchers interested in extending studies on financial management information systems as it applies to Kenya could use this study as a reference point.
1.7 Definition of Terms

1.7.1 Financial Management

Within the context of the public sector, financial management is the process wherein a governmental unit or agency employs the means to obtain and allocate resources and/or money, based on articulated priorities and utilizes methods and controls to effectively achieve publicly determined ends (McKinney, 2004).

1.7.2 Transaction Processing

This refers to a set of activities that are the foundation of doing day-to-day business and goes beyond the mere capturing of financial data or performing accounting transaction to include accounts payable, accounts receivable, inventory and assets management, payroll management, tax accounting, travel and expense processing and treasury management among others (Bernstein & Newcomer, 2009).

1.7.3 Performance

In the public sector, performance depicts effectiveness, efficiency, relevance and financial viability of an organization (Boyle, 2006).

1.8 Chapter Summary

This chapter provided background information on financial management information systems, trends and implementation issues underpinning financial management in the public sector. The chapter discussed the problem and raised the research questions. Further, it provided the scope and explained the significance of the study. It has also defined key operating terms.

The next chapter reviews literature pertinent to financial management in the public sector. The chapter includes a review of the theories and past studies done on financial management information system as it is applied in public finance.
Chapter three describes the methodology used to undertake the research includes a discussion of the research design, the population and sampling design, the data collection methods, research procedures and data analysis methods.

Subsequently, chapter four presents the results and analysis of findings whereas chapter five discusses the finding, draws conclusions and makes recommendations for improvements.
CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

This chapter reviews literature related to financial management information systems. The chapter explores theoretical and empirical literature regarding the effects of IFMIS on financial reporting in public sector organizations, the effect of IFMIS on financial transaction processing in public sector organizations and the effect of IFMIS on financial control and governance of public sector organizations.

2.2 The Effect of IFMIS on Financial Reporting in Public Sector Organizations

Financial reports retrospectively describe the results of an organization’s financial transactions and events in terms of its financial position and performance (Van der Hoek, 2005). According to Simson, Sharma and Aziz (2011), financial reports aim to improve budget compliance. They provide a means for internal or external actors to assess government performance. Thurakam (2007) posit that in order to serve its objectives meaningfully, financial reports must be relevant, accurate, prompt and authentic.

2.2.1 Relevance

The financial statements must be relevant for the purpose for which they are meant for. Irrelevant and unwanted information should be avoided but at the same time material facts must necessarily be disclosed (Thurakam, 2007). According to Rupanagunta (2006), transactions data captured in the right formats classified appropriately and presented in simple, easy to use formats can be used as valuable decision support systems. For instance, capturing the specific function performed or service rendered and the nature of the expenditure of each financial transaction undertaken by the government can be used to understand the true cost of service delivery by activity.

Simson et al. (2011) elucidate that financial reporting entails extracting and presenting data from the accounting system in ways that facilitate analysis. Governments produce a range of reports for internal and external consumption. Typical reports include daily
reports on cashflows, monthly reports on budget execution, revenue reports, mid-year reports and annual financial statements or fiscal reports. There are internationally recognised minimum requirements for annual fiscal reporting. These reports form the basis for the audit general’s review of government performance.

An IFMIS allows users anywhere within the IFMIS network to access the system and extract the specific information they need. A variety of reports can be generated to address different budgeting, funding, treasury, cash flow, accounting, audit and day-to-day management concerns (Hendricks, 2012). Diamond and Khemani (2005) explain that IFMIS role is to connect, accumulate, process, and then provide information to all parties in the budget system on a continuous basis. All participants in the system, therefore, need to be able to access the system, and to derive the specific information they require to carry out their different functions. The converse is also true, if the FMIS does not provide the required information – that is, has not the right functionality – it will not be used, and will cease to fulfill its central function as a system.

According to Diamond and Khemani (2005), a well designed FMIS should: offer a common platform and user interface to the stakeholders in different agencies responsible for financial management, for adding to and accessing the information database (in its absence each agency will have the incentive to develop “its own” FMIS to meet its currently perceived needs); maintain a historical database of budget and expenditure plans; transaction data at the highest level of detail; cash flows and bank account operations including checks issued, cancelled, and paid, cash balances and floats; have dedicated modules to handle monthly, rolling, short-term (one to three months) and longer-term (three months to end of year) forward estimates of revenues, and expenditures prepared by agencies, and corresponding estimates of the resulting cash flows.

Diamond and Khemani (2005) further added that IFMIS should also have built-in analytical tools to offer trend analysis of various elements of fiscal operations to permit a forward look at the emerging events bearing on the fiscal stance; compile formal government accounts from the database of authorizations and cash allocations, primary revenue and expenditure transactions of the agencies; and treasury operations, avoiding the need to duplicate data entry for accounting purposes; enable real-time reconciliation
of parallel but related streams of transaction data—at the agency level: checks issued with those paid by the banks; at treasury: receipts from banks with the checks paid by taxpayers; cash balances reflected in the agency ledgers with the cash balances in the banks; mechanize all possible routine tasks at the central and spending agencies—generating various forms/authorizations, checks, outputting hard copies of key registers and statements; and be flexible enough to provide user-defined management information, aggregated at the desired level of detail, from the database.

2.2.2 Accuracy
Thurakam (2007) maintains that financial accounts must disclose accurately the position and prospect of the organization. Inaccurate information not only misleads the public but also attracts fines and penalties. There should not be any personal prejudice and window dressing of financial statements. As a tool of management, Diamond and Khemani (2005) argue that IFMIS should provide the information required for decision making. For this purpose it is anchored in the government accounting system, and should be designed to perform all necessary accounting functions as well as generate custom reports for internal and external use. For example, the component of reporting of government transactions encompasses all activities that include the updating and maintenance of the general ledger, the reconciliation of sub ledgers to the general ledger and closing of books. It also includes recording, control and reporting on fixed assets at both National and County level (Ministry of Finance, 2013).

Diamond and Khemani (2005) however adds that this does not mean that it should exclusively concentrate on financial information. They note that managers will require other non-financial information including personnel information such as numbers of employees, their grade within the organizational structure and rates of remuneration. For performance-based budgets, performance information will be important to managers, such as the identification of programs, the objectives or outcomes of programs, the types of goods and services produced, as well as indicators by which to judge the efficiency and effectiveness of programs.

Walker (2008) avers that modern integrated financial systems rely on transaction-based entries to update all relevant accounts, be they for budgetary control, proprietary accounting objectives, or program management. In these modern, integrated systems,
financial data are carried in a common format, and the effects of financial transactions in one application are accurately transmitted to other affected applications. Accordingly, aside from the timeliness in recording transactions, the use of integrated systems largely negates the risk of out-of-balance situations and data entry errors. Thus, agencies can have at their disposal information that can quickly provide year-to-date balances, mitigate the need for extensive reconciliation procedures, and more important, can be used for analysis throughout the year.

2.2.3 Promptness

In order to facilitate the functioning of the management, there should be quick preparation and prompt submission of the report to all those executives who depend on it (Thurakam, 2007). Promptness stands for a quick retrieval of information and reports as and when needed by the users of the information system (Modina and Zanolli, 2008). The promptness in the flow of information is critical in better resource utilization (Kumar, 2009). Integrated Financial Management Information Systems (IFMIS) can improve public sector management by providing real-time financial information to managers in order to enhance their decision-making capabilities (Hendricks, 2012). Automation of mechanical activities such as automatic generation of accounting vouchers triggered by each financial transaction and easy generation of accounting records, financial statements and management information systems (MIS) reports are essential to ensure basic data integrity, availability of data on demand and timely audit of transaction data (Rupanagunta, 2006).

Van der Hoek (2005) identified four financial reporting systems stipulated by accounting standards framework. The first system is known as full cash accounting. This system records a transaction when funds are paid out of an appropriation authority or when funds are received. The second system is modified cash accounting. This system recognizes transactions on a cash basis during the year and the setup of unpaid accounts and/or receivables at year's end. The third system is modified accrual accounting - this records expenditures when resources are received and revenues when they are measurable and available within the accounting period or shortly afterward. The last one is full accrual accounting - which recognizes expenses as incurred, records revenues as earned, and capitalizes fixed assets. Hendricks (2012) argues that IFMIS supports adequate
management reporting, policy decisions, fiduciary responsibilities and the preparation of auditable financial statements related to these financial reporting systems.

2.2.4 Authenticity

According to Thurakam (2007), the statements which are prepared from accounting information are known as financial statements. Most countries require the preparation of at least four statements: an operating statement reflecting revenues and expenses; a statement of assets and liabilities of the entity; a cash flow statement related to operating, investment, and financing activities; and a statement presenting additional information on a disaggregated basis (Van der Hoek, 2005). They are the end products of accounting process in an enterprise. Financial statement refers to formal and original statements which are prepared to disclose financial health of an organization in terms of profits, position, and prospects on a certain data. The financial statements provide a summary of the accounts of the agency, the balance sheet reflecting the assets, liabilities and capital as on a certain data and income statement showing the results of operation during a certain period (Thurakam, 2007).

Thurakam (2007) avers that to make financial statement authentic it should be certified by an independent and qualified person known as an auditor. A statement which is authenticated by an auditor will be acceptable by all without giving room for doubt and unreliability. In keeping with this requirement, Hendricks (2012) holds the view that an IFMIS can improve public financial management in a number of ways, but generally seeks to enhance confidence and credibility of the budget through greater comprehensiveness and transparency of information.

Kimwele (2011) undertook a study of factors affecting effective implementation of IFMIS in government ministries in Kenya since 2005. The study covered 42 ministries and sample of 30 accountants was used. Four factors were studied namely staff resistance, management commitment, system complexity and capacity and skills of the user. The study established that effective use of the system is largely affected by sabotage and resistance. The study also established that management support is lacking and top management does not inspire the users. The capacity and technical know-how was found to be low due to lack of training and hurried implementation of the system.
2.3 The Effect of IFMIS on Transactions Processing in Public Sector Organizations

An IFMIS generally implies fundamental changes in operating procedures and should be preceded by a detailed functional analysis of processes, procedures, user profiles and requirements that the system will support (Hendricks, 2012). Key high-level government goals will only be achieved if the IFMIS solution supports a wide range of business processes that transcend functional, business, organisational and geographic boundaries (Hendricks, 2012). Automated payments, combined with sophisticated document management and identity management systems associated with IFMIS enable governments globally to improve efficiency, effectiveness, security, convenience, financial control and stakeholder confidence (Sabatini, 2012). These are further reviews as follows:

2.3.1 Efficiency

In measuring performance, Moeti, Khalo and Mafunisa (2007) argued that efficiency has to do with inputs and outputs. We are said to be efficient if we can produce the maximum amount of output for a given and fixed amount of inputs. To ensure that the budget and accounts are comprehensive, it is essential that all the cash flows be channeled through the FMIS, and hence that all transactions, both receipts and payments, are processed by the FMIS, including the payroll payments (Diamond & Khemani, 2005).

The introduction of an IFMIS can be regarded as an organisational reform which deeply affects work processes and institutional arrangements governing the management of public finance (Hendricks, 2012). Government entities and agencies have huge challenges in automating payments and collections, particularly in countries where financial exclusion is high. Volumes can also be enormous, from taxes and utility payments, to social benefits and salaries. According to Sabatini (2012), paper and cash remain the two greatest barriers to achieving efficient financial processing.

In addition, public money is considered to have been inappropriately managed or spent if instances of unauthorized expenditure, fruitless and wasteful expenses, and/or irregular expenditure are present (Moeti et al., 2007). Unauthorized expenditure refers to overspending and/or spending that is not in accordance with the mandated purpose of
appropriated funds (Bragg, 2013). Fruitless and wasteful expenditure refers to unnecessary expenditure that should have been avoided if reasonable care had been exercised while irregular expenditure refers to authorized expenditure that happens to be in contravention of other applicable legislation (Moeti et al., 2007).

Isidore (2012) undertook a study of an assessment of how integrated financial management information system enhances financial decision making in two case study organizations in Tanzania. The sample size consisted of 34 respondents drawn from 204 employees. The research design adopted was descriptive survey, a purposive sampling method was drawn. The primary data was collected using questionnaires and secondary data was collected using existing literature and journal articles. The correlation analysis and descriptive statistics were used to analyze data. Findings indicated that financial managers use IFMIS tools in generating financial planning information which contributes to efficiency of their financial decision making and that managers were making capital budgeting decisions based on information generated from IFMIS.

Simson et al. (2011) observed that while automation can improve system efficiency, the process can be disruptive and challenging, as it usually requires significant reform of existing processes and new human resource skills. Proponents of large-scale automation reforms argue that it streamlines procedures and reduces opportunities for corruption; critics point to the high costs of automation, the failure rate of many automation projects and the risks of graft shifting from the procurement officer level to those with control over the new automation system.

2.3.2 Effectiveness

Moeti et al. (2007) explain that effectiveness has to do with meeting objectives. They note that we can be very productive, efficient and economical, but all for naught if we do not meet our objectives, or if we satisfy wrong objectives. Thus, regardless of whether we are efficient or not, we shall have to measure our effectiveness by the extent to which our objectives are met.

In the endeavour to be more effective, Simson et al. (2011) note that the various public finance management processes are structured around the budget cycle. This annual cycle aims to ensure that public expenditure is well planned executed and accounted for. The
budget cycle starts with the budgeting process, in which the government, with legislative oversight, plans for the use of the coming year’s resources in accordance with policy priorities. Once the budget has been approved and the new fiscal year begins, spending agencies and the Ministry of Finance embark on its implementation. They use the resources allocated to them on salaries for public servants, running costs for their offices, such as rent and electricity, and goods and services delivered to beneficiaries.

Diamond and Khemani (2005) argue that spending public funds effectively to meet stated policy objectives while ensuring value for money is often just as challenging if not more so than planning how to spend it. Agencies need to ensure that the budget is executed in accordance with the appropriations and rules to prevent corruption and overspending. The budget execution process is usually divided into four steps: authorization and allocation of appropriations (the release of funds to spending units); commitment of funds to specific purchases; verification of deliveries; and payment. The establishment of an FMIS has consequently become an important benchmark for the country’s budget reform agenda, often regarded as a precondition for achieving effective management of the budgetary resources.

2.3.3 Security

According to Jin and Lin (2012), security is a vital component of financial management information system. Howard (2004) emphasizes that requirements for security have to be addressed in the context of the business requirements, and implementation of security controls for a system has to be grounded in the context of the sensitivity of the data that the system is used to process, transmit and store. Centralized management as found in IFMIS necessarily requires further opening up and data sharing of accounting system, thereby increasing difficulties of security control. Jin and Lin further argue that security threats are not only threat inside the agency but also threat from outside. Potential security hazards that the system face must therefore necessarily increase with increase of opportunities to interfere with the system by the operator and the user, thus increasing operational risks of the system (Jin & Lin, 2012).

Benefiting from the advances in technology, new FMIS projects are designed with better focus on the quality and security of information to minimize the risk of corruption and
improve the reliability of systems (Watkins & Dorotinsky, 2011). It means that there are levels of access rights to sensitive information which offers people responsible to manage and account for. Sensitivity is often thought of being that quality that makes it necessary to protect data from being seen by those who do not have a need to see it and it is also based on how prone system data is to risks to its integrity and to its availability (Howard, 2004). Transporting and issuing cash payments also bring significant risks including lack of control, potential for fraud, error and theft. Cheques also bring considerable challenges as they are costly and time-consuming to produce, the value date is unpredictable, and auditability is low (Sabatini, 2012). Therefore, by automating procedures and internal controls, it strengthens financial controls and promotes accountability (Diamond and Khemani, 2005).

According to Watkins and Dorotinsky (2011), some of the instruments that can be used in FMIS projects to improve the reliability, cost effectiveness and accountability of information systems include: using electronic payment systems for all government payments, benefiting from digital/electronic signatures for all financial transactions, electronic records management, publishing the budget execution results and performance monthly on the web interoperability and reusability of the information systems, FMIS development and project management based on industry standards.

2.3.4 Financial Control

Allen and Tommasi (2011) identified four basic questions when assessing the development of the financial control system in a country. These are: is there a coherent and comprehensive statutory base in place that defines the principles and procedures of financial control and internal audit? Are there effective internal control systems and procedures in place and do these scrutinize relevant areas of an organization’s activity such as accounting systems, procurement, revenue control, audit trail and reporting systems? Is there a functionality independent internal audit mechanism in place, with relevant remit and scope? Are there systems in place to prevent and take action against irregularities and to recover amounts lost as a result of irregularity or negligence? Simson et al. (2011) suggest that the first in ensuring a robust financial control is setting up proper accounting systems where they defined accounting as the practice of recording, classifying and summarizing financial transactions. It is a means of ensuring compliance
with budget rules and demonstrating that public funds are being used for their intended purposes. How to classify transactions is spelt out in a country’s chart of accounts, which provides a system for classifying and numbering transactions and events (Simson et al., 2011).

An FMIS strengthens financial controls, facilitating a full and updated picture of commitments and expenditure on a continuous basis. Once a commitment is made, the system should be able to trace all the stages of the transaction processing from budget releases, commitment, purchase, payment request, reconciliation of bank statements, and accounting of expenditure. For example, through IFMIS, a procurement plan is used to provide information about the purchase of goods and services, how vendors will be chosen, what type of contract(s) will be used, how vendors will be managed and who will be involved at each stage of the process. This document will be approved by appropriate individuals before the actual procurement process begins. Developing this plan in the system ensures that all procuring entities within government buy the right products and or services at the right prices (Ministry of Finance, 2013).

Generally, increased availability of comprehensive financial information on current and past performance assists budgetary control and improves economic forecasting, planning, and budgeting (Chene, 2009). The internal controls regulate the cycle of recording, analyzing, classifying, summarizing, communicating, and interpreting financial information (Diamond & Khemani, 2005). IFMIS improves financial controls by availing reliable and timely financial information (Ministry of Finance, 2013). In line with the Public Financial Management Act 2012 (Article 12), the Integrated Financial Management Information System (IFMIS) has been implemented to connect all government ministries, agencies and departments to a core network for purposes of effecting a single public financial management system. In addition, IFMIS also seeks to strengthen the efficiency of financial controls by making comprehensive, reliable and timely financial information available to the Auditor General, parliament, investigative and prosecutorial agencies, among others, as they improve accounting, recording and reporting practices through the provision of timely and accurate financial data, a standardised integrated financial management reporting system and an upgraded computerised accounting system. When they work well, they make bank reconciliation automatic and allow a closer monitoring of outstanding bills and cash in bank accounts.
2.3.5 Convenience

One of the aims of IFMIS, according to Conrad (2013), is to make the interaction between government and citizens (G2C), government and business enterprises (G2B), and inter-agency relationships or government to government (G2G) more friendly and convenient. Rodin-Brown (2008) points out that IFMIS uses standard data classification for recording financial events; has internal controls over data entry, transaction processing, and reporting; and has common processes for similar transactions and a system design that eliminates unnecessary duplication of data entry. However, an assessment report by KPMG (2012) accounting, recording and reporting systems are beset with issues, related to compliance with procedures and IFMIS-system errors that damage the credibility of the Government in terms of its perceived capabilities in PFM. The assessment also adds that the problems in preparing accurate end-year accounts are also partly due to lack of accounting discipline, but also relate to incomplete data in IFMIS some of which date back several years, and also to the data still held in manual records that together with IFMIS data are used to prepare the final accounts.

2.3.6 Stakeholder Confidence

Conrad (2013) discussed that IFMIS aims at enhancing services delivery to citizens, businesses, and other stakeholders, and that it encompasses internal and external dimensions and despite the challenges faced, as noted by Picci (2005), most people would agree that the new information technologies hold vast potentials for improving public administrations, and better administrations in turn would have a positive influence on the economy and on society thereby improving stakeholder confidence. Mullen and Horner (2004) observed that the rapid diffusion of e-commerce in particular has placed existing norms and moral behaviour under pressure and may affect the successful implementation of successive governments’ visions of e-Government. They noted that the 2003 review of 34 IFMIS projects supported by the World Bank over 15 years estimated that only 6 percent of the systems were likely to be sustained after donor support ceased.

2.4 The Effect of IFMIS on Financial Control and Governance in Public Sector Organizations

Internal financial control systems are the policies and procedures put in place by the management of a government agency in order to ensure the agency achieves its objectives
and complies with external laws and regulations. Such policies and procedures tend to cover financial accounting and reporting, performance monitoring, asset management and procurement (Simson et al., 2011). As a management tool IFMIS also enables management to do the following: control aggregate spending and the deficit, prioritise expenditure across policies, programmes and projects to achieve efficiency and equity in the allocation of resources, make better use of budgeted resources, namely, to achieve outcomes and produce outputs at the lowest possible cost (Hendricks, 2012). In other words, the benefits anticipated in implementing IFMIS are: enhanced governance, reduced fraud, transparency and accountability, and better monitoring and evaluation.

2.4.1 Enhanced Governance
Barton (2009) explains that the activities of governments in satisfying the collective needs of the nation can be summarized as follows: provision of public goods and services to citizens, provision of social welfare goods and services to citizens, macroeconomic management of the economy, conservation of the nation’s natural and cultural environment, pursuit of intergenerational equity, and management of government resources which are used to provide the above goods and services. The management of these activities determines the financial management information and reporting needs of government.

According to Oz (2006), the goal of financial managers, including controllers and treasurers, is to manage an organization’s money as efficiently as possible. They achieve this goal by collecting payables as soon as possible, making payments at the latest time allowed by contract or law, ensuring that sufficient funds are available for day-to-day operations and taking advantage of opportunities to accrue the highest yield on funds not used for current activities. Simson et al. (2011) pointed out that in order to effectively manage the government’s cashflow and prevent arrears from accumulating, it is important to monitor the pipeline of future payments. In addition, procurement is a common source of corruption and therefore procurement systems tend to include controls aimed to detect and deter corruption via IFMIS.

Simson et al. (2011) further noted that in developing countries, under-spending is frequently as much of a problem as overspending. A failure to spend funds in a timely manner and in accordance with the budget points to a failure to deliver planned services.
It is therefore useful to consider the budget execution responsibilities of spending agencies and this is often embedded in IFMIS. According to Diamond (2005), an IFMIS has for long time helped in tracking financial events and summarizing financial information. It supports adequate management reporting, policy decisions, fiduciary responsibilities and the preparation of auditable financial statements. The interface between IFMIS and other functionalities has been largely manual raising the possibilities of errors in reports and accounting statements. The interface will lead to improved PFM and service delivery. In the sphere of many governmental institutions operations, IFMIS adoption generally guides the transition of task in the public financial management processes, from budget preparation and execution to accounting and reporting, with the help of an integrated system for the purpose of financial management (Harwlow, 2008).

Unlike fragmented financial management systems, McKinney (2004) argues that the integrated IFMIS is able to respond effectively to citizen’s demands. It enhances policy-makers’ ability to organize data around significant issues instead of the expenditure or object classification, which is under the existing, fragmented systems. In a nutshell, the benefits associated with the integrated systems model include: that information can be presented in a relevant framework, data can be better analyzed and categorized before they are reported and/or disseminated, information has greater opportunity for reaching decision-makers on a timely basis; the opportunity to design the system to produce data to meet users’ needs is facilitated; the opportunity for data analysis and conducting cost-benefit analysis are enhanced, there is greater opportunity to standardize, centralize and increase the consistency of information, it minimizes duplication and jurisdictional problems in exchanging information and facilitates efficient information sharing.

2.4.2 Reduce Fraud
Hendricks (2012) submits that a well-designed IFMIS can provide a number of features that may help detect excessive payments, fraud and theft. These include, for example, automated identification of exceptions to normal operations, patterns of suspicious activities, automated cross-referencing of personal identification numbers for fraud, cross-referencing of asset inventories with equipment purchase to detect theft, automated cash disbursement rules and identification of ghost workers. For example, the aim of IFMIS Procure to Pay (P2P) system is to develop an efficient and streamlined procurement and payment system by fully automating the procurement and payment
process to increase control and visibility over the entire life-cycle of a procurement transaction, from procurement planning to payment. The end-to-end P2P automated process that starts at development of procurement plans, to the actual procurement of goods and services, to payment of suppliers for goods or services delivered (Ministry of Finance, 2013).

One of the functions where fraud has always been rampant within government is the procurement function. IFMIS works towards a leaner and fraud-proof process of supplier management. According to the Ministry of Finance (2013), supplier management entails the process of registering suppliers, the goods and services they offer, qualification of the suppliers and managing this information throughout the procurement cycle. The supplier management module is an internet based portal that allows: Self-service registration of suppliers by departments; categorisation of suppliers based on goods and services offered; online supplier approvals; online generation of statistics reports on suppliers like quotations submitted and awarded LPOs/LSOs and their status; self-service supplier details change update; and online collaboration on supplier inquiries.

2.4.3 Transparency and Accountability

According to McKinney (2004), the benefits of FMIS could be argued to be profound. First, the improved recording and process of government financial transactions also allows prompt and efficient access to reliable financial data. Second, FMIS strengthens financial controls, facilitating a full and updated picture of commitments and expenditure on a continuous basis. Once a commitment is made, the system should be able to trace all the stages of the transaction processing from budget releases, commitment, purchase, payment request, reconciliation of bank statements and accounting of expenditure.

By computerising the budget management and accounting system for a government, an IFMIS aims at improving the quality and availability of information necessary at various stages of public financial management, such as budgeting, treasury management, accounting and auditing (Hendricks, 2012). First, the improved recording and processing of government financial transactions also allows prompt and efficient access to reliable financial data. This supports enhanced transparency and accountability of the executive to parliament, the general public, and other external agencies (Diamond & Khemani, 2005).
The Ministry of Finance (2013) claims that IFMIS reengineering promoted transparency, accountability and responsiveness of public financial resources.

According to Dener and Young (2013), most discussants agree that for true transparency, it is important not only that governments publish budget data on websites, but that the data they disclose are meaningful and provide a full picture of their financial activity to the public. Hendricks (2012) highlights that IFMIS assists management in ensuring accountability for the deployment and use of public resources and in improving the effectiveness and efficiency of public expenditure programmes. By tracking financial events through an automated financial system, management is able to exercise improved control over expenditure and to improve transparency and accountability in the budget cycle as a whole.

Diamond and Khemani (2005) for instance reported that in Tanzania, the benefits of the IFMS have been extensive, with the restoration of expenditure control and improved levels of transparency and accountability. The Commitment Control System has led to the elimination of overspending, and a substantial reduction in domestic arrears. A number of government bank accounts have been reduced to treasury single accounts maintained at the central bank, and the lag in reconciliation with banking data has been reduced from up to two years to automatic reconciliation on a daily basis. Comprehensive and fully reconciled fiscal data and reports are available on a continuous basis.

Some empirical studies have however established to the contrary. The study by Dener and Young (2013) attempted to explore the effects of FMIS on publishing open budget data and identify potential improvements in budget transparency, and provide some guidance on the effective use of FMIS platforms to publish open budget data. The study identified 20 key and 20 informative indicators drawn from the public finance websites of 198 economies to assess the status of government websites for publishing open budget data from FMIS. The study established that despite the widespread availability of 176 FMIS platforms used by 198 governments around the world, good practices in presenting open budget data from reliable FMIS solutions are highly visible in only 24 countries (12%).
2.4.5 Better Monitoring and Evaluation

According to Simson et al. (2011), to gain an understanding of how public funds have been utilised, and how they contribute to government policies, it is important to monitor the results of expenditure. This has led to the establishment of government monitoring and evaluation (M&E) systems. These systems are used to measure the quantity, quality and targeting of goods and services that the state provides and to measure the outcomes and impact resulting from them (Mackay, 2007). A common feature of such systems involves the Ministry of Finance keeping spending agencies in check by requesting reports on financial and non-financial performance (Simson et al., 2011). The latter is also referred to as the results of government spending, and can be measured at the levels of outputs, outcomes and impacts, which involve defining performance indicators (Simson et al., 2011).

Simson et al. (2011) also emphasize the importance for governments to define and keep track of indicators to consider what they are trying to achieve with their policies and how far they are progressing and to use the information to plan accordingly. Built in features within IFMIS is intended to facilitate this. According to the Ministry of Finance (2013), the system establishes effective links between key players in accounting and financial management. It provides an integrated computerised financial package to enhance the effectiveness and transparency of public resource management by computerising the budget management and accounting system for a government as it consists of several core sub-systems which plan, process and report on the use of public resources.

Rodin-Brown (2008) however observed that implementing successful IFMIS is often fraught with difficulties, such as resistance from the bureaucracies involved; lack of decision-making from the top; weak human capital; corruption and fraud. He also noted that IFMIS systems are complicated, expensive, and difficult to manage and maintain. He cited the example of inadequate setting up the chart of accounts; planning; poor communications between implementers, donors, and Government; shortage of management capacity and resources; changes in systems design documents without full agreement; poorly implemented trainings; and unnecessary and spurious project expenditures.
2.5 Chapter Summary

This chapter has reviewed the literature related to IFMIS. It has discussed the potential effects of IFMIS on the performance of public sector organizations as it relates to financial reporting, financial transactions processing and control and governance. The literature shows that most scholars have highlighted a number of benefits of IFMIS to the management of public finance. However, few empirical studies have been conducted and those that exist have yielded mixed results in terms of successful outcomes. In the next chapter, a description of the research design that guided this research work is discussed.
CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction

This chapter provides in details the research design to be used for the study. The research design chosen enables the purpose and objectives of this study to be achieved. The chapter discusses the research methodology, population and sampling, data collection, research procedures and data analysis.

3.2 Research Design

The researcher adopted descriptive research design. Descriptive research design involves measuring a set of variables as they exist naturally (Gravetter & Forzano, 2011) and seeks to provide answers to immediate questions about a current state of affairs (Matthews & Kostelis, 2011). According to Denscombe (2007), descriptive design emphasizes on producing data based on real world observation through a purposeful and structured approach. Researchers can draw inferences about relationships between variables from related variations of independent and dependent variables (Polit & Beck, 2001). Descriptive research design was used because of its ability to provide a snapshot of the current state of affairs. In this study, the major variables that studied were: financial reporting, financial transaction processing and financial control and governance.

3.3 Population and Sampling Design

3.3.1 Population

A population is the total set of elements about which a researcher wishes to make some inferences; where population elements refer to the subject on whom the measurement is being taken (Cooper & Schindler, 2005). According to Ministry of East Africa, Commerce and Tourism (2014), there were 1066 employees working in the ministry. This represents the population of the study. The target population comprised of staff working in the Finance, Accounts, Procurement and Audit departments, making up a total of 94 staff as shown in table 3.1 below.
Table 3.1 Population Distribution

<table>
<thead>
<tr>
<th>Strata</th>
<th>Population</th>
<th>Percentage population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounts</td>
<td>45</td>
<td>48</td>
</tr>
<tr>
<td>Audit</td>
<td>27</td>
<td>29</td>
</tr>
<tr>
<td>Procurement</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Finance</td>
<td>12</td>
<td>13</td>
</tr>
<tr>
<td>Total</td>
<td>94</td>
<td>100</td>
</tr>
</tbody>
</table>

3.3.2 Sampling Design

3.3.2.1 Sampling Frame

Saunders, Lewis and Thornhill (2009) define the sampling frame as the complete list of all the cases in the population from which a probability sample is drawn. In this study, the sampling frame comprised of the list of target staff available in the Ministry of East Africa, Commerce and Tourism database.

3.3.2.2 Sampling Technique

Since the target population was small, a census technique was used instead of sampling. This is where all the elements in the population are included in the sample (Saunders et al., 2009).

3.3.2 Sampling Size

Sample size may be defined as a small section of a part that represents the larger whole (Saunders et al., 2009). Gill and Johnson (2010) argue that an adequate sample size depends on several issues. Gill and Johnson (2010) adds that what is important is not the proportion to the research population that gets sampled, but the absolute size of the sample selected relative to the complexity of the population, the aims of the research and the kinds of statistical manipulations that will be used in data analysis. Denscombe (2007) concurs with this argument and adds that adequacy of sample size depends on a number of factors connected with the research which need to be borne in mind and weighed upon by the researcher in the process of reaching a decision about the necessary size of the
sample. That is, the absolute size will depend on the complexity of the population and the research questions being investigated.

For the purpose of this study, a sample size of 94 respondents, representing 100% of the target population was used for the study. Table 3.2 shows the stratification of the sample based on their respective departments.

<table>
<thead>
<tr>
<th>Strata</th>
<th>Population</th>
<th>Percentage population</th>
<th>Sample size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounts</td>
<td>44</td>
<td>47</td>
<td>44</td>
</tr>
<tr>
<td>Audit</td>
<td>28</td>
<td>30</td>
<td>28</td>
</tr>
<tr>
<td>Procurement</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Finance</td>
<td>12</td>
<td>13</td>
<td>12</td>
</tr>
<tr>
<td>Total</td>
<td>94</td>
<td>100</td>
<td>94</td>
</tr>
</tbody>
</table>

3.4 Data Collection Methods

Data was collected using a structured questionnaire. Saunders et al. (2009) defines a questionnaire as a general term that includes all data collection techniques in which each person is asked to answer the same set of questions in a predetermined order. In this study, the questions sought answers to the research questions and the respondents were provided with a list of close-ended questions based on each specific objective.

The research instrument was designed using measurement variables such as nominal, ordinal, interval and ratio scales as recommended by Kothari (2004). Denscombe (2007) avers that nominal data come from counting things and placing them into a category. Like nominal data however, ordinal data are based on counts of things assigned to specific categories, but, in this case, the categories stand in some clear, ordered, ranked relationship. This means that the data in each category can be compared with data in the other categories as either being higher or lower, more or less, among other examples. In this study, the questions seeking responses regarding the views of respondents about the effect of IFMIS were constructed using Likert’s 5 Point Scale. This was guided by the specific research questions.
The questionnaire was divided into four major sections. The first section sought respondents’ demographic profile such as gender, age, education, years of service at the ministry, among others. The second section comprised of Likert Scale questions about the effect of IFMIS on financial reporting in public sector organizations. Similarly, the third section comprised of questions about the effect of IFMIS on transactions processing in public sector organizations. The last section contained questions concerning the effect of IFMIS on financial control and governance in public sector organizations.

3.5 Research Procedures

Buchanan and Bryman (2007) observed that organizational researchers can rarely approach respondents directly with requests to participate in their studies. The Buchanan and Bryman (2007) argued that permission typically has to be obtained first from a senior management gatekeeper, who may often refer such requests to other senior colleagues and in some instances to a management committee or board. In turn, once a general warrant to proceed has been granted, they explain that unit or department managers may then have to be approached with further requests to access “their” staff in a particular manner. The Buchanan and Bryman (2007) further submit that individual respondents can, of course, refuse to collaborate despite that cascade of management concessions. According to them, this layering of permissions has at least two consequences for the researcher. First, this can delay the start of data collection; second, it can compromise research objectives and methods. They add that permission may be constrained in terms of the topics that can be investigated, the questions that can be asked, the materials that can be collated, and the timing and manner in which data collection is allowed to unfold. In view of this, the researcher sought necessary permission to conduct the study from the Director of Administration in the Ministry of East Africa, Commerce and Tourism.

Once official authority was granted, a pre-test of the research instrument was undertaken on 5 respondents from the target population to ascertain the suitability of the tool. The purpose of pre-testing the instrument was to ensure that items in the instruments are stated clearly and have the same meaning to all respondents (Mugenda & Mugenda, 2003). This enabled the researcher to refine the questionnaire for objectivity and efficiency of the process.
Buchanan and Bryman (2007) note that researchers are often asked to report their findings to those who granted access as a form of quid pro quo for providing documentation and allowing staff to be interviewed, complete questionnaires, or attend focus groups, for example. Such reporting implies a tacit acceptance of managerially defined themes and problems. The consequences of failing to meet gatekeeper expectations in this respect can be damaging to the researcher’s local reputation, may restrict publication of findings, occasionally leads to the censorship of reports, and can close that research site to other investigators. The researcher therefore promised to make available a summary of the report to all participants who expressly request so once the research exercise is complete.

### 3.6 Data Analysis Methods

The procedure for data analysis began by first coding and entering the data in the Statistical Package for the Social Sciences (SPSS), computer software used for analyzing data. Coding, in essence, entails the attribution of a number to a piece of data, or group of data, with the express aim of allowing such data to be analyzed in quantitative terms (Denscombe, 2007). Descriptive statistical techniques was then used to analyze data. Healey (2005) explains that descriptive statistics allow researchers to summarize large quantities of data using measures that are easily understood by an observer. This, consist of graphical and numerical techniques for summarizing data, in other words, reducing a large mass of data to simpler, more understandable terms. Denscombe (2007) considers this process a vital part of making sense of the data. The descriptive statistical techniques which were used include mean and standard deviation as well as percentage frequencies.

Inferences on the relationship between variables were drawn using correlation analysis techniques. The correlation technique used is Spearman’s rank correlation coefficient which, according to Healey (2011), is a statistic which is used to measure the relationship of paired ranks assigned to individual scores on two variables. In this attempt, data was first coded and entered into the Statistical Package for the Social sciences. The results were represented in figures and tables.

### 3.7 Chapter Summary

This chapter has described the methodology that was adopted for the research. It has discussed the population, sampling frame, sampling technique, sample size, the data
collection methods, the research procedure and finally the data analysis methods that was applied in the study. Chapter four presents the results and findings of the study while conclusions and recommendations are made in chapter five.
CHAPTER FOUR

4.0 RESULT AND FINDINGS

4.1 Introduction

The purpose of the study was to determine the effect of integrated financial management information system on the performance of public sector organizations. This chapter presents the results and findings of the study. The chapter begins by analysing the general information of the respondents, and then presents the analysis of the effect of IFMIS on financial reporting in public sector organizations. The chapter then presents the analysis of the effect of IFMIS on financial transaction processing in public sector organizations and then ends with the analysis of the effect of IFMIS on financial control and governance in public sector organizations. The total number of questionnaires distributed were 94 out of which and 71 questionnaires were realised. This is equivalent to a response rate of 75.5% as shown in table 4.1.

Table 4.1: Response Rate

<table>
<thead>
<tr>
<th>Strata</th>
<th>Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
</tr>
<tr>
<td>Responded</td>
<td>71</td>
</tr>
<tr>
<td>Did not respond</td>
<td>23</td>
</tr>
<tr>
<td>Total</td>
<td>94</td>
</tr>
</tbody>
</table>

4.2 General Information

In this section, the general information such as gender, age bracket, education level, the department the respondents worked for and the tenure of the respondents are analysed. The section also analyses the frequency of the usage of IFMIS in their department.

4.2.1 Gender of Respondents

The distribution of the staff according to their gender is as shown in table 4.2. The table shows that 54.9% of the respondents were of male gender while 45.1% of the respondents
were of the female gender. Therefore, both male and female respondents were adequately represented.

**Table 4.2 Gender**

<table>
<thead>
<tr>
<th>Gender</th>
<th>Distribution</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>39</td>
<td></td>
<td>54.9</td>
</tr>
<tr>
<td>Female</td>
<td>32</td>
<td></td>
<td>45.1</td>
</tr>
<tr>
<td>Total</td>
<td>71</td>
<td></td>
<td>100.0</td>
</tr>
</tbody>
</table>

**4.2.2 Age of Respondents**

The distribution of respondents by age is shown in table 4.3. The table shows that 33.8% of the respondents were in the 40-49 years age bracket while those over 50 years were 22.5% of the respondents. The table also shows that the respondents in the 30-39 age brackets were 32.4% whilst those in the 18-29 age brackets were 11.3% of the respondents. Therefore, the majority (56.3%) of the respondents were 40 years old or more.

**Table 4.3: Age Bracket**

<table>
<thead>
<tr>
<th>Age bracket</th>
<th>Distribution</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td></td>
<td>Percent</td>
</tr>
<tr>
<td>18-29 years</td>
<td>8</td>
<td></td>
<td>11.3</td>
</tr>
<tr>
<td>30-39 years</td>
<td>23</td>
<td></td>
<td>32.4</td>
</tr>
<tr>
<td>40-49 years</td>
<td>24</td>
<td></td>
<td>33.8</td>
</tr>
<tr>
<td>Over 50 years</td>
<td>16</td>
<td></td>
<td>22.5</td>
</tr>
<tr>
<td>Total</td>
<td>71</td>
<td></td>
<td>100.0</td>
</tr>
</tbody>
</table>

**4.2.3 Level of Education**

The distribution of respondents by their level of education is shown in table 4.4 below. The table shows that 29.2% of the respondents were undergraduates while 28.2% had done their postgraduate studies. Diploma graduates were 23.9% while certificate holders were 18.3% of the respondents. Thus, the majority of the respondents were university graduates.
Table 4.4: The Level of Education

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
</tr>
<tr>
<td>Certificate</td>
<td>13</td>
</tr>
<tr>
<td>Diploma</td>
<td>17</td>
</tr>
<tr>
<td>Degree</td>
<td>21</td>
</tr>
<tr>
<td>Post graduate</td>
<td>20</td>
</tr>
<tr>
<td>Total</td>
<td>71</td>
</tr>
</tbody>
</table>

4.2.4 Department of Respondent

The respondents were asked to indicate the departments where they were working. The distribution is shown in table 4.5. The table shows that 54.9% of the respondents were working in the accounts department while 14.1% were working in the audit department. Those who were working in the procurement department were 16.9% while the respondents working in the finance department were 14.1%. Therefore, the majority of the respondents were working in the accounts department.

Table 4.5: Distribution of Respondents by Department

<table>
<thead>
<tr>
<th>Department</th>
<th>Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
</tr>
<tr>
<td>Accounts</td>
<td>39</td>
</tr>
<tr>
<td>Audit</td>
<td>10</td>
</tr>
<tr>
<td>Procurement</td>
<td>12</td>
</tr>
<tr>
<td>Finance</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>71</td>
</tr>
</tbody>
</table>

4.2.5 Tenure of Respondents

The respondents indicated their tenure as captured in table 4.6 below. The table shows that 5.6% of the respondents had worked for less than a year while those who had worked for 1-3 years were 8.5% of the respondents. The respondents who had worked for 4-10 years were 49.3% of whereas those who worked for over ten years were 36.6%. Therefore, majority of the respondents worked with the ministry for at least four years.
Table 4.6 Distribution of Respondents by Tenure

<table>
<thead>
<tr>
<th>The tenure</th>
<th>Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
</tr>
<tr>
<td>Less than 1 year</td>
<td>4</td>
</tr>
<tr>
<td>1-3 years</td>
<td>6</td>
</tr>
<tr>
<td>4-10 years</td>
<td>35</td>
</tr>
<tr>
<td>Over 10 years</td>
<td>26</td>
</tr>
<tr>
<td>Total</td>
<td>71</td>
</tr>
</tbody>
</table>

4.2.6 Frequency of IFMIS Use

The respondents were asked to indicate the frequency with which they used IFMIS. Table 4.7 shows that 66.2% of the respondents used IFMIS daily whereas 16.6% of the respondents used the software weekly. The table also shows that 9.9% of the respondents used IFMIS monthly while 5.6% of the respondents used the software quarterly. Lastly, 1.4% of the respondents used IFMIS annually. Therefore, the majority of the respondents used IFMIS daily.

Table 4.7 Frequency of IFMIS Use

<table>
<thead>
<tr>
<th>The usage rate</th>
<th>Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
</tr>
<tr>
<td>Daily</td>
<td>47</td>
</tr>
<tr>
<td>Weekly</td>
<td>12</td>
</tr>
<tr>
<td>Monthly</td>
<td>7</td>
</tr>
<tr>
<td>Quarterly</td>
<td>4</td>
</tr>
<tr>
<td>Annually</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>71</td>
</tr>
</tbody>
</table>

4.3 The Effect of IFMIS on Financial Reporting

In this section, the effect of IFMIS on financial reporting by the ministry is analyzed. The analysis is situated within four measures of effectiveness namely; relevance, accuracy, promptness and authenticity.
4.3.1 Relationship between IFMIS and Financial Reporting

Spearman’s rank correlation coefficient was run to establish the relationship between IFMIS and financial effects on aspects of financial reporting at the ministry. The results are shown in table 4.8.

Table 4.8: Correlation between IFMIS and Financial Reporting Variables

<table>
<thead>
<tr>
<th>Spearman’s Rho</th>
<th>Correlation Coefficient</th>
<th>Sig. (2-tailed)</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Improved Financial Reporting</td>
<td>1.000</td>
<td>.</td>
</tr>
<tr>
<td>2</td>
<td>Report true cost per activity</td>
<td>.252(*)</td>
<td>.034</td>
</tr>
<tr>
<td>3</td>
<td>Easy data extraction and presentation</td>
<td>.437(**)</td>
<td>.000</td>
</tr>
<tr>
<td>4</td>
<td>Access to specific information</td>
<td>.406(**)</td>
<td>.000</td>
</tr>
<tr>
<td>5</td>
<td>Trend analysis of fiscal operations</td>
<td>.261(*)</td>
<td>.028</td>
</tr>
<tr>
<td>6</td>
<td>Real time reconciliation of data</td>
<td>.305(**)</td>
<td>.010</td>
</tr>
<tr>
<td>7</td>
<td>Accurate disclosure of financial position</td>
<td>.445(**)</td>
<td>.000</td>
</tr>
<tr>
<td>8</td>
<td>Generation of custom reports</td>
<td>.454(**)</td>
<td>.000</td>
</tr>
<tr>
<td>9</td>
<td>Easy access to non-fiscal information</td>
<td>.441(**)</td>
<td>.000</td>
</tr>
<tr>
<td>10</td>
<td>Quick provision of year-to-year balances</td>
<td>.466(**)</td>
<td>.000</td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).
The correlation results show that there was a statistically significant positive correlation between the effect of IFMIS on improved financial reporting and: reporting of true cost per activity ($r=.252, p<.05$); easy data extraction and presentation ($r=.437, p<.01$), improved access to specific financial information ($r=.406, p<.01$); easy trend analysis of fiscal operations ($r=.261, p<.05$); real time reconciliation of data ($r=.305, p<.01$); accurate disclosure of financial position ($r=.445, p<.01$); generation of custom reports ($r=.454, p<.01$); easy access to non-fiscal information ($r=.441, p<.01$) and quick provision of year-to-year balances ($r=.446, p<.01$). The coefficients indicate that there was a direct relationship between the introduction of IFMIS and improvements in aspects of financial reporting.

### 4.3.2 Views on the Effect of IFMIS on Financial Reporting

The study sought to determine the respondents’ views on whether IFMIS enabled them to understand the true cost of service delivered by the ministry per activity. Table 4.9 shows that 59.2% of the respondents agreed and a further 15.5% strongly agreed. However, 15.5% of the respondents were neutral whereas 8.5% of the respondents disagreed and 1.4% strongly disagreed that IFMIS enabled them to truly understand the true cost of service delivered at the ministry. Therefore, majority of the respondents (74.7%) of the respondents were of the view that IFMIS enabled them to understand the true cost of service delivered by the ministry.

The study sought to establish whether respondents could easily extract and present data from IFMIS in ways that facilitate analysis. Table 4.9 shows that 52.1% of the respondents agreed and 35.2% of the respondents strongly agreed. On the other hand, 5.6% of the respondents disagreed whereas another 5.6% of the respondents were neutral. Therefore, the majority (87.3%) of the respondents agreed that it easy to extract and present data in ways that facilitated analysis.

The study sought to ascertain whether respondents could access IFMIS to derive the specific information they required to carry out their work. Table 4.9 shows that 49.3% of the respondents agreed and 38.0% of the respondents strongly agreed. Seven percent (7%) of the respondents were neutral whereas those who disagreed where 5.6%. Therefore, majority (87.7%) of the respondents agreed that they could access IFMIS to derive the specific information they required to carry out their work.
The study sought to establish whether there were inbuilt analytical tools within IFMIS that made it possible to do trend analysis. The results showed that 49.3% and 28.2% of the respondents agree and strongly agreed respectively, that there were inbuilt analytical tools that made it possible to do trend analysis. However, there were 19.7% of the respondents who were neutral while 2.8% of the respondents disagreed. Therefore, majority (77.5%) of the respondents agreed that there were inbuilt analytical tools with IFMIS that enabled trend analysis.

Respondents were asked whether the software made it possible to reconcile transaction data in real time. Table 4.9 below shows that 46.5% of the respondents agreed and 31% of the respondents strongly agreed that IFMIS made it possible to reconcile data in real time. However, 5.6% of the respondents disagreed while 16.9% of the respondents were neutral. Therefore, majority (77.5%) of the respondents agreed that through IFMIS, the respondents were able to reconcile transactions data in real time.

The views of respondents were sought as to whether IFMIS accurately disclosed the financial position of the ministry. Table 4.9 shows that 40.8% of the respondents agreed and 36.6% of the respondent strongly agreed. The table however shows that 5.6% of the respondents disagreed that the software accurately disclosed the financial position of the ministry while 16.9% of the respondents were neutral. Therefore, the majority (75.4%) of the respondents agreed that IFMIS accurately disclosed the financial position of the ministry.

The study sought to establish whether IFMIS enabled the respondents to generate custom reports for external and internal use. As shown in table 4.9, 40.8% and 42.3% of the respondents agreed and strongly agreed, respectively. The table however shows that 11.3% of the respondents were neutral and 5.6% of the respondents disagreed. Therefore, the majority (83.1%) of the respondents agreed that IFMIS enabled them to generate custom reports for internal and external use.

The study sought to establish whether IFMIS enabled the respondents to easily access non-financial information. Table 4.9 showed that 16.9% of the respondents strongly agreed that they were able to easily access non-financial information while 29.6% of the
respondents agreed compared to 23.9% of the respondents who disagreed and 2.8% of the respondents who strongly disagreed. The study also showed that 26.8% of the respondents were neutral. Therefore, on aggregate, majority (46.5%) of the respondents agreed that IFMIS enabled them to easily access non-financial information such as number of employees.

Table 4.9: Perceptions of the Effect of IFMIS on Aspects of Financial Reporting

<table>
<thead>
<tr>
<th>Perceptions</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>IFMIS enable me to understand the true cost of service delivered by the ministry per activity</td>
<td>15.5%</td>
<td>59.2%</td>
<td>15.5%</td>
<td>8.5%</td>
<td>1.4%</td>
</tr>
<tr>
<td>I can easily extract and present data from IFMIS in ways that facilitate analysis</td>
<td>35.2%</td>
<td>52.1%</td>
<td>5.6%</td>
<td>7.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>I can access IFMIS to derive the specific information I require to carry out my work</td>
<td>38.0%</td>
<td>49.3%</td>
<td>7.0%</td>
<td>5.6%</td>
<td>0.0%</td>
</tr>
<tr>
<td>There are inbuilt analytical tools within IFMIS that enables trend analysis of various elements of fiscal operations at the ministry</td>
<td>28.2%</td>
<td>49.3%</td>
<td>19.7%</td>
<td>2.8%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Through IFMIS, I am able to reconcile transactions data in real time</td>
<td>31.0%</td>
<td>46.5%</td>
<td>16.9%</td>
<td>5.6%</td>
<td>0.0%</td>
</tr>
<tr>
<td>IFMIS accurately discloses the financial position of the ministry</td>
<td>36.6%</td>
<td>40.8%</td>
<td>16.9%</td>
<td>5.6%</td>
<td>0.0%</td>
</tr>
<tr>
<td>The IFMIS system enables me to generate custom reports for internal and external use</td>
<td>42.3%</td>
<td>40.8%</td>
<td>11.3%</td>
<td>5.6%</td>
<td>0.0%</td>
</tr>
<tr>
<td>I can easily access non-financial information such as employee number and cadre</td>
<td>16.9%</td>
<td>29.6%</td>
<td>26.8%</td>
<td>23.9%</td>
<td>2.8%</td>
</tr>
<tr>
<td>With IFMIS, I have at my disposal information that can quickly provide year to year balances which can be used for analysis throughout the year</td>
<td>21.1%</td>
<td>47.9%</td>
<td>19.7%</td>
<td>11.3%</td>
<td>0.0%</td>
</tr>
<tr>
<td>IFMIS offers real time financial information that enhances my decision making abilities</td>
<td>21.1%</td>
<td>63.4%</td>
<td>7.0%</td>
<td>8.5%</td>
<td>0.0%</td>
</tr>
</tbody>
</table>
Respondents were asked whether IFMIS provided periodic balances which could be used for analysis throughout the year. Table 4.9 shows that 47.9% and 21.1% of the respondents agreed and strongly agreed, respectively that the software provided periodic information for analysis throughout the year. However, 11.3% of the respondents disagreed and 19.7% of the respondents were neutral. Therefore, the majority (68%) of the respondents agreed that IFMIS provided periodic balances which could be used for analysis throughout the year.

The study sought to establish whether IFMIS provided real time financial information that enhanced decision making. The results showed that 63.4% of the respondents agreed and a further 21.1% of the respondents strongly agreed that the software provided real time financial information that enhances decision making. However, 7.0% of the respondents were neutral whereas 8.5% of the respondents disagreed. Therefore, the majority (64.5%) of the respondents agreed that IFMIS provided real time financial information.

4.4 The Effect of IFMIS on Financial Transactions Processing

In this section, the analysis of the effect of IFMIS on financial transactions processing was made concerning the following dimensions: efficiency, effectiveness, security, financial control, convenience, stakeholder confidence.

4.4.1 Relationship between IFMIS and Transactions Processing

The study analyzed the correlation between IFMIS’ effect on transaction processing and indicators of performance regarding aspects of financial transactions processing at the ministry. Table 4.10 shows the results. The table shows that IFMIS effects on transaction processing was significantly correlated to: processing of receipts and payments through IFMIS ($r=.270, p<.05$); reductions in wasteful expenses and irregular expenditure ($r=.507, p<.01$); streamlined procedures ($r=540, p<.01$); budget execution according to rules ($r=.380, p<.01$); automated procedures and internal controls ($r=.326, p<.1$); enabled tracing of all stages of transaction processing ($r=.425, p<.01$); closer monitoring of bills and cash ($r=.422, p<.01$); friendly and convenient interaction with the public ($r=.466, p<.01$). This suggests that an increase in effectiveness of transaction processing at the ministry was noted with the introduction of IFMIS.
Table 4.10: Correlation between IFMIS and Transaction Processes Performance

<table>
<thead>
<tr>
<th>Spearman's Rho</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 IFMIS effects on transaction processing</td>
<td></td>
</tr>
<tr>
<td>Correlation Coefficient</td>
<td>1.000</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.</td>
</tr>
<tr>
<td>N</td>
<td>71</td>
</tr>
<tr>
<td>2 Processing of receipts and payments through IFMIS</td>
<td></td>
</tr>
<tr>
<td>Correlation Coefficient</td>
<td>.270(*)</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.023</td>
</tr>
<tr>
<td>N</td>
<td>71</td>
</tr>
<tr>
<td>3 Reductions in wasteful expenses and irregular expenditure</td>
<td></td>
</tr>
<tr>
<td>Correlation Coefficient</td>
<td>.507(**)</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>71</td>
</tr>
<tr>
<td>4 Streamlined procedures</td>
<td></td>
</tr>
<tr>
<td>Correlation Coefficient</td>
<td>.540(**)</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>71</td>
</tr>
<tr>
<td>5 Budget execution according to rules</td>
<td></td>
</tr>
<tr>
<td>Correlation Coefficient</td>
<td>.380(**)</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.001</td>
</tr>
<tr>
<td>N</td>
<td>71</td>
</tr>
<tr>
<td>6 Automated procedures and internal controls</td>
<td></td>
</tr>
<tr>
<td>Correlation Coefficient</td>
<td>.326(**)</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.005</td>
</tr>
<tr>
<td>N</td>
<td>71</td>
</tr>
<tr>
<td>7 Enabled tracing of all stages of transaction processing</td>
<td></td>
</tr>
<tr>
<td>Correlation Coefficient</td>
<td>.425(**)</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>71</td>
</tr>
<tr>
<td>8 Allowing a closer monitoring of bills and cash</td>
<td></td>
</tr>
<tr>
<td>Correlation Coefficient</td>
<td>.422(**)</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>71</td>
</tr>
<tr>
<td>9 Friendly and convenient interaction with the public</td>
<td></td>
</tr>
<tr>
<td>Correlation Coefficient</td>
<td>.460(**)</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>71</td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

4.4.2 Perception of the Respondents on IFMIS Effects on Transaction Processing

The research sought to establish whether all ministry transactions were processed through IFMIS. The findings are presented in table 4.11. The table shows that 42.3% and 35.2% of the respondents agreed and strongly agreed, respectively. However, there were 8.5% of the respondents who disagreed while 14.1% of the respondents were neutral. Therefore, the majority (77.5%) of the respondents agreed that the all ministry’s transactions were processed through IFMIS.
Respondents were asked whether IFMIS has led to significant reductions in wasteful expenses and irregular expenditure. Table 4.11 shows that 36.6% of the respondents agreed and a further 18.3% of the respondents strongly agreed. However, 26.8% of the respondents were neutral, whereas 12.7% and 5.6% disagreed and strongly disagreed, respectively. Therefore, majority (54.3%) of the respondents agreed that IFMIS has helped curb wasteful expenses and irregular payments.

The perceptions of the respondents were sought as to whether IFMIS streamlined procedures and reduced opportunity for corruption. The findings showed that 50.6% of the respondents agreed and another 16.9% strongly agreed. On the other hand, 16.9% of the respondents were neutral whereas 9.9% of the respondents disagreed and 5.6% of the respondents strongly disagreed. Therefore, majority of the respondents agreed that the software helped in streamlining procedures and helped in reducing opportunity for corruption.

The study sought to establish whether IFMIS ensured that the ministry budget was executed in accordance with the rules. Table 4.11 shows that 45.1% of the respondents agreed and 25.4% of the respondents strongly disagreed. Nevertheless, there were 12.7% of the respondents who disagreed that the software helped in ensuring that the ministry budget was executed according to the established rules and a further 4.2% of the respondents who strongly disagreed. On aggregate, majority (70.5%) of the respondents agreed that IFMIS ensure that the ministry budget was implemented according to the rules. The question sought to determine whether IFMIS automated procedures and internal controls which promoted accountability. Table 4.11 shows that 52.1% and 25.4% of the respondents agreed and strongly agreed, respectively. Even so, some 8.5% of the respondents disagreed while 14.1% of the respondents were neutral. Therefore, majority (77.5%) of the respondents agreed that IFMIS automated procedures and internal controls which promoted accountability.

The opinion of the respondents was sought as to whether IFMIS helped to trace all stages of transaction processing in the ministry. Table 4.11 shows that 42.3% of the respondents agreed and another 38.0% of the respondents strongly agreed that the software helped in tracing all the stages of transaction processing in the ministry. Seven percent (7.0%) of
the respondents disagreed and 12.7% of the respondents were neutral. Therefore, majority (80.3%) of the respondents agreed that the software helped to trace all the stages of transaction processing.

The views of the respondents was sought as to whether by using IFMIS, financial information was made available in a reliable and timely manner. Table 4.11 shows that 56.3% of the respondents agreed and 28.2% strongly agreed. Some 12.7% of the respondents were neutral while 2.8% of the respondents disagreed. Therefore, majority (84.5%) of the respondents agreed that by using IFMIS, financial information was made available in a reliable and timely manner.

The study sought to establish whether IFMIS made bank reconciliation automatic thus allowing a closer monitoring of outstanding bill and cash in bank. Table 4.11 shows that 39.4% and 23.9% of the respondents agreed and strongly agreed, respectively. Twenty eight percent (28.2%) of the respondents were neutral whereas 7% of the respondents disagreed and 1.4% of the respondents strongly disagreed. Therefore, majority (63.3%) of the respondents agreed that IFMIS made bank reconciliation automatic thereby allowing for a closer monitoring of outstanding bills and cash in bank.

Respondents were asked whether IFMIS made interaction with the public friendly and convenient. Thirty eight percent (38.0%) of the respondents agreed and 5.6% of the respondents strongly agreed. On the other hand, 36.6% of the respondents were neutral, while 18.3% and 1.4% of the respondents disagreed and strongly disagreed, respectively. On aggregate, majority (43.6%) of the respondents agreed that IFMIS made interaction with the public possible. Respondents were also asked whether stakeholder confidence with the ministry improved with the implementation of IFMIS. Forty five percent (45.1%) of the respondents agreed and 16.9% of the respondents strongly agreed. However, 28.2% of the respondents were neutral whereas 8.5% of the respondents disagreed and another 1.4% of the respondents strongly disagreed. Therefore, majority (62.0%) of the respondents agreed that IFMIS improved stakeholder confidence with the ministry.
Table 4.11: The Respondents’ Views on IFMIS’ Effects on Transaction Processing

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>All ministry transactions, both receipts and payments are processed through IFMIS</td>
<td>35.2%</td>
<td>42.3%</td>
<td>14.1%</td>
<td>8.5%</td>
<td>0.0%</td>
</tr>
<tr>
<td>IFMIS has lead to significant reductions in wasteful expenses and irregular expenditure</td>
<td>18.3%</td>
<td>36.6%</td>
<td>26.8%</td>
<td>12.7%</td>
<td>5.6%</td>
</tr>
<tr>
<td>IFMIS has streamlined procedures and significantly reduced opportunity for corruption</td>
<td>16.9%</td>
<td>50.7%</td>
<td>16.9%</td>
<td>9.9%</td>
<td>5.6%</td>
</tr>
<tr>
<td>IFMIS has ensured that the ministry budget is executed in accordance with the rules to prevent overspending</td>
<td>28.2%</td>
<td>45.1%</td>
<td>9.9%</td>
<td>12.7%</td>
<td>4.2%</td>
</tr>
<tr>
<td>IFMIS has automated procedures and internal controls which promotes accountability</td>
<td>25.4%</td>
<td>52.1%</td>
<td>14.1%</td>
<td>8.5%</td>
<td>0.0%</td>
</tr>
<tr>
<td>IFMIS enables me to trace all stages of transaction processing in the ministry</td>
<td>38.0%</td>
<td>42.3%</td>
<td>12.7%</td>
<td>7.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Using IFMIS financial information is made available in reliable and timely manner</td>
<td>28.2%</td>
<td>56.3%</td>
<td>12.7%</td>
<td>2.8%</td>
<td>0.0%</td>
</tr>
<tr>
<td>IFMIS makes bank reconciliation automatic thus allowing a closer monitoring of outstanding bill and cash in bank account</td>
<td>23.9%</td>
<td>39.4%</td>
<td>28.2%</td>
<td>7.0%</td>
<td>1.4%</td>
</tr>
<tr>
<td>IFMIS makes my interaction with the public friendly and convenient</td>
<td>5.6%</td>
<td>38.0%</td>
<td>36.6%</td>
<td>18.3%</td>
<td>1.4%</td>
</tr>
<tr>
<td>Since the implementation of IFMIS, stakeholder confidence with the ministry has improved a lot</td>
<td>16.9%</td>
<td>45.1%</td>
<td>28.2%</td>
<td>8.5%</td>
<td>1.4%</td>
</tr>
</tbody>
</table>
4.5 The Effect of IFMIS on Financial Control and Governance in the Public Sector

This section presents the findings on the effect of IFMIS on financial control and governance. The dimensions of financial control and governance evaluated include: enhancement of governance, fraud reduction, transparency and accountability and better monitoring and evaluation.

4.5.1 Relationship between IFMIS and Financial Control and Governance

A correlation analysis was undertaken between IFMIS effects and aspects of financial control and governance as shown in table 4.12.

<table>
<thead>
<tr>
<th>Spearman’s Rho</th>
<th>Correlation Coefficient</th>
<th>Sig. (2-tailed)</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 IFMIS effects on control and governance</td>
<td>1.000</td>
<td>.</td>
<td>71</td>
</tr>
<tr>
<td>2 Reduced jurisdictional problems</td>
<td>.431(**)</td>
<td>.000</td>
<td>71</td>
</tr>
<tr>
<td>3 Reduced cases of fraud</td>
<td>.335(**)</td>
<td>.004</td>
<td>71</td>
</tr>
<tr>
<td>4 Enhanced transparency</td>
<td>.262(*)</td>
<td>.027</td>
<td>71</td>
</tr>
<tr>
<td>5 Increased accountability</td>
<td>.366(**)</td>
<td>.002</td>
<td>71</td>
</tr>
<tr>
<td>6 Effective monitoring and evaluation</td>
<td>.179(*)</td>
<td>.135</td>
<td>71</td>
</tr>
<tr>
<td>7 Auditable financial statements</td>
<td>.322(**)</td>
<td>.006</td>
<td>71</td>
</tr>
<tr>
<td>8 Enhanced credibility and confidence</td>
<td>.520(**)</td>
<td>.000</td>
<td>71</td>
</tr>
<tr>
<td>9 Enhanced security of information</td>
<td>.299(*)</td>
<td>.011</td>
<td>71</td>
</tr>
<tr>
<td>10 Improved efficiency of public expenditure</td>
<td>.242(*)</td>
<td>.042</td>
<td>71</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).
The table (4.12) shows that there was a significant positive correlation between IFMIS effects on control/governance and reduced jurisdictional problems \((r=.431, \ p<.05)\); reduced cases of fraud \((r=.335, \ p<.01)\); enhanced transparency \((r=.262, \ p<.01)\); increased accountability \((r=.366, \ p<.01)\); auditable financial statements \((r=.322, \ p<.01)\); enhanced credibility and confidence \((r=.520, \ p<.01)\); enhanced security of information \((r=.299, \ p<.05)\) and improved efficiency of public expenditure \((r=.242, \ p<.05)\). This implies that positive effects on these financial control and governance were felt with the introduction of IFMIS. However, the correlation between IFMIS and effective monitoring and evaluation \((r=.179, \ p>.05)\) was not statistically significant, implying that relationship occurred out of chance.

### 4.5.2 Respondents’ Views on the Effect of IFMIS on Financial Control/Governance

The views of the respondents regarding the effect of IFMIS on various aspects of financial control and governance are summarized in table 4.13. Respondents were asked whether the implementation of IFMIS has minimized duplication and jurisdictional problems. The table shows that 59.2% of the respondents agreed and 12.7% of the respondents strongly agreed. There were 25.4% of the respondents who were neutral whereas 1.4% of the respondents disagreed and another 1.4% strongly disagreed. Therefore, majority (71.9%) of the respondents agreed that since the implementation of IFMIS, duplication and jurisdictional problems in exchanging information have been minimized.

The study sought to establish whether IFMIS allowed for cross-referencing of personal numbers and asset inventories. Table 4.13 shows that 50.7% and 8.5% of the respondents agreed and strongly agreed, respectively. The table also shows 28.2% of the respondents were neutral whereas 11.3% of the respondents disagreed and 1.4% of the respondents strongly disagreed. Therefore, majority (59.5%) of the respondents agreed that IFMIS allowed for cross-referencing of personal numbers and asset inventories, significantly reducing cases of fraud.

Respondents were asked whether IFMIS could trace all the stages of transaction process hence enhancing transparency and accountability of the process. Table 4.1 shows that 59.2% and 26.8% of the respondents agreed and strongly agreed, respectively. Seven
percent (7.0%) of the respondents however disagreed and another 1.4% strongly disagreed while 5.6% of the respondents were neutral. Therefore, majority (86%) of the respondents agreed that IFMIS could trace all the stages of a transaction process, thereby enhancing transparency and accountability.

The study sought to establish whether IFMIS assisted the management in ensuring accountability for the deployment and use of public resources. Table 4.14 shows that 21.1% of the respondents strongly agreed that the software assisted them in ensuring accountability while 60.6% of the respondents agreed. Nevertheless, 7% of the respondents disagreed that the software helped in ensuring accountability while 1.4% strongly disagreed. The result also revealed that 9.9% were neutral. Therefore, the majority of the respondents agreed that IFMIS assisted the management in ensuring accountability for the deployment and use of public resources.

The study sought to establish IFMIS has inbuilt features which facilitated the monitoring and evaluation of the ministry’s activities. Table 4.14 shows that 14.1% of the respondents strongly agreed that the software had inbuilt features while 57.7% of the respondents agreed. Meanwhile, 9.9% of the respondents disagreed that the software had inbuilt features while 18.3% of the respondents were neutral. Therefore, the majority of the respondents agreed that IFMIS had inbuilt features which facilitated the monitoring and evaluation of the ministry’s activities.

The study sought to establish whether IFMIS had improved the effectiveness and efficiency of public expenditure programs. Table 4.14 shows that 59.2% of the respondents agreed that IFMIS had improved the effectiveness and efficiency of public expenditure programs contrasted to 8.5% of the respondents who agreed and 19.7% of the respondents who strongly disagreed and 8.5% of the respondents who disagreed. The study also showed that 12.7% of the respondents were neutral. Therefore, the majority of the respondents agreed that IFMIS had improved the effectiveness and efficiency of the public expenditure programs.

The views of the respondents were sought as to whether IFMIS assists management in ensuring accountability for the deployment and use of public resources. The findings showed that 60.6% of the respondents agreed and a further 21.1% strongly agreed.
However, 9.9% of the respondents were neutral and 7.0% and 1.4% of the respondents disagreed and strongly disagreed, respectively. Therefore, majority (81.7%) of the respondents agreed that the system assists management in ensuring accountability for the deployment and use of public resources.

The study sought to determine the opinion of the respondents as to whether built-in features within IFMIS facilitate effective monitoring and evaluation of ministry’s effectiveness. Table 4.13 shows that 57.7% of the respondents agreed and 14.1% strongly agreed. However, 18.3% of the respondents were neutral while 9.9% of the respondents disagreed. On aggregate, majority (71.8%) of the respondents agreed that the built-in features within IFMIS facilitated effective monitoring of the ministry’s performance. The study also sought to determine whether IFMIS improved the effectiveness and efficiency of public expenditure programs. According to table 4.13, majority (59.2%) of the respondents agreed. However, there were 12.7% of the respondents who were neutral, while 8.5% and 19.7% of the respondents disagreed and strongly disagreed, respectively.

Respondents were asked whether since the implementation of IFMIS, confidence and credibility of the ministry’s budget has been enhanced. Table 4.13 shows that 56.3% and 21.1% of the respondents agreed and strongly agreed. Nevertheless, 2.8% of the respondents disagreed that IFMIS improved the public image of the ministry while 1.4% strongly disagreed. The table also shows that 18.3% of the respondents were neutral. Therefore, the majority (77.3%) of the respondents agreed that implementation of the software improved confidence and credibility of the ministry’s budget.

Respondents were also asked whether the use of IFMIS has greatly enhanced security of information which minimizes risk of corruption and improve reliability of the system. Table 4.13 shows that 49.3% and 22.5% of the respondents agreed and strongly agreed, respectively. However, there were 22.5% of the respondents who were neutral and 5.6% of the respondents who disagreed. On aggregate, majority (71.8%) of the respondents agreed that IFMIS greatly enhanced security of information consequently minimizing corruption and improving the reliability of the system.
Table 4.13: The Respondents’ Views on the Effect of IFMIS on Control/Governance

<table>
<thead>
<tr>
<th>Description</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Since the implementation of IFMIS, duplication and jurisdictional problems in exchanging information have been minimized</td>
<td>12.7%</td>
<td>59.2%</td>
<td>25.4%</td>
<td>1.4%</td>
<td>1.4%</td>
</tr>
<tr>
<td>IFMIS allows for cross-referencing of personal identification numbers and asset inventories that has reduced cases of fraud significantly</td>
<td>8.5%</td>
<td>50.7%</td>
<td>28.2%</td>
<td>11.3%</td>
<td>1.4%</td>
</tr>
<tr>
<td>IFMIS can trace all the stages of transaction process hence enhancing transparency of the process</td>
<td>26.8%</td>
<td>59.2%</td>
<td>5.6%</td>
<td>7.0%</td>
<td>1.4%</td>
</tr>
<tr>
<td>IFMIS assists management in ensuring accountability for the deployment and use of public resources</td>
<td>21.1%</td>
<td>60.6%</td>
<td>9.9%</td>
<td>7.0%</td>
<td>1.4%</td>
</tr>
<tr>
<td>Built- in features within IFMIS facilitates effective monitoring and evaluation of ministry’s effectiveness</td>
<td>14.1%</td>
<td>57.7%</td>
<td>18.3%</td>
<td>9.9%</td>
<td>0.0%</td>
</tr>
<tr>
<td>IFMIS had improved the effectiveness and efficiency of public expenditure programs</td>
<td>0.0%</td>
<td>59.2%</td>
<td>12.7%</td>
<td>8.5%</td>
<td>19.7%</td>
</tr>
<tr>
<td>Since the implementation of IFMIS, there is enhanced confidence and credibility of the ministry’ budget</td>
<td>21.1%</td>
<td>56.3%</td>
<td>18.3%</td>
<td>2.8%</td>
<td>1.4%</td>
</tr>
<tr>
<td>Use of IFMIS has greatly enhanced security of information which minimizes risk of corruption and improve reliability of the system</td>
<td>22.5%</td>
<td>49.3%</td>
<td>22.5%</td>
<td>5.6%</td>
<td>0.0%</td>
</tr>
</tbody>
</table>
4.6 Chapter Summary

The chapter has shown that in terms of the effect of IFMIS on financial reporting in public sector organizations, there was a statistically significant positive correlation between the effect of IFMIS on improved financial reporting and: reporting of true cost per activity ($r=0.252, p<0.05$); easy data extraction and presentation ($r=0.437, p<0.01$), improved access to specific financial information ($r=0.406, p<0.01$); easy trend analysis of fiscal operations ($r=0.261, p<0.05$); real time reconciliation of data ($r=0.305, p=0.01$); accurate disclosure of financial position ($r=0.445, p<0.01$); generation of custom reports ($r=0.454, p<0.01$); easy access to non-fiscal information ($r=0.441, p<0.01$) and quick provision of year-to-year balances ($r=0.446, p<0.01$).

Concerning the effect of IFMIS on financial transaction processing in public sector organizations, the findings have shown that IFMIS’ effects on transaction processing was significantly correlated to: processing of receipts and payments through IFMIS ($r=0.270, p<0.05$); reductions in wasteful expenses and irregular expenditure ($r=0.507, p<0.01$); streamlined procedures ($r=0.540, p<0.01$); budget execution according to rules ($r=0.380, p<0.01$); automated procedures and internal controls ($r=0.326, p<0.1$); enabled tracing of all stages of transaction processing ($r=0.425, p<0.01$); closer monitoring of bills and cash ($r=0.422, p<0.01$); friendly and convenient interaction with the public ($r=0.466, p<0.01$). This suggests that an increase effectiveness of transaction processing at the ministry was noted with the introduction of IFMIS.

Regarding the effect of IFMIS on financial control and governance in public sector organizations, there was a significant positive correlation between IFMIS’ effects on control/governance and reduced jurisdictional problems ($r=0.431, p<0.05$); reduced cases of fraud ($r=0.335, p<0.01$); enhanced transparency ($r=0.262, p<0.01$); increased accountability ($r=0.366, p<0.01$); auditable financial statements ($r=0.322, p<0.01$); enhanced credibility and confidence ($r=0.520, p<0.01$); enhanced security of information ($r=0.299, p<0.05$) and improved efficiency of public expenditure ($r=0.242, p<0.05$).

The findings have been presented in frequency and correlation tables. The next chapter discusses the findings, draws conclusions and makes recommendations.
CHAPTER FIVE

5.0 DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The purpose of this chapter is to discuss the findings, draw conclusions and make recommendations. The chapter begins with a summary of the study. The chapter then proceeds to discuss the study findings according to the specific objectives. Conclusions are then drawn in view of the discussion under each objective. Lastly, this chapter makes recommendations for improvement as well as suggestions for future study.

5.2 Summary

The purpose of the study was to determine the effect of IFMIS on the financial performance of public sector organizations. The specific objectives of the study were: to determine effect of IFMIS on financial reporting in public sector organizations; establish effect of IFMIS on financial transaction processing in public sector organizations; and to ascertain the effect of IFMIS on financial control and governance in public sector organizations.

Descriptive research design was used because of its ability to provide a snapshot of the current state of affairs. The population of the study was 1066 staffs of the Ministry for East Africa, Commerce and Tourism. The target population comprised of 94 staff working in the finance, accounts, procurement and audit departments. A census technique was used and therefore, the sample size was 94 respondents, representing 100% of the target population size. The data collection method used in this study was a questionnaire and the response rate was 75.5%. The data was analyzed using Spearman’s Rank Correlation Coefficient, made possible by the use of SPSS. The findings were presented in tables.

The study found that in terms of the effect of IFMIS on financial reporting in public sector organizations, there was a statistically significant positive correlation between the effect of IFMIS on improved financial reporting and: reporting of true cost per activity...
easy data extraction and presentation \((r=.437, p<.01)\), improved access to specific financial information \((r=.406, p<.01)\), easy trend analysis of fiscal operations \((r=.261, p<.05)\); real time reconciliation of data \((r=.305, p=.01)\); accurate disclosure of financial position \((r=.445, p<.01)\); generation of custom reports \((r=.454, p<.01)\); easy access to non-fiscal information \((r=.441, p<.01)\) and quick provision of year-to-year balances \((r=.446, p<.01)\).

Concerning the effect of IFMIS on financial transaction processing in public sector organizations, the findings have shown that IFMIS’ effects on transaction processing was significantly correlated to: processing of receipts and payments through IFMIS \((r=.270, p<.05)\); reductions in wasteful expenses and irregular expenditure \((r=.507, p<.01)\); streamlined procedures \((r=540, p<.01)\); budget execution according to rules \((r=.380, p<.01)\); automated procedures and internal controls \((r=.326, p<.1)\); enabled tracing of all stages of transaction processing \((r=.425, p<.01)\); closer monitoring of bills and cash \((r=.422, p<.01)\); friendly and convenient interaction with the public \((r=.466, p<.01)\). This suggests that an increase effectiveness of transaction processing at the ministry was noted with the introduction of IFMIS.

Regarding the effect of IFMIS on financial control and governance in public sector organizations, there was a significant positive correlation between IFMIS’ effects on control/governance and reduced jurisdictional problems \((r=.431, p<.05)\); reduced cases of fraud \((r=.335, p<.01)\); enhanced transparency \((r=.262, p<.01)\); increased accountability \((r=.366, p<.01)\); auditable financial statements \((r=.322, p<.01)\); enhanced credibility and confidence \((r=.520, p<.01)\); enhanced security of information \((r=.299, p<.05)\) and improved efficiency of public expenditure \((r=.242, p<.05)\).

5.3 Discussions

5.3.1 The Effect of IFMIS on Financial Reporting

The findings showed that majority (74.7%) of the respondents were of the view that IFMIS enabled them to understand the true cost of service delivered by the ministry. This implies that the system enhanced accurate reporting of financial data. This is depicted in the positive correlation between the system’s improvement in financial reporting and the
reporting of true cost per activity \((r = 252, \ p < .05)\), albeit with a weak coefficient. This agrees with the views of Rupanagunta (2006) who suggest that the system is invaluable in reporting each financial transaction undertaken by the government. Coupled with this is the finding which showed that majority (87.3%) of the respondents agreed that it was easy to extract and present data in ways that facilitated analysis. This explains the statistically significant relationship established between the system and ease of data extraction and presentation \((r = .437, \ p < .01)\). The results are consistent with the role of financial reporting which, according to Simson et al. (2011), entails extracting and presenting data from the accounting system.

The study established that majority (87.7%) of the respondents agreed that they could access IFMIS to derive the specific information they required to carry out their work. It can be construed from this finding that the system was effective in this aspect of performance. This is further indicated by the significant positive correlation between the system’s effect on improved financial reporting and better access to specific financial information. The findings agree with Hendricks (2012) description of the system as implied in the features which enables the generation of a variety of reports to address issues of budgeting, funding, treasury, cash flow, accounting, audit and day-to-day management concerns.

Similarly, the study showed that majority (77.5%) of the respondents agreed that there were inbuilt analytical tools with IFMIS that enabled trend analysis. Although correlation analysis returned a weak coefficient value, the relationship between the system and easy trend analysis of fiscal operations was statistically significant \((r = .261, \ p < .05)\). It could thus be inferred that ease of trend analysis of fiscal operation coincided with the introduction of the IFMIS. The findings are consistent with Diamond and Khemani (2005) linked the built-in analytical tools within the system to the offering of trend analysis of various elements of fiscal operations. The study also showed that majority (77.5%) of the respondents agreed that through IFMIS, the respondents were able to reconcile transactions data in real time. This corresponded to significant positive correlation between the effects of IFMIS on improved financial reporting and real time reconciliation of data \((r = .305, \ p < .01)\), which implied faster data reconciliation through the usage of the system.
Further findings showed that majority (75.4%) of the respondents agreed that IFMIS accurately disclosed the financial position of the ministry; with the correlation results showing that the relationship between IFMIS effects and accurate disclosure of financial position was statistically significant ($r=.445, p<.01$). This is consistent with the argument put forward by Thurakam (2007) that financial accounts must disclose accurately the position and prospect of the organization, and by extension, implies the system had a positive effect on financial reporting in public sector organizations. The study also found that majority (84.5%) of the respondents agreed that by using IFMIS, financial information was made available in a reliable and timely manner. This agrees with the views of Beschel and Ahern (2012) who argued that IFMIS can facilitate timely and accurate reporting.

The study also established that majority (83.1%) of the respondents agreed that IFMIS enabled them to generate custom reports for internal and external use; returning a positive and statistically significant correlation coefficient ($r=.454, p<.01$). This is also consistent with the requirements of financial reporting explained by Thurakam (2007), that is the accurate disclosure of the position and prospect of the organization. Related findings showed that majority (68%) of the respondents agreed that IFMIS provided periodic balances which could be used for analysis throughout the year. This further reinforces the implied effectiveness that characterizes the system. This is consistent with empirical studies reported by Diamond and Khemani (2005) regarding the effect of IFMIS in Tanzania, making it the generic public sector financial management system used by the entire public sector. This is further reflected in the findings which showed that majority (64.5%) of the respondents agreed that IFMIS provided real time financial information. The results agree with the claims of Hendricks (2012) that the system can improve public sector management by providing real-time financial information to managers in order to enhance their decision-making capabilities.

### 5.3.2 The Effect of IFMIS on Financial Transactions Processing

The findings showed that majority (77.5%) of the respondents agreed that all the ministry’s transactions were processed through IFMIS and that this was significantly correlated to the ministry’s financial performance ($r=.270, p<.05$). This agrees with the argument fronted by Diamond and Khemani (2005) who emphasized that it was essential
that both receipts and payments are processed by the FMIS, including the payroll payments to ensure that the budget and accounts are comprehensive. The implication of this is a reduction in wasteful and irregular payments which returned a strong and statistically significant correlation coefficient \((r=.507, p<.01)\). It means that the system helped curb instances of unauthorized, unnecessary or irregular expenditure, suggesting that public money was being appropriately managed through IFMIS.

The foregoing is further reinforced by the findings which showed that majority (67.5\%) of the respondents agreed that the software helped in streamlining procedures and helped in reducing opportunity for corruption. The relationship between IFMIS and streamlined procedures had the strongest positive correlation coefficient \((r=540, p<.01)\) suggesting that reduction of opportunity for corruption was a major benefit that was realized with the introduction of IFMIS. This is consistent with the benefits outlined by proponents of automation cited by Simon et al. (2011). It is also reflected in further findings which showed that majority (70.5\%) of the respondents agreed that IFMIS ensure that the ministry budget was implemented according to the rules. It means that the system by default enforces due diligence in its users which is consistent with sound financial management principles theorized by Diamond and Khemani (2005) for effective management of the budgetary resources.

Similarly, the study also established that majority (77.5\%) of the respondents agreed that IFMIS automated procedures and internal controls which promoted accountability. This suggests that the objective of better financial management as outlined by the Ministry of Finance (2013) was fulfilled through IFMIS. In terms of transaction processing, it is expected that the automation and interlinking of procurement processes such as requisition, tendering, contract award and payment has yielded dividends for public sector organizations. One of the dividends perhaps manifest in the finding which showed that majority (80.3\%) of the respondents agreed that the software helped to trace all the stages of transaction processing. This is one of the gains which motivated the introduction of the system by the Ministry of Finance (2013) and the positive correlation between the system and improvements in financial transaction processing \((r=.425, p<.01)\) suggest that all procuring entities within the ministry buy the right products and or services at the right prices.
The study established that majority (63.3%) of the respondents agreed that IFMIS made bank reconciliation automatic thereby allowing for a closer monitoring of outstanding bills and cash in bank. This suggests that the system improved financial transaction processing and this is supported with a positive correlation coefficient (r = .422, p < .01). The result is therefore better budgetary control and performance, which agrees with Chene (2009). That majority (62.0%) of the respondents in this study agreed that IFMIS improved stakeholder confidence with the ministry was therefore unsurprising. The results are consistent with Sabatini (2012) who argued that automated transaction processing enable governments globally to improve efficiency, effectiveness, security, convenience, financial control and stakeholder confidence.

5.3.3 The Effect of IFMIS on Financial Control and Governance in the Public Sector

As an aspect of financial control and governance, the findings showed that majority (59.5%) of the respondents agreed that IFMIS allowed for cross-referencing of personal numbers and asset inventories, significantly reducing cases of fraud. This agrees with the observations of Hendricks (2012) who maintained that a well-designed IFMIS can provide a number of features that may help detect excessive payments fraud and theft. This is linked to further findings which showed that majority (81.7%) of the respondents agreed that IFMIS assisted the management in ensuring accountability for the deployment and use of public resources. That there was a statistically significant positive correlation between the system and both enhanced transparency (r = .262, p < .01) as well as increased accountability (r = .366, p < .01) was within the expectations for which the system was introduced.

The results also showed that majority (71.8%) of the respondents agreed that IFMIS had inbuilt features which facilitated the monitoring and evaluation of the ministry’s activities. It means that users were able to access and analyze data regarding all aspects of financial management at the ministry which enhanced financial control and governance. This is one of the benefits anticipated with the introduction of IFMIS by the public sector organization. The impact on financial management is implied in the findings which showed that majority (67.7%) of the respondents agreed that the system had improved the
effectiveness and efficiency of the public expenditure programs. In agreement with the perspective of Hendricks (2012), the findings suggest that by tracking financial events through an automated financial system, management is able to exercise improved control over expenditure and to improve transparency and accountability in the budget cycle as a whole.

This foregoing also supported by further findings that showed that majority (81.7%) of the respondents agreed that the system assists management in ensuring accountability for the deployment and use of public resources. Related to this is the finding which showed that majority (77.3%) of the respondents agreed that implementation of the software improved confidence and credibility of the ministry’s budget. This agrees with Thurakam (2007) who holds the view that an IFMIS generally seeks to enhance confidence and credibility of the budget through greater comprehensiveness and transparency of information.

As another aspect of control and governance, study also established that majority (71.8%) of the respondents agreed that IFMIS greatly enhanced security of information consequently minimizing corruption and improving the reliability of the system. This is in harmony with the observations of Watkins & Dorotinsky (2011) who argued that FMIS projects are designed with better focus on the quality and security of information to minimize the risk of corruption and improve the reliability of systems. What the findings imply is that there are levels of access rights to sensitive information with offers people responsible to manage and account for. It can also be inferred that the ministry’s financial data is protected from being seen by those who do not have a need to see it which preserved its integrity and availability.

5.4 Conclusions

5.4.1 The Effect of IFMIS on Financial Reporting

Integrated Financial Management System had a positive effect on financial reporting in public sector organizations. The introduction of the system in the ministry led to improvement in reporting of true cost per activity, easy data extraction and presentation, improved access to specific financial information, easy trend analysis of fiscal operations,
real time reconciliation of data, accurate disclosure of financial position, generation of custom reports, easy access to non-fiscal information and quick provision of year-to-year balances. The system therefore helped fulfil the principles of relevance, accuracy, promptness and authenticity of financial reporting.

5.4.2 The Effect of IFMIS on Financial Transactions Processing

IFMIS also leads to significant improvements in financial transaction processing in public sector organizations. This was indicated by reduction in wasteful expenses and irregular expenditure, streamlined procedures, execution of budgets according to rules, automated procedures and internal controls, enabled tracing of all stages of transaction processing, closer monitoring of bills and cash and friendly and convenient interaction with the public. In other words, the objectives of efficiency, effectiveness, security, financial control, convenience, stakeholder confidence were achieved.

5.4.3 The Effect of IFMIS on Financial Control/Governance in the Public Sector

In terms of financial control and governance, IFMIS has led to reduced jurisdictional problems, reduced cases of fraud, enhanced transparency, increased accountability, auditable financial statements, enhanced credibility and confidence of the ministry, enhanced security of information and improved efficiency of public expenditure.

5.5 Recommendations

5.5.1 Recommendation for Improvement

5.5.1.1 The Effect of IFMIS on Financial Reporting

In order to help achieve the objective of realizing the full benefits of a fully integrated end-to-end financial management information system, the Ministry of Finance should both appeal to and support the adoption of the system within the county government system. This may require advocacy and capacity building by the national government to influence policy development that embraces the system at the county level.
5.5.1.2 The Effect of IFMIS on Financial Transactions Processing

Public sector organizations such as the Ministry of East Africa, Commerce and Tourism should leverage on the efficiency and effectiveness gains of the system to consolidate stakeholder confidence through more awareness and publicity of the achievements. For example, they should explore opportunity for partnership with the private sector and non-governmental actors to support their agenda as a way of promoting sustainability of the respective agencies.

5.5.1.3 The Effect of IFMIS on Financial Control/Governance in the Public Sector

In order to enhance financial control and governance in public sector organizations, the government should integrate non-financial information into the system so that other functions within the organizations can also benefit from the advantages of IFMIS. Such functions include information technology, security and maintenance, human resource and other peripheral functions. This recommendation is subject to cost-benefit analysis.

5.5.2 Recommendation for Further Studies

Like most studies, this research was not without its shortcomings. Although the research objectives have been achieved, the use of the questionnaire as the only data collection tool exposes the findings to the vagaries of self-report approaches such as exaggerated answers and potential biases occasioned by the feelings of the respondent. Therefore, in order to validate the findings of this study, a future study could use tools based on specific quantitative measures of improvement in financial performance realized with the introduction of IFMIS.
REFERENCES


APPENDICES

Appendix I: Cover Letter

Stella Omokong’a,
United States International University,
Nairobi,
8th April 2014.

The director of Administration,
The Ministry of East Africa, Commerce and Tourism,
P.o Box 30430-00100,
Nairobi.

Dear Sir/Madam,

RE: REQUEST TO CONDUCT RESEARCH ON IFMIS IN THE MINISTRY

I am carrying out a research to determine the effect integrated financial management information system on the performance of public sector organizations. This is in partial fulfillment of the requirement of the Master of Business Administration (MBA) degree program at the United States International University.

This study has selected the Ministry of East Africa, Commerce and Tourism for the research. This is an academic research and therefore, the information obtained during the research process will be used strictly for academic purposes and will be treated with utmost confidentiality. Your kind support in this regard will be highly appreciated.

Thank you in advance,

Yours sincerely,

Stella Omokong’a
(0722 219 398)
Appendix II: Questionnaire

SECTION A: GENERAL INFORMATION

1. What is your gender?
   - Male 
   - Female 

2. What is your age bracket?
   - 18 – 29 years 
   - 30 – 39 years 
   - 40 – 49 years 
   - 50 years and over 

3. Level of education:
   - Certificate 
   - Diploma 
   - Degree 
   - Post graduate 

4. Department:
   - Accounts 
   - Audit 
   - Procurement 
   - Finance 

5. How long have you worked in your department?
   - Less than 1 year 
   - 1 – 3 years 
   - 4 – 10 years 
   - More than 10 years 

6. How frequent do you use IFMIS as part of your work?
   - Daily 
   - Weekly 
   - Monthly 
   - Quarterly 
   - Annually 

SECTION B: THE EFFECT OF IFMIS ON FINANCIAL REPORTING IN PUBLIC SECTOR ORGANIZATIONS

Please indicate whether you agree or disagree with the following statements by placing a tick (✓) inside the appropriate box:

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
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<tr>
<td>7. IFMIS enables me to understand the true cost of service delivered by the ministry per activity</td>
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<td>8. I can easily extract and present data from IFMIS in ways that facilitate analysis</td>
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<td>9. I can access IFMIS to derive the specific information I require to carry out my work</td>
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<td>10. There are built-in analytical tools within IFMIS that enables trend analysis of various elements of fiscal operations at the ministry</td>
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<td>11. Through IFMIS, I am able to reconcile transactions data in real-time</td>
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<td>12. IFMIS accurately discloses the financial position of the ministry</td>
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<td>13. The IFMIS system enables me to generate custom reports for internal and external use</td>
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<td>14. I can easily access non-financial information such as employee number and cadre</td>
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<td>15. With IFMIS, I have at my disposal information that can quickly provide year to year balances which can be used for analysis throughout the year</td>
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<td>16. IFMIS offers real-time financial information that enhances my decision making abilities</td>
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SECTION C: THE EFFECT OF IFMIS ON TRANSACTIONS PROCESSING IN PUBLIC SECTOR ORGANIZATIONS

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<tr>
<td>17. All ministry’s transactions – both receipts and payments – are processed through IFMIS</td>
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<td>18. IFMIS has led to significant reductions in wasteful expenses and irregular expenditure</td>
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<td>19. IFMIS has streamlined procedures and significantly reduced opportunity for corruption</td>
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<td>20. IFMIS has ensured that the ministry budget is executed in accordance with rules to prevent overspending</td>
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<td>21. IFMIS has automated procedures and internal controls which promotes accountability</td>
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<td>22. IFMIS enables me to trace all stages of transaction processing in the ministry</td>
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<td>23. Using IFMIS, financial information is made available in a reliable and timely manner</td>
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<td>24. IFMIS makes bank reconciliation automatic thus allowing a closer monitoring of outstanding bills and cash in bank account</td>
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<td>25. IFMIS system makes my interaction with the public friendly and convenient</td>
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<td>26. Since the implementation of IFMIS, stakeholder confidence with the ministry has improved a lot</td>
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SECTION D: THE EFFECT OF IFMIS ON FINANCIAL CONTROL AND GOVERNANCE IN PUBLIC SECTOR ORGANIZATIONS

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<td>27. Since implementation of IFMIS, duplication and jurisdictional problems in exchanging information have been minimized</td>
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<td>28. IFMIS allows for cross-referencing of personal identification numbers and asset inventories that has reduced cases of fraud significantly</td>
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<td>29. IFMIS can trace all the stages of a transaction process hence enhancing transparency and accountability of the process</td>
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<td>30. IFMIS assists management in ensuring accountability for the deployment and use of public resources.</td>
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<td>31. Built-in features within IFMIS facilitates effective monitoring and evaluation of Ministry’s activities</td>
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<td>32. IFMIS has improved the effectiveness and efficiency of public expenditure programmes</td>
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<td>33. IFMIS provides auditable financial statements from the ministry</td>
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<td>34. Since the implementation of IFMIS, there is enhanced confidence and credibility of the ministry’s budget</td>
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<td>35. Use of IFMIS has greatly enhanced security of information which minimizes risk of corruption and improve reliability of the system</td>
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THANK YOU FOR YOUR TIME AND COOPERATION