

**CONTROL ENVIRONMENT AND OPERATIONAL EFFICIENCY OF INTEGRATED
FINANCIAL MANAGEMENT SYSTEMS OF LOCAL GOVERNMENTS IN UGANDA:
A CASE STUDY OF JINJA DISTRICT**

BY

SSEGGUJJA LAMECA

REG. NO: 16/U/13335/GMBA/PE

**A DISSERTATION SUBMITTED TO KYAMBOGO UNIVERSITY GRADUATE
SCHOOL IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE
AWARD OF MASTERS' DEGREE OF BUSINESS ADMINISTRATION
OF KYAMBOGO UNIVERSITY**

DECEMBER, 2018

DECLARATION

I, **Sseggujja Lameca**, hereby declare that this is my own original work and that it has never been presented to any other university or Institute of higher Learning for the award of any degree, diploma or certificate.

Sign:.....

Date:.....

SSEGGUJJA LAMECA

16/U/13335/GMBA/PE

APPROVAL

I hereby certify that this dissertation titled “Control environment and Operational efficiency of IFMS in Jinja District” is the original and individual work of **Mr Sseggujja Lameca** and has been done under supervision of the undersigned and is ready for submission to Graduate School.

Sign:.....

Date:.....

Dr. Stephen Kasumba

Principal Supervisor

Sign:.....

Date:.....

Dr. Gerald Kasigwa

Second Supervisor

DEDICATION

This Dissertation is dedicated to my parents Mr. Ssebbaale James and Ms. Namuswe Betty, my guardians, Mr. Ssemambo Fred and Ms. Namata Annet and the workmates for always providing different support towards my academics. They are the reason for what I am today and may the Lord reward them abundantly.

ACKNOWLEDGEMENT

I would like with great honor to acknowledge the contribution of the following people in the effort to produce this work:

First, I thank the Almighty God for his providence, guidance and peace throughout the research period. Without him, I would not have accomplished all that I have

Secondly, I wish to acknowledge the kind support of my supervisors Dr. Stephen Kasumba and Dr. Gerald Kasigwa for their tireless guidance and positive criticism which has helped me to successfully complete this research dissertation. May the almighty God bless you with knowledge and wisdom abundantly.

Thirdly, my appreciation goes to the staff of Jinja district especially from the finance department, procurement and disposal unit department, internal audit department, planning department, administration department and the human resource department for the time they gave me to respond to my questionnaires and giving me the response in time.

And lastly, my sincere thanks also go to my course mates especially those I discussed with; for their great advice, care and continuous support. I also thank my parents, siblings, friends and in-laws for their encouragement and for giving me a conducive academic environment.

LIST OF ACRONYMS

AIS	-	Accounting Information Systems
ASQ	-	American Society for Quality
COSO	-	Committee of Sponsoring Organisations
CSBAG	-	Civil Society Advocacy of Budget Group
DC	-	Developing Countries
EFMP	-	Economic and Financial Management Project
GoU	-	Government of Uganda
ICT	-	Information and Communication Technology
IFMS	-	Integrated Financial Management Systems
IIA	-	Institute of Internal Auditors
IT	-	Information Technology
LG	-	Local Government
MFPEd	-	Ministry of Finance, Planning and Economic Development
PFM	-	Public Financial Management
SPSS	-	Statistical Package for Social Sciences in Research
UBOS	-	Uganda Bureau of Statistics
USA	-	United States of America

TABLE OF CONTENTS

DECLARATION	ii
APPROVAL	iii
DEDICATION	iv
ACKNOWLEDGEMENT	v
LIST OF ACRONYMS	vi
TABLE OF CONTENTS	vii
LIST OF FIGURES	xii
ABSTRACT	xiii
CHAPTER ONE	1
INTRODUCTION	1
1.0 Introduction.....	1
1.2 Statement of the Problem.....	7
1.3 General Objective of the Study	7
1.4 Specific Objectives	8
1.5 Research Questions.....	8
1.6 Scope of the Study	8
1.7 Significance and justification of the study.....	10
1.8 Conceptual framework.....	11
1.9 Definition of Terms	12
CHAPTER TWO	13
LITERATURE REVIEW	13
2.1 Introduction	13
2.2 Theoretical Review	13

2.3 Review of Related Literature.....	15
2.3.1 Relationship between Human capital capacity and operational efficiency of IFMS	15
2.3.2 Relationship between Management commitment and operational Efficiency of IFMS ..	18
2.3.3 Relationship between Technological factors and operational efficiency of IFMS	21
2.4 Gaps in the Literature	23
CHAPTER THREE	25
RESEARCH METHODOLOGY	25
3.1 Introduction	25
3.2 Research Design.....	25
3.3 Study Population.....	25
3.4 Sampling Size and Design	26
3.5 Sampling Technique And Procedure.....	26
3.6 Sources of Data	27
3.7 Research Instruments.....	28
3.8 Validity and Reliability of the instruments	29
3.9 Data Presentation and Analysis.....	30
3.10 Ethical Considerations	31
3.11 Delimitations of the Study.....	31
CHAPTER FOUR.....	33
PRESENTATION, ANALYSIS AND INTERPRETATION OF THE FINDINGS	33
4.1 Introduction.....	33

4.2 Response Rate.....	33
4.3 Results on the background information of the respondents.....	34
4.3.1 Gender of the Respondents	34
4.3.2 Age of the Respondents.....	35
4.3.3. Education level of the respondents	36
4.3.4 Marital status of the respondents.....	36
4.3.5 Department of the Respondents.....	37
4.3.6 Employment position of the respondents.....	38
4.3.7 Length of employment of the respondents.....	39
4.4 Presentation of findings of the study per objective.....	39
4.4.1 Human capital capacity and operational efficiency	40
4.4.2 Relationship between human capital capacity and operational efficiency	41
4.4.3 Management commitment and operational efficiency	42
4.4.4 Relationship between management commitment and operational efficiency	43
4.4.5 Technological factors and operational efficiency	44
4.4.6 Relationship between technological factors and operational efficiency	45
4.4.7 Operational Efficiency.....	46
4.4.8 Relationship between control environment and operational efficiency of IFMS	49
CHAPTER FIVE	50
SUMMARY, DISCUSSION, CONCLUSION, RECOMMENDATION AND AREAS OF FURTHER STUDY	50
5.1 Introduction.....	50

5.2 Summary of the findings.....	50
5.2.1 Human capital capacity and operational efficiency of IFMS	50
5.2.2 Management commitment and operational efficiency of IFMS	51
5.2.3 Technological factors and operational efficiency of IFMS	51
5.3 Discussion of the findings.....	52
5.3.1 Human capital capacity and operational efficiency of IFMS	52
5.3.2 Management commitment and operational efficiency of IFMS	53
5.3.3 Technological factors and operational efficiency of IFMS	54
5.4 Conclusions.....	55
5.5 Recommendations.....	55
5.6 Areas for further research	56
REFERENCES	58
APPENDICES	66
Appendix 1: Questionnaire	66

LIST OF TABLES

Table 1: Population and sample size.....	26
Table 2: Cronbach's Alpha values.....	30
Table 4: Response Rate.....	33
Table 5: Gender of Respondents.....	34
Table 6: Age of the Respondents.....	35
Table 7: Education level of the respondents.....	36
Table 8: Marital status of the respondents.....	37
Table 9: Department of the Respondents.....	37
Table 10: Employment position of the respondents.....	38
Table 11: Length of employment of the respondents.....	39
Table 3: Numerical values and response modes used to interpret the means.....	40
Table 12: Human capital capacity and Operational Efficiency.....	40
Table 13: Relationship between human capital capacity and operational efficiency.....	41
Table 14: Management Commitment and operational efficiency.....	42
Table 15: Relationship between management commitment and operational efficiency.....	43
Table 16: Technological factors and operational efficiency.....	44
Table 17: Relationship between technological factors and operational efficiency.....	46
Table 18: Operational efficiency.....	47
Table 19: Relationship between control environment and operational efficiency of IFMS.....	49

LIST OF FIGURES

Figure 1: Conceptual framework	11
--------------------------------------	----

ABSTRACT

The general objective of this study was to analyze the relationship between control environment and operational efficiency of IFMS in Jinja district. It was guided by three objectives; analyzing the relationship between human capital capacity and operational efficiency of IFMS, analyzing the relationship between management commitment and operational efficiency of IFMS and analyzing the relationship between technological factors and operational efficiency of IFMS. The study used a case study design since it looked at a single unit of study which was Jinja district. A population of 80 employees from selected departments was targeted and a sample of 66 respondents was made using both simple random and purposive sampling techniques. Data was collected using questionnaires as a research instrument. Descriptive involved the mean and standard deviation while correlation analysis was used as inferential statistics to draw a conclusion on the relationship between variables. The study found out that human capital capacity had a moderate positive and significant ($r = 0.476$, $p\text{-value} = 0.001 < 0.01$) relationship with the operational efficiency of IFMS. Also it was revealed that management commitment had a moderate positive and significant ($r = 0.522$, $p\text{-value} = 0.000 > 0.01$) relationship with the operational efficiency of IFMS and also that technological factors had a strong positive and significant ($r = 0.669$, $p\text{-value} = 0.000 < 0.01$) relationship with the operational efficiency of IFMS. In general, it was discovered that there exist a strong relationship ($r = 0.636$, $p\text{-value} = 0.000 < 0.01$) between the control environment and operational efficiency of IFMS in Jinja district. The study recommended that local governments should consider capacity building, providing support in terms of resources, ensuring quality, having a well-built IT infrastructure and managing change if the aims for which IFMS was introduced for are to be achieved.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This introduction chapter presents the background to the study, statement of the problem, general and specific objectives of the study, study questions, conceptual framework, scope of the study, significance and justification of the study, and definition of key terms. The study looked at Control environment as an independent variable which is defined as a set of standards, processes, and structures that provide the foundation for the continuity of internal control within the organization (Yurniwati & Alfhal, 2015). This is in relation with COSO (1992), which defined control environment as a component of internal controls that sets the tone of an organization and influence the control consciousness of its people. It is the foundation for all other components of internal control, providing discipline and structure. Control environment comprises of different factors which include the integrity, ethical values and competence of the entity's people; management's philosophy and operating style; the way management assigns authority and responsibility, and organizes and develops its people; and the attention and direction provided by the board of directors (COSO, 1992). In the absence of a demonstrably effective control environment, no level of design and operating effectiveness of controls within business and IT processes can provide meaningful assurance to stakeholders of the integrity of an organization's internal control structure (Institute of Internal Auditors, 2011).

1.1 Background to the Study

The background of the study is presented in four perspectives which include the historical perspective, theoretical perspective, conceptual perspective and contextual perspective as shown below;

1.1.1 Historical Perspective

According to Hackett and Mobley (1976), Internal controls emerged way back before the evolution of auditing and other accounting professional elements. This was as a result of the entrepreneurs discovering that if profits were to be preserved and improved within their businesses, there was a need to have control measures within the organisations according to Mesopotamian civilization (Hackett & Mobley, 1976). Its evolution is believed to have been influenced by the increasing public expectations of auditing standards and the trend in the evolution of management control concepts towards recognizing a broader range of influences on the control of organizations (David , 1993). Due to the increased demands within the companies with issues concerning financial reporting improvement in 1992, the Committee of Sponsoring Organisation (COSO) which was formed in 1985 formed an integration with the internal controls so as to improve the internal control environment (Jordan , 2017).

Operational efficiency can be traced way back in the first half of the Twentieth Century when manufacturing firms sought ways to improve their competitiveness in areas like quality, delivery, cost efficiency, and flexibility (Olhager, 2013). With increasing competition, companies have always been forced to find new ways to improve their operations and to look beyond the walls of the factory (Dhillon & Vachhrajani, 2012). So, efficiency has often coincided with the invention of new tools that contribute to labor like early inventions of the wheel and the horse collar, which redistributes the weight on a horse's back so that the animal can carry large loads without being overburdened (Dhillon & Vachhrajani, 2012). Operational efficiency emerged popular during the industrial revolution when different innovations such as steam engines and motor vehicles allowed people to move farther in shorter periods of time and contributed to efficiencies in travel and trade,

the introduction of new sources of power such as fossil fuels, which were cheaper, more effective and more versatile (Olhager, 2013).

Over the last 50 years the world has witnessed the new concepts and approaches that have emerged and been implemented in manufacturing firms, some more successfully than others (Dhillon & Vachhrajani, 2012). Some of these concepts and approaches have been facilitated by the developments in Information and Communication Technologies (ICT) that have led to gradual improvement of computer-based systems for operations planning and control (Dhillon & Vachhrajani, 2012). According to Vardi (2015), in a survey carried out by the American Society for Quality (ASQ) it was revealed that manufacturing companies that had digitilised their processes (using the Internet of Things) had astonishing results of 82% increased efficiency, 49% experienced fewer product defects, 45% increased customer satisfaction. Its conceived that this improvement is as a result of connecting manufacturing devices and aggregating the data created (Vardi, 2015). With the introduction of IFMS, the aim was to see how operational efficiency is achieved in terms of accuracy, completeness, consistency, timeliness among others of the financial reports and budgets within the governments agencies, local governments and ministries (Kalekye, 2017; Kakande & Kalebbo, 2015; Diamond & Khemani, 2005). So the development and implementation of IFMS was way back in 1975 in New York City due to the persistent fiscal crisis within the City that led to the mandate being made not to allow financial resources flow to New York unless the financial reporting house was put in order. (Sally , 1979).

1.1.2 Theoretical Review

The study used Contingency theory that sought to explain the approach to the study of organizational behavior in which explanations are given as to how contingent factors such as

technology, culture and the external environment influence the design and function of organizations (Jesmin & Hui, 2012). It claims that there is no best way to organize a corporation, to lead a company, or to make decisions. Instead, the optimal course of action is contingent (dependent) upon the internal and external situation. The assumption underlying contingency theory is that no single type of organizational structure is equally applicable to all organizations (Jesmin & Hui, 2012).

This theory was applied since it explains well how different contingent factors can help the concerned parties within the local government to achieve the operational efficiency of IFMS minus considering how organized they are in leading, how decisions are made and how command is within the institution (Kerr and Jermier, 1978). Different local governments experience different contingency factors as constraints, pressures and imperatives upon the managerial choice of design arrangements and the effectiveness of organizational forms. And in this case these factors include HR policies and practices, Audit Committees, organizational structure, ethics and integrity, Company-wide Objectives and Process-level Objectives among others. This is in line with the findings of (Nasrallah & Qawasmeh, 2009; Drazin and Van de Ven, 1985) which suggested that the optimal structure of an organization is contingent upon different contingency variables.

1.1.3 Conceptual Perspective

Globally, Public sector financial management has been the focus of increasing attention in recent years. Reductions in public expenditure have pressured public authorities to maintain services with less money. To achieve cuts, financial managers have had to improve their financial analysis as a basis for improving efficiency and value for money (Mohammed, 2015). And to improve

efficiency in public sector, IFMS is among the Public financial reforms which has introduced. To achieve the aims, the most important ingredient in any accounting information system is sound internal control system since it's designed to provide reasonable assurance regarding the achievement of objectives (Topash, 2014; Masli *et al.*, 2010).

In Africa, to improve on the management of Public resources, developing countries (DCs) have been encouraged by International Monetary Fund to embark on major projects to reform their public expenditure management systems to computerize their government operations (Khemani & Diamond, 2005). Hence, there has been an introduction of IFMS as one of the most common financial management reform practices, aimed at the promotion of efficiency, effectiveness, accountability, transparency, security of data management and comprehensive financial reporting (Were, 2017; Chêne, 2009)

In Uganda, according to the IFMS Study Report 2015, it was revealed that although IFMS was reported to have adequate controls at different user levels, domestic arrears and over expenditures continued to be unchecked. These were largely due to budgetary indiscipline. Since most IFMS users had been trained, the limitation in capacity may not wholly explain the persistent weak financial management practices. (Kakande & Kalebbo, 2015). Inappropriate distribution of roles was reported as a weakness affecting the implementation of IFMS operations.

In a study of IFMS as a Management Control in Local Governments in Uganda it was revealed that there existed power struggles in that the senior technocrats resisted the transfer of significant amount of power to subordinate technocrats (Kasumba, 2009). It was further disclosed that, IFMS operated mainly in finance department, which maintained the power of the senior finance officers

and accountants over the possession of stock of financial and accounting information. Other technocrats from other departments had to rely on the information supplied to them by the finance department which greatly affected the Operational efficiency of the system (Kasumba, 2009).

In Jinja District Local Government, there has been persistent accumulation of domestic arrears to unmanageable levels which has led to settlement of arrears that are not authorized, unbudgeted for, inadequately supported and in some instances there has been inadequate recognition and disclosure of the domestic arrears (Auditor General's Report, 2017). The variances between the reported figures in the financial statements and the amounts verified by Internal Auditor General formed a basis for the qualification of consolidated GoU financial statements for the year ended 30th June 2016. This is attributed to the existence of a weak and ineffective internal control system over the control and management of domestic arrears (Auditor General's Report, 2017).

1.1.4 Contextual Perspective

Jinja District is located in the Southeastern part of Uganda. It is a small district found east of the River Nile and along the northern shores of Lake Victoria. Jinja District has an area of 767.7sq Km of which; 701.9 sq. km is land and the rest (65.8 Sq. km) is covered by water bodies. The district is subdivided into 3 counties namely, Butembe, Kagoma and Jinja Municipality. There are 6 Sub-Counties; 46 Parishes and 381 villages. Jinja Municipality has three sub-counties and 55 villages. In 2014, the National Population Census put the population at 72,931 (UBOS, 2014).

Within the Public Sector the main objective is to deliver the goals and projects within the set budget agreed, managing those funds, planning and forecasting and delivery of value for money and to achieve the above in Local governments, IFMS was enrolled in Uganda in 2003. Though despite

its enrollment in local governments, many challenges are still faced with the use of the system (Kakande & Kalebbo, 2015). According to CSBAG (2016), in the Local Government Budget consultations in which Jinja district was apart, Local Governments complained about inadequate information from the IFMS help desk and delayed update and responses to LG responses whereby sometimes local governments are not aware when the funds are released which delays the operation of activities hence hindering service delivery (CSBAG, 2016).

1.2 Statement of the Problem

Since the implementation of IFMS in Uganda's Local Governments in 2003, different control measures have been put in place to see its aims achieved (Ssemakula, 2012). These measures include training the required users, clearly defining the roles and responsibilities, organizational structure required, encouraging an extensive change of management exercises and clear communication strategies among others (Semakula & Muwanga, 2012; Ssemakula, 2012). However, in Jinja District there has been consistent and delays in the generation of information, production of financial and budget related reports, consistent errors made, low absorption of funds, multiple and over payment of employees, delayed payments to service providers, delayed procurement of services and office operations among others as required by the Public Finance Management Act 2015 (Auditor General's Report, 2016; 2017; Draku, 2018). It is on this ground, that the study seeks to examine why in spite of all initiatives at control environment, the operational efficiency of IFMS at the Local Government level has remained a serious challenge.

1.3 General Objective of the Study

To analyze the relationship between control environment and operational efficiency of IFMS in Jinja District.

1.4 Specific Objectives

- i. To analyze the relationship between human capital capacity and operational efficiency of IFMS in Jinja District.
- ii. To analyze the relationship between management commitment and operational efficiency of IFMS in Jinja District.
- iii. To analyze the relationship between technological factors and operational efficiency of IFMS in Jinja District.

1.5 Research Questions

- i. What is the relationship between human capital capacity and operational efficiency of IFMS in Jinja District?
- ii. What is the relationship between management commitment and operational efficiency of IFMS in Jinja District?
- iii. What is the relationship between technological factors and operational efficiency of IFMS in Jinja District?

1.6 Scope of the Study

1.6.1 Content Scope

The study aimed at analyzing the relationship between control environment and operational efficiency of IFMS in Jinja District Local Governments. Control environment in this context was the independent variable and Operational Efficiency of IFMS was the dependent variable.

Control environment constituted the following constructs (Human capital capacity, management commitment and technological factors), and operational efficiency of IFMS (in form of Accuracy, completeness and Timeliness) as indicated in figure 1 below.

1.6.2 Geographical Scope

The study was undertaken in Jinja District. This is because, Jinja district is among the first four local governments (Jinja, Kampala, Bushenyi and Lira) in which IFMS was first implemented in 2003 according to Ssemakula (2012), and also the persistent challenges with the use of the system within the district (CSBAG, 2016). So, the fact that Jinja has been in the use of IFMS for some years in managing the public finances, enough information is available concerning the operation efficiency of the system in relation to the control environment within the Local governments in Uganda.

Jinja District is located in the Southeastern part of Uganda. It is a small district found east of the Nile River and along the northern shores of Lake Victoria. Jinja District has an area of 767.7sq Km of which 701.9 sq km is land and the rest (65.8 Sq km) is covered by water bodies. Jinja District is bordered Kamuli District to the north, Luuka District to the east, Mayuge District to the southeast, Buvuma District to the south, Buikwe District to the west and Kayunga District to the northwest. The district headquarters at Buwenge are located 96 kilometres (60 mi), by road, east of Kampala, Uganda's capital and largest city. The coordinates of the district are: 00 30N, 33 12E. (Latitude: 0.5000; Longitude: 33.2000).

1.6.3 Time Scope

The study took a period of six (6) months since it is the maximum period granted to a post-graduate student by the School/ University to conduct and report on their study findings. It considered Literature review from 2005-2018. For the case study, the study considered data for the last five years (2013 to date)

1.7 Significance and justification of the study

The research study will help the government in providing the way forward as far as using IFMS in its local governments is concerned. This will help the government to know the strategies which it can put in place to make the system to be user friends within the local governments, agencies and ministries at large.

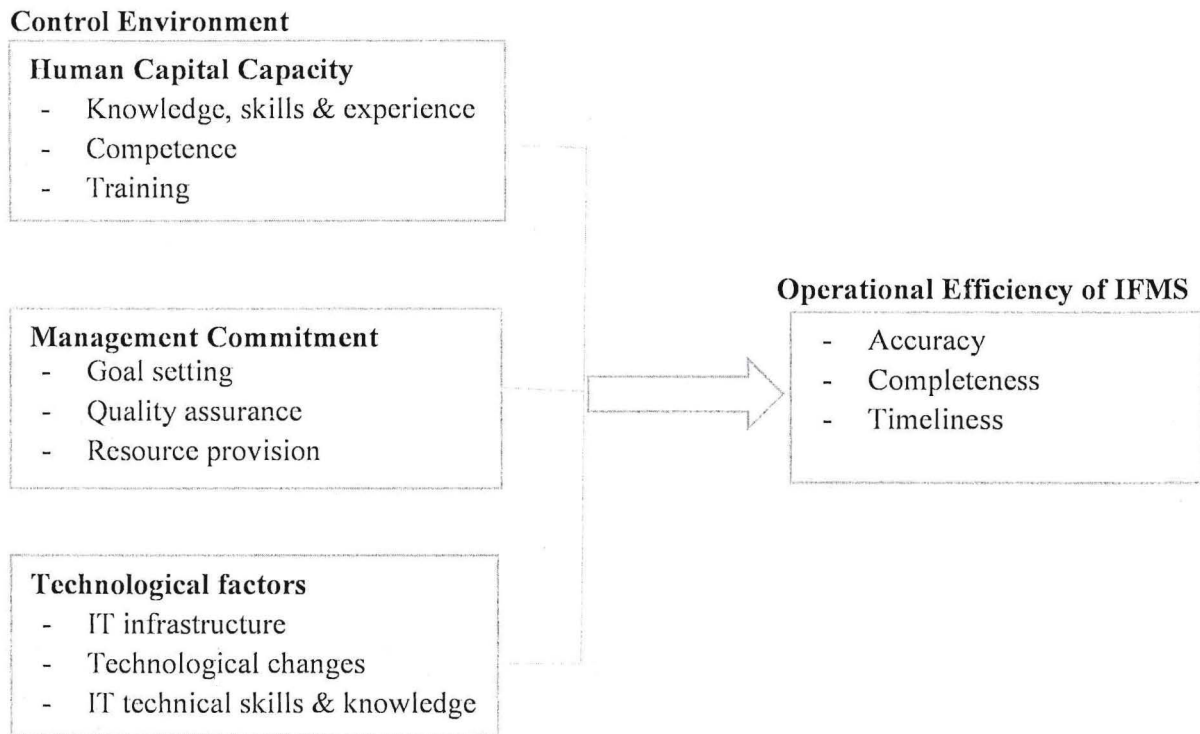
The research study will help the local governments to understand clearly the different internal controls which must be in place in order to improve on the operation efficiency of any accounting information system in place with in the management of the public finances.

The research study will help the users within the local governments to understand well how best the system operates, its impact as far as managing the government financial sources is concerned. Through this, errors made by the users will be reduced and hence helping to improve on the efficiency and the effectiveness within the use of the system.

The research study will also help the local governments to understand what have persistently made the system not to help achieve the set objectives by the government and hence be able to provide measures on how the effectiveness and the efficiency of the system can be achieved.

1.8 Conceptual framework

Figure 1: Conceptual framework



Adapted from Kalekye, 2017; Cherono, 2016; Wainaina & Makori, 2015; Ahamad et al, 2013; Chebet, 2013; Hongjiang, 2003 and modified by the Researcher 2018.

From figure 1, Control Environment the independent variable constitutes the following dimensions; Human capital capacity, management commitment and technological factors. Human capital capacity was measured in terms of knowledge, skills and experience of the IFMS users within the district, the competence of the users and the training programs that are always held within the district about the use of the system. Management commitment was measured in terms of ability by the managers to set goals, the ability to assure quality for the IFMS output, and also the commitment of the management to provide the necessary resources for the efficient operation

of IFMS. Technological factors were measured in terms of IT infrastructure available, the technological changes and how they are managed and the IT technical skills and knowledge. These variables relates with operational efficiency of IFMS the dependent variable which is measured in terms of accuracy of the financial reports, completeness of the financial reports and budgets and timeliness as per the production and submission of the financial statements to the ministry of finance.

1.9 Definition of Terms

Internal Control Systems (ICS)

ICS refers to the systems, processes and procedures that local government council establishes in order to ensure that its established objectives are met (Glance, 2006).

Internal Control

Internal control can be described as any action taken by an organization to help enhance the likelihood that the objectives of the organization will be achieved (COSO, 1992)

Integrated Financial Management Systems (IFMS)

This is defined as the information and communications 3 technology (ICT) usage in management of finances in decisions making based of budget management, responsibilities of trustees, and the financial reports preparation (Casals, 2009).

Control Environment

Control Environment is the set of standards, processes, and structures that provide the basis for carrying out internal control across the organization. The board of directors and senior management establish the tone at the top regarding the importance of internal control including expected standards of conduct (COSO, 1992).

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter present the literature review on the Contingency theory, actual review of literature that was done by previous scholars objective by objective and finally the gap available in the literature of previous studies. The rationale of the literature review was to discuss existing literature with the objective of revealing contributions made by earlier scholars, weaknesses and gaps in existing knowledge and lessons learnt. The sources of the literature were journals, text books and online materials by scholars and academicians

2.2 Theoretical Review

Different scholars in their research have applied Contingency theory to study how internal control systems predicts the outcomes of the dependent variables and these include; (Jesmin & Hui, 2012; Nasrallah & Qawasmeh, 2009; Chenhall, 2003; Scott, 1987; Drazin and Van de Ven, 1985; Flamholtz et al. 1985; Flamholtz *et al.*, 1979; Gordon & Miller, 1976; Selznick, 1957). Like according to Jesmin & Hui (2012), Contingency theory is a theory that seeks to explain the approach to the study of organizational behavior in which explanations are given as to how contingent factors such as technology, culture and the external environment influence the design and function of organizations. It claims that there is no best way to organize a corporation, to lead a company or to make decisions. Instead, the optimal course of action is contingent (dependent) upon the internal and external situation. The assumption underlying contingency theory is that no single type of organizational structure is equally applicable to all organizations (Jesmin & Hui, 2012).

Different scholars in different studies have applied contingency theory in studying how control issues predict the outcomes of different variables as a result of the contingent factors and the findings have revealed that the control aspect is studied along with three main aspects which include the sociological, the administrative and the psychological perspectives (Flamholtz et al. 1985). The sociological perspective focuses on the entire organization and the larger groups within it. In this view, structural mechanisms of rules, policies, hierarchy of authority or coordinative units obtain control (Flamholtz et al., 1985). The administrative perspective focuses on the individuals or departments within an organization. The control mechanisms employed by the administrative theorists are plans, measurement, supervision, evaluation and feedback. The psychological perspective emphasizes goal and standard setting, extrinsic and intrinsic rewards, feedback or interpersonal influence (Flamholtz, 1979).

Contingency theory presumes that organisations are technically devised instruments aiming for effective and efficient control of work processes (Chenhall, 2003; Gordon & Miller, 1976). Scott (1987), asserted that organisations are designed as means to achieve definite goals and efficient transformation of material inputs into material outputs (Scott, 1987). In this case, efficiency is an operating ideal when organizational goals are settled, and the main resources and methods for achieving these goals are made available (Selznick, 1957).

This theory was applied since it will help the leaders in the local governments to put in place the control systems which can help to attain the operational efficiency as far as IFMS is concerned. In this context contingent factors which determines the operational efficiency of IFMS in Local governments include the components of the internal control systems, majorly the Control environment. Different local governments experience different contingency factors as constraints,

pressures and imperatives upon the managerial choice of design arrangements and the effectiveness of organizational forms. And in this study, the components of Control environment were very vital in predicting the operational efficiency of IFMS in local governments. These contingent factors include, HR policies and practices, Audit Committee, organizational structure, ethics and integrity, Company-wide Objectives and Process-level Objectives among others. This is in line with the findings of (Nasrallah & Qawasmeh, 2009) which suggested that the optimal structure of an organization is contingent upon different factors. Also according to Drazin and Van de Ven (1985) that organizational performance can be easily achieved when having different contingency variables. So once all these issues given attention in local governments, it can easily help to improve on the operational efficiency of IFMS in order to improve the management of the public finances.

2.3 Review of Related Literature

2.3.1 Relationship between Human capital capacity and operational efficiency of IFMS

Many scholars have carried out studies about how the Human capital capacity relate with the operations of Accounting Information Systems and different conclusions have been made. These studies include; (Mwakio, 2017; Okello *et al*, 2017; Ndaiga, 2016; Kahari *et al*, 2015; Wainaina & Makori, 2015; Selfano & Serah, 2014; Emilie, 2015; Ondimu, 2013; Ahmad *et al*, (2013); Kwena, 2013; Chebet, 2013; Hove & Wynne, 2010; MFPED, 2012).

In a study carried out by Kahari *et al*, (2015) about the assessment of the factors affecting implementation of Integrated Financial Management Information System (IFMS) in County Governments in Kenya, with the focus on capacity building and skills of IFMIS users towards IFMS Operation, it was revealed that there exists a strong, positive and statistically significant (r

= 0.749; $p < 0.01$) relationship between capacity building and skills of IFMS users and its implementation and operation. This is in line with the study carried out by Wainaina & Makori (2015), examining the determinants of performance of Integrated Financial Management Information System in public sector in Kenya with a case of National treasury where it was revealed that human resource capacity had a positively correlated relationship (Pearson correlation coefficient = 0.777; p -value = 0.031 < 0.05) with Performance of IFMS in the organization.

The above findings are supported by Okello *et al*, (2017), Emilie (2015) and Selfano & Sarah, (2014), who asserted that the effective implementation, operation and maintenance of an IFMS require personnel with the required knowledge and expertise. Kahari *et al*, (2015), added on that human capital development requires the creation of an enabling environment in which people can learn rapidly and effectively apply new ideas, skills, competencies, attitudes, and behaviors.

Lack of capacity is regarded as one of the main causes for the delay in the implementation process experienced by Ghana, whilst the emphasis that was put on capacity building through training in Tanzania was one of the main contributors to their success. (Selfano & Sarah, 2014). To achieve capacity building success of the IFMS users, the emphasis should be on training as stated by (MFPED, 2012). This is in line with Ahmad *et al*, (2013), who concluded in their study that comprehensive training programs are very important to get the sufficient knowledge in accounting information system implementation and operation because of the strong relationship between training of the users and accounting information systems which was revealed.

According to Ndaiga (2016) in a study about the determinants of the adoption of IFMS, it was revealed that training is a key component and a requirement to successful system operation. Within

the study, only 56% strongly agreed that the objectives of the trainings carried out were clearly defined and topics covered were relevant to users in their line of responsibility to enable them handle and interact with the system to be able to generate expected results (Ndaiga, 2016). This is in line with Hove & Wynne (2010) who concluded that the human resource development issue within government needs prioritization, the education system needs to be aligned with the information and communication technologies (ICT) demands of the country and scarce ICT skills need to be attracted and retained particularly within government. studies, it was revealed that, IFMIS requires training of staff not only on the use of the FMIS for their respective operations and functions but also training in the new legal and regulatory framework, new business procedures to be implemented, the new system codes and classifications (MFPED, 2012). This is line with Kwena (2013) in his study of Kenya's ministries who argued that the capacity and technical knowhow was low due to lack of training and hurried implementation of the system, so he recommended that the users of the system need always to have on-the-job training in order to improve their skills and capacity to use the system.

However, according to the studies by different scholars it been revealed that absence of staff with the requisite information technology (IT) knowhow and experience cannot be mitigated with ease through training and hiring, instead it just create awareness especially to the old technocrats (Parry, 2005). This is because effective training requires sufficient time to the sessions as it was revealed in Ndaiga (2016) where managers never showed initiative by attending training sessions and neither did they encourage users to attend the sessions. Also for hiring, the salary structure and terms of employment in the public sector are usually not attractive enough to compete with the private sector and to incentivize candidates with the required IT-skills levels (Chêne 2009). Also

in a study carried out by Ondimu (2013), it was revealed that there a low level of government absorption of skilled personal, poor salary scale in government sector, poor human resource retention policies yet there private sectors that offers healthy salary scale to skilled personnel especially information technology. However, the above finding are contrary to the studies carried out by Kalekye (2017) who revealed that human capital capacity had a negative and insignificant relationship with the implementation of IFMS in his study in County governement, Kenya.

According to Chebet (2013), in the study carried out on the critical success factors in the implementation of the Re-Enginced IFMS in the Kenyan Ministries, it was revealed that clear procedures for recruitment and risk management is positively correlated with the implementation and operation of IFMS. This implies that recruitment or hiring should be in a such way that people with the required technical skills are recruited so as to manage the operation of IFMS effectively as agreed in the study carried out about the relationship between accounting information systems and Human resource management (Mwakio, 2017).

2.3.2 Relationship between Management commitment and operational Efficiency of IFMS

Different scholars have carried out different studies concerning the relationship between Management Commitment and operational efficiency and different conclusions have drawn out; (Kalekye, 2017; MFPED, 2016; Biwott & Kiplagat, 2015; Kakande & Kalebbo, 2015; Ernst & Young Report, 2015; Kahari et al., 2015; Emilie, 2015; Karanja and Nyambura, 2014; Chebet, 2013; Hendricks, 2013; Kimwele, 2011; Barcan, 2010; Chene, 2009;).

According to Kalekye (2017), in a study carried out on the determinants of successful implementation of IFMS by County Governements in Kenya, revealed that there exist a significant and positive relationship of 0.544 between top management commitment and support

and IFMS implementation and operation. This is in agreement with the study carried out by Karanja and Nyambura (2014), about the factors that determine the implementation and operation of IFMS in Kenya Government Ministries where it was discovered that there existed a significant relationship of 0.8009 between Management support and IFMS implementation in government ministries. This implies that for the effective operation of IFMS, Top Management support in terms of resource allocation and inspiring the users of the system is essential as it was revealed in the study carried out about the critical success factors in the implementation of the re-engineered IFMS in Kenyan Ministries where there existed a strong relationship between IFMS operation and Top management support (Chebet, 2013). This is evidenced in a study on the factors affecting effective implementation of IFMS in Government ministries in Kenya where it was established that the implementation and the operation were not successful since management support was lacking and top management was not inspiring the users (Kimwele, 2011).

Kakande & Kalebbo (2015), carried out a study about the effectiveness of IFMS in Uganda and it was revealed that there was a strong positive relationship between the ownership, authority and distribution of roles and the implementation and operation of IFMS within the Government's Ministries, Departments, Local governments, and Agencies. This is in agreement with Chebet (2013) in a study focusing on the critical success factors, where it was revealed that having project team members with clearly defined roles and responsibilities made the operation of integrated financial management system efficient. This is evidenced where many projects have failed because they lacked clear ownership, clear authority, clear roles and responsibilities to implement and operate the system (Chebet, 2013). Public expenditure management is segmented by institution,

so as a result it is not always clear who should be in charge of IFMS, from the Ministry of Finance or Accountant General Department (Emilie, 2015).

Also according to Ernst & Young (2015), about the management commitment to new technology changes, it was asserted that change management is among the central factors that determine the success of the IFMS in the public sector and so organizations have to implement new technologies and systems to automate functions and achieve benefits such as higher productivity, increased efficiency, and cost savings., so there is always a need to develop a change strategy so as to meet the various changes associated with the system. The IFMS change management strategy requires to ensure that there is always adequate information flow between the project and business areas that will be the eventual owners and users of the system (MFPED, 2016). Though Change management is often neglected, despite being critical (Chebet, 2013).

In many cases, IFMS programs have not sufficiently taken into account the role of individual incentives and political will (Emilie, 2015). Yet various stakeholders in different organisations always resist to change because of the vested interests from previous methods and a threat to their jobs as asserted by Hendricks (2013). These changes in management are always very important since the changes within the system always brings about changes in processes, roles, policies and functions (MFPED, 2016). This change in management can be done through clear communication, education, training and other methods that emphasize on the need and benefits of the change using various channels such as the media, workshops, seminars or conferences (Barcan, 2010).

However, though various studies have indicated that there exist a positive relationship, in a study carried out by Kalekye (2017), about the determinants of successful implementation of IFMS by

County governments in Kenya, it was revealed that change management and communication and IFMS implementation and operation had an insignificant and negative relationship of 0.085. However, managers have always resisted to changes not putting into consideration its impact on the operation of IFMS yet a study by Kahari *et al*, (2015), about the determinants of successful implementation of IFMS by County Governements in Kenya revealed that there exist a strong, negative and statistically significant ($r = -0.461$; $p < 0.01$) relationship between staff resistance and IFMS implementation and operation. This implies that staff resistance has an adverse strong effect on operation of IFMS, as the staff resistance increases, the implementation and operation of IFMS is compromised and the reverse is true, that's to say, if the staff resistance is acute then the operation of IFMS would be less effective (Kahari *et al*, 2015). This is supported by Biwott & Kiplagat (2015), in a study conducted to establish IFMS implementation and the impact of IFMS on procurement performance in Kenyan Ministries where it was revealed that lack of the expertise to operate IFMS, staff unwillingness to accept the change and fear of loss of jobs as a result of IFMS operations created a big challenge for the system implementation and operation.

2.3.3 Relationship between Technological factors and operational efficiency of IFMS

In relation to this objective, several scholars have carried out different studies concerning the relationship between technological factors and operational efficiency and different conclusions have drawn out; (Kalekye, 2017; Mwaura, 2016; Bonventure, 2015; Wainaina & Makori, 2015; Odunga, 2015; Hendriks, 2012; Dener *et al.*, 2011; Chêne, 2010; Ramlah, Shahriza and Selamat, 2007).

In a study carried out by Kalekye (2017), about the determinants of successful implementation of integrated financial management systems by county governments in Kenya, the results revealed

that there was a positive and insignificant relationship ($r=0.019$) between IT infrastructure and IFMS implementation and operation by county governments. This is in line with the study carried out by Wainaina & Makori (2015), examining the determinants of performance of IFMS in public sector in Kenya with a case of National treasury where it was revealed that ICT Infrastructure had a strong positive relationship (Pearson correlation coefficient = 0.801; $p\text{-value} = .012 < .05$) with Performance of IFMS in the organization. This is further supported by the study carried out about the impact of Technological factors on Information Systems Success in the Electronic government Context, where it was discovered that there exist a significantly correlated relationship between the technological factors and information systems (Ramlar, Shahriza, & Selamat, 2007).

Technological factors are basic system functionalities that include both the software and the hardware used for the successful operation of IFMS to take place (Bonventure, 2015; Hendriks, 2012). Without a well-built information technology, the operation of IFMS is difficulty, so it requires making the right and simple technical choice for automation to have a successful implementation and operation of the system (Chêne, 2010). Also according to Odunga (2015), a successful operation of any AIS is achieved with a well-built platform for interconnectivity and this involves the internet and the intranet facilities.

Several IFMS projects in developing countries have failed because of the failure to clearly specify the basic system functionalities from the time of intervention, so in some circumstances Information technology interfaces with the system have to be created so as to fit the country's specific settings (Dener *et al.*, 2011). On addition to that, several studies have revealed that there many technical challenges that impede the accomplishment of IFMS key objectives and these include; lack of IT capacity that works with the system, resistance due to complexity and technical

challenges of the software (Hendriks , 2013). According to Dener et al. (2011), IFMS is a complex and risky system that necessitates motivation to change so as operate efficiently. Considering its complexity, the commitment greatly influence how the IFMS operates within an organisation and this is caused by the lack of commitment to change which is a result of status quo of the users on the use of old manual systems, fear of risks that may occur in implementing the IFMS and also fear of not knowing how to operate the new systems or a perception of ease of the system usage (Hendriks , 2013).

In relation to the above, according to Chene (2010) in the study it was observed that there was a failure up to when the information technology solution of a medium software package of less complexity was selected compared to what was being used before. It's further noted that the use of outdated infrastructure inherited from the previous systems used within the public sector cannot be able to manage and operate IFMS software that requires improved and advanced software and hardware (Mwaura, 2016).

2.4 Gaps in the Literature

Various studies have been conducted in the field of IFMS concerning with the adoption, implementation, determinants of IFMS performance and challenges which have been faced with the use of the system within the Local governments, governments' agency and ministries in different countries all over the world. But no work has been published in the Uganda with regard to the control environment in relation to the operational efficiency of IFMS in the Ugandan Local Government. It's very crucial to look at operational efficiency of the system since it helps to evaluate the level at which the aims for which it was set for have been achieved. This is measured in terms of accuracy, completeness, consistency and timeliness of the financial reports and

budgets. According to the different studies all over the world, the key determinants of IFMS performance within the context of control environment are human capital capacity, management commitment, change management and IT Infrastructure among others. However, these studies were not conducted in Uganda's Local governments which is a unique field by itself. This study therefore sought to fill the gap by analyzing the relationship between control environment and operational efficiency of IFMS in Jinja District.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research methodology that was used during the study. This included the Research design, study population, sample size and selection, sampling techniques, data collection methods, Data collection instruments, procedure of data collection, Reliability and validity of instruments, Data analysis, measurement of variables, data presentation and analysis and the limitations to the study.

3.2 Research Design

The study used a case study design since it looked at a single unit of study at one point and in this case it will be Jinja district (Gerring, 2004; Karlsson 2016). This design offered the opportunity to the researcher to study control environment in Jinja district and thereby being able to develop a deep comprehension of its relationship with operational efficiency of IFMS (Halinen & Tornroos, 2005). A quantitative approach was used in the study since the study looked at only relationships between variables

3.3 Study Population

The population for this study comprised of the employees of Jinja District working in the departments of Finance, Procurement and disposal unit, Internal Audit, Administration, Planning and Human Resource Department who mostly use Integrated Financial Management Systems (IFMS) on a daily, weekly, monthly, quarterly or annual basis to generate financial reports. The study was based on a population of 80 employees from the above selected departments of Jinja District (Jinja District Service Commission, 2017).

3.4 Sampling Size and Design

The research sample size covered 66 respondents from Jinja District currently working in the departments of Finance (20), Procurement and disposal unit (15), internal audit (04), Administration (04), Human resource (17) and planning (06) who are actively using the Integrated Financial Management System (IFMS). This sample size was determined using Krejcie & Morgan (1970), sample size determination model as illustrated in the table below;

Table 1: Population and sample size

Department	Population	Sample size	Sampling technique
Finance	25	20	Simple random
Procurement and disposal unit	18	15	Simple random
Internal Audit	05	04	Purposive sampling
Administration	05	04	Purposive sampling
Human Resource	20	17	Simple random
Planning	07	06	Purposive sampling
Total	80	66	

Source: Adapted from Krejcie & Morgan (1970)

3.5 Sampling Technique And Procedure

Simple random and purposive sampling methods was used in the selection of the respondents.

3.5.1 Simple random sampling

Under this technique, all the members of the finite population were given equal chances to be included in the sample (Ashley, 2018). Since the target respondents either engaged or had an interaction with the use of IFMS at Jinja district, they were in a better position to respond to the

research questions appropriately. It was also used since it removes the possible bias that may have arisen as the result of researcher favoring some members of the population (Stephanie 2014). In this study, the technique was used on the respondents from the finance department, procurement and disposal unit, and human resource management department.

3.5.2 Purposive sampling

With this technique, members were selected based on their technical knowledge about the purpose of the study and it was applied where they were few respondents in a given section (Tongro, 2007). This method was useful since it made it easier to reach a targeted sample quickly (Palys, 2008). For this reason, this technique was preferred when getting the information from the respondents within the department of planning, internal audit and administration.

3.6 Sources of Data

The researcher used both secondary data and primary data sources for the study.

3.6.1 Primary Data

Primary data is the data that was collected by a researcher from the respondents using questionnaires (Stephanie 2018). The questionnaires were divided into two sections to ensure data collection validity, reliability and deep insight on the statistical variables (Stephania, 2018). The first section considered respondents' demographic profile such as gender, age, education, department of service, years of service in the department and level of IFMS usage. The second section was comprised of structured questions developed according to the objectives of the study. This was generally applied to the employees working in the departments of Finance, Procurement and disposal unit, Internal Audit, Administration, Planning and Human Resource of Jinja district.

3.6.2 Secondary data

Secondary data was collected through review of past reports from government public services departments such as annual budget data, progress reports, internal audits reports and Auditor generals reports about the operation of IFMS from the time it was implemented in 2003 up to date. Other secondary data was collected from Written Researches, Electronic Journals, Magazines, Newspapers in relation to IFMS implementation and operation(Stephanie 2018). This information was very important since it helped the researcher to supplement his data that was collected from the respondents, hence helping to increase sampling size and the reliability of the research findings (Tran et.al, 2013).

3.7 Research Instruments

The researcher used both primary and secondary data collection instruments. Primary data was collected using questionnaires. Secondary data was collected from district's literature like past financial reports and from the Ministry of finance and planning reports.

A questionnaire is a set of techniques of data collection in which individuals are asked to respond to a standard (same) set of questions in a predetermined order (de Vaus, 2002) as cited in Saunders et al, 2003. The researcher used structured questionnaires. Structured questionnaires helped to elicit responses specific to this case-study (Cohen et al, 2007), and also to reduce costs since it was economical and time-saving as they were easy to be administered (Mugenda & Mugenda, 2003; Amin, 2005). These structured questions were presented in a Likert Scale questions for respondent's analysis about the relationships between the variables under study. The use of the Likert scale ensured flexibility in responses and also helped to avoid the tendency of respondents responding to questions with a certain mental set (Amin. 2005). The structured questionnaire were administered using a drop and pick later method to the employees working in the departments of

Finance and Accounts, Audit and Procurement, Education and Health, Planning and Administration who are actively using IFMS in Jinja district.

3.8 Validity and Reliability of the instruments

3.8.1 Validity

Data validity refers to the ability of research instruments to elicit the desired response from the target population (Kothari, 2003). To ensure the correctness of the instruments, the research tools were presented to the supervisors so as to ensure that all vague questions were eliminated before the final document was approved. Also to ensure this desired response, the questionnaires in this study were subjected to scrutiny by 5 experts in the field of study prior to their deployment in the field to eliminate vague and ambiguous questions and streamline the content structure, flow and conciseness, in other words to ensure content validity (Saunders et al, 2003). The results of the pre-test were used to subject the questionnaire to a content validity test using the following formula:

$$CVI = \frac{K}{N}$$

Where: CVI Content Validity Index

K Total Number of Items rated as relevant

N Total number of items in the questionnaire

A total of 20 items out of 25 in the questionnaire were rated as relevant, yielding a content validity index as calculated below;

$$CVI = \frac{20}{25} = 0.80$$

Since the questionnaire content validity obtained for this study was 0.80 and the results of CVI were greater than the recommended 0.70 as suggested by Amin (2005), this implied that the questionnaire was valid for data collection.

3.8.2 Reliability

Reliability refers to the degree to which a test is free from measurement errors, since the more measurement errors occur the less reliable the test, that's to say the degree to which an instrument yields consistent results (Fraenkel & Wallen, 2003; McMillan & Schumacher, 2006). It is the characteristic of a set of test scores that relates to the amount of random error from the measurement process that might be embedded in the scores. Scores that are highly reliable are accurate, reproducible, and consistent from one testing occasion to another (Cohen et al, 2007). Errors may arise from inaccurate coding, ambiguous instructions to the subjects, interviewer's fatigue, interviewee's fatigue, interviewer bias, and others. A reliable sample ensures that the responses from the sample more than adequately represent the apparent responses from the population (Cohen et al, 2007). To determine the reliability of the instrument, the researcher used the Cronbach alpha and according to the results, all the variables gave Cronbach's alpha values of more than 0.5 implying that the research instruments were reliable as to provide consistent results if administered repeatedly, as emphasized by Kembro et al, (2017) and Kothari (2004). Below are the values of the Cronbach's alpha for the variables which were under study.

Table 2: Cronbach's Alpha values

Variable	Cronbach's Alpha	No of items
Human capital capacity	0.656	10
Management commitment	0.641	10
Technological factors	0.709	10
Operational efficiency	0.705	10

3.9 Data Presentation and Analysis

In order to achieve the meaning of data that was collected, a quantitative data analysis was used since the study was basically quantitative, looking at only relationships between the study variables.

With quantitative data analysis, the data collected from the questionnaires relating to the study was checked for completeness and accuracy. The data was categorized, coded and then fed into SPSS (Statistical Package for Social Sciences in Research) software and analyzed to determine relationship between control environment and operational efficiency of IFMS in Jinja district. The researcher used Pearson correlation coefficient where data was fed in SPSS software to analyze the relationship between control environment and operational efficiency of IFMS in Jinja District (Surbhi, 2016 and Saunders et al, 2003). Descriptive statistics was also used to summarize the data through tables, charts and graphs to facilitate comparison and for easy inference.

3.10 Ethical Considerations

To reduce all forms of suspicion of respondents before, during and after the study, attention was put on seeking permission from Kyambogo University (Graduate School), and then from the Jinja Local government where the research was conducted. Due to the nature of the study, confidentiality was given due consideration. An introductory letter from the school of graduate studies, backed by the identity card was used for identification throughout the research study whenever necessary. To ensure that the respondents understand well the questionnaire, the research discussed some important issues within the tool to ensure that the best and reliable responses were achieved from them and their responses was given a due confidentiality to ensure security of their few.

3.11 Delimitations of the Study

The researcher faced a challenge of some respondents not willing to give information which led to increase of the non-response rate. This is because, the respondents feared to get exposed to their bosses which may result in the losing of their jobs. The researcher however minimized this

challenge by explaining to the respondents that the purpose of the study was purely for academics and that the information was to be treated with confidentiality.

The research also experienced a challenge of delay in the submission of the questionnaires by the respondents which affected negatively the time in which the analysis and discussion of the findings was to be done. However to reduce on the consequences, the researcher explained the respondents how urgent the required information was, yet the available time was not enough

CHAPTER FOUR

PRESENTATION, ANALYSIS AND INTERPRETATION OF THE FINDINGS

4.1 Introduction

The following sections in this chapter aimed at analyzing, presenting and interpreting the findings of this study about the relationship between control environment and operational efficiency of IFMS in Jinja district. It presents the background information of the respondents, findings of the analysis based on the objectives of the study.

This chapter was based on the primary data which was gathered using the questionnaires as the research instrument. For this purpose, the various statistical analysis tools like Cronbach alpha and Pearson coefficient correlation analysis were employed to analyze the operational efficiency of IFMS in Jinja district.

4.2 Response Rate

Table 3: Response Rate.

Total No. in Sample	Total No. of Responses	Ineligible	Response Rate (%)
66	48	18	73

Source: SPSS Primary Data.

According to table 4, out of the sample size of 66 respondents which was targeted by the study, 48 filled in and returned the questionnaires making a response rate of 73% as shown in Table 3. This was considered as a good and acceptable response rate as asserted by Mugenda and Mugenda (2003) that a response rate of 50% is satisfactory for analysis and reporting; a rate of 60% is good and a response rate of 70% and over is excellent. The achievement of this high response rate can be attributed to the data collection procedures, where the researcher pre-notified the potential participants and applied the drop and pick method where the questionnaires were picked at a later

date to allow the respondents ample time to fill the questionnaires. The response rate was therefore adequate for the study to make relevant conclusions basing on the responses. The response rate results from this study are illustrated as shown below;

4.3 Results on the background information of the respondents

Background information provides data regarding research participants and is necessary for the determination of whether the individuals in a particular study are a representative sample of the target population and testing appropriateness of the respondent in answering the questions for generalization purposes. The background information comprised of the gender, age, level of education, marital status, department, employment position and Length of employment.

4.3.1 Gender of the Respondents

The study sought to analyze the gender composition of the respondents from various departments actively using the IFMS in Jinja District as a selected sample size.

Table 4: Gender of Respondents

Gender	Frequency	Percentage (%)
Male	30	62.5
Female	18	37.5
Total	48	100

Source: SPSS Primary Data.

According to the findings from the table above, it was established that majority of the respondents as shown by 62.5% were male whereas 37.5% of the respondent were female, this shows that both genders were represented in this study and therefore the findings of the study were not affected by the bias of the gender. This implies there were more male than female respondents though with

less disparity meaning that there is gender balance among the employees involved in the use of the system. The balanced gender of the employees within the IFMS user departments is a sign of motivation towards achieving the goals and aims of the district as women and men compete favorably to deliver on their assignments (Carter and Shaw, 2007).

4.3.2 Age of the Respondents

The study also sought to establish the age distribution of the respondents and the table below shows the results from the study

Table 5: Age of the Respondents

Age	Frequency	Percentage (%)
20-29 years	14	29.2
30-39 years	16	33.3
40-49 years	05	10.4
Above 49 years	13	27.1
Total	48	100

Source: SPSS Primary Data.

According to the study findings, it was revealed that most of the respondents as shown by 33.3% were aged 30-39 years, 29.2% of the respondents were aged 20 to 29 years, 27.1% were above 49 years and 10.4% of the respondents were aged 40-49 years. This implies that respondents were well distributed in terms of their age during the study and that majority of the respondents were at their maturity stage which means that they were able to handle their roles responsibly. This mature reasoning was considered when answering the questions within the questionnaire as age is associated with experience (Baines & Hardill, 2008).

4.3.3. Education level of the respondents

The study also required respondents to indicate their level of education and the analysis of distribution was as shown in table below

Table 6: Education level of the respondents

Education level	Frequency	Percentage (%)
Diploma	2	4.2
Degree	29	60.4
Masters	16	33.3
Post graduate	1	2.1
Total	48	100

Source: SPSS Primary Data.

From the Table above, findings indicated that most of the respondents as shown by the 60.4% were bachelor's degree holders, 33.3% of the respondents had master's degree, 4.2% indicated to have reached diploma level and 2.1% of the respondents had reached post graduate level and this implies that most of respondents were well educated and that they were in a position to respond to research questions with ease hence giving reliable information.

4.3.4 Marital status of the respondents

The study also sought to establish the marital status distribution of the respondents and the table below shows the results from the study

Table 7: Marital status of the respondents

Marital status	Frequency	Percentage (%)
Married	37	77.1
Single	11	22.9
Others	00	00
Total	48	100

Source: SPSS Primary Data.

From the table above, the study revealed that 77.1% of the respondents were married, 22.9% were single. Having more respondents in the district it implies that these people are responsible people compared to those who are still single (22.9%) and so, meaning that they were serious when filling the questionnaires which were given to them.

4.3.5 Department of the Respondents

The study also considered the departments in which the respondents were situated within the district and below is the distribution.

Table 8: Department of the Respondents

Department	Frequency	Percentage (%)
Finance	16	33.3
Procurement and disposal unit	9	18.8
Internal audit	4	8.3
Administration	4	8.3
Planning	4	8.3
Human Resource	11	22.9
Total	48	100

Source: SPSS Primary Data.

From the table above, it's indicated that most of the respondents were from the Finance department (33.3%), followed by human resource department with 22.9%, the procurement and disposal unit with 18.8% and internal audit, administration and planning with 8.3% each. Having more respondents from the finance department indicates that reliable data was collected since the IFMS system is mostly used by the people within this department in the district. Also by looking at different departments, it ensured the researcher that the data collected was reliable since different views were got from the respondents.

4.3.6 Employment position of the respondents

The study also put into consideration the employment position of the respondents so as to understand clearly the roles and responsibilities. The results are indicated as shown below;

Table 9: Employment position of the respondents

Employment position	Frequency	Percentage (%)
Supervisor	11	22.9
Manager	16	33.3
Administrator	9	18.8
Others	12	25.0
Totals	48	100

Source: SPSS Primary Data.

As shown in the table above, its indicated that large number of the respondents were managers, that is 33.3%, followed by others who were 25%, then supervisors who were 22.9% , and then lastly the administrators who were 18.8%. The indication of having more managers within the findings implies that these many managers had enough information concerning with how the

operation of IFMS is and hence the data collected was authentic for further conclusions to be made by the researcher.

4.3.7 Length of employment of the respondents

The study also looked at the length of employment of the respondents within Jinja district. This was of importance to determine how reliable the data collected was. The findings are indicated as shown below;

Table 10: Length of employment of the respondents

Length of employment	Frequency	Percentage (%)
Less than 2years	4	8.3
2-4years	19	39.6
5years and above	25	52.1
Total	48	100

Source: SPSS Primary Data.

From the table above, it's shown that most respondents had worked for Jinja district for over a period of 5 years (52.1%), followed by those who had stayed for 2-4 years (19%) and lastly by respondents who had worked for a period of less than 2 years (8.3%). These results indicate that the researcher was able to collect enough and reliable information since most of the respondents had stayed in the district for over 5 years, meaning that they had enough skills and experience concerning with how IFMS operates within the district.

4.4 Presentation of findings of the study per objective

This section looked at the presentations of the findings of the study per objective. The objectives were presented in terms of their indicators with the respective means and standard deviations and they were interpreted using the table as shown;

Table 11: Numerical values and response modes used to interpret the means

Mean Range	Response mode	Interpretation
4.60-5.00	Strongly Agree	Very High
3.70-4.50	Agree	High
2.80-3.60	Not sure	Moderate
1.90-2.70	Disagree	Low
1.00-1.80	Strongly Disagree	Very Low

Source: Mabonga (2012)

4.4.1 Human capital capacity and operational efficiency

The study sought to look at the extent to which respondents agreed with the statements relating to human capital capacity in relation to operational efficiency of IFMS in Jinja District.

Table 12: Human capital capacity and Operational Efficiency

Indicators of Human capital capacity	Mean	Std. Dev
Skilled, knowledgeable and experienced personnel are remunerated well in order to keep them within the district	2.88	1.409
Users of the system have accounting background to effectively use the IFMS system	2.83	1.260
Employees within the district have training program on how to use IFMS	2.60	1.317
On-the-job and other training programs for IFMS have defined objectives	2.56	1.128
On-the-job and other training programs for IFMS have defined objectives	2.50	0.923
The district has personnel with requisite knowledge and expertise for effective IFMS	2.23	1.115

Source: SPSS Primary data

Table 11, Findings showed that the extent at which human capital capacity relates with operational efficiency in Jinja district was low with an average mean of 2.60 and standard deviation of 1.192. This was attributed by the following responses including: the moderate extent to which Skilled, knowledgeable and experienced personnel are remunerated well in order to keep them, (mean = 2.88 S.D = 1.409), the moderate extent to which users of the system have accounting background to effectively use the IFMS system (mean = 2.83 S.D = 1.260), the low extent at which employees within the district have training program on how to use IFMS (mean = 2.60 S.D = 1.317), the low extent at which on-the-job and other training programs for IFMS have defined objectives (mean = 2.56 S.D = 1.128). The low extent at which employees have requisite expertise & qualifications for IFMS operation (mean = 2.50 S.D = 0.923) and also the low extent at which the district has personnel with requisite knowledge and expertise for effective IFMS (mean = 2.23 S.D = 1.115).

4.4.2 Relationship between human capital capacity and operational efficiency

Pearson correlation was used to measure the degree of association between human capital capacity and operational efficiency of IFMS. Pearson correlation coefficients range from -1 to +1.

Table 13: Relationship between human capital capacity and operational efficiency

		Operational Efficiency	Human capital capacity
Operational Efficiency	Pearson Correlation	1	.476(**)
	Sig. (2-tailed)		.001
	N	48	48
Human capital capacity	Pearson Correlation	.476(**)	1
	Sig. (2-tailed)	.001	
	N	48	48

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

Source: SPSS Primary data

Table 13, shows that Human capital capacity had a moderate statistically positive (Pearson correlation coefficient = 0.476, p- value = 0.001<0.01) and significant relationship with the operation of IFMS in Jinja district. This implies that human capital capacity significantly relates

with the operational efficiency of IFMS since its p-value is 0.001 less than the significant value which is 0.01 as shown by the table above.

4.4.3 Management commitment and operational efficiency

The study sought to look at the extent to which respondents agreed or disagreed with the statements relating to management commitment in relation to operational efficiency of IFMS in Jinja District.

Below is the table showing the means and standard deviations for each indicator.

Table 14: Management Commitment and operational efficiency

Indicators of Management commitment	Mean	Std. Dev
Employees within the district are not positively committed to changes brought about by IFMS Operations	2.85	1.288
District administrator and managers believe that IFMS makes work more complex and prefer manual systems	2.60	1.317
The managers and administrators are resistant to changes brought about by IFMS	2.40	1.086
District managers and Administrators are committed to minimize resistance to change by employees	2.54	1.237
The administrators are committed to the change management strategies which were put in place to manage changes	2.31	1.095

Source: SPSS Primary data

Table 12, Findings showed that the extent of at which management commitment relates with operational efficiency in Jinja district was low with an average mean of 2.54 and average standard deviation of 1.205. This was attributed by the moderate extent of employees within the district not being positively committed to changes brought about by IFMS Operations with mean of 2.85 and standard deviation of 1.288. The low extent of; district administrator and managers believing that IFMS makes work more complex and prefer manual systems, the managers and administrators being resistant to changes brought about by IFMS, district managers and Administrators being committed to minimize resistance to change by employees and the administrators being committed to the change management strategies which were put in place to manage changes. These were supported by the means and standard deviations of; (mean = 2.60 S.D = 1.288), (mean = 2.40 S.D = 1.086), (mean = 2.54 S.D = 1.237) and (mean = 2.31 S.D = 1.095) respectively.

4.4.4 Relationship between management commitment and operational efficiency

Pearson correlation was used to measure the degree of association between management commitment and operational efficiency of IFMS.

Table 15: Relationship between management commitment and operational efficiency

		Operational Efficiency	Management commitment
Operational Efficiency	Pearson Correlation	1	.522(**)
	Sig. (2-tailed)		.000
	N	48	48
Management commitment	Pearson Correlation	.522(**)	1
	Sig. (2-tailed)	.000	
	N	48	48

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

Source: SPSS Primary data

Table 15 indicates that management commitment had a moderate positive (Pearson correlation coefficient = 0.522, p- value = 0.000 > 0.01) and significant relationship with the operation of IFMS

in Jinja district. This implies that management commitment significantly relates with operational efficiency of IFMS as indicated in the table above.

4.4.5 Technological factors and operational efficiency

The study sought to look at the extent to which respondents agreed or disagreed with the statements relating technological factors in relation to operational efficiency of IFMS in Jinja District.

Table 16: Technological factors and operational efficiency

Indicators of Technological factors	Mean	Std. Dev
The district lack the IT capacity for effective promotion and support for using IFMS	3.31	1.170
Mechanisms exist to identify and react to technological changes and changes in the functional requirements of the unit	2.81	1.249
Technical IT challenges that impede the accomplishment of IFMS key objectives are numerous	2.77	1.242
The district has appropriate IT infrastructure required for the proper operation of IFMS	2.77	1.403
The management always adjust to changes according to the new technological updates within the system	2.56	1.413
Lack sufficient IT technical skills and knowledge of the information technologies affect the operation of IFMS	2.52	1.288
The personnel in the accounting department have the required skills and knowledge concerning the operation of IFMS	2.31	1.114
Without a well-built information technology, the operation of IFMS is difficulty	2.13	1.231
Up to date technology provides greater efficiency and productivity and reduced costs	1.92	1.164
Adequate IT infrastructure is vital to the successful Operation of IFMS	1.83	1.243

Source; SPSS Primary Data

Table 13, findings showed that the extent at which technological factors relates with operational efficiency was low with an average mean of 2.493 and an average standard deviation of 1.252. This was attributed by the moderate extents for; the district lacking the IT capacity for effective promotion and support for using IFMS, having Mechanisms to identify and react to technological changes and changes in the functional requirements of the unit, having a technical IT challenges that impede the accomplishment of IFMS key objectives being numerous and having the appropriate IT infrastructure required for the proper operation of IFMS with the following means and standard deviations, (mean = 3.31 S.D = 1.170), (mean = 2.81 S.D = 1.249), (mean = 2.77 S.D = 1.242) and (mean = 2.77 S.D = 1.403) respectively. The low extent of; the management always adjusting to changes according to the new technological updates within the system, lacking sufficient IT technical skills and knowledge of the information technologies affect the operation of IFMS, the personnel in the accounting department having the required skills and knowledge concerning the operation of IFMS, without a well-built information technology, the operation of IFMS being difficulty, up to date technology providing greater efficiency and productivity and reducing costs with the following means and standard deviations respectively; (mean = 2.56 S.D = 1.413), (mean = 2.52 S.D = 1.288), (mean = 2.31 S.D = 1.114), (mean = 2.13 S.D = 1.231) and (mean = 1.92 S.D = 1.243). And lastly, the very low extent of having adequate IT infrastructure being vital to the successful Operation of IFMS (mean = 1.83 S.D = 1.241).

4.4.6 Relationship between technological factors and operational efficiency

Pearson correlation was used to measure the degree of association between management commitment and operational efficiency of IFMS. Pearson correlation coefficients range from -1 to +1. Negative values indicate negative correlation and positive values indicates positive correlation

where Pearson coefficient <0.3 indicates weak correlation, Pearson coefficient $>0.3<0.5$ indicates moderate correlation and Pearson coefficient >0.5 indicates strong

Table 17: Relationship between technological factors and operational efficiency

		Technological Factors	Operational Efficiency
Technological Factors	Pearson Correlation	1	.669(**)
	Sig. (2-tailed)		.000
	N	48	48
Operational Efficiency	Pearson Correlation	.669(**)	1
	Sig. (2-tailed)	.000	
	N	48	48

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

Source: SPSS Primary data

The analysis in Table 17 shows that Technological factors have a strong statistically positive (Pearson correlation coefficient = 0.669, p-value = 0.000 < 0.01) and significant relationship with the operation of IFMS in Jinja district. This means that technological factors significantly relates with the operational efficiency of IFMS due to the significant level of 0.000 which is less than 0.01 significance.

4.4.7 Operational Efficiency

The study analyzed the extent to which respondents agreed with the statements relating to how operational efficiency of IFMS in Jinja district has been attained given the control environment in place. The following scale was used, very low extent representing a mean of 1 to 1.8, a low extent representing a mean of 1.9 to 2.7, a moderate extent representing a mean of 2.8 to 3.6, a high extent representing a mean of 3.7 to 4.5 and a very high extent representing a mean of 4.6 to 5.4. Below is the table showing the means and standard deviations for each indicator.

Table 18: Operational efficiency

Indicators of Operational efficiency	Mean	Std. Dev
Accuracy		
Financial reports accuracy has improved from time to time with the district	1.77	0.973
The control measures in place have helped to improve on the accuracy of the system	2.38	1.084
Financial reports and the budgets produced are on average accurate	3.56	1.090
Errors still exist within the financial reports and the budgets prepared at the district	2.65	1.021
There exist double payment of employees, suppliers among others within the district	2.65	1.021
Completeness		
Financial reports and budgets are always complete in accordance to the requirement by the Public Financial Management Act	2.67	1.243
Complete information is always available to allow the processing of the financial reports and the budgets	2.56	1.128
No complete financial reports and budgets have ever been produced within the district	3.71	1.184
The financial reports are always reliable for future decision making within the district	2.17	1.155
Timeliness		
Financial reports and budgets are always produced in time by the district	2.54	1.368
Timeliness of the financial reports has improved from time to time within the district	2.00	0.875
In case financial reports and budgets are not submitted in time, the district is affected negatively	2.00	1.092
Reports and budgets are always submitted in time but always with errors and mistakes	3.25	1.194

Source: SPSS Primary data

Table 14, Findings showed that the extent of at operational efficiency had been achieved was low with an average mean of 2.658 and average standard deviation of 1.124. This was attributed by the high extent of no complete financial reports and budgets have ever been produced within the district (mean = 3.71 S.D = 1.184). The moderate extent of; financial reports and the budgets produced being on average accurate, the existence of double payment of employees, suppliers among others within the district and reports and budgets are always being submitted in time but always with errors and mistakes with means and standard deviation of (mean = 3.56 S.D = 1.090), (mean = 3.29 S.D = 1.202) and (mean = 3.25 S.D = 1.194) respectively. The low extent of; financial reports and budgets always being complete in accordance to the requirement by the Public Financial Management Act, errors still existing within the financial reports and the budgets prepared, complete information always being available to allow the processing of the financial reports and the budgets, financial reports and budgets always being produced in time, the control measures in place have helped to improve on the accuracy of the system, the financial reports always being reliable for future decision making within the district, the district being affected negatively whenever financial reports and budgets are not submitted in time and Timeliness of the financial reports have been improved from time to time. These were supported by the following means and standard deviation of; (mean = 2.67 S.D = 1.243), (mean = 2.65 S.D = 1.021), (mean = 2.56 S.D = 1.128), (mean = 2.54 S.D = 1.368), (mean = 2.38 S.D = 1.084), (mean = 2.17 S.D = 1.155), (mean = 2.00 S.D = 1.092) and (mean = 2.00 S.D = 0.875) respectively. And lastly a very low extent of having financial reports accuracy have improved from time to time with the district (mean = 1.77 S.D = 0.973).

4.4.8 Relationship between control environment and operational efficiency of IFMS

Pearson correlation was used to measure the degree of association between variables under consideration. In this case it was control environment and operational efficiency of IFMS. Pearson correlation coefficients range from -1 to +1. Negative values indicates negative correlation and positive values indicates positive correlation where Pearson coefficient <0.3 indicates weak correlation, Pearson coefficient $>0.3<0.5$ indicates moderate correlation and Pearson coefficient >0.5 indicates strong

Table 19: Relationship between control environment and operational efficiency of IFMS

		Control environment	Operational Efficiency
Control environment	Pearson Correlation	1	.636(**)
	Sig. (2-tailed)		.000
	N	48	48
Operational Efficiency	Pearson Correlation	.636(**)	1
	Sig. (2-tailed)	.000	
	N	48	48

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

Source: SPSS Primary Data

Table 19 shows that control environment which is the independent variable has a positive significant and moderate relationship ($r = 0.636$, $p\text{-value} = 0.000 < 0.01$) with the operational efficiency of IFMS. This implies that the control environment of Jinja district has a significant relation with the operational efficiency of IFMS as indicated by the p-values which 0.000 less than the significant value of 0.01 as shown in the table 19 above.

CHAPTER FIVE

SUMMARY, DISCUSSION, CONCLUSION, RECOMMENDATION AND AREAS OF FURTHER STUDY

5.1 Introduction

The purpose of the study was to analyze the relationship between control environment and operational efficiency of IFMS, Jinja district as a case study. This chapter focuses on summary of the findings, discussion of the findings of the study and their relation to the research objectives, the conclusion of the study, recommendations derived from the findings of the study as well as the areas of further research or study.

5.2 Summary of the findings

The findings indicated that 66 respondents were targeted from which 48 of them were able to complete the questionnaires and return them, resulting in a response rate of 73% which is considered to be representative and excellent to make conclusions for the study. This response rate was representative and excellent to make conclusions for the study. The findings showed the respondents were familiar with the use of IFMS in Jinja district, and therefore being in a position to understand and provide the right information for this study.

5.2 1 Human capital capacity and operational efficiency of IFMS

The study established that there exist a moderate and positive significant relationship between human capital efficiency and operational efficiency of IFMS in Jinja district. This was supported by an average mean of 2.60 and standard deviation of 1.192 for the indicators of human capital capacity in the district. The study also revealed that there exist a moderate and positive significant relationship (Pearson correlation coefficient = 0.476, p- value = 0.001<0.01) between human

capital capacity and operational efficiency of IFMS in Jinja district. This implies that human capital capacity in terms of skills, experience, knowledge and qualifications as far as the operation of IFMS is concerned in local governments.

5.2.2 Management commitment and operational efficiency of IFMS

According to the findings of the study, it was discovered that there exist a positive and moderate significant relationship ($r = 0.522$, $p\text{-value} = 0.000 > 0.01$) between management commitment and operational efficiency of IFMS in Jinja district. This is was indicated by an average mean and standard deviation of 2.54 and 1.205 respectively. Management commitment was looked at in terms of soliciting the required resources, embracing the IFMS by the management, encouraging the use of the system, ensuring quality, setting goals, being committed in terms of managing resistances by the employees because of the new changes brought by the IFMS system among others.

5.2.3 Technological factors and operational efficiency of IFMS

From the findings it was established that there exist a strong and positive significant relationship (Pearson correlation coefficient = 0.669, $p\text{-value} = 0.000 < 0.01$) between the technological factors and the operational efficiency of IFMS in Jinja district and this was supported by the average mean of 2.493 and standard deviation of 1.252. Respondents agreed that considering the IT infrastructure, changes brought by the changes in technology and the technical knowledge among others are always very important if the district is to ensure the efficiency of the system in terms of accuracy, completeness and timeliness. Though it was noted at times the management find it difficult to adapt to the changes brought about by the changes in technology as far as the use of the system is concerned.

5.3 Discussion of the findings

This section presents the discussion of the major findings of the study and this was done basing on the findings of the objectives which were under study. The study applied self-administered questionnaires and this instrument ensured that valuable information was provided upon which the findings of the study were based and discussed in this section.

5.3.1 Human capital capacity and operational efficiency of IFMS

The study revealed that there exist a moderate positive and significant relationship ($r = 0.476$, p -value = $0.001 < 0.01$) between the human capital capacity and operational efficiency of IFMS in Jinja district. It was discovered that the efficient operation of the IFMS required users with skills and knowledge on how to use the system. This is in line with the findings of Kahari *et al*, (2015) who in there study revealed that there exist a strong, positive and statistically significant ($r = 0.749$; $p < 0.01$) relationship between capacity building and skills of IFMS users and its implementation and operation. So their study encouraged the building of capacity building within the districts, counties if the success of the system is to be achieved. These findings are further supported by many studies all of which there findings indicated a positive relationship between human capital capacity and the success of IFMS (Wainaina & Makori, 2015; Okello et al, 2017 & Emilie, 2015) however, these findings are in disagreement with Kalekye (2017), who revealed a negative and insignificant relationship between human capital capacity and the IFMS implementation among the county governments in Kenya.

It was also revealed that if the operation efficiency of IFMS is to be achieved, training of the personnel in the user departments is a paramount within the local government. This is supported by the findings of Ahmad *et al*, (2013), who concluded in their study that comprehensive training programs are very important to get the sufficient knowledge in accounting information system

implementation and operation because of the strong relationship between training of the users and accounting information systems. On-the-job training was revealed vital if the skills of the users are to be improved everyday within the district, and this is also supported Kwena (2013) who recommended that the users of the system need always to have on-the-job training in order to improve their skills and capacity to use the system.

5.3.2 Management commitment and operational efficiency of IFMS

In the study carried out, it was discovered that management commitment had a significant and positive ($r = 0.522$, $p\text{-value} = 0.000 > 0.01$) relationship with the operation of IFMS within Jinja district. This indicated that management commitment significantly affected the operation efficiency of IFMS positively. Findings further indicated that the management was reluctant in encouraging the use of the system, promoting continuous improvement and soliciting of funds to catalyze the use of the system within the district. Some managers within the district were not committed to the change management strategies and hence resisting to changes brought by the IFMS system in place. These findings are in line with prior studies by Kalekye (2017), MOFED (2016), Karanja and Nyambura (2014), Chebet (2013) and Kimwele (2011) who in their studies revealed that management commitment in terms of soliciting resources, managing the staff resistance, reacting to changes brought about by the use of the system, appreciating and embracing IFMS usage and application, encouraging the training of the users among others had positive relationships with the implementation, maintenance and operation of IFMS within the governments' agencies, districts, local governments and ministries. However, these findings are contrary to Kalekye (2017), who in his study about the determinants of successful implementation of IFMS by County governments in Kenya, discovered that change management and communication commitment and IFMS implementation and operation had an insignificant and

negative relationship of 0.085. Also according to Kahari *et al*, (2015), who in his study revealed that there exist a strong, negative and statistically significant ($r = -0.461$; $p < 0.01$) relationship between staff resistance and IFMS implementation and operation.

5.3.3 Technological factors and operational efficiency of IFMS

The study revealed that technological factors have a strong and positive significant relationship (Pearson correlation coefficient = 0.669, p -value = 0.000 < 0.01) with the operation of IFMS in Jinja district. This indicates that technological factors have a significant relation with the operation efficiency of the IFMS in Jinja district. Technological factors like having IT infrastructure in place, technological changes and their mechanisms, managing technological updates, availability of IT technical skills and well built information technology structure to be of a great importance in the operation of the system. However, according to the findings, it was revealed that some of the technological factors have not been considered important and this has affected the efficiency of the system in terms of accuracy, completeness and timeliness. This indicates that there is lack of enough computers, accessibility and software's to enable the users perform their roles well thus affecting the operation of the system in the district. The findings went on to indicate there exist many technical challenges that limit the achievement of the aims for which IFMS was introduced for. These challenges include lack of IT capacity, resistance due to the difficulties with the use of the system. These findings are in agreement with Wainaina & Makori (2015), in a study examining the determinants of performance of IFMS in public sector in Kenya where it was revealed that ICT Infrastructure had a strong positive relationship (Pearson correlation coefficient = 0.801; p -value = .012 < .05) with the performance of IFMS. This is further supported by Kalekye (2017), Bonventure (2015), Hendriks (2012), Odunga (2015) who in their studies discovered that if any

accounting information system is to be successful in its operation, the technology in place must be a paramount factor.

5.4 Conclusions

The study revealed that there exist a moderate and positive significant relationship between human capital capacity and the operational efficiency of IFMS in Jinja district. This implies that human capital capacity significantly relates with the operation of the IFMS in the district. Human capital capacity was looked at in terms of skills, knowledge and experience, competence and ways of how to always encourage capacity building.

The findings also indicated that management commitment has a moderate and positive significant relationship with the operation efficiency of IFMS in Jinja district. This concludes that management commitment has a significant relationship with the operation of IFMS in Jinja district. The study looked at management commitment in terms of ensuring availability of resources required for the efficient operation of the system, ensuring quality, managing changes brought by IFMS and ensuring that goals for which IFMS was set for are achieved.

The study also revealed that technological factors like the availability of the IT infrastructure, technological changes, IT technical skills and knowledge, mechanisms to manage technological changes had a strong and a positive significant relationship with the the operational efficiency of IFMS in Jinja district. This concludes that technological factors significantly relates with the operation efficiency of IFMS in Jinja district.

5.5 Recommendations

The study revealed that there exist a strong relationship between human capital capacity and operational efficiency of IFMS in Jinja district. hence, the study recommends that, if local governments are to achieve the aims for which IFMS was set for, the focus must be on capacity

building so as to make sure that the users are well equipped with skills and knowledge concerning the use of the system. This can easily be achieved through encouraging training programs both at the workplace and outside the organisations. Also some measures like providing benefits, should be put in place so as to maintain the human resources with the knowledge, skills and experience concerning the use of IFMS.

Also the findings revealed a significant positive relationship between management commitment and operational efficiency of IFMS. Thus, the study recommends that management should always be committed in providing resources, ensuring quality, always reacting to changes, having well change management strategies in place, evaluating the progress and setting goals among others if the local governments are to achieve the aims and goals for which IFMS was introduced for.

The study also revealed a significant relationship between technological factors and the operational efficiency of IFMS in Jinja district. The study therefore recommends that, local governments should also have technical personnel with the required skills, ensuring a well built up IT infrastructure in order to promote the use of IFMS, always being updated with the new changes in technology so as to adjust accordingly among others if the efficiency of the system is to be achieved as per the aims which it was introduced for.

5.6 Areas for further research

The study looked at human capital capacity, management commitment and technological factors and how they relate with the operational efficiency of IFMS in Jinja district. This therefore encourages other researchers to look at how other components of the control environment influence or relates with the performance of IFMS. These other components include Integrity and ethical values, commitment to competence, management's philosophy and operating style and assignment of authority and responsibility.

The study also focused on the operational efficiency of IFMS in Jinja district local government, so it encourages further researchers to focus on how the system is performing in government's agencies, ministries and the public institutions where there still challenges with the use of the system.

REFERENCES

- Stephanie. (2014). Simple random sampling; Definition and examples. *Statistics how to*.
- Ahmad , A.-H., Mohammed , H. A.-M., Kamariah, N. M., & Jamal , M. (2013). Factors that Affect Accounting Information System Implementation and Accounting Information Quality. *American Journal of Economics*.
- Ajayi, I. A., & Omirin, F. F. (2007). *The Use of Management Information Systems (MIS) In Decision Making In The South-West Nigerian Universities, Vol. 2(No. 5)*, pp. 109-116.
- Ashley, C. (2018). Simple random sampling: Definition and different approaches.
- Asselin, L., & Srivastava. (2009). *Integrated Financial Management Systems: Experiences in Latin America*.
- Auditor General's Report. (2017).
- Barcan, L. (2010). Change Management within Public organisation. *Young Economist Journal*, 8(14), 93-97.
- Bartel, M. L. (2009). Integrated Financial Management Systems. *A Guide to Implementation Based on Experience in Latin America*.
- Bhat, A. (2015). *Quantitative Research: Definition, Method, Type and Examples*. Retrieved from <https://www.questionpro.com/blog/quantitative-research/>.
- Biwott, E., & Kiplagat. (2015). Integrated Financial Management Information Systems Implementation and its impact on Public Procurement Performance at National Government of Kenya.

- Bonventure, F. M. (2015). Challenges facing governments in the implementation of Integrated Financial Management Information Systems; The case of Taita Taveta County. *International Journal of Research in Commerce, Economics and Management*, 5(11).
- Casals , A. (2009). *Integrated Financial Management Systems Best Practices*.
- Casals, A. (2009). Integrated Financial Management Systems Best Practices. *Bolivia and Chile, funded under USAID Contract AEP-I-00-00-00010-00*.
- Chêne, M. (2009). The Implementation of Integrated Financial Mngement Systems (IFMS).
- Chimoyo, E. (2017, October 25). New IFMS Awaiting Approval From Financiers.
- CSBAG. (2016, September 19). CSBAG BUDGET NEWS BRIEF. *Local governments challenge PFMA, 2015*.
- David , H. (1993). Internal Control: How It Evolved in Four English – Speaking Countries.
- Dener, C., Watkins, J., & Dorotinsky, W. L. (2011). Financial Management Information Systems 25years of World Bank experience on what works and what does not work. *World Bank Publications*.
- Dhillon, A. S., & Vachhrajani, H. (2012). Impact of Operational Efficiency on Overall Profitability-A Case Study of GIPCL.
- Diamond , J., & Khemani, P. (2005). Introducing Financial Management Information Systems in Developing Countries.
- Draku, F. (2018). Government orders sacking of 60 district Chief Administrative Officer, Daily Monitor.

- Emilie, C. (2015, June 12). Implementing integrated financial management information systems.
- Ernst and Young. (2015). *Integrated Financial Management Information Systems (online)*.
- Gerring, J. (2004). What Is a Case Study and What Is It Good for? *American Political Science Review*.
- Glance, A. (2006). Effectiveness of internal control. Local Governmen.
- Hackett, W., & Mobley, S. C. (1976). Auditing perspective of the historical development of internal control.
- Halinen, A., & Tornroos, J.-A. (2005). Using Case methods in study of Contemporary Business Networks. *Journal of Business Research*, 58(9), 1285-1297.
- Helen, B., & Maria, K. (2009). Cross-Sectional studies design Application. *Strength and Weakness of Cross Sectional Studies*.
- Hendriks , C. J. (2013). Integrated Financial Management Information Systems; Guidelines for effective implementation of the Public Sector of South Africa. *South African Journal of Information Management*, 15(1), 1-9.
- Hove, M. R., & Wynne, A. (2010). The experience of medium term expenditure framework and IFMIS Reforms in Sub-Saharan Africa. Africa capacity building foundation.
- Jesmin , I., & Hui, H. (2012, April 18). A review of literature on contingency theory in managerial accounting. *African Journal of Business Management*, 6(15), pp. 5159-5164.
- Jinja District Service Commission. (2017).
- Jordan , R. (2017, 2). The Evolution of Internal Controls.

- Kahari, C. K., Gathogo, & Wanyoike, D. (2015). Assesment of factors affecting the implementation of Integrated Financial Management Information Systems in the County governemnts: A case of Nyandarua County. *Kenya International Journal of Economics, Commerce and Management*, 3(11), 1352-1373.
- Kakande, M., & Kalebbo, J. (2015, April). The Effectiveness of the Integrated Financial Management System in Uganda. *IFMS Study Report*.
- Kalekye, N. V. (2017). Determinants of successful implementation of Integrated Financial Management Systems by County governments in Kenya.
- Karanja, J. G., & Nyambura, N. E. (2014). Determinants of the performance of IFMIS in Kenya government Ministries. *Research Journal of finance and Accounting*, 5(7).
- Karlsson, M. (2016). What is a case study?
- Kasumba, S. (2009). Accountancy Business and the Public Interest. *Where New Technology Meets Social-Economic Impasses: A Study of the Integrated Financial Management System as a Management Control in Local Governments in Ugand*, 8(2), 31.
- Kembro, J., Wieland, A., Durach, C. F., & Treiblmaier, H. (2017). Statistical and judgmental criteria for scale purification, Supply Chain Management. *An International Journal*, 22(4).
- Khemani, P. D., & Diamond, J. (2005, October 1). International Monitory Fund Working Papers. *Introducing Financial Management Information Systems in Developing Countries*.
- Kimwele, J. M. (2011). Determinants of performance of Integrated financial management information sysytem in government ministries in Kenya.

- Krejcie, R. V., & Morgan, D. M. (1970). Determining sample size for research activities”, *Educational & Psychological Measurement*. 30, 607-610.
- Kwena, F. I. (2013). Factors that influence the use of Integrated Financial Management Systems in Public Sector; A case study of selected government ministries.
- Labarce, R. V. (2009). *Organising your social science research paper: Quantitative methods*. Retrieved from <https://libguides.usc.edu/writingguide/quantitative>.
- Lavrakas, P. J. (2008). Cross-Sectional Survey Design.
- Masli, G. F., Peters, V. J., & Richardson, J. M. (2010). Examining the potential benefits of internal control monitoring technology. pp. 1001 – 1034.
- MFPED. (2012, September-Kampala). Central Government Public Expenditure and Financial Accountability (PEFA) Assessments Report.
- Mohammed, A. (2015, 06 15). The Impact of Integrated Financial Management System on Economic Development. p. 77.
- Mugenda, O. M., & Mugenda, A. G. (2003). *Research methods: Quantitative and qualitative Approaches*. Nairobi: African Centre for Technology Studies.
- Mwakio, S. (2017). The Realationship between Accounting Information Systems and Human Resource Mngement among commercial Banks in Kenya.
- Mwaura, K. Z. (2016). Factors influencing implementation of integrated Financial Information System in developed government in Kenya. *The International Journal of Business and Management*, 4.

- Ndaiga, P. M. (2016). Determinants of the adoption of an IFMS, A case of Mombasa County government.
- Nomvalo, F. (2008). Case study PFM Reforms, A South African perspective.
- Odunga, D. (2015). Rotich says governors resisting online tendency fear scrutiny; *Business Daily*.
- Okello, O. J., & Stephen, M. (2017, 4 5). Integrated Financial Management Information System: a conceptual framework for Migori County, Kenya. *Public and Municipal Finance*.
- Olhager, J. (2013, March 12). Evolution of Operations planning and control; from production to supply chain.
- Ondimu, R. M. (2013). Factors affecting Implementation of Integrated Financial Management Information Systems (IFMIS) at Kenya Bureau of Standards. Masinde Muliro University of Science and Technology.
- Palys, T. (2008). Purposive sampling in L.M. 2, 697-698.
- Ramlar, H., Shahriza, K. A., & Selamat, H. M. (2007). The impact of technological factors on information systems success in the electronic-government context. *Business Process Management Journal*, 13(5).
- Sajady, H., Dastgir, M., & Hashemnejad. (2008). Evaluation of the effectiveness of accounting information systems.
- Sally, J. R. (1979). The City of New York's integrated financial management-From mandate to working system in 18 months. 103.

- Selfano, O. F., & Serah, C. (2014). Integrated financial management systems and its effect on cash management in Eldoret westdistrict treasury, Kenya. *International journal of business and social sciences*, 5(8).
- Semakula, L., & Muwanga, R. (2012). Country Learning Notes, Uganda: Implementing an Integrated Financial Management System and the Automation of the. *Guidelines on the Management of the Decentralised payroll*.
- Ssemakula, K. (2012). Integrated Financial Management System a boon for Uganda Government. *Balancing Act*.
- Stephania. (2018). Primary Data & Secondary Data: Definition & Example. *Statistics how to*.
- Surbhi, S. (2016). *Differences between correlation and regression*. Retrieved from <https://keydifferences.com/difference-between-correlation-and-regression.html>
- Tongro, M. C. (2007). Purposive Sampling as a tool for informat selection. *A journal of plants, people and Applied research: Ethobotany Research and Application*.
- Topash, N. K. (2014). Evaluation of Efficiency of Accounting Information Systems. *A Study on Mobile Telecommunication Companies in Bangladesh*, pp 40-55.
- UBOS. (2014, August 27). "The Population of The Regions of the Republic of Uganda And All Cities And Towns of More Than 15,000 Inhabitants.
- Vardi, Y. (2015, October 21). How manufacturers use Internet of Things (IoT) for Operational Efficiency.

Wainaina, N. A., & Makori, M. (2015, October 24). Determinants of Performance of Integrated Financial Management Information System in Public Sector in Kenya. *Strategic journals*, 2(90), 1243 – 1284.

Were, A. (2017). Problems with financial accountability in Counties; *Business daily Africa*.

World bank. (2003). Malawi; Country Financial Accountability Assessment.

Yurniwati, & Alfhal, R. (2015). Control Environment analysis at Government Internal Control System: Indonesia Case. *Second Global Conference on Business and social sciences*, (pp. 844-850).

APPENDICES

Appendix 1: Questionnaire

QUESTIONNAIRE TO BE FILLED BY THE EMPLOYEES OF JINJA DISTRICT WITHIN THE SELECTED DEPARTMENTS

I am **SSEGGUJJA LAMECA**, a student of **KYAMBOGO UNIVERSITY** with Registration Number **16/U/13335/GMBA/PE**. I am carrying out a research about Control Environment and Operational Efficiency of Integrated Financial Management Systems (IFMS) in Public Sector entities. This is in partial fulfillment of the requirement of **Master's Degree of Business Administration (MBA)** program at **KYAMBOGO UNIVERSITY**. So the purpose of this questionnaire is to get your view with regards to the above topic.

This is an academic research thus, all the information obtained during the research process will be used strictly for academic purposes and will be treated with utmost confidentiality. You have been chosen as a respondent because of the knowledge and information that you have with regard to the topic.

Section A: Background information of the respondent.

1. Gender: (a) Male (b) Female
2. Age: (a) 20-29 (b) 30-39 (c) 40-49 (d) Above 49
3. Education level
- (a) Diploma (b) Degree (c) Masters (d) PhD

4. Marital status

(a) Married

(b) Single

Others specify.....

5. Department

(a) Finance

(b) Procurement & disposal unit

(c) Internal Audit

(d) Administration

(e) Planning

(f) Human Resource

6. Employment position

(a) Supervisor

(b) Manager

(c) Administrator

(d) Others specify.....

7. Length of employment

(a) Less than two years

(b) 2-4 year

(c) above 5 years

Section: B Human capital capacity and Operational efficiency of IFMS

This section aims at analyzing the relationship between human capital capacity and operational efficiency of IFMS. Hence evaluate the following statements on Human capital capacity and Operational efficiency of IFMS in Jinja District.

Please rate /indicate/ tick (✓) appropriately your response with respect to the importance of the statements below:

1. <i>Strongly Agree</i>	2. <i>Agree</i>	3. <i>Not Sure</i>	4. <i>Disagree</i>	5. <i>Strongly Disagree</i>
-----------------------------	--------------------	-----------------------	-----------------------	--------------------------------

SN	Statement	Response				
		1	2	3	4	5
B1	Employees within the district have regular training program on how to use IFMS					
B2	The district has personnel with requisite knowledge & expertise for effective IFMS operation, & maintenance					
B3	On-the-job and other training programs for IFMS have defined objectives.					
B4	Skilled, knowledgeable and experienced personnel are remunerated well in order to keep them within the district					
B5	Most users are not properly trained to use all functionalities of IFMS					
B6	Hiring of the skilled, knowledgeable and experienced personnel about the use of IFMS is always done					
B7	Users of the system have accounting background to effectively use the IFMS system					
B8	Employees have requisite expertise & qualifications for IFMS operation					
B9	There is always engagement of external consultants with extensive experience in public sector financial management					
B10	Employees within the district lack enough skills and knowledge required to use the system					

Section: C Management commitment and Operational efficiency of IFMS

This section aims at analyzing the relationship between management commitment and Operational efficiency of IFMS. Hence evaluate the following statements on management commitment and Operational efficiency of IFMS in Jinja District

Please rate /indicate/ tick (✓) appropriately your response with respect to the importance of the statements below:

1. <i>Strongly Agree</i>	2. <i>Agree</i>	3. <i>Not Sure</i>	4. <i>Disagree</i>	5. <i>Strongly Disagree</i>
-----------------------------	--------------------	-----------------------	-----------------------	--------------------------------

SN	Statement	Response				
		1	2	3	4	5
C1	Managers and administrators always encourage the training programs about the application of IFMS within the district					
C2	Most senior managers and administrators in the district are not interested in IFMS usage and application					
C3	Employees within the district are not positively committed to changes brought about by IFMS Operations					
C4	District managers and administrators encourage and advice you and colleagues on using IFMS					
C5	Management promotes continuous improvement and solicits input and feedback on the implications of significant change about IFMS					
C6	Management is willing to commit resources to achieve positive change					
C7	The managers and administrators are resistant to changes brought about by IFMS					
C8	District managers and Administrators are committed to minimize resistance to change by employees					
C9	District administrator and managers believe that IFMS makes work more complex and prefer manual systems					
C10	The administrators are committed to the change management strategies which were put in place to manage changes					

Section: D Technological factors and Operational efficiency of IFMS

This section aims at analyzing the relationship Technological factors and operational efficiency of IFMS. Hence evaluate the following statements on Management Commitment and Operational efficiency of IFMS in Jinja District

Please rate /indicate/ tick (✓) appropriately your response with respect to the importance of the statements below:

1. <i>Strongly Agree</i>	2. <i>Agree</i>	3. <i>Not Sure</i>	4. <i>Disagree</i>	5. <i>Strongly Disagree</i>
-----------------------------	--------------------	-----------------------	-----------------------	--------------------------------

SN	Statement	Response				
		1	2	3	4	5
D1	The district has appropriate IT infrastructure required for the proper operation of IFMS					
D2	The personnel in the accounting department have the required skills and knowledge concerning the operation of IFMS					

D3	The management always adjust to changes according to the new technological updates within the system					
D4	Adequate IT infrastructure is vital to the successful Operation of IFMS.					
D5	Mechanisms exist to identify and react to technological changes and changes in the functional requirements of the unit					
D6	Technical IT challenges that impede the accomplishment of IFMS key objectives are numerous					
D7	Up to date technology provides greater efficiency and productivity and reduced costs					
D8	The district lack the IT capacity for effective promotion and support for using IFMS					
D9	Lack sufficient IT technical skills and knowledge of the information technologies affect the operation of IFMS					
D10	Without a well-built information technology, the operation of IFMS is difficulty					

Section E: Operational Efficiency of IFMS

This section focuses on the extent to which Operational Efficiency of IFMS in terms of Accuracy, Completeness and Timeliness have been attained Jinja District Local Government as a result of Control Environment.

Please rate /indicate/ tick (✓) appropriately your response with respect to the importance of the statements below:

1. <i>Strongly Agree</i>	2. <i>Agree</i>	3. <i>Not Sure</i>	4. <i>Disagree</i>	5. <i>Strongly Disagree</i>
-----------------------------	--------------------	-----------------------	-----------------------	--------------------------------

SN	Statement	Response				
		1	2	3	4	5
E1	Financial reports accuracy has improved from time to time with the district					
E2	The control measures in place have helped to improve on the accuracy of the system					
E3	Financial reports and the budgets produced are mostly accurate					
E4	Errors still exist within the financial reports and the budgets prepared at the district					
E5	There exist double payment of employees, suppliers among others within the district					

SN	Statement	Response				
		1	2	3	4	5
	Completeness					
E6	Financial reports and budgets are always complete in accordance to the requirement by the Public Financial Management Act					
E7	Complete information is always available to allow the processing of the financial reports and the budgets					
E8	No complete financial reports and budgets have ever been produced within the district					
E9	The financial reports are always reliable for future decision making within the district					

SN	Statement	Response				
		1	2	3	4	5
	Timeliness					
E10	Financial reports and reports are always produced in time by the district					
E11	Timeliness of the financial reports has improved from time to time within the district					
E12	In case financial reports and budgets are not submitted in time, the district is affected negatively					
E13	Reports and budgets are always submitted in time but always with errors and mistakes					

Thank You for Your Time


KYAMBOGO UNIVERSITY

P. O. BOX 1 KYAMBOGO
Tel: 041 - 4286792 Fax: 256-41-220464
Website: www.kyu.ac.ug

Office of the Dean, Graduate School

25th October 2018

To Whom It May Concern

RE: LETTER OF INTRODUCTION

Dear Sir/Madam,

This is to introduce **Mr. Ssegguja Lameca** Registration Number **16/U/13335/GMBA/PE** who is a student of Kyambogo University pursuing a Masters Degree.

He intends to carry out research on "**Control Environment and Operational Efficiency of Integrated Financial Management SYSTEMS OF Local Governments in Uganda: A Case Study of Jinja District.**" as partial fulfillment of the requirements for the award of the Masters in Business Administration.

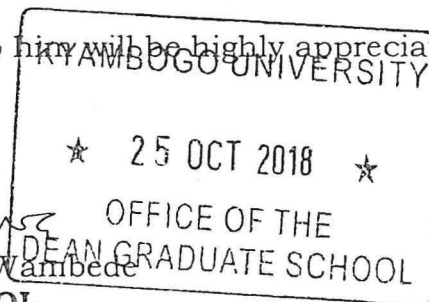
We therefore kindly request you to grant him permission to carry out this study in your institution.

Any assistance accorded to him will be highly appreciated.

Yours sincerely,



Assoc. Prof. Muhamud N. Wambede
DEAN, GRADUATE SCHOOL



PHONE NO. 256-77-6-613296



OFFICE OF THE
CHIEF ADMINISTRATIVE OFFICER
JINJA DISTRICT LOCAL GOVERNMENT
P.O. BOX 1551
JINJA

OUR REF: CR/164/1

29th October, 2018

YOUR REF:

The Deputy Chief Administrative Officer/JDLG
The District Finance Officer/JDLG
The District Internal Auditor/JDLG
The Principal Human Resource Officer
The District Planner
The Senior Procurement officer

RE: RESEARCH

This is to introduce to you Sseggujja Lameca a student at Kyambogo University. He wishes to carry out a research on topic titled **“Control environment and Operational efficiency of integrated financial management systems of Local Governments in Uganda: A case study of Jinja District.** This is therefore to inform you that he has been permitted to undertake this research in our District in your Sector.

Please render him the necessary assistance.

A handwritten signature in black ink, appearing to be 'Kanyesigye William', written over a rectangular stamp.

CHIEF ADMINISTRATIVE OFFICER
JINJA DISTRICT LOCAL GOV'T

KANYESIGYE WILLIAM
CHIEF ADMINISTRATIVE OFFICER/JINJA

Cc: The Dean,
Graduate School,
Kyambogo University