

**THE EFFECTS OF COMPUTERIZED ACCOUNTING ON
PERFORMANCE OF GOVERNMENT MINISTRIES
OF TANZANIA.**

**CASE STUDY: MINISTRY OF INFRASTRUCTURE
DEVELOPMENT.**

**A RESEARCH REPORT SUBMITTED TO THE SCHOOL OF
BUSINESS AND MANAGEMENT IN PARTIAL FULFILMENT
FOR THE AWARD OF A BACHELOR'S DEGREE IN
BUSINESS ADMINISTRATION OF KAMPALA
INTERNATIONAL UNIVERSITY.**

BY

VICENT KATAGIRA

JUNE 2009.

DECLARATION

I the undersigned, hereby declare that the presentation of this report is my original work. It has never been submitted to any other university for the award of my academic qualification.

Signature: Wase:.....

Date 05/06/09.....

VICENT KATAGIRA

BBA/12808/61/DF

APPROVAL

I certify that the work submitted by this candidate was under my supervision.

Signature.....*M Ruteganda*..... Date: *05/06/09*.....

MR.RUTEGANDA MICHAEL BBA (U.S.A), MSC (UK), A.C.I.S.

(SUPERVISOR)

DEDICATION

This professional work is at first place dedicated to my lovely parents Fulgens Katagara and Judith Katagira for their financial assistance, tolerance and great care during the whole time of my studies from primary school to higher learning education, may Almighty God bless them!

ACKNOWLEDGEMENT

There is good number of individuals who in one way or another assisted the researcher with various relevant information which has been used in this report. To mention them all it will be difficult hence I thank them all.

First I have to grant my grateful thanks to the almighty God for his blessings which enabled me to perform my assignment within a specified time.

I owe much thanks to my field supervisor **Mr. Ruteganda Michael** for his tireless guidance, helpful comments and criticisms which at last made the existence of this report a reality.

Furthermore, I convey my sincere gratitude to my friends **Ally Abas Ruhega, Emanueli Karim, Gimonge B. Kanire Shungu Mboma, Athuman Kikwete, Daniel Muguli, Victor Nyagilo, Richard Kavutu, Irene Koku** and the entire K.I.U community at large. for their advice.

LIST OF TABLES

TABLE 1: LEVEL EDUCATION OF WORKER AT ACCOUNTING DEPARTMENT	28
TABLE 2: COMPUTER APPLICATION IN ACCOUNTING SYSTEM OF MINISTRIES	29
TABLE 3: THE ACCURACY OF ACCOUNTING INFORMATION AND APPLICATION OF COMPUTERIZED SYSTEM	29
TABLE 4: THE BENEFITS OF COMPUTERIZED ACCOUNTING SYSTEM	31
TABLE 5: NUMBER OF COMPUTERS IN DEPARTMENT	31

ACRONYMS.

TMID	-TANZANIA MINISTRY OF INFRASTRUCTURE DEVELOPMENT.
GDP	- GROSS DOMESTIC PRODUCT.
GNR	- GOODS RECEIVING NOTE.
LPO	-LOCAL PURCHASE ORDER.

ABSTRACT

This research was about the effectiveness of computerized accounting, a research which was conducted at ministry of infrastructure development, as a case study. The main objective of this study was to examine the effectiveness of computerized accounting at Ministry of Infrastructure Development, by examining the procedures, designs and methods followed by this organization from the early stages of implementing, controlling and finally comparing the projected results with the actual results.

The sampling procedure used is simple random sampling where by total number of sampling are 20 people.

Research technique used both qualitative and quantitative where by qualitative used words collecting and analyzing data while quantitative used numerical methods especially in accounting.

The data collected by using observation, interview, questionnaires and documentation. Analysis of data done by table and percentages.

The study revealed that at the ministry there is effectively computerized accounting although there are some activities still done manually.

TABLE OF CONTENTS

Declaration	(ii)
Approval	(iii)
Dedication	(iv)
Acknowledgement	(v)
List of tables	(vi)
Acronyms	(vii)
Abstract	(viii)
Table of content	(ix)

CHAPTER ONE

1.0 Introduction	1
1.1. Historical Background of Ministry of Infrastructure Development	4
1.2 Statement of the problem	6
1.3 Objectives of the study	6
1.4 Purpose of the study	7
1.5 Research questions.....	7
1.6 Significance of the study	7
1.7 Scope of the study	8
1.8 Limitation of the study.....	8
Conceptual framework	9

CHAPTER TWO

2.0 Literature review	11
2.1 Relevance of theories and principles	12
2.2. Empirical literature review	22

CHAPTER THREE

3.0 Research methodology	23
3.1 Research design	23

3.2 Research Techniques	23
3.3 Population inquiring	23
3.4 Sampling techniques	23
3.4.1 Sample random sampling	23
3.5 Types of data collection	24
3.6 Data collection methods	24
3.6.1 Observation	24
3.6.2 Questionnaire	24
3.6.3 Interview	24
3.6.4 Documentary sources	24
3.7 Data presentation and analysis	24

CHAPTER FOUR

4.0 Introduction	26
4.1 Computerized accounting system in ministry of infrastructure development	26
4.2 Computer application in accounting system of ministry	28
4.3 The accuracy of accounting information and application	29
4.4 The benefits of computerized accounting system	30
4.5 Barriers to computer application in accounting system	31
4.6 Measures taken by the ministry to implement and maintain computerized accounting system	32

CHAPTER FIVE

5.0 Introduction	34
5.1 Conclusion	34
5.2 Recommendations	35
5.3 Areas for further research	36

Bibliography	37
Appendix 1: Research questionnaires	39
Appendix 2: Curriculum vitae	42

Appendix 3A: Map of Tanzania	43
Appendix 3B: A Map of Dar-es-Salaam	44
Appendix 4A: Time frame	45
Appendix 4B: Research's Budget	46
Research Letter of Introduction to Ministry of Infrastructure and Development	47

CHAPTER ONE

1.0 INTRODUCTION

Information Technology is the major technology that merges computing with high-speed communications links carrying data, sound, and videos. Information Technology defines activities involving the acquisition, transformation and creation of strategies, manipulation and communication of information through electronic means by using computers.

Information Technology includes the hardware and software used to store, retrieve, process and transmit data. This could include computer hardware (personal computers, mainframe computers), telecommunication hardware (routers, multiplexors), software (operating systems, programmed applications), networking hardware and software (Local Area Network cards and operating systems).

Keep in mind that Information technology cannot accomplish any goals by it self. The Technology is simply a tool to be used for accomplishing a specific business goal. Information technology enables a vision-it does not provide it.

Accounting is often characterized as “the language of business.” The acceleration of change in our society has contributed to increased complexities in this “language”, which is used in recording, summarizing, reporting and interpreting basic economic data, for individuals, businesses, government and other entities. Sound decisions based on reliable Information, are essential for the efficient distribution and use of the nation’s scarce resources. Accounting therefore, plays an important role in our economic and social system.

Accounting has been defined broadly as; the process of identifying, measuring and communicating economic information to permit informed judgments and decisions by users of the information.

Implicit in this definition is the requirements that, accounting has a broad knowledge of the social economic environment; without it the users would be unable to identify and develop relevant information.

Accounting information is composed principally of financial data about business transactions, expressed in monetary terms. Historical recording of transaction data may take various forms, such as pen or pencil markings made by hand, printing by various mechanical and electronic devices or holes or magnetic impressions in cards or tape.

Accounting information can be used by different groups such as Investors. The business enterprises need information about their financial status and its future prospects. Bankers and suppliers appraise the financial soundness of a business Organization and assess the risks involved before making credits or granting loans. Government and Employees and their union representatives are also vitally interested in the stability and profitability of the organization that employs them.

Developing and communicating the information is the role of the business organization's accounting system, which consists of the business documents, journals, ledgers, procedures and internal control needed to produce reliable financial statements and other accounting reports.

The complexity of the accounting system of recording and reporting business transaction processed everyday requires the operation of a comprehensive accounting system which can be more rudimental for the dual purpose of control and performance assessment on a regular basis.

The nature of accounting activities is to do more with calculation, figures and repetitive works hence computer can be used to accomplish it accurately and efficiently. Information technology plays a major role in reengineering most business process; information-processing capability and connectivity of computer networks, can substantially increase the efficiency of business process as well as collaboration with the people responsible for operation and management. It can play a strategic role in gaining competitive advantage for a business organization, for instance many firms use internet, extranet and other networks that tie them electronically to their customers or suppliers and other trading collaborators. Also enables organization to apply centralized system of controlling accounting activities from its different branches.

Hence information technology in accounting system can result in the development of unique services, product or process which may create new business opportunities and enable a firm to expand into new markets or into new segments for the existing markets, enable a company to cut costs, improve quality and customer services and develop innovative products for new market.

However, the benefit of information technology in accounting system and in the whole business include case of software distribution and improving managerial ability due to its

advantage of having incredible speed, thus for a computer to post transaction and accounting balance is very short, hence;

- The whole amount of data can be processed quickly and efficiently.
- Internal control procedures may be possible in a computer-based system.
- Excess information developed at virtually low costs.
- Real time can make feedback available while transactions are in process.

1.1 HISTORICAL BACKGROUND OF MINISTRY OF INFRASTRUCTURE

DEVELOPMENT (MID)

Ministry of infrastructure development (MID) is among the government entity specialized in promoting infrastructure in Tanzania. The ministry responsible for Infrastructure had gone through several changes since independence. From 1995 it was known as the Ministry of Construction Development; so infrastructure was under Construction .Between 2000 and 2005 it became the Ministry of Infrastructure Development). From 2005 to date it is known as the Ministry of Infrastructure Development (MID).

Role

The MID is responsible for facilitating the development of sustainable infrastructure for increasing productivity and profitability and the development of member based and economically viable cooperatives so as to enhance income to the majority of Tanzanians.

Functions

For the nation to achieve national goals MID has the following responsibilities.

- Promote measures to improve the efficiency and effectiveness of the services in the infrastructure sector
- Acquire, retain, and develop standards expected by its clients, and
- Promote sustainable cooperative development services to the public.

The Ministry of Infrastructure Development, offer a wide range of social, economic and technical services. These includes Infrastructure research, extension services, training services, infrastructure statistics, early warning system, technical issues related to infrastructure, land use planning, infrastructure protection and policy formulation.

The development potential of the infrastructure sector cannot be over-emphasized, although tourism and mining have become important in recent years, infrastructure remains the main stay of the economy. Infrastructural sector contributed 50% of the total foreign exchange earnings between 2002 and 2005, accounted for 35% of the GDP and provides employment to 62% of the population. Recently, the sector has registered an average annual growth rate of 4.8% compared to average growth of 3.1% from 1998 to 2000(NSGRP,2005).The arena of policy reforms and interventions has contributed to the sector growth. However, such positive growth is still unsatisfactory compared to the targeted growth rate of 10% which is required to fast-track poverty reduction. This is according to Ministry of Infrastructure Development Medium Term Strategies Plan 2007-2010.

1.2 STATEMENT OF THE PROBLEM

Information technology is the major recording system for simplifying activities towards the obtaining of any organization goals, since it consists of computerized central processing units and varieties of interconnected peripherals devices through which data resources like customer records, employee files, inventory database and product description can be maintained properly. In most 3rd world countries especially Tanzania, this technology of using computers in accounting systems has not been utilized effectively despite its importance; most organizations still use manual methods of processing accounting transactions rather than using computers. Computers are fast to perform, reliable and accurate in providing accounting systems such as cash receipt payments and cash balances. They also prevent losses and fraud. Most organization has failed to use computers due to:-

- i. Most of organization's employees are not computer literally, when installed employees need to be trained (cost of training).
- ii. Computer hardware are not adquatly available in easy and reliable way, that means they are more expensive.
- iii. The cost of installing computer systems and networks for use with accounting packages is very expensive and costly to maintain.

1.3 OBJECTIVES OF THE STUDY

- i. To examine the effectiveness of accounting system of the organization.
- ii. To identify barriers for computerizing in accounting system.
- iii. To suggest measures to be taken for effective computerized accounting system.

1.4 PURPOSE OF THE STUDY

The study will aim at evaluating the effects of computerized accounting on the performance of government ministries of Tanzania.

1.5 RESEARCH QUESTIONS

- i. Is computer applications effectively implemented in accounting system of the organization?
- ii. What are the barriers of computer application in accounting system?
- iii. What measures are taken to make sure that effective computerized accounting system is applied in the organization?

1.6 SIGNIFICANCE OF THE STUDY

- i. The researcher finding of this study helps in better understanding of the existing problem and may reveal new areas for research/investigation.
- ii. The research finding helps and enable the policy makers, planners and administrators in the improving the betterment of their field if used effectively.
- iii. The evaluation and recommendation of the study useful to the management of the organization especially as it provide a clear frame on improving the field concerned.

- iv. The research findings are also used as reference and further study material in the higher learning institutions for the purpose regarded to be conducted on the topic.

1.7 SCOPE OF THE STUDY

The research deals with the organization staffs to get information in respect to accounting procedures and activities undertaken by the organization manually and computerized. As long as the topic is about information technology in accounting system (computerized Accounting) it also has access to computer specialists within the organization to provide relevant data as the researcher requires. The data collected mainly concern the Finance and Accounting Departments, and is limited to the accuracy of accounting information produced by computerized system.

1.8 LIMITATION OF THE STUDY

The research work may encounter the following limitations in the course of data collection, analysis and presentation.

- i. The study was limited to six months, and this in a way was a constraint. The period given to the researcher to deal with the topic concerned is very a short time, and then the researcher is making short report because of the short given period.
- ii. Some documents, which were necessary to the research, were considered confidential: hence employees didn't give necessary information required for the research study.

- iii. Incomplete return of the questionnaires; The respondents were too busy with their work, other providing wrong information. This incomplete return of the questionnaire has affected the results of the research in one form or another.

- iv. Lack of experience; the researcher has not come out uniquely to the solution of the problem in hand due to lack of experience. In spite this is the first research to the researcher.

1.9 CONCEPTUAL FRAMEWORK

This helps us to define the topic of research through the definition of the variables within the topic. There are independent variables which control, predict and determine the dependant variables.

We also have the Intervening variables which work hand in hand with the Individual variables to influence the dependant variables.

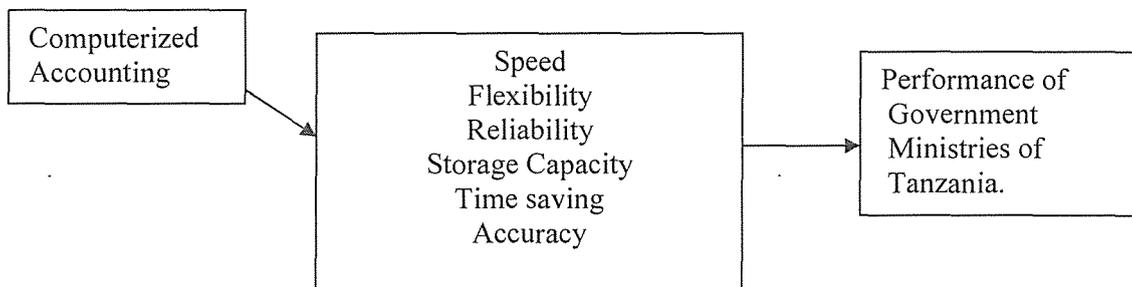
For the purpose of this research the Independent variable will be Computerized accounting, the dependent variable will be Performance of government ministries of Tanzania, and the Intervening variables may includes speed, flexibility, Reliability, Storage Capacity, Time saving and accuracy.

This can be illustrated using a diagram as shown below;

Conceptual Model

Dependent variables

Independent Variables



Source: Researcher

Computerized accounting processes, accounting information at high speed and accurately. Customers' files are stored safely they can be retrieved for changes whenever need arises hence computerized accounting is flexible. It is time saving when it comes to serving customers because all information is current and up-to-date.

This leads us to the topic of research which states:

THE EFFECTS OF COMPUTERIZED ACCOUNTING ON THE PERFORMANCE OF GOVERNMENT MINISTRIES OF TANZANIA.

CASE STUDY: MINISTRY OF INFRASTRUCTURE DEVELOPMENT.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 RELEVANCE OF THEORIES AND PRINCIPLES

Accounting is the process used to measure and report to various users' relevant financial information regarding the economic activities of an organization or unit. This information is primarily financial in nature; that is; it is stated in money terms." Accounting may also be defined as an information system designed to provide, through financial statements, relevant financial information. In designing the system, accountants keep in mind the types of users of the information (owners, creditors etc) and the kinds of decisions they make that require financial information. Usually, the Information provided relates to the economic resource owned by an organization.(Roger H Herman son, James Don Edwards and R.F Salmon son 1989).

According to Lanny M.Salomon, 1990, defined accounting as a set of concept and techniques that collectively measure, summarize, and report financial information about an economic unit. To expand, most disciplines are based on some type of theoretical frame work. Accounting is no exception. The foundation for much of what accounts do is a set of underlying principles, assumptions and practices that have been generally accepted by the accounting profession.

P C Tulsian 1996 defined accounting information system is the process of identifying, measuring and communicating the economic information of an organization to its users who need the information for decision making. It identifies transactions and events of a specific entity. A transaction is an exchange (e.g. purchase of raw material). An event (whether

internal or external) is a happening of consequences to an entity (e.g. use of raw material for production). An entity means (e.TISCO, TELCO, Bivra Industries Ltd). As an Information system, accounting may be viewed as under:

INPUT	PROCESS	OUTPUT.
Economic events	Recording,	Communicating
Measured in financial teams	Classifying, Analyzing, Interpreting Summarizing.	Information to users

Lee (1983) defined accounting “as the financial records of an organization articulated from an accounting system and operating of such a system”. Lee described further that, accounting has two branches.

The making of routine records from day to day financial activities, to set rules of accounting events, which affect the organization’s financial state.

Summarization from time to time, information contained in events to interested parties and its interpretations has aid to decision making by those parties.

Often individuals must be supplied with proper accounting information in order to buy a car or home etc. Large enterprises on their side must supply this information to their stockholders, government and public at large (Meigs and Merges, 1990).

Smith (1987) insist that if accounting is to meet its objectives of providing useful information for economic decision-making, one should bear in mind the users of accounting information

and the kind of information required for decision making. According to him, the users of accounting information are grouped into two,

Internal users who make decision directly affecting the internal operations of the organization.

External users who make decisions concerning their relationship to the organization.

Some people mistakenly think of accounting as a highly technical field, which can be understood by professional accountants (Meigs and Meigs 1987).

Actually, nearly everyone practices accounting in one form or another on almost a daily basis. Accounting is the art of interpreting and describing economic activity. Whether you are preparing household budget, balancing your checkbook, preparing your income tax return, or running general motors, you are working with accounting concepts and accounting information. Robert B.S (1971)

Accounting is in the age of rapid transition, its environment has undergone vast changes in the last two decades and an accelerating rate of changes is in prospect for the future. Much of what is accepted as accounting today would not have been recognized as such fifty years ago, and one may safely predict that in fifty years time the subject will bear little resemblance to what it is today (Gautier, 1988).

A more recent definition is less restrictive and interprets accounting as “the provision of information about the financial position, performance and financial adaptability of an enterprise that is useful to a wide range of potential users in making economic decision. (ASP,1989)”. This definition come closer to the interpretation of the scope of accounting and

the manner in which we should like to treat the subject matter, but it should be understood that accounting is moving rapidly now towards a consideration of social welfare objectives.

Accordingly, the purpose of accounting has been redefined as to provide information, which is potentially useful for making economic decisions and which if provided will enhance social welfare (AAA, 1975). Accounting is becoming more science-oriented owing to the increasing sophistication of information technology. The use of computer in business organizations started in the large data processing areas such as payroll and sales invoicing which involved routine tasks.

Changing social attitudes combined with development in information technology, quantitative methods and the behavioral sciences affect radically, the environment in which accounting operates today, thereby creating the need to re-evaluate the objective of accounting in a wide perspective. Accounting is moving away from its traditional procedural base, encouraging record keeping and such related work as the preparation of budgets and final accounts towards a role which emphasizes its social importance. The changing environment has not only extended the boundaries of accounting but has created a problem in defining the scope of the subject. There is a need for a definition, which is broad enough to delimitate its boundaries, while at the same time being sufficiently precise as a statement of its essential nature. Information Technology is interesting to contrast definitions, which were accepted a little time ago with statements that are more recent. Smith J, M (1987)

Moreover, accounting is concerned with financial events only; this means that the accounting system doesn't provide all possible information about a business. Information that is not financial in nature such as the personal qualities of management isn't reported by account and

therefore must be secured from some other sources, as long as accounting is used not only by business but also by individuals and such organization as government, hospitals, schools and so forth, which are not business in a profit-making sense. Even though the approach to accounting is, nonetheless, necessary, but business supplies the required information to interested parties by issuing financial statements based on the accounting records.

Information system is a comprehensive collection of information available to facilitate external reporting and communication and enhance management decision-making and control of the business. Therefore, the company management makes the strongest demands on the accounting information system because this group must direct the progress of the business while it has to consider other interested parties outside the business. Susan Lenier (1992)

a) Manual accounting system

In manual accounting systems, people using various kinds of paper work accomplish the processing of information paper documents, journals, ledgers, worksheets and reports. The processing steps are laid down in sets of clerical proceedings. The flows of information is evidenced and in fact is brought about by the movement of data from source documents to

Journals, to ledgers, to worksheets, to output documents or report, output also include the financial statement that reflects the flow of information during accounting period.

Source documents have already been described. They are to capture the input data in preparation for processing. Frequently they are retained after processing has been completed as permanent records of the transactions for audit purposes. Manual accounting systems

operate a “batch mode”. That is transactions are accumulated in batches and are posted to the ledger at intervals. The frequency depends on the needs of management and other users but it has an important bearing on the currency of the date in the ledgers. The ledger provides information concerning the status or balance of the particular account. This information is correct or current immediately after posting but if there has been intervening transaction activity will be “out of date”. The lack of date currency between postings can be a problem when up to date information is essential, as in many inventory control systems. To achieve currency of ledger date it would be necessary to make immediate posting of every transaction.

This objective is automatically accomplished in one-write systems and is achieved in some other options that dispense with a journal and accept transaction entries directly on ledger cards. In that case, the data currency is achieved at the expense of a clear audit trail. In more conventional system, where transactions are initially entered in a journal and then are posted to a ledger in separate operation, the effort involved in immediate posting is usually prohibiting and some loss of ledger currency has to be tolerated for practical reasons. Immediate posting is much more feasible in computerized systems and is the basis of “real time” processing (Nash & Robert 1984).

b) Computerized accounting system

Computerized accounting system refers to any set of organized procedures used to collect and record accounting data with the use of a computer. This is a system that replaces manual system. Under this system computer automatically posts transactions, analyzes and classifies

business transactions by type. One of the primary motivations in the development of computers for business data processing applications was the need to handle the ever-growing volume of data that has to be digested by modern organizations. Moreover, the physical limitation of manual processing places severe constraints on the amount of processing and analysis that can be carried out.

In the days of manual processing, managements were often forced to compromise their information needs in the interests of feasibility and timeliness and the prospects for deploying an effective decision support system based on manual processing were slim. The advent of business computer offered a means of removing all or most of these constraints as computers are fast and accurate (Nash and Roberts, 1984).

Manual accounting system, in various form have a very long history stretching back to the early days of trade. The double-entry system familiar to accounting students today dates back several centuries. Computer based accounting systems are a relatively recent introduction being about 20 – 30 years in use (Graham & McNamara, 1988).

French (1990) in his book of data processing and Information Technology define information technology (IT) “as the technology which supports activities involving the creation, storage, manipulation and communication of Information, together with their related methods, management and application”.

According to Marvin & John (1984) in his book computer & information system, defines information technology as “...the term commonly used to describe computer and computer network that supports the collection, recording and communication of information”.

Information Technology skills required by individuals using computer and networks as a part of their daily work comprises three main areas:

- i. Undertaking the technology, the equipment and tools.
- ii. Applying the technology to business tasks.
- iii. Managing the technology, maintaining and troubleshooting.

According to Robert (1971) in his book the use of computer in accounting he defines Computer as “an electronic device capable of accepting data, performing arithmetic or decision type processing on it and making the answers available”. In the world of business-computer and computer systems are parts of an even large system-the business system.

Bassett (1996) verified the different systems and procedures used in computer-based accounting system which is based in the technique and style of most commonly available systems. Organization intending to use computer based accounting system as there is no real substitute for the need of a real software package invariably to make the accounting function the first priority. There are two reasons for this;

- i. The control of funds coming into and going out of the firm is obviously very important and the use of computers should make such control more effectively.
- ii. The vast majorities of accounting data are numerical and are always processed with the same method; this makes computerized system relatively easy.

(C) Comparison of accounting cycle in manual and computerized Accounting cycle in a manual.

Both business transactions occur.

- i. Any necessary documents such as invoices, orders, or checks are created, the transactions is analyzed and recorded in a journal.
- ii. Transactions are posted from the journals to the ledgers.
- iii. A trial balance is prepared.
- iv. Adjusting entries are journalized and posted.
- v. Closing entries are journalized and posted. A post closing trial balance is prepared.

Accounting cycle in computerized system

- i. The transaction is analyzed and entered into the computer, which creates any necessary documents and journalizes the transaction into the appropriate journal.
- ii. The computer prints a trial balance.
- iii. Adjusting entries are recorded and the computer journalizes and posts them.
- iv. The computer generates and prints financial statement requested by user.
- v. The computer completes the doing process.
- vi. The computer can be used to print a post-closing trial balance or balance sheet.

The principle strengths of the computer are its speed, its accuracy and its capacity to store and retrieve large volumes of data. On the other hand, its innate level of intelligence is very low. Computers have super human capacities for memory and fast processing and they generally do not make mistakes. Accounting systems includes a complex group of applications that can be reduced to the common functional components of inputs, storage,

processing, output and controls. The successes of accounting systems depend on large extent on the right time and in the right form.

The manual system depends on paper, information and on clerical procedures for capturing, processing and communicating the accounting data. Computerized accounting system is very similar to a manual system because the same type of transactions occurs whether your system is computerized or not. In addition, the same type of reports is required. Because of this, a computerized Accounting system has been designed to emulate the manual accounting process though a computerized accounting system is more efficient than a manual system (Susan Lenier, 1992). Some advantages of computerized accounting systems are:

Effective Computerized Accounting System

Computerized system offers many advantages over manual systems. Some of these are listed below:

Speed

Since the computer can perform many time consuming manual tasks almost instantaneously, a computerized system can provide information much more quickly than a manual system.

Error protection

Using computer greatly reduces the occurrence of errors. A computer will not make careless errors when performing repetitious work, as human tend to do. In addition a good computerized accounting system will have many built in error protection features.

Inventory controls

For retail business, good control over inventory is one of most vital elements of profitability.

With a computer changes in inventory level can be entered at the same time that sales, purchases and return transactions are recorded and inventory records will automatically be updated.

Computerized accounting system can generate reports listing inventory levels and other important information about inventory quickly and accurately.

Automatic posting

In computerized system, computer performs posting automatically. Hence it is an enormous time saver

Current Balance Available Immediately

A big advantage to management is that up to date accounting balance are available at any time to aid in management decision.

Automatic Operation

Reports can be generated automatically by a computerized accounting system.

Automatic Document Printing

A computerized system can also provide many of the documents used in business. This speeds up the document preparation, and also ensures that the journal entries agree with the invoice, cheque and other records of transactions.

Nash and Roberts . M (1984)

2.2 EMPIRICAL LITERATURE REVIEW

NENO KAMILIFU (2000/2001): Effectiveness of database application in organization.

Computer is well suited for accounting activities and should be based on making the accounting functions more efficient. In order for computer application to be effective, the users should acquire computer skills of various programs including accounting package.

PATRICK NGESSY (2001/2002) Effectiveness of computerized accounting in organization.

Due to changes of technology the management is advised to send their staffs for training so as keep them up to date. The management should increase its budget so as to cope with this new and improved technology.

HERPES C LUCAS (1997) Evidence for descriptive model

This article presents a model of factors associated with the successful implementation of a computer based information system. The model hypothesized those two classes of variables; model quality and management support, influence attitudes and perception of a model or system.

CHAPTER THREE

3.0. RESEARCH METHODOLOGY

3.1 RESEARCH DESIGN

The research was carried out using case study which is the ministry of infrastructure development, to find out the effectiveness of computerized accounting system.

The research enables the researcher to study the problem in deep by concentrating only a particular area.

The case study was used because of the benefits it has over survey in terms of time resources and flexibility. Furthermore, the case study allowed one to have in depth information of the subjects.

3.2. RESEARCH TECHNIQUES

Both qualitative and quantitative research used. Since qualitative research used words in collecting and analyzing data. Also research quantitative since it applies numerical methods, especially in accounting.

3.3. POPULATION INQUIRING

All units of the operation including ministry of infrastructure, head of accounts departments and other employees of accounts department were in the study.

3.4. SAMPLING TECHNIQUES

The sampling techniques that were used including; 7 staff from salaries, 5 staff from cash office, 5 staff from examination and 3 staff from auditing room. Therefore total sampling is 20.

3.4.1 SIMPLE RANDOM SAMPLING

A list of people from various departments in the institute was drawn and from the list, the table of random numbers was employed to obtain the required sample.

3.5 TYPES OF DATA COLLECTION;

The researcher used both primary and secondary data, because, data collected on both sources.

Primary data; these are data collected for the first time from the source and data which need to be organized/analyzed

Secondary data; these are data that have been already collected and analyzed. The researcher used those documents available in the organization and mainly those data concerning with his study.

3.6 DATA COLLECTION METHODS;

The data collection methods used as follows

3.6.1 OBSERVATION

In this study, participatory observation techniques were applied whereby the researcher involved himself physically at ministry of infrastructure in carrying out day to day operations in the accounts departments as well as stores department.

3.6.2 QUESTIONNAIRE

The method was done through distribution of questionnaires to the heads of departments, directors and other targeted employees.

The method was used purposely to give out their views that are beneficial to the researcher in evaluating the efficiency and effectiveness of computerized accounting systems.

It was a convenient method as it facilitated information from the large group with minimum cost and ensures greater openness. A total 10 of questionnaires were distributed.

3.6.3INTERVIEW

This method was done through discussions held with people from different departments. The interviews were face to face contact with the interviewer who screened the respondents to ensure that they fit with the desire population. The interviews were a follow up to the questionnaires earlier returned.

3.6.4DOCUMENTARY SOURCES

This was done by examining various documents including; financial statements, payment vouchers, journal vouchers, local purchase orders, goods receiving notes, and other documents appropriate for the research study.

3.7 DATA PRESENTATION AND ANALYSIS.

The data was collected and edited for accuracy, coded and analyzed in the form of tables, and percentage. Basically data analysis and presentation enable d the study to address the research problem,eventually to recommends for possible policy

implication and give the researcher possible solution against the problem. Quantitative and Qualitative research techniques was used to answer the research question.

CHAPTER FOUR
RESEARCH FINDINGS, PRESENTATIONS, ANALYSIS AND
INTERPRETATION

4.0 INTRODUCTION

This chapter deals with the presentation of the research findings. The data obtained during the research by means of interview, simple questionnaire, observation and documentary materials are recorded correctly and being analyzed into tables. After analysis, the same data are interpreted into simple forms of percentages as responded by the respondents.

4.1 COMPUTERIZED ACCOUNTING SYSTEM AT MINISTRY OF INFRASTRUCTURE

Ministry of infrastructure has computerized accounting systems such as payroll, bank reconciliation statements, trial balance, cash flow statements. Each section in finance department uses computer despite having the computer room for every department i.e. final account section.

Ministry of infrastructure has been using **Epico**. The software contains many flexible applications. These modules contain fixed assets, Payroll, as well as accounting described as follows;

1. Payroll module

At Ministry of Infrastructure, this module is used to prepare pay slips, calculate the deductions such as taxation, PAYE, staff loans and other deductions to arrive at a net pay. All these calculations are done automatically due to the formulas that are being set in Epical software. Sometimes these deductions may change; if that happens then the only thing, which is supposed to be done is just to change the particular formula and everything will be changed automatically.

2. Accounting

This

module is used in doing different accounting functions such as preparation of payment vouchers, journal vouchers, and Goods Receiving Note (GRN), Local Purchase Order (LPO), and bank reconciliation reports.

Also it used to prepare cash book details which are very important for reconciliation.

3. Fixed assets

At ministry of infrastructure, this module has not yet been adopted fully. The epical software is only used to keep records concerning the motor vehicles. The information which is been stored are such as the disposal of those motor vehicles, their running expenses and other expenses incurred, the other fixed assets has not being utilized effectively by this epical software.

4. Special features

Apart from above modules epical is having the number of features, which enhanced effectiveness, and efficiency of computerized accounting system at ministry of infrastructure. These features include receipting, general ledger, inventory, reporting and integrating feature as detailed.

A/ Receipting

The receipting module is aimed at the business that need to do invoicing and the issuing the depositing of receipts in a seen less environment. At ministry of infrastructure this is done by posting it direct to the cash book by selecting the cash book receipts and post It to the respectively account and the update the receipts batch.

B/ Report Feature

Epical enables ministry of infrastructure to run external reports from within epical and is able to create their own customers reports by using crystal reports, example Orders, GRN reports allows to view which orders have not yet arrived and the GRN that are outstanding. These reports can be generated by supplier, summary or item code.

C/ General Ledger

The receipt cash book and payment cash tables display in different colors, thus making cash book entries look initiative. A field total for payments or receipts on the cash book screen has been added to enable ministry of infrastructure to enter a value equal to the total of the transaction in the batch.

D/ Inventory

This feature allows ministry of infrastructure to link their inventories items to the different stores through inventories. This has enabled ministry of infrastructure to view what is going on in the store department from the main server, which is fixed in the accounts department.

Table 1 Level of Education of worker at accounting department

Type of answer	Number of respondents	Percentages %
degree	7	35%
diplomas	10	50%
certificates	3	15%
TOTAL	20	100%

Source: Researcher at ministry of infrastructure development

According to the findings the researcher observed that 50% of the staffs have diplomas, 35% have degree and 15% have certificate. This implies that most of the staffs at the Ministry of Infrastructure Development especially in accounting department had sufficient skills and knowledge that can support the computerized system.

4.2 COMPUTER APPLICATION IN ACCOUNTING SYSTEM OF MINISTRY

Computer application in accounting system at the ministry of infrastructure, the observation shows that most of the staffs use the software which the ministry in stored. The following table shows application of computer in accounting at the ministry

Table. 2 Computer application in accounting system of ministry

Types of answer	Number of respondents	Percentages %
YES	17	85%
NO	1	5%
NOT SURE	2	10%
TOTAL	20	100%

Source: Researcher at Ministry of Infrastructure

The study revealed that 85% of the staff at the ministry of infrastructure development can perform all the accounting activities effectively and in efficiently way by using computers. Researcher observed that only 10% of the staff was not aware of the computers application and 5% know nothing about computers application. This shows that most of the staff at the ministry was computer literary. This helps organization to attain the intended goal more effectively.

4.3 THE ACCURACY OF ACCOUNTING INFORMATION AND APPLICATION OF COMPUTERIZED SYSTEM

The accuracy if accounting information and application of computerized system of the accounting department it shows that when the staffs using computers it leads them to working more accuracy compare to manually.

Table. 3 The accuracy of accounting information and application of computerized system

Types of answers	Number of respondents	Percentages %
High	18	90%
Moderate	1	5%
Low	1	5%
TOTAL	20	100%

Source; Researcher at ministry of infrastructure field survey

The study revealed that 90% of respondents had realized the changes in the level of accuracy of accounting information due to application of computerized system. In stead of performing the work manually with the high rate of error in posting accounting information now they were using different accounting packages that is easier for them to detect and correct errors.

4.4 THE BENEFITS OF COMPUTERIZED ACCOUNTING SYSTEM

The following are the benefits of the system compared when the works done manually;

- **Automatic processing:** Transactions in computer are automatically processed but in manual system each and every transaction is entered manually.
- **Time reduction:** due to its high speed, accounting transactions processed by using computer are faster than those processed manually. It takes much time to process each and every accounting transaction manually.
- **Error detection:** computer can easily detect error during the processing of computerized accounting information systems, but in manual procedures the person processing the accounting information should be very careful and aware of the computer based accounting information in order to avoid the error making
- **Reduces the number of paperwork:** computer can reduce the number of paperwork to be done because suppose one is doing addition of certain transactions therefore such transactions can be added without adding each and every transaction separately.

Table 4. The benefits of computerized accounting system

Types of answers	Number of respondents	Percentages %
YES	18	90%
NO	2	10%
TOTAL	20	100%

Source; researcher at ministry of infrastructure

The study revealed that 90% of respondents agreed that computerized has benefits compared to manually. But 10% of respondents not agreed. It means that most of the staffs agreed that when works is performed by computer is better than manually.

4.5 BARRIERS TO COMPUTER APPLICATION IN ACCOUNTING SYSTEM.

The study revealed the existence of the following barriers of computer application in accounting system at the ministry of infrastructure development in accounting department;

Lack of sufficient computers at the ministry; at the ministry especially in accounting department there are lack of sufficient computers it means that computers are very few compare to the staffs for example in salary room there are only one computer.

Table 5. Number of computers in department

departments	Number of computers	Percentages %
Final accounts	3	50%
Salaries	1	20%
Examination	2	30%
TOTAL	20	100%

Source; researcher at ministry of infrastructure

The study revealed that computers are very few for example final account has 3 computers, salaries have 1 computer and examination has 2 computers. It means that

computers are few compared staffs of ministry of infrastructure development therefore it leads ministry to become not effectively computerized accounting.

Lack of training on computer application; some of the staffs at ministry especially in accounting department are computer illiterate therefore it leads them do not perform well their duties of accounting. Observation shows that most of workers have lack of knowledge of computers. This leads them to couple with software which is stored in the ministry.

Power rationing/problem; this is the big problem to the ministry, when power cutoff there are no more activities performed therefore this leads all accounting activities to stop. It means that power is very important in computer without computer no activities go on. At the accounting department there is no generator so that no power no accounting activities precede.

4.6 MEASURES TAKEN BY THE MINISTRY TO IMPLEMENT AND MAINTAIN COMPUTERIZED ACCOUNTING SYSTEM

The researcher observed that the computerized system needs some measures to be taken including;

- **User training:** The study revealed show that the employees who are concerned with the processing of computerized accounting information systems are taken for computer training to have enough knowledge and better understanding on how to process the accounting information.
- **Password management:** Through observation, it was found out that each of the ministry staff dealing with the processing of computer based accounting information system has computer password in order to prevent unauthorized users to have access to computer programs.

- **Back-ups facilities:** Through observation, it was observed that ministry staffs have back-ups facilities such as flash disks, diskettes, and computer cd's. for protection of computer based accounting information such as electricity failures, so as to ensure continuity of operation.
- **Data protection standards:** It was observed that protection against incorrect data files, wrong version of production programs and errors are taken into consideration so as to ensure effective control in computer based accounting information systems. **Virus protection:** The researcher observed that most of computer programs were protected by using ant-virus programs in order to ensure security of information.
- **Implementation :** it was observed that computerized accounting systems is being implemented so as to ensure that effective control is taking place to the organizations with computer based accounting information systems.

WHEATHER THE SYSTEM IS EFFECTIVE OR NOT

The researcher observed despite of being full computerized there were some weaknesses in the accounting system of the ministry that lead to be in effective. There were lack of open lines of communication from one room to another through computer and some of the accounting records were recorded manually instead of using computer.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.0 INTRODUCTION.

In view of what the study has got in field work at MID in this chapter intends to conclude and recommend on different matter related studying. For this case the study has examine various solutions and suggestion has been considered as hinder to effective of computerized accounts on Performance of Government Ministries of Tanzania. Following the survey of the literature review, analysis and findings the following may conclude from the study. The purpose of the research was to evaluate the effects of computerized accounting on the performance of government ministries of Tanzania.

5.1. CONCLUSION

The overall objective of the study was to check the performance of computerized accounting system. The research was well conducted data is presented according to what was obtained during the study.

Although the researcher failed to get some information documents and the access to post accounting transaction that could be useful in writing a report. All findings of this study are based on ministry and some ideas from different ministry staff.

Based on the research objectives, research questions and findings, it is observed that, the computerizing accounting system by considering with epical system already installed are effective in processing accounting data.

This can be seen from those findings on chapter four. Despite of having some weaknesses the truth is the system are new to the organization and staff.

Below is a list of some achievements that have come about because of computerization;

Ministry has moved forward towards computer technology and in order to ensure the effectiveness in computer based accounting information systems, the company has adopted some measures such as user training, password management, ant-virus protection, and back-up facilities.

Computer based accounting information systems is faced with many risks such as pervasive security risks, computer fraud, computer virus, software piracy, hacking, and unauthorization, however most of the respondents viewed computer virus to be the most key risk in computer based accounting information systems.

5.2 RECOMMENDATIONS

In order for the control in computerized accounting system to be more effective, basing on the findings of the study and conclusion given above the researcher recommended the following;

- **More effective training to staffs:** should be undertaken for the effective use of computerized accounting information systems. Both long and short term courses will enable them to acquire more knowledge concerning computer based accounting information systems. Some of ministry employees do not have much knowledge concerning computerized accounting information systems, so there should be inter-departmental computer training programs, which if successfully implemented, it will simplify data processing and improve the efficiency. Also this training will enable the ministry to have more specialists in software applications.
- The core and unique systems should be capable of fulfilling the information needs of the organization. Coding system is very essential in any accounting activities as it simplifies data recording process. The management should emphasize the use of coding system which will minimize account errors in computer data processing.
- Users should be competent enough to cope with the system whenever changes are made to the system. Example payroll processing personnel should expect to perform voucher processing.
- Procedures adopted to ensure effective control in computer based accounting information systems should be changed with time in order for them to be up-to date so as to ensure effective control in computer based accounting information systems.

- It was recommended that in order to minimize the risks associated with computer based accounting information measures such as virus protection, the use of passwords and back-up facilities should be taken.
- It was recommended that, apart from the procedures adopted by ministry in ensuring effective in computer based accounting information, ministry should establish a policy that can be used for the improvement of control performance.

5.3 AREAS FOR FURTHER RESEARCH.

There is great need for advance study as the study was limited to Tanzania Ministry of Infrastructure Development (TMID) only and cannot be representative of what happens in other organizations.

There should be further researcher on how computerized accounting can be managed, as well as the effect of computerized accounting on performance of organizations in Tanzania.

BIBLIOGRAPHY

Basset P.H. (1996): Computerized Accounting, 4th Ed. NCC Services Ltd. Oxford Road, Manchester M17 Ed, UK.

French C.F (1990): Computer Science, 3rd Ed.D.P. Publications.UK.

Grantier and Bunderdown (1994): Accounting Theory & Practice, 5th Ed, Pitman Publishing,London.

Graham and McNamara J. (1988): Information Technology & The new Accounting, McGraw-Hill Book Co. Ltd. UK.

Hermerson and Edwards D.J. (1983): Accounting Principles, Business Publication.
Lee G. A. (1983): Modern Financial Accounting, 3rd Ed. Workingman, UK.

Marvin and John W.S. (1984): Computer & Information System, 2nd Ed. McGraw-Hill, Singapore.

Meigs and Meigs (1987): Accounting (The Basis of Business Decisions), 7th Ed, McGraw-Hill, Singapore.

Nash and Robert M.(1984): Computerized Accounting Information System, Macmillan Publishing Company, New York.

Page and Hooper P. (1992): Accounting & Information System, 4th Ed. Prentice-Hall Inc, New Jersey, U.S.A.

Robert B.S. (1971): the use of computer in Accounting, Prentice-Hall Inc, Englewood Cliff New Jersey, U.S.A.

Richard D. (1992): Financial Accounting, 5th Ed, Iriwin Inc., U.S.A.

Smith J.M. (1987): Intermediate Accounting, 9th Ed., South-westerns Publishing, UK.

Susan Lenier (1992): Computerized Accounting, Regents/Practice Hall Inc., New Jersey, U.S.A.

P.C. Tuisian,(1996): Accountancy for C.A Foundation, 3rd Edition,New Delhi India.

Roger H Hermanson, James Don Edwards and R.L.Salomonson, (1989), Accounting Principles, 4th Edition Library of congress cataloging in publication Data,USA.

Lanny. M. Salomon, Richard Solomon, Richard .S..Vargo and Larry. M. Walther,(1990), Accounting Principles, 3rd Edition, Instructors Edition,west publishing company,New York.

APPENDIX ONE
RESEARCH QUESTIONNAIRES

1. To what extent inaccurate accounting information occur when the work is done manually?

- (a) Too little
- (b) About right
- (c) Too much

2. In which interval of percentage does the accuracy of accounting information increased after application of computerized system?

- (a) 1% - 25%
- (b) 26% - 50%
- (c) 51% - 100%

3. What steps are taken to discover the errors and its causes in producing computerized accounting documents?

.....

.....

.....

.....

.....

4. What are the barriers to computer application in business accounting system?

.....
.....
.....
.....
.....
.....

SECTION B: MANAGEMENT QUESTIONS

5. Were there any steps taken to implement installation of computerized accounting system in this organization?

- (a) Yes
- (b) No

6. What actions does the management take on discovered failures?

.....
.....
.....
.....
.....

7. What problem does management face on implementing computerizing accounting system?

.....
.....
.....

8. Are the costs incurred reasonable or relevant compared to the benefit obtained?
Explain

.....
.....
.....

9. Do the organization's departments benefit from this new technology (computerized system)?

- (a) Yes
- (b) No

10. How can management overcome those barriers to computerized accounting system?

.....
.....
.....
.....

APPENDIX 2

CURRICULUM VITAE

1. Personal Details

Surname: Katagira
Other Names: Vicent kamara
Date of Birth: 23rd Sept, 1985
Place of Birth: Kagera - Karagwe
Nationality: Tanzanian
Sex: Male
Marital Status: Single

2. Contacts

Address: P.O. Box 72149,
Dar- es -salaam,
Tanzania
Mobile: +255 786 686 847 OR +255 763 894 024
Email: kamaravicent@yahoo.com

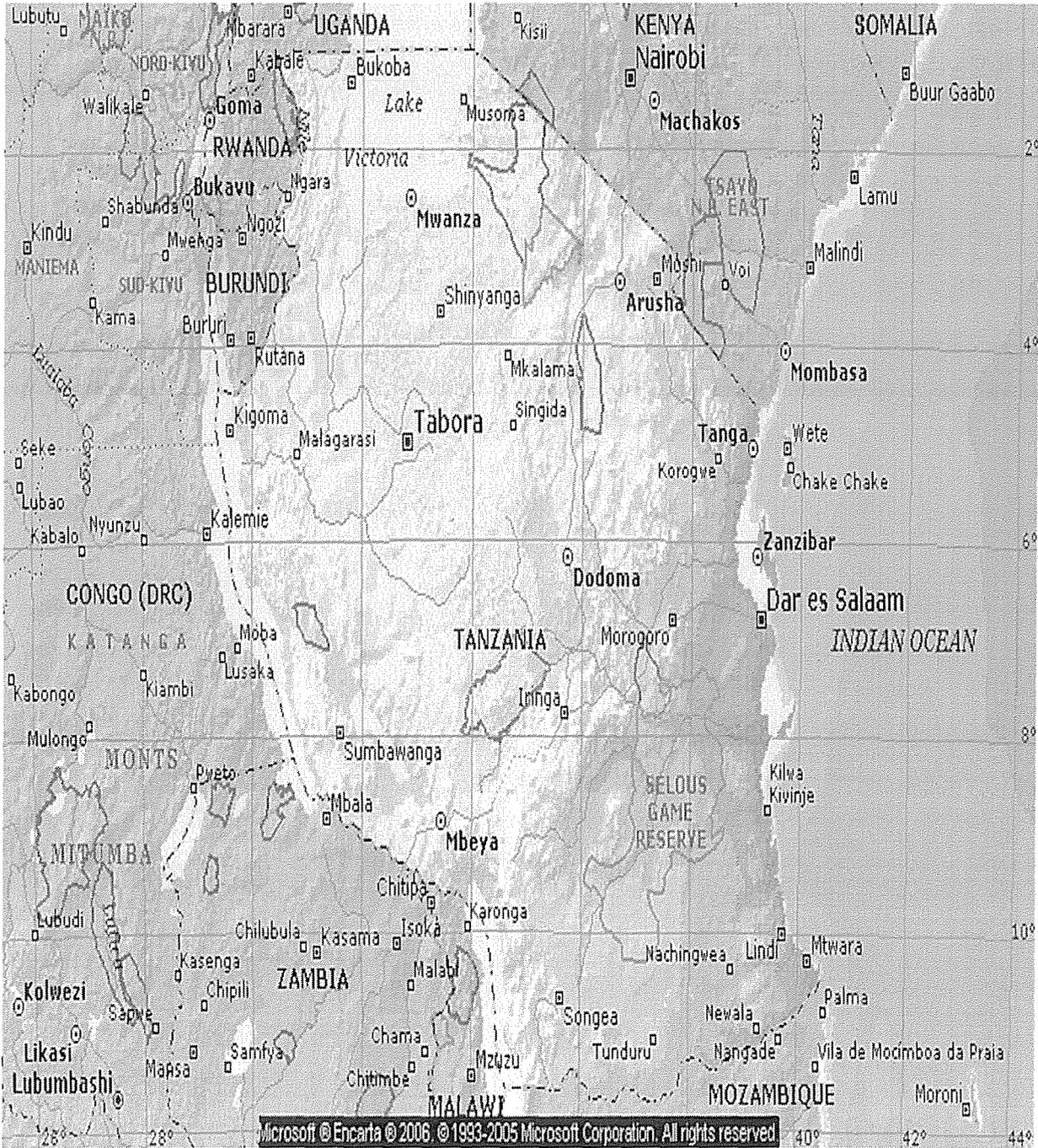
3. Research Conducted

I conducted a Research on The Effect of Computerized Accounting on Performance Government Ministries of Tanzania. A Case Study of MINISTRY OF INFRASTRUCTURE DEVELOPMENT.

COMPANY	POSITION AND WORKS PERFORMED
MINISTRY OF INFRACTURE DEVELOPMENT <i>June, 2008 to August, 2008</i>	Position: Accounting and Finance Trainee (During Field Study) <ul style="list-style-type: none">• Preparing monthly Bank and Petty Cash Reconciliation Statements.• Preparing the Payrolls (data entry, pay run, pays calculation, final report).• Preparation of payment voucher• Posting and writing cheques• Registering and Dispatch cheques• Posting cash and cheque• Posting cheque issues• Posting issued Voucher

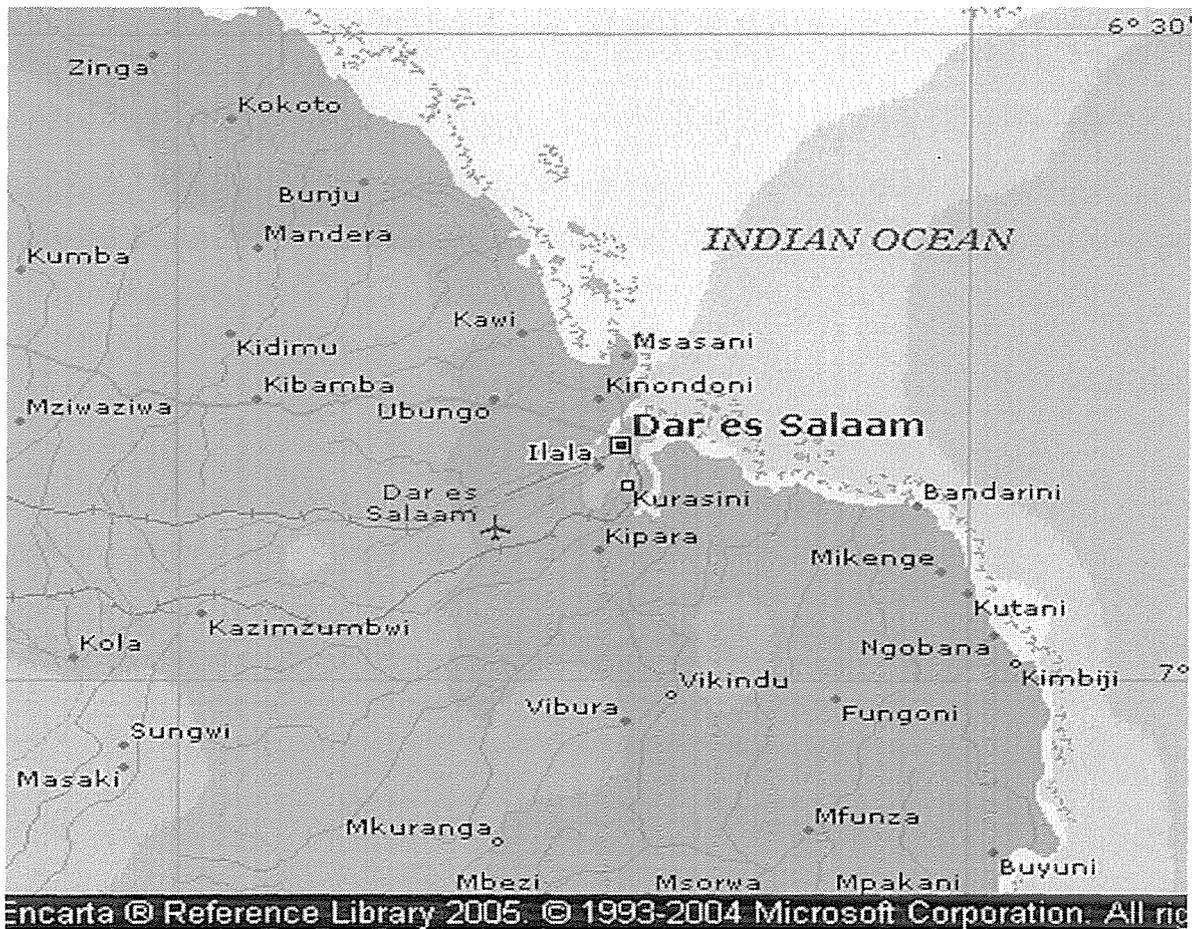
APPENDIX 3A

MAP OF TANZANIA



APPENDIX 3B

A MAP OF DAR ES SALAAM



APPENDIX 4 A

TIME FRAME

TIME FRAME FOR RESEARCH REPORT	
DURATION	ACTIVITY
14 th April, 08 – 28 th April, 08	Proposal writing
01 st June, 08 – 14 th June, 08	Data collection
15 th June,08 - 23 th June, 08	Data editing and coding
24 th June, 08 – 04 th July, 08	Data analysis and presentation
05 th July, 08 – 19 th July, 08	Report writing and Compiling
60 DAYS	TOTAL TIME PERIOD

APPENDIX 4B

RESEARCHER'S BUDGET

THE RESEARCHER'S BUDGET IN TANZANIAN SHILLINGS		
ITEM	AMOUNT PER DAY	AMOUNT IN TOTAL
Transport	1500 @ For 60 days	90,000.00
Meals	2500 @ For 60 days	150,000.00
Stationary		30,000.00
Internet cafe		20,000.00
Miscellaneous		50,000.00
TOTAL		340,000.00

**OFFICE OF THE DEAN
SCHOOL OF BUSINESS AND MANAGEMENT**

Date: 8th April, 2009

Our Ref: KIU/SBM/RL/002-04/09-3

THE HUMAN RESOURCE MANAGER,
MINISTRY OF INFRASTRUCTURE,
TANZANIA.

Dear Sir/Madam,

RE: VICENT KATAGIRA REG.NO.BBA/12808/61/DF

The above mentioned is a bonafide student of Kampala International University pursuing a Bachelor of Business Administration programme(Accounting Option) in the School of Business and Management of the University.

He is currently conducting field research and the title of the Research project is "THE EFFECTS OF COMPUTERIZED ACCOUNTING ON THE PERFORMANCE OF GOVERNMENT MINISTRIES OF TANZANIA" A CASE STUDY OF MINISTRY OF INFRASTRUCTURE DEVELOPMENT. As part of his studies (research work) he has to collect relevant information through questionnaires, interviews and other relevant reading materials.

The purpose of this letter is to please request you to avail him with the necessary information he may need.

All and any information shared with him will be used for academic purposes only and we promise to share our findings with your institution.

Any assistance rendered to him in this regard will be highly appreciated.

Yours Sincerely,



**DR. NUWAGABA ALFRED
DEAN SCHOOL OF BUSINESS AND MANAGEMENT**