# THE EFFECT OF COMPUTERIZATION OF LAND TITLES ON SERVICE DELIVERY IN THE LAND REGISTRY.

## A CASE STUDY OF KAMPALA LAND REGISTRY.

**BY**

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## DEDICATION

I dedicate this research report to my parents Mr. and Mrs. Kasumba D.George William for their parental love, care, advice and financial support they rendered to me for my education since childhood to university level.

May the Almighty Lord reward you abundantly and may He continue blessing you more and more.

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Work of this nature can only be accomplished with external guidance and support from different individuals. It is therefore on this note that I extend my sincere gratitude to the following people for their prayers, love, care, advice, help and support to make this research a success

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## LIST OF ACRONYMS

ICT: Information Communication Technology.

ITAA: Information Technology Association of America.

DLSC: Department of Lands, Survey and Cartography.

CNDRA: Center for National Documents and Records/Archives.

LTC: Land Tenure Centre.

MoLHUD: Ministry of Lands Housing and Urban Development.

NDP: National Development Plan.

LIS: Land Information System.

USA: United States of America.

SPSS: Statistical Package for Social Scientists.

IT: Information Technology.

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## ABSTRACT

The study was about the effect of computerization of land titles on service delivery in the Kampala land registry. Primary and secondary data was collected using questionnaires and review of literature, news papers respectively. A questionnaire approach used and was designed to cover employees of the land registry, key stake holders of the land registry that is; lawyers, real estate agents and banking firms. Results from the study showed that most of the respondents were not in agreement with computerization's effect on the level of service delivery in the Kampala land registry mainly asserting that it's not the computerized system but the human resource in the land registry. Recommendations and conclusions drawn among which include; close monitoring of the human resource in the land registry, creation of on-line access services and computer networking with key stake holders that is; law firms, real estate firms and banking firms which help in completely getting rid of corruption and forgeries in the land registry.

# CHAPTER ONE

# GENERAL INTRODUCTION

## 1.0 Introduction.

According to Keith Clifford BELL, reform of land administration and management is a major drive to capital and human resources which requires strong and consistent leadership in order to achieve effective, sustainable results. This is so because land is one of the main sources of collateral used for obtaining credit from financial lending institutions like banks micro finances and even individuals who have the capacity to lend money to others and many other importance that are attached to land. Therefore this has encouraged the World Bank and other development partners to assist in funding of land administration projects all over the world. Such projects include the utilization of information and communication technology (ICT).Hence this study was interested in service delivery in the land registry after introduction of ICT.

## 1.1 Background to the study.

Njuguna, (2012) in his research states that computerization is the application of computers and other associated accessories for the collection, storage, and manipulation of data to produce, present and communicate information with an intention to improve service delivery to customers mostly in profit making organizations.

Computerization in this study is an aspect of productions and operations management which has helped in service delivery in the land registry. In the recent years, many organizations in different countries have embraced computerization as a key tool for carrying out their activities. Some organizations have benefited but others have not benefited from its implementation. While on the other hand, Information technology is the study, design, development, implementation,

support or management of computer based information systems, particularly software applications and computer hardware. The whole package involves converting, storing, protecting, processing, transmitting and secure retrieving of information as defined by the Information Technology Association of America (ITAA).

Regardless of the fact that embracing of computerization comes with disadvantages like high initial costs of acquiring the hardware, employee training, installation of the computer system in addition to the complex programming procedures. In land administration it offers advantages like, reliability, performance of complicated procedures and operations like in land cadastral surveys in addition to speed, accuracy, easy accessibility among other advantages. (Terry Lucy, 2000 cited in Njuguna, 2012). These advantages bring about efficiency in the management of operations in organizations.

French (2000) as sited in Nkote (2011) states that as a result, many organizations have completely computerized their organization that is; including all routine tasks in so doing increasing their efficiency and effectiveness in their activities greatly improving their production and service delivery especially in land registration.

The aspect of computerizing land titles is not recent it has already been adopted in different countries all over the world.

In Europe, England is one of the first countries to adopt computerization of the land registry. This started off as a result of technological advancements at the time.

In Africa, different countries have also taken on computerization of the land registry a case in point is Liberia which is found in the western region of Africa.

Computerization of the land registry in Liberia was as a result of the chaos caused by many years of conflict they faced which distorted everything including the agencies responsible for registration, administration and management of land information. These agencies are; the Department of Lands, Survey and Cartography (DLSC) and the Center for National Documents and Records/Archives (CNDRA). The agencies faced problems such as; few trained and experienced staff, lack of tools and equipment to effectively carry out their jobs. It was therefore upon these issues that the Truth and Reconciliation Commission in its 2008 report stressed that unless the Land tenure security system in the country was handled it was at that time a threat to the peace in the country. Therefore the government together with the agencies managed to rectify the issues although the challenge remained with IT, record management, conservation of records properly especially in the Land administration and Land information Management. Thus CNDRA decided to adopt computerization in the land registry which was easy to use, appropriate for the infrastructure, mobile, flexible, quick to implement, cost effective, scalable among others factors.

The project Open Title as a solution was selected in August 2011. It started with scanning and digitization of the various deed records with the CNDRA. This system was affordable and met all CNDRA requirements. It was therefore able to combine mapping components and the documents management system which would capture and maintain land and property information and at the same time truck changes in land rights over time. This system is easy to use because it allows spatial management, user friendly thus taking less time to train staff members. In this case it took them a single day to train all the staff; it can also be upgraded on time.

Open Title system is also being used in a mobile capacity where tribal certificates are scanned and a photo of the certificate holder is taken and scanned within in the document at the same time data is being indexed to their respective locations. Thus it's a convenient system to individuals.

Therefore as regards service delivery, computerization of the Land registry through the Open Title system has proved to be effective, secure, track changes especially social tenure relations; hence reducing on fraudulent actions and resolve conflicts in line with land administration. From the time of implementation of the Open Title system in October 2012 up to date, over 1.6 million pages and 2000 deeds have been scanned.

Therefore in Liberia, computerization of the Land registry and Land Information has been a success.

In Uganda, computerization of the land registry was after the Ugandan government recognized that by ensuring a transparent land registry, the people's land rights would be protected and hence a sense of security among the people and ultimately facilitating economic growth.

Therefore the first attempts to computerize the land registry started in 1989 after the Makerere Institute of Social Research and the Land Tenure Centre (LTC) of Wisconsin in their study of the Land tenure situation in Uganda discovered that there was poor management of land records caused by poor storage, ill equipped offices and unskilled staff. The same findings were established in the 2nd study carried out in 1990 just like the Swede survey which was conducted in 1996. All these studies concluded the same problems of the land registry and recommended immediate computerization of the land registry. Most land in Uganda had never been demarcated or surveyed and no evidence for ownership claims. Only a few individuals were having

registered titles or certificates of ownership. The land registry was running on a manual system which was poorly handled, thus slow and cumbersome service delivery, generally the whole process was prone to errors and fraud making land assets unreliable and risky as collateral security for loans. The failures associated with the land registration system were identified as obstacles to economic growth through investment in the land market thus the need for the government to computerize the land registry.

Therefore in September 2003, a decision was taken by the ministry of Lands Housing and Urban Development (MoLHUD) to begin the implementation of computerizing the land registry. However prior to the actual computerization, some issues had to be addressed within the land registry like; correct filling and reorganizing of all the registry records, cleaning and dusting, reconstruction of the torn and damaged records and vetting all of the records. Thus by May, 2009 all the mailo land records had been captured, indexed and scanned into a computer database for the Kampala, Wakiso and Mpigi districts.

The improvements in the land registry included; all leasehold and freehold titles were scanned and captured and transferred to six zonal offices while the Mailo titles were transferred to Wakiso and Kampala zonal offices. Data from various institutions was incorporated in the LIS database. It included administrative boundaries, forest cover, water bodies, national parks, reserves and protected areas.

The improvements in the land registry have been credited to the incorporation of the computerized system into the land registry activities as a way of improving their service delivery and achieve efficiency in their operations.

As of December, 2014, seven zonal land offices have been computerized found in the districts of Masaka, Wakiso, Mpigi, Jinja, Mukono, Mbarara and Kampala.

### 1.2 Problem statement

The Ministry of Lands Housing and Urban Development has computerized the land registry so as to address the short comings of the manual system that include; forgeries of titles, red-tape, poor storage of information, bureaucracy ( NDP, 2010). This is in effort to restore the integrity of the land Registry and ensure modernization of Land Registry operations as a way of improving its service delivery and meet the needs of a growing economy (Daudi Migereko, lands minister as quoted from the new vision, April 14th, 2013 ).Therefore it is upon this base that the researcher decided to find out how far the computerized system has helped to mitigate the above problems and find out the perceptions of the service providers and users over the effects of computerizing the land registry.

### 1.3 Purpose of the study

This study aimed at assessing the effect of computerization of land titles on service delivery at the land registry mainly focusing on the service providers and service users' perspectives.

### 1.4 Specific objectives

- To determine the ways in which computerized registration affected the level of service delivery in the Kampala land registry.
- To find out how online access of land information impacted on service delivery in the Kampala land registry.
- To find out whether there was computer networking and how it affected service delivery in the Kampala land registry.

### 1.5 Research questions.

In order to provide the answers to the objectives above, the following research questions guided the researcher.

- How does computerized registration affect the level of service delivery in the Kampala land registry?
- How has on-line access of land information impacted service delivery in the Kampala land registry?
- Is there computer networking, if so how has it affected service delivery in the Kampala land registry?

#### 1.5.1. Research hypothesis.

The study tested the hypothesis that;

- Computerized registration affects the level of service delivery in the Kampala land registry.
- On-line access of land information improves service delivery in the Kampala land registry.
- Computer networking affects service delivery in the Kampala land registry.

### 1.6 The Scope of the study.

This study on the effect of computerization of land titles on service delivery at the land registry in Kampala Uganda will be conducted from January to August 2014 through an ethnography design because it will help me identify the presence or absence of features of the study thus providing a complete picture of the environment being studied. The study will be conducted in

the Kampala land office where data will be collected by the researcher using questionnaires and document analysis techniques. This study specifically seeks to determine the effect of adopting a computerized system on service delivery at the land registry in Kampala focusing on the perceptions of the service providers and service users.

### 1.7 Justification of the study.

Justification of the study shows the relevance of the study at the time and why it was important to conduct it. Research observed that computerization of the land registry helped in addressing the shortcomings of the manual system thereby enhancing service delivery at the land registry. However there was need to listen from the service providers and users especially their view on outcomes after the computerization of the land registry.

### 1.8 Significance of the study.

The results of this study will benefit the following people;

The land office employees, because through this study the system's interaction with activities and with people is assessed which will help them realize their weaknesses such that they can improve where necessary and their strengths so that can maintain them or even make them better. Again this research will benefit management in helping them know whether the targets they put in place in terms of expected output are being achieved.

Business owners, because having a well performing land office facilitates the smooth flow of land administration system in a country facilitates a smooth running of businesses as most of them use land as collateral in order to acquire credit or loans from lending institutions like banks and potential individuals among others.

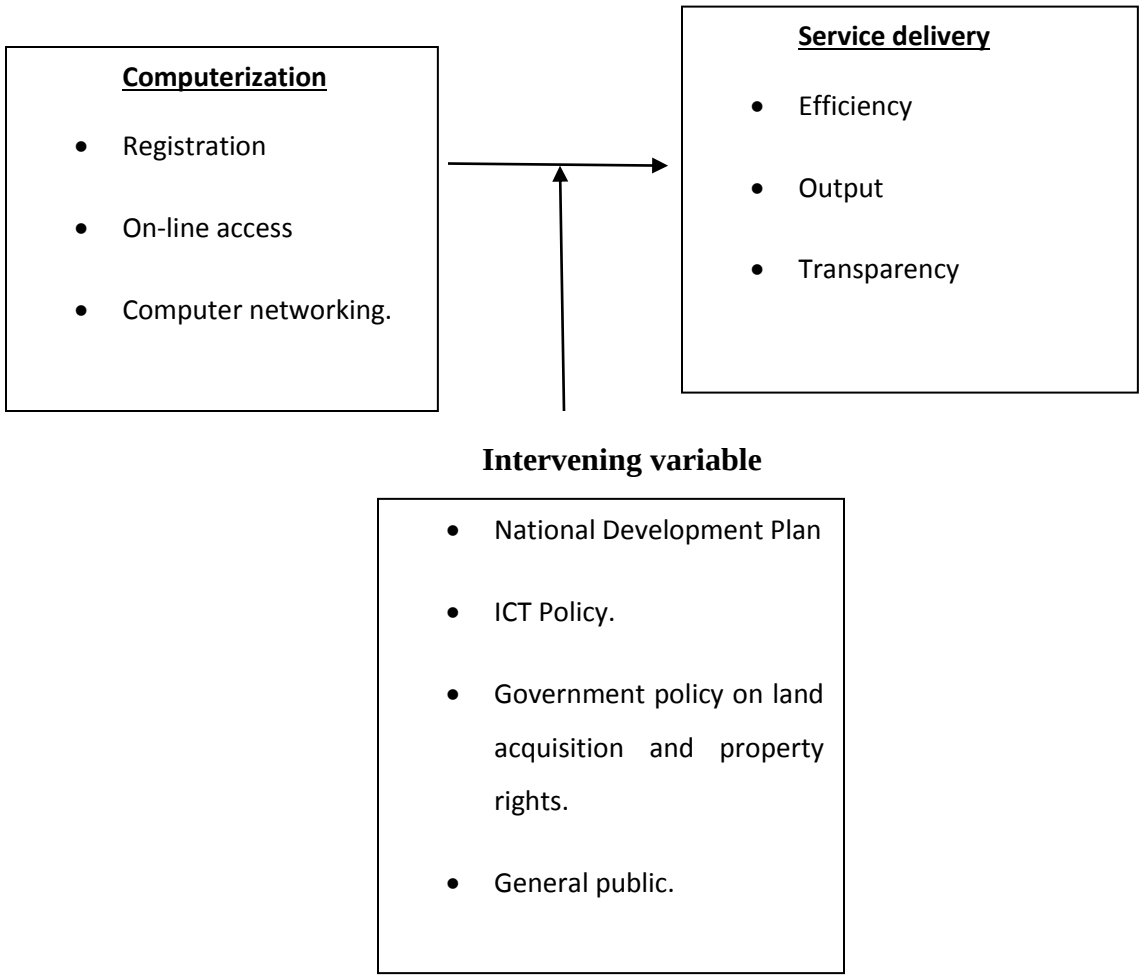
The research will also be useful in the land administration field that is land administrators or land officers to enable them identify the best ways through which they can run the system without difficulty, government and the policy makers to help in addressing some of the issue that are hindering the effectiveness of the national land policy as regards land administration, land valuers will also depend on the clear information about land registry performance to attach the right tax on land and property.

Real estate dealers; to help them keep up with the land administration activities and do away with malpractices affecting land office hiding behind the name of real estate dealerships and create an organized land market.

The study will also benefit institutions like banks and Law firms through facilitating quick and easy access of data necessary in doing their job efficiently and effectively.

## 1.9 Conceptual framework

**Independent variable** **dependent variable.**




The conceptual framework illustration above is indicating that computerization does not rely on service delivery instead it can influence it in terms of efficiency, output and transparency.

## 1.10 Definition of terms and concepts.

### 1.10.1 Computerization:

Computerization as a term refers to cause (certain operations) to be performed by a computer, especially as a replacement for human labor, (Steudler et al 2004).

Computerization brings about an essential change in the way the worker can know the world and with it a crisis of confidence in the possibility of certain knowledge. Therefore computerization in this study is just an aspect of productions and operations management which is helping in the improvement of performance in land administration processes.

### 1.10.2 Service delivery

This refers to the fulfillment of customers' orders efficiently and at a minimum cost. Chopra and Meindl, (2004) describe it as meeting clients expectations with regard to fulfillment through consistence and time delivery, quicker response to clients' requirements and the ability to meet unique and special requests of clients.

### 1.10.3 Land

This is part of the earth's surface that is not covered in water. It is also a primary input and factor of production which is not consumed but without which no production is possible. It is thus a resource that has no cost of production and although its usage can be switched from less to more profitable one, its supply cannot be increased. Land is also an asset; it includes anything on the ground, above the ground and under the ground. It is the oldest form of collateral and thus it has value.

### 1.10.4 Land title registration:

This is a system by which ownership of real property is established through the issuance of an official certificate indicating the name of the individual in whom such ownership is vested.

Land title registration also generally describes systems by which matters concerning ownership possession or other rights in land can be recorded (usually with government agency or department) to provide evidence of title, facilitate transaction and to prevent unlawful disposal

### 1.10.5 Land administration:

Land administration refers to management of land issues that involve keeping custody of the land title records, documentation and ensuring land transactions are secure to promote investments.
The UN-ECE (1996) defines land administration as "the processes of determining, recording and disseminating information about the tenure, value and use of land when implementing land management policies. It is considered to include land registration, cad astral surveying and mapping, fiscal, legal and multi-purpose cadastres and land information systems."

Dale and McLaughlin, (1999) define land administration as "the process of regulating land and property development and the use and conservation of the land, the gathering of revenues from the land through sales, leasing, and taxation, and the resolving of conflicts concerning the ownership and use of the land." Like the UN-ECE, Dale and McLaughlin identify ownership, values, and use as the three key attributes of land. They continue that land administration functions can be divided into four functions: juridical, fiscal, regulatory, and information management. The first three functions are traditionally organized around three sets of organizations while the latter, information management is integral to the other three components.

# CHAPTER TWO

# LITERATURE REVIEW

## 2.1 Introduction

The researcher in this chapter reviewed on the influence of computerization of land titles on service delivery in the land registry lighting on the general causes that led to its computerization in Uganda and the world at large. These themes are discussed in line with the objectives of the study and research questions and the main sources of information are the internet publications, newspaper publication text books and other research sources available.

## 2.2 Conceptual review

### 2.2.1 Computerization.

Papet, (1980) defines computerization as a social process for providing access to and support for computer equipment to be used in diverse activities such as teaching, management, and accounting. It entails social choices about the levels of appropriate investment and control over equipment and expertise. Computerization provides an exponential increase in capability through the use of digital technology. It also enables one to disperse critical functions although it comes with higher costs due to the increased requirement for high tech systems operators at different facilities. (Major G.R.Hust).

On the on the other hand**,** Kumar (2005), defines computerization as the application of a set of interacting components that operate together to accomplish a purpose. Computerization involves the use of computer programs such as spread sheet, database, Microsoft word, lotus, specialized accounting packages for example Tally, quick books, pastel among others depending on the

nature, size and the needs of the organization to generate management making and problem solving.

Mutaindwa, (1990) suggests that the main factor behind the expansion of technology is the computer which allows the electronic processing of information at a high speed and in a quantity that would be unthinkable 50 or more years ago. According to him the computer is so far the most sophisticated device that can provide large volumes of data and reliably pass it on with Speed and accuracy as meaningful useful information. The input into the computer which is stored in machine readable form for processing is known as a data.

Regardless of the fact that introduction of computerization reduces on the labor cost and also gets work easily and very fast, research also has that the reduction of labor as a result of introduction of technology causes the organization a big loss of the total benefit it would have gained when using the capital (computerization), in otherwise they suggest that capital (computerization) and labor should complement each other and therefore when an organization decides to embrace computerization, they should ensure they have alternative solutions for the employees that might be affected in the process.

Also, adoption of a computerized system promotes good land administration which in turn creates accurate, accessible, timely, secure and complete information about land and property in an affordable and efficient way that promotes confidence between the public, its commercial enterprises and the government. Therefore the use of computerization in land administration is remarkable as it is diverse.

However as Ian P. Williamson (2000) says, computerization is one of the most difficult components of land administration reform in developing countries. In one sense, it is essential

and inevitable but care needs to be taken in the introduction of IT. The introduction of IT into large government departments in developing countries requires a major IT strategic plan and a long term commitment. He further says that the introduction of computerization of land administration records is difficult. However once adopted, it ensures fast flow of activities within the land registry hence enhancing service delivery.

Thus emphasis of computerization was mainly put on land registry in Land administration as an important resource which started in Uganda in 2006 after government had recognized that land and real estate are one of the most important assets whose value and economic usefulness was discouraged by insecurity of property rights. Thus the main reason for computerization of the land registry was for the need of efficient, effective and reliable land Information application in order to manage land administration work flows and automatically produce secure land titles as stated by Stephane GIL; project manager IGN. Therefore with that in mind, the researcher sought to examine the effect of computerization on service delivery at the land registry; focusing on the perceptions of service providers and service users.

### 2.2.2 Service delivery

Chopra and Meindl (2004) describe service delivery as meeting clients' expectations with regard to fulfillment through consistence and timely delivery, quicker response to clients' requirements and the ability to meet unique and special requests of clients. This thus means that the modes of service delivery mainly depend on the client's needs and characteristics although business processes and administrative support also influence it.

In the land sector of developing countries, service delivery has been generally characterized by lack of coordination between agencies. These agencies include the land registry, the government,

the real estate firms and even the people. Lack of coordination causes duplication of functions in the long run the duplications increase on the cost of clients in addition to delay in service delivery hence leading to rise of fraudulent actions, corruption, red-tape among others issues in the land registry.

According to Rebecca Sittie (2006), the main causes of lack of coordination are the features of the manual procedures, manual forms of record keeping and managing information. This means they are ineffective and hence poor service delivery.

## 2.3 Theoretical review.

### 2.3.1 Theories of technology

There are a number of theories attempting to address technology, which tend to be associated with the disciplines of science and technology studies (STS) and communication studies. Most generally, the theories attempt to address the relationship between technology and society and prompt questions about agency, determinism/autonomy, they are classified into descriptive and critical theories but for the purposes of this study, the critical theory as a theory of technology was viewed by the researcher.

#### 2.3.1.1 Critical approaches/theory

Critical theory goes beyond a descriptive account of how things are, to examine why they have come to be that way, and how they might otherwise be. Critical theory asks whose interests are being served by the status quo and assesses the potential of future alternatives to better serve social justice. According to Guess's definition, "a critical theory, then, is a reflective theory which gives agents a kind of knowledge inherently productive of enlightenment and

emancipation" (1981: 2). Critical theory has the explicit normative and political intent of going beyond mere description to produce actual change.

In line with this theory, scholars like Marcus and the school of Frankfurt have asserted that whilst matters of technology design are often presented as neutral technical choices in fact they manifest political or moral values. Critical theory is a form of archaeology that attempts to get beneath common-sense understandings in order to reveal the power relationships and interests determining particular technological configuration and use for example; values in Design - asks how do we ensure a place for values in line with technical standards such as speed, efficiency, and reliability as criteria by which we judge the quality and acceptability of information systems and new media. How do values such as privacy, autonomy, democracy, and social justice become integral to conception, design, and development, not merely retrofitted after completion? Nissenbaum, (2001).

## 2.4 Actual review

### 2.4.1 Computerized registration and the level of service delivery in the land registry.

Ram B (2003) a computer is the most powerful tool man has ever created, it has made great impact in the daily functioning of all industrialized societies whereby today they are used for a variety of office work, games, reservations in airlines, buying and selling of goods on line, disease diagnosis. In the land registry, computers are used for registration of land titles, titles searches and transfers, administrative purposes, storing of data among others.

The use of computers is nowadays widely spread across most organizations, institutions, companies and governments (Alan Moon, 2004). As cited by Namanya Amon in his research

(2010), most businesses depend on employees with strong computer skills and supervisors identify computer skills required for employees to perform their duties.

In the Kampala land registry, it was revealed that most of the most of the land titles had been converted into digital copies in particular, 500,000 copies of land titles. Computerized registration generates computer related information on land ownership; on information on Mailo land transactions like changes in property ownership and encumbrances thus creating a reliable computer database which allows prompt searches and retrieval of land information. However these systems are also subject to possible manipulation, Jackson Armstrong, (2001).

Despite the possible manipulation, the use of computers in registration in several companies helps converting manual land records into electronic documents which lead to establishment of efficient land records information management ultimately leading to improvement in service delivery at the land registry.

According to Zarri (2003) Modern computer systems can store huge amounts of information kept in the form of a database. From a database, the required information can be sorted in the desired manner, in order to effectively handle databases special programs called database programs have been developed and these have made it easier for organizations to do business of supplying information in certain specialized areas such as medicine, engineering, banking, business and others to consulting customers. Thus computerized registration completely deals away with congestion at the land registry as there is no need to keep on piling the office rooms with files containing land information. Therefore, from Zarri's perspectives, service delivery in an organization is enhanced because data concerning their activities is collected and compiled into manageable files which are organized in databases in a computer. This not only allows

efficient management of information but also allows for easy access of information any time. Thus benefits of computerizations vary from one organization as several studies have been carried out to analyze the advantages of computerized registration, information processing systems over the manual information system and as such, computerization is credited for its advantages of; leading to development of internet which is enabling people from different countries to communicate on various platforms among others, (Waburoko, 2000).

As Beck (2000), asserts innovations in the technology for improvement in terms of storage, access, retrieval of information for example in insurance companies, banks among others has played an important role in improving the welfare of people. Also in the land sector it has helped in bridging the gap between land administrators and clients. Efficient land systems not only reduced risks especially in loss of land information on both sides but also open up opportunities for both land administrators and clients ultimately improving the level of service delivery.

### 2.3.2 On-line access and its effect on service delivery

With the ever changing technology, different organizations are trying to keep up with the advancements as they come hence making life so easy. There are online applications commonly termed as APPs, these make communication easy, reduce on congestion in offices, eliminate bureaucracy, eliminate unnecessary costs among other advantages. With these APPs, one can easily book plane tickets, order for food, conduct business transactions, register for different purposes, pay bills among others by simply using a computer, or a mobile phone as long as they access the internet. Institutions like universities have adopted this product where students instead of picking applications from the university's premises, they acquire them on line as long as they access the website. Among other organizations, the Uganda Revenue Authority has

adopted this applying it in registration of vehicles although some requirements have to be met first like having a TIN number.

Thus by use of on-line systems, access of information is made more readily available to the general public. In this case, the public has access to property register via the internet. This is commonly known as e.registration and e.conveyancing.

The Hong-Kong land registry uses the IRIS Online services which provide users with a full range of search services through the internet. For example clients can use this service to place orders of copies of land records. This service is available in two forms and versions that is; the desktop version and mobile version where the mobile version is customized and is suitable for smart phones and any mobile device using iOS and Android platforms. The forms are the Ad hoc Basis and the Subscription Basis.

Sandberg (2010) in his research states that e.registration is one way of enhancing the accessibility of the general public to land registration hence, having a fundamental impact on the efficiency of land transactions. In this case, service delivery in the land registry is improved. Therefore because of this, many countries have adopted e.registration hence making it legal. Some countries have thus gone ahead to implement laws supporting it. For example; USA passed a Uniform Real Property Electronic Recording Act in 2004 which allows electronic documents and electronic signatures for land registration.

However like any other technology, e.land registration has challenges which are in terms of technical infrastructure.

As noted in Sandberg (2010), the main challenge with e.registration is identifying parties to transactions and authentication of documents. This is such a concern because it is common

knowledge that electronic systems are prone to hacking and electronic fraud. This thus affects service delivery in the land registry adversely. However such is the experience in developed countries, what could then be the experience in low developing countries like Uganda?

### 2.3.2 Computer networking and service delivery.

A computer network or data network is a tel-communications network that allows computers to exchange data. In other words it consists of two or more computers that are linked in order to share resources, exchange files or allow electronic communications linked through cables, telephone lines, radio waves, satellites or infrared light beams.

Thus networks combine both hardware and software from one location to another where the software consists of the instruction sets that make possible the services that are expected from a network.

From this view, computer networking facilitates interpersonal communications thereby allowing people to share and communicate resources efficiently and easily. Therefore, given the nature of the land registry activities or services which in this include; title searches for transfer, updating of information relating to property, addressing client complaints in line with special requests from affiliated organizations, registering new titles among others, a robust environment is created and the only way of meeting each one's need is to ensure that there is coordination and sharing of the load hence finding it important to network computers in the land registry.[ D. Luyombya and D. Obbo, (2013)] assert that a person cannot hide and distort data in the files or lose a file as it was the case in the manual system because these documents are accessed and shared by various officers.

Nkote. N, (2010) in his study of automation in Uganda's land administration provides evidence that enhanced computer-networking in the land registry facilitates linking all sites from its IT infrastructure supplier thereby leading to a reduction in the land registry's tel communication costs. This means that documents in the land registry can be searched electronically and in a fast and expeditious manner.

In the initial stages of the newly computerized Kampala land registry, stakeholders' transactions were not automated because the key offices like law and banking firms were not linked as the land registry did not have a networked system. (Nkote. N, 2010)

Hence, with such evidence, there is need to find out whether the Kampala land registry has a computer networked system and if so, how is it impacting on service delivery.

# CHAPTER THREE

# METHODOLOGY

## 3.0 Introduction

This chapter elaborates the methodology that was be used by the researcher to collect data from the field in line with the research questions. The research questions were used as guidelines to the research findings that assisted in finding of answers to the research problem.

## 3.1 Research design

This is a plan for undertaking a field based study. Therefore in preparation for carrying out research study, the researcher aimed at having a research design that tested whether computerization actually had an effect on service delivery in the land registry. Therefore in this study, a case study design was adopted where a cross sectional research design was used to help gather data from the service providers and service users over a period of days or weeks in order to answer all the research questions.

## 3.2 The study population and study area.

The study population consisted of land registry employees, real estate agents and clients because most of these people were familiar with the land registry's activities and therefore they provided the right information.

## 3.3 Sampling design

Simple random sampling was used where each element had a known and equal chance of being selected as a sample subject from the population

### 3.4 Sampling methods:

A purposive sampling method was used because they had the relevant information needed by the researcher for the study. Stratified sampling method was used because of the categories of the study population that is; land registry employees, land surveyors, real estate agents and lawyers where a representative sample was chosen randomly from the population at large.

### 3.5 Sample size;

The researcher used a sample size of thirty respondents who were categorized as follows.

**3.5.0**

**Table 1 Division of targeted respondents.**

| Category of respondents | Number of respondents |
|---|---|
| Land registry employees and land surveyors | 10 |
| Real estate agents | 5 |
| Lawyers and bankers | 15 |
| Total | 30 |

From table 1, the sample size was chosen because during the pilot study, it was revealed that the population at large was not interested in knowing the operations of the computerized system as they only concerned about how fast and how much it required them to acquire the information they needed.

### 3.6 Sources of data

The data was collected from both primary and secondary sources.

#### 3.6.1 Primary sources:

Data in this was collected from respondents through questionnaires that were given out respectively to the employees in the land office and the real estate agents and survey of clients during the time of research who ranged from lawyers to bakers, land surveyors among others.

#### 3.6.1 Secondary sources:

Data in this case was collected from the Internet, newspapers, and journals and from text books as well regarding land registration.

### 3.7 Data collection methods

#### 3.7.1 Questionnaire

Questionnaires were semi structured and were designed for clients, employees and employers, and the real estate agents of Kampala land registry. Questionnaires were standardized and focused on the specific objectives these partially solved biases in data collection. They were both closed and open ended to generate large amounts of data.

#### 3.7.2. Observation

Observation method was also used by the researcher to observe items like the technologies used to promote customer service efficiency and facial expressions and attitudes of respondents which helped in effectively answering the research questions.

### 3.8 Data collection instruments.

#### 3.8.1Questionnaire

Questionnaires were distributed amongst thirty respondents from the land registry employees, land surveyors, and key stakeholders who included; lawyers, bankers and real estate firms.

#### 3.8.2 Ethical consideration

All participants were asked if they liked to take part in the study seeking their opinions on their perception about the implication of computerization to service delivery in Kampala land registry. The researcher informed all participants that the study was purely voluntary and that they were free to withdraw at any time without giving reasons if they wished.

### 3.9 Data processing analysis and presentation

#### 3.9.1 Data processing

The data collected was processed for analysis. This process entailed editing the data, coding the data and entering the data in the computer with SPSS.

#### 3.9.2 Data presentation:

For easy interpretation and understanding the relationship between the two variables, the researcher after collecting data, it was organized, cross checked, verified, edited and summarized for analysis and drawing of valid conclusions from the data in accordance to questionnaires.

Quantitative data collected by the questionnaire was coded. In the coding process, a coding sheet was constructed. A number was assigned to each answer in the questionnaire with a corresponding number on the coding sheet. Then the same questionnaire was constructed on the

computer using statistical packages for social scientist (SPSS) and also through the use of ordinary tabulation.

Frequency tables and graphs were worked out basing on the data entered into SPSS. In these frequency tables, and graphs, analysis was done with corresponding percentages and the results were discussed in line with the mean and standard deviation.

# CHAPTER FOUR

# PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS

## 4.0 Introduction

This study investigated the effect of computerization of land titles on service delivery at the land registry. This was in the light of the Ministry of Lands Housing and Urban Development computerizing the land registry to address the short comings of the manual system that included; forgeries of titles, red-tape, poor storage of land information, bureaucracy among others so as to restore the integrity of the land registry and ensure modernization of land registry operations as a way of improving its service delivery to meet the needs of the growing economy. The data collected was analyzed using the SPSS computer program. This chapter also presents the results of the analyses. The results are as follows.

## 4.1 Gender of respondents.

Frequency tabulation was used by the researcher to present the gender distribution of the respondents. This is as shown in table1 below**.**

**Table 2 Gender of respondents**

| Sex | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Male | 12 | 70.6 | 70.6 | 70.6 |
| | Female | 5 | 29.4 | 29.4 | 100.0 |
| | Total | 17 | 100.0 | 100.0 | |

***Source:*** primary data (2015)

From the above table 2, 70.6% of the respondents were males and 29.4% were females, this is because males are more involved in land matters than the females at the land registry there were more males than females as the males are more involved in the technical activities than females.

### 4.1.1 Age of respondents.

The study established the age group of the respondents at the Kampala land registry and the affiliated organizations who participated in the research. This was to capture the most prevalent group in the study. The distribution was as in table below:

**Table 3 Respondents age group**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 25-35years | 10 | 58.8 | 58.8 | 58.8 |
| | 36-45years | 5 | 29.4 | 29.4 | 88.2 |
| | 46-55years | 2 | 11.8 | 11.8 | 100.0 |
| | Total | 17 | 100.0 | 100.0 | |

***Source: primary data (2015)***

From the table 3 above, the biggest number of respondents was between 25 years and 35 years of age because they are computer literate as it is the computer era. It is indicated with a 58.8%, between 36 and 45 years with a 29.4%, this is so because most of the employees of the land registry that were there before the computerization of the land registry were replaced with those computer skills and those of between 46 and 55 years of age were represented by a 11.8%.

## 4.2 The study objectives.

### 4.2.1. Computerized registration and its effect on the level of service delivery.

The first objective of the study was to determine how computerized registration affects the level of service delivery. To achieve this objective, the respondents were asked to react to several statements which were intended to describe how computerization affects the level of service delivery in the Kampala land registry. Computerized registration's effect was defined in terms of time required to collect, compile and register land information, record management, confidence of clients and easy access to land information. Data on this objective was analyzed under the hypothesis "computerized registration affects the level of service delivery in the Kampala Land registry." The various findings are presented in the table below:

**Table 4 Respondents on computerized registration.**

**Descriptive statistics**

| no | Computerized registration | mean | Std. deviation. |
|---|---|---|---|
| **1** | less time is required to collect, compile and register land information, search for property transactions | **4.65** | **0.996** |
| **2** | Successful record management due to computerization has enhanced accuracy, efficiency and effectiveness and transparency in service delivery of the highest quality | **3.35** | **1.169** |
| **3** | There is complete and easy access to land information by clients | **3.82** | **1.286** |
| **4** | Clients now completely have confidence in the land registry | **3.35** | **0.862** |

***Source: primary data (2015)***

In the table 4 above, details concerning computerized registration were examined in order to ascertain the general perception of respondents as regards computerized registration in the land registry. The different statements about computerized registration of land information were ranked in terms of mean and standard deviation for easy interpretation of the results. The details in the table are therefore discussed below under their respective subheadings.

#### 4.2.1.1 Less time is required to collect, compile and register land information, search for property transactions as it takes an average of 15 minutes.

The findings in table 4 showed that most of the respondents disagreed that computerized registration reduces the time for collecting, compiling and register land information as portrayed by the mean of 4.65. However, the standard deviation revealed a value of 0 .996 showing variations in the response. This is in agreement with the findings where one of the respondents stressed that it took to collect, compile and register land information had not increased not because of the inefficient computerized system but because of the human resource within the land registry. Thus this totally contradicts [Nkote.N Isaac, 2010] and the minister of lands statements in the issue of [ssthe New vision, 5th March] stated that, "it used to take 8months to transfer land ownership and do a title search because of the paper work that was needed in the manual system but now it takes seven days and two respectively. This implies that the system maybe fast but its performance maybe affected by the human resource's manipulations which reduces the level of service delivery in the land registry.

#### 4.2.1.2 Successful record management due to computerization has enhanced accuracy, efficiency and effectiveness plus transparency in service delivery.

From the findings in table 4 above, most of the respondents were not in agreement with the statement that record management was successful and thus there was accuracy, efficiency and effectiveness. This is manifested by the mean value of 3.35 as shown in the table above. Although, a significant standard deviation of 1.169 proved that there were significant variations in the nature of responses made. These variations were brought about as some members insisted on acknowledging the present order and availability of space in the land office because all land

information had been computerized as David Migereko the lands ministry secretary was quoted in the Independent, September 2013 that the land office was in order, however this contradicts some of the respondents view who stated that there was inadequate data as result of misplacing hard copies after entry of data in addition to missing white pages leading to delay in title searching and lack of transparency in the land registry thus poor service delivery

.

**4.2.1.3 There is complete and easy access to land information.**

The table 4 above shows that most of the respondents disagreed that there was complete and easy access to land information as it is manifested by the mean value of 3.82 and a standard deviation of 1.286. This is in disagreement with the Daudi Migereko the permanent secretary's statement of the Ministry of Housing and Urban Development as quoted from the [New vision, March, 5th 2014], "that computerization had made access to land information easy".

**4.2.1.4 Clients now completely have confidence in the land registry.**

The results as portrayed in table 4 revealed that most of the respondents disagreed that the clients of the land registry completely have confidence in the land registry after its computerization. This is indicated by a significant mean value of 3.35 and a standard deviation value of 0.862. This maybe as result of the continued payment of more fees (150,000 SHS) than the actual fees of 10,000shs that were stated to be paid and also the continued misplacement of white pages and hard copies that brings about inefficient land information and creates room to fraudulent actions. This means that bribes still exist in the land registry as one of the respondents stated.

### 4.2.2 On-line access and its impact on service delivery.

On-line access was defined in terms of preference, mode of delivery, distance and congestion, efficiency and effectiveness. Data on this objective was analyzed under the hypothesis "on-line access affects the level of service delivery in the Kampala Land registry." The various findings are presented in the table below:

**Table 5: On-line access.**

**Descriptive statistics**

| no | On-line access and service delivery | mean | Std. deviation |
|---|---|---|---|
| **1** | There is online access of land information | **4.00** | **0.000** |
| **2** | Use of online services is preferred by both employees and clients of the land registry | **2.47** | **0.514** |
| **3** | Online services are delivered by email, download, by facts and by view of browser | **5.00** | **0.000** |
| **4** | The problem of missing land records, high operation costs, high average end to end processing time and fraud have been completely eliminated | **4.24** | **0.831** |
| **5** | Distance constraints and congestion at the land registry has been reduced. | **4.00** | **0.000** |
| **6** | Online access has highly increased service delivery efficiently and effectively | **5.00** | **0.000** |

***Source: primary data (2015***).

In the above table 5, the findings on On-line access were examined so as to establish the respondents' perception about On-line access's impact on service delivery in the Kampala Land registry. The test statements were ranked using mean and standard deviation as a way of deducing results quantitatively. The results of the finding are discussed within the corresponding subheadings as shown below:

#### 4.2.2.1 There is on-line access of land information.

From the results in the table 5 above, it is indicated that all of the respondents disagreed about the fact that there was On-line access of land information. This is revealed by a mean value of 4.00 and a standard deviation of 0.00. This is completely contradictory to Daudi Migereko the Minister of Housing and Urban Development's statement as quoted from the New vision of 5th March, 2014 that the land registry provided on-line access of land information as the ministry's website (www.mlhud.go.ug) was redesigned with on-line access to land information forms which had been originally difficult to access.

#### 4.2.2.2 Use of on-line services is preferred by both employees and clients of the land registry.

From the above table 5, respondents agreed that they preferred using on-line services. This is revealed by the mean of 2.47 although it was not being utilized at the land registry. However a standard deviation of 0 .514 revealed that there was a slight variation from the majority. This variation maybe is as a result of the respondents not conversant with the digital era of doing things on-line as is the trend.

**4.2.2.3 On-line services are delivered by; e-mail, download, by fax and view of browser.**

Table 5 above shows that all respondents disagreed on the mode of delivery of on-line services. This is revealed by the mean of 5.00 and a standard deviation of 0 .000. This is because on-line services were not being provided at the land registry at the moment of the study. These results are completely contradictory to Daudi Migereko the Minister of Housing and Urban Development's statement as quoted from the [New vision of 5th March, 2014] that the land registry provided on-line access of land information as the ministry's website (www.mlhud.go.ug) was redesigned with on-line access to land information forms which had been originally difficult to access hence the need for submission of e-mail addresses as new administration requirements to facilitate on-line access.

**4.2.2.4 The problems of missing land records, high operation costs, high average end-to-end processing time and fraud have been completely eliminated.**

From the above table, most of the respondents were not in agreement with the above statement. This is revealed by the mean value of 4.24 and a standard of 0.831. This is because there are no on-line services provided at the land registry. These results are contradictory to the statement of Daudi Migereko the lands Minister stated in the New vision of 8th December, 2014. That the problems of missing land records will be eliminated as all transactions will be done on-line.

**4.2.2.5 Distance constraints and congestion at the land registry has been reduced.**

Table 5 above shows that all the respondents were not in agreement with the above statement. This is revealed by the mean of 4.00 and a standard deviation value of 0.000. This is because

clients still go to the land registry offices since there is no on-line access as stated by the minister of lands Daudi Migereko.

#### 4.2.2.6 On-line access has highly increased service delivery efficiently and effectively.

The study as reflected in the table 5 above found out that all of the respondents disagreed on the statement that on-line access has highly increased the efficiency and effectiveness of service delivery. This was ascertained by the mean value of 5.00 and a 0.000 standard deviation value. This is so because there is no way on-line access would increase service delivery efficiently and effectively when there are no on-line services provided at the land registry in the first place.

### 4.2.3. Computer networking and service delivery at the Kampala land registry.

Computer networking was defined in terms of data integration, transparency, contribution and safety of land information. Data on this objective was analyzed under the hypothesis "computer networking affects the level of service delivery in the Kampala Land registry." The findings are as follows;

**Table 6: Computer networking.**

**Descriptive statistics.**

| | **Computer networking and service delivery.** | **mean** | **Std. deviation** |
|---|---|---|---|
| **1** | Computers are fully networked | **4.41** | **0.795** |
| **2** | Has enabled data integration from affiliated organizations like; Banks, Law firms, Real estate firms. | **4.53** | **0.874** |
| **3** | Transparency, efficiency and effectiveness have been enhanced as a result of computer networking | **2.82** | **0.393** |
| **4** | Computer networking has contributed to better service delivery | **3.12** | **0.993** |
| **5** | Safety of land information is ensured through computer net working | **3.44** | **1.031** |

***Source: primary data (2015)***

In the above table 6, the findings on whether there was computer networking and its impact on service delivery were examined so as to establish the respondents' perception about computer networking in the Kampala land registry. The test statements were ranked using mean and standard deviation as a way of deducing results quantitatively. The results of the finding are discussed within the corresponding subheadings as shown below:

#### 4.2.3.1 Computers are fully networked.

From the table 6 above, the majority of the respondents disagreed that computers were fully networked. This is indicated by a mean value of 4.41. However, the standard deviation of 0.795 indicates that there were variations in the responses from the respondents. This is because the computers within the land office were networked as stated by one of the respondents but was not networked with those of key stakeholders that is, the law firms, banking firms as stated by [Nkote. N. Isaac, 2010]. This is could mean that the land registry is not fully automated as for now.

#### 4.2.3.2 Has enabled data integration from affiliated organizations like; banks, laws firms, real-estate firms among others.

The results from the table 6 above portray that most of the respondents were not in agreement with the statement that computer networking has enabled data integration. This is justified by the mean value of 4.53 and a standard deviation of 0.875 indicates that there were variations in the responses as some of the respondents were not sure. Also one particular respondent a lawyer confirmed that there was no data integration between their law firm and the land registry because they still make trips to the land registry to carry out a title search which is also a tedious process.

#### 4.2.3.3 Transparency, efficiency and effectiveness have been enhanced as a result of computer networking.

From table 6 above, the results indicate that most of the respondents were not sure whether transparency, efficiency and effectiveness had been enhanced after networking of computers. This is ascertained by the mean value of 2.8.2. However there is a wide variation in the responses made, this is indicated by a standard deviation value of 0.39. These results are as such because

the system's administrator boasted of improved efficiency and effectiveness as there is coordination and sharing of the load of work in the land registry. This is confirmed by [D. Luyombya and D.Obbo,( 2013)], that computer networking is one of the checks in the land registry as it enables various officers to share the same information at the same time hence enhancing transparency, efficiency and effectiveness in the land registry thus improving service delivery.

**4.2.3.4 Computer networking has contributed to better service delivery.**

From table 6 above, most of the respondents were not sure whether computer networking has contributed to better service delivery. This is indicated by a mean value of 3.12 and a standard deviation of 0.993 because there was no empirical evidence to show that there is a better service delivery. However to the employees in the land registry it has enabled them to easily retrieve files. Although such is the case, generally there is no better service delivery.

**4.2.3.5 Safety of land information is ensured through computer networking.**

Concerning the respondents' view regarding whether land information safety was ensured as a result of computer networking, it is revealed that most of the respondents were not sure about the statement. This is indicated by the mean value of 3.44 as shown in the table 6 above. However, the standard deviation of 1.031 reflects that there were variations in the nature of responses made in accordance to the statement because computer networking enables various officers to share the same information at the same time hence enhancing transparency, efficiency and effectiveness in the land registry thus improving service delivery and ensuring safety of land information as stated by [David Luyombya and Denis Obbo, 2013].

### 4.2.4 Service delivery.

**Table 7 Level of service delivery.**

**Descriptive Statistics**

| no | Level of service delivery. | mean | Std. deviation |
|---|---|---|---|
| **1** | Computerization has contributed to quick service delivery to clients. | **3.71** | **0.849** |
| **2** | computerization has been successful in enhancing service delivery in the land registry | **3.12** | **0.697** |
| **3** | Services offered are efficient and effective. | **3.88** | **1.409** |
| **4** | It is through computerization that the land registry can improve its service delivery. | **3.12** | **0.928** |

***Source: primary data (2015)***

In the table 7 above are details of the measures of service delivery analyzed in terms of contribution, success, efficiency and effectiveness and improvement. These statements were ranked using both mean and standard deviation so as to ascertain meaning out of it. For that purpose, the details of the table are discussed under the subheadings of their corresponding test statements.

#### 4.2.4.1 Computerization has contributed to quick service delivery to clients.

Based on the results in table 7 above, it is indicated that the majority of the respondents were in disagreement with the statement that computerization has contributed to quick service delivery. This is indicated by the mean value of 3.71; whereas the standard deviation of 0.849 shows that there was some level of deviation in the nature of responses given concerning the statement. This

is because there was no empirical evidence to show improvement in service delivery at the land registry apart from the land registry being spacious. These findings are in contradiction with [Nkote. N. Isaac, (2010)] that computerization of the land registry had contributed to quick service delivery.

#### 4.2.4.1 Computerization has been successful in enhancing service delivery in the land registry.

From table 7 above, it's indicated that most of the respondents were not sure whether computerization had been successful in enhancing service delivery in the land registry. This is indicated by a mean of 3.12 hence disagreeing with [Nkote. N. Isaac, (2010)] that service delivery has been enhanced at the land registry as a result of computerization. However there were variations in the response which are shown by a standard deviation value of 0.697 because the staff at the land registry and the system administrator who are the service providers boast success in the system thus they support that service delivery has been enhanced. This is in agreement with [Zarri, (2003)] that computerization brings about proper information management which enhances service delivery.

#### 4.2.4.2 Services offered are efficient and effective.

The study as reflected in the table 7 above found out that most of the respondents were not in agreement with the statement that services offered are efficient and effective as ascertained by the mean value of 3.88. However, the significant standard deviation value of 1.409 shows that there were varied responses from the respondents because the service users especially the key stakeholders that is the lawyers, bankers and real estate agents did not agree as one of the respondents a lawyer stated that, "the process is still tedious although the land titles are now

computerized, the registry officers still have to move with the physical files to the registrar of titles with a letter that a client is requesting for a title search." This means that the same procedures before computerization still hold and the speed with which one gets results that is a search statement depends on how much in terms of 'facilitation' they have injected in the process.

**4.2.4.3 It is through computerization that the land registry can improve its service delivery.**

From the table 7 above, most of the respondents disagreed that it's not through computerization that the land registry can improve its service delivery. This was indicated by the mean of 3.12 although some respondents agreed while a small number were not sure. These variations in the responses are shown by the standard deviation value of 0.928. These results are in disagreement with other past studies especially those of [Sandberg, (2010), Beck, (2000), Zarri, (2003) and Nkote. N. Isaac, (2010)] that it's only through computerization that organizations can improve service delivery; they forget the human resource also needs to be closely monitored too.

# CHAPTER FIVE

# SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

## 5.0 Introduction

This chapter presents the discussion, conclusions and recommendations arising out of the research findings in chapter four and suggestions for further research.

## 5.1 Summary of findings

### 5.1.1 Effect of Computerized registration and the level of service delivery.

From the findings, the results revealed that there is computerized registration at the land registry. It was analyzed that there was a positive correlation between computerized registration and service delivery as indicated by r=0.364. This therefore implies that computerization has an effect on the level of service delivery. However the general response from key stakeholders pointed out that computerized registration would even be more effective on the level of service delivery but because of the incompetence of the human resource at the land registry who manipulate the system to fit their own interests. Therefore this implies that if the human resource is closely monitored and supervised, service delivery be affected positively.

### 5.1.2 Impact of on-line access and service delivery.

The results revealed that there were no on-line access services at the land registry. The findings asserted that the in the case of the land registry there is a negative relationship as shown by r= -0.287. This means that on-line access has no impact on service delivery in the Kampala land registry. However from the respondents' perceptions, they preferred using on-line services because it's the era of digital migration which makes things move faster and it's an easy way of

doing things. Therefore, if the land registry adopts use on-line access services, service delivery will be greatly improved and the issue of fraud and bribery will be completely eliminated.

### 5.1.3 Effect of computer networking and service delivery.

The results indicated that there is computer networking within the land registry but at a small level as it was not connected with the key stakeholders who include; law firms, banking firms and real estate firms. It is therefore ascertained that there is a slight impact on service delivery as a result of computer networking at the land registry because the employees and the system administrator agreed that there sharing of the load of work, easy access of files and securing of land information although when there is system failure, everything is at a standstill as the computers are networked.

## 5.2 Conclusion

From the results in the findings, computerization in the Kampala landregistry is in existance, however it is not fully computerized and has not yet achieved its objectives of cabbing the shortfalls of the manual system. The research findings indicate that the majority of the respondents believe that computerization of the land registry has done more harm than good as only a small number of people are benefiting but after paying something (bribes). Inadequate information as result of misplacing hard copies and white pages leading to delay in carryingout title searches. However  there is good data management and a short period is taken during data processing but the major problem is caused by the human resource element at the land registry which is manipulating the system to there own advantage. However this is also fueled by the clients who are not awareof the benefits of computerizing the land registry but all they are

interested is how fast they can get served and at what cost. This thus creates conditions for the human resource to manipulate the system to their own advantage.

Therefore once the human resource is sorted , the country will then see the benefit of computerization of the land registry at large. The land registry would also benefit if it adopts on-line services because the majority respondents showed that they prefered using on-line services. This implies that once use of on-line services is embraced at the land registry its impact on the level of service delivery will be greatly improved. Therefore the land registry's management needs to seriouly put as soon as possible.

### 5.3 Recommendations

From the research findings realized out of the study, the following recommendations are made:

The human resource at the land registry needs to be closely monitored and supersized because it's them who are making the computerization of the land registry a failure.

Efforts should be made to make the public more aware of the new computerized land registry operations. This therefore would create a standing relationship that would end up leading to better service delivery.

Secondly, the land registry should embark on creation of on-line access services and computer networking. This will help to completely get rid of corruption tendencies in the land registry and enhance easy access of land information thereby improving the level of service delivery at the land registry.

Thirdly, there is need for more man power at the land offices of Kampala and Wakiso because land transactions flourish more there than any other land offices.

## 5.4 Suggestions for further research

The researcher strictly revolved around computerization of land titles. However the land surveying component has been ignored yet it is also being affected by computerization in a way that most of the geo maps have coordinates that not riming with those on ground and thus causing disorganization of land information.

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**APPENDIX 1: QUESTIONNAIRE**

**QUESTIONNAIRE FOR RESPONDENTS (EMPLOYEES/ EMPLOYERS, REAL ESTATE AGENTS AND CLIENTS)**

**Introduction;**

Dear respondent, I am Nakanwagi Janefrancis a student of Uganda Martyrs University carrying out an academic research on the Effect of Computerization of titles on Service delivery in the land registry, taking the Kampala land registry as a case study. All information is purely for academic purposes and will be treated with utmost confidentiality and therefore I request you to spare a few minutes of your time and answer the questions that follow.

Instructions: Please tick the right options in the sections as assigned according to the scales and instructions given,

**SECTION A: DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS**

Sex : Female ☐ Male ☐

Age: 25-35 ☐ 36-45 ☐ 46-55 ☐ 56 and above ☐

**Section B; please *tick the correct alternative answer in the space provided***

**Key**

1. **Strongly agree**
2. **Agree**
3. **Not sure**

4. **Disagree**

5. **Strongly disagree**

**a) The level of computerization.**

| | | | | | | |
|---|---|---|---|---|---|---|
| | Level of computerization in Kampala land registry. | 1 | 2 | 3 | 4 | 5 |
| 1 | Less time is required to collect, compile & register land information, search for property transactions. | | | | | |
| 2 | Successful record management due to computerization has enhanced accuracy, efficiency &effectiveness in service delivery. | | | | | |
| 3 | There is easy access to land information by clients. | | | | | |
| 4 | Computerization has built client confidence in the land registry. | | | | | |

**b) Online access.**

| | | | | | | |
|---|---|---|---|---|---|---|
| | Online access and service delivery | 1 | 2 | 3 | 4 | 5 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | There is on-line access | | | | | |
| 2 | Use of online services is preferred by both employees and clients of the land registry | | | | | |
| 3 | Online services are delivered by; e-mail, download, by fax and view of browser. | | | | | |
| 4 | The problems of missing land records, high operation costs, high average end-to-end processing time and fraud have been eliminated. | | | | | |
| 5 | Distance constraints and congestion at the land registry has been reduced. | | | | | |
| 6 | Online services have increased service delivery efficiently and effectively. | | | | | |

**c) Computer networking.**

| | Computer networking and service delivery. | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| 1 | Computers are networked | | | | | |
| 2 | Has enabled data integration from affiliated organizations like; banks, law firms, real-estate | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | firms among others | | | | | |
| 3 | Transparency, efficiency and effectiveness have been enhanced as a result of computer networking. | | | | | |
| 4 | Computer networking has contributed to better service delivery. | | | | | |
| 5 | Safety of land information is ensured through computer networking. | | | | | |

**SECTION C**

**Service delivery**

| | **Level of service delivery** | **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|---|---|
| **1** | Computerization has contributed to quick service delivery to clients | | | | | |
| **2** | Computerization has been successful in enhancing service delivery at the land registry. | | | | | |
| **3** | Services offered are transparent, efficient and effective. | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **4** | It is through computerization that the land registry can improve its service delivery. | | | | | |

a) What should be the indicators of increased service delivery in the land registry in your view?

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b) Which areas in the land registry do you think service delivery needs to be improved even after all the effort of computerization has been made?

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***THANK YOU VERY MUCH FOR YOUR RESPONSE.***