OPTIMIZATION OF ELECTRONIC RECORD MANAGEMENT SYSTEM AND PERFORMANCE IN PUBLIC INSTITUTIONS: CASE STUDY OF THE MINISTRY OF LANDS AND PHYSICAL PLANNING REGISTRY

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DECLARATION

This research project is my original work and has not been submitted for examination to any other university.

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DEDICATION

This work is dedicated to my family members for the motivation and inspiration they have shown me. I wish to express my heartfelt sincere gratitude to my sisters; Hilda, Lydia, my uncle Paul and Aunt Karimi for their support. May the Lord bless you.

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ABSTRACT

The aim of the study was to examine the optimization of electronic records management system in performance of public institutions with reference to the Ministry of Lands and Physical Planning Registry. The study specific objecives were to find out the perceived use of electronic record management system and performance of Ministry of Lands and Physical planning, to establish the management process of electronic record management system and performance of Ministry of Lands and Physical Planning, to determine how information governance of electronic record management system affects performance of Ministry of Lands and Physical Planning and to examine how return on investment of electronic record management system moderates performance of Ministry of Lands and Physical Planning. The study literature incorporated information governance theory and diffusion of innovation Theory. The study was based on descriptive research design with target population of 56 respondents in cadre of record managers, land registrars, information technologist, and head of administration, land assistants and secretaries. The study used questionnaires for data collection of which a response rate of 84 percent was obtained. The study findings showed that perceived use of electronic record management system and organizational performance had a positive correlation. Management process of electronic record management system had a positive relationship to organizational performance. Information governance of electronic record management had a positive association to organizational performance with appositive relationship. Return on investment of electronic record management system had a positive association to organizational performance. The study recommended that the use of technological backed system comes with limitations and challenges relating to information security, fraud, privacy and confidentiality. Throughout the implementation of the electronic record management system, there is need to have transparency and control so that the platform is not used or given less support by the employees for other motives. The use of technology in business transactions has ascertained to be very impactful and saves a lot of organization resources. Through the use of systems, organizations are able to provide services throughout even in odd hours.

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LIST OF ABBREVIATIONS AND ACRONYMS

DOI	Diffusion of Innovation
EACC	Ethics and Anti-Corruption Commission
ERMS	Electronic Record Management System
IGT	Information of Governance Theory
LIMS	Land Information Management System
SPSS	Statistical Package for Social Science

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter constitutes key introductory aspects that involve background to the study, statement of the problem, objectives of the study, research questions and the relevance of the study context with scope, limitation and operational definition of terms.

1.1 Background to the Study

Organizations are increasingly changing their records management techniques from manual (paper based) to electronic (computer based) in order to have chronology of records and efficient management (Mnjama & Wamukoya 2013). This is done by acquiring and integrating relevant software and hardware to build up a complete and robust electronic records management system (ERMS) that accommodate all records management functionalities. The electronic records management system is termed as a program developed to generate, analyze, review and store data safely (Franks, 2013). Electronic records management system can widely be applied to manage and create its own records based on the functionality classification in access. According to (Fuzea 2015), the automation practices refers to an approach that enlists a detailed procedure with defined entity or personnel in charge of managing and updating of the media records through an electronic system.

The concept of electronic records management system, automation in an organization establishes a wide range of operational infrastructures that are revised and shared in an electronic platform. The repositories are termed as basic information units that capture

the organization records in a model that can be shared, certified in applications and retrieved in a way that is traced. The units of information presented in repositories that does provide different levels of record management automation for categorization as stated (Cox, 2013).

The agencies in record management provide effective role in the management of the records in an accessible approach. The implied aspect of information technology budget in record management and automation becomes affordable and very secure in a viable approach to many organizations using electronic record management. Comprehensive training is needed when actively managing and auditing of the electronic record management involving single or multiple users in an organization to ensure there is compliance to the set standards (Maguire 2015). The security of the database is very important as it ensure many risks are minimized and consistent compliance to the set regulations in business organizations.

This can be exemplified by the financial institutions like the commercial banks, microfinance institutions and the digital financial firms that heavily relies on data to process many of their transactions in an effective approach. Compromising of such viable records within their custody can have a disastrous outcome not only to the organizations reputations but also to the customers' privacy with legal ramifications. Thus, effective and consisted management of the electronic records must be a priority to every institution with achievable milestones when incorporating other agencies in the automation process of the ERMS. Effective implementation of the records in automation approach must

adhere to record retention model with executable roles in maintaining and creating other records in metadata system (Maguire 2015).

Referring to Davenport (2013), the management of the existing records through the agency is reviewed with two dimensional model that can either support efficient management of the records or it can expose top not information to unauthorized access of the organization information. Workflow must be created in the information support system to enhance the applicability of the automation of the organization electronic records. Commonly, the optimization of the automated records relies on the integrated flow to the access of the sub variables of the metadata (Davenport, 2013). Access to the information must be regulated with categorical approach towards how sensitive and non-sensitive information is obtained in the system more so to the organizations that harbors vital information such as property ownership mandate.

According to Adam (2012), electronic record management systems ought to enlist the organization's records in a structured way that defines the applications and the model operand when retrieving information created. The model must widely define the type of the records with associated directional links to the metadata within the system of classification scheme. Indisputably, the ERMS does exist in an electronic model with diverse layers of metadata as compared to the physical records that are mostly in hardcopy writing. They become very distinct with digital objects that are used to preserve digital objects and help in reconstruct and authenticate information in a reliable model to the original information of the specified institutions. This yields flexibility to the

organization in numerous aspects such as synchronization, duplication retrieval, management or upgrade of the data in the system.

The successful implementation of electronic record management systems is the support of every organization performance. This is because it increases accuracy manifold and productivity. Effective implementation of system requires seamless alignment with business operations in order to improve output. Most countries in Africa are investing a lot of resources in terms of finances and manpower on electronic record management systems projects. According to (Govan 2007), the implementations of electronic record management systems are facing lots of bottle necks when it comes to end user validation, change in project scope, undefined intention to access authorized data and scant budget allocation in the ERMS with stiff opposition among the users who object change.

According to the Wan (2011) the use of electronic records is very important although it needs to be supported by a strong legal frame work to support the electronic records. As we know that Records are the backbone of any judicial proceeding they need to be made available in order to help the judges make the decisions on time and it also helps in the speedy case disposals. Many institutions in the public service which have utilized the electronic records management system, handle their internal and external information easily, making it easy to work at a greater level in terms of competence and effectiveness in service delivery as compared to those institutions that manages their records manually.

(Iwhiwhu, 2011) states that bad practices of record keeping in Africa has led to serious impediments in public sector. It has negatively affected timely employment practices, payment processes, revamping of the government functions and institutions structures, strengthening of financial management and national legal and regulations framework. Lack of record culture monitoring and evaluation quality, control and verification cannot proceed as well– kept records provide the basis for all these, which also prompt the rule of law accountability. Therefore, it's important the government officers to accept the best record keeping practices as they will support the effectiveness, transparency and accountability of the administration activities. Proper records keeping will make it easy to access information when it is required for reference by people who were not there during a certain session, it will help the people who were not there to know the decisions which were made, action taken and the people who were involved and the rights and responsibilities that existed. This calls for the adaption of the electronic records management system.

According to Wan (2012) many Africans nations are faced with the challenges of managing records particularly electronic records. As records are known to be key in the running of the government daily activities, absence of proper records keeping can lead to inefficiency and failure in the operational procedures. It can lead to the government employees being accused of fraud improperly political embracement and inability to defend the state in cases of legal actions or claims against the government if no records are produced.

Records are usually the evidence of any organization transaction that is documented in any format either paper or electronic. Records creation, use, maintenance, storage and dissemination of information have been transformed by the information communication and technology which provides an opportunity for the government to improve the delivery of the information and services to citizens. Many public institutions around the world have not given enough attention to the vital need to manage the electronic records for them to be able to meet evidence requirement, promote accountability and support the rule of law (Iwhiwhu, 2011).

Electronic systems exhibit high efficiencies in the operations in a records management environment. Records management functionalities such as records creation, sharing/dissemination, processing, storage, disposal, appraisal, and file tracking are efficiently executed (Chinyemba & Ngulube, 2015). Smooth and efficient running of operations are thereof achieved. The application of electronic systems brings forth numerous benefits to both the organizations and clients, among them being accountability data/information integrity authenticity& security. The high operational efficiencies and other opportunities and/or benefits brought about by the application of system help boost service delivery in an organization. Clients/customers satisfaction can be well met by the use of ERMS as opposed to the manual systems.

Helle et al (2013) perceived that there has been limited utilization of the system in administrations, in spite of the benefits associated with electronic systems such as increased efficiency as well as effectiveness of services in the government, increase in

transparency and accountability in making informed decisions and enhances efficient and cost effective services to the public. Furthermore, they opine that the key indicators of limited utilization of electronic record management systems project as inadequate training and poorly designed user interfaces, and controls. The researcher investigates the utilization of electronic record management system in public institutions with specific reference to the ministry of lands and planning.

Records and information management has in the recent past received increasing support and attention in the public sector across the globe as governments embrace information & communication technologies in the management of their corporate records (Mnjama & Wamukoya, 2013). The public sector in most of the developing nations in Africa have embarked on reforms directed at streamlining and bettering life of their citizens and modelling new governance systems that are meant to support and promote appropriate use of technology in records management (Chinyemba & Ngulube, 2015). This hasn't been all way been successful even though a lot of resources has been ploughed in a number of institutions with internal and external oversight. Very little progress has been made in digitalization of the records linked to many malpractices in change management. This makes the effective implementation of electronic document management systems to remain a challenge for many countries mostly in the Public Sector.

1.1.1 Context of the Study

Ministry of Lands and Physical Planning headquarters is based at Ardhi house, Upper Hill Nairobi County. It is the central nerve of all the land related matters in the republic and is headed by a cabinet secretary who manages all the activities that are undertaken at

the ministry. The ministry is led by mission and visions. The vision is pegged on globally competitive organization in land management in an effective and efficient way with equality besides service to all. The ministry also has some objectives that the institutions need to achieve at the end of their business. Their objectives are as follows to make sure accessibility, equity and sustainable management of lands resource for socio- economic development and to reinforce institution ability for efficient and effective service delivery.

Throughout, the organization has digitized twelve registries in the entire country and its target for 2018 is to digitize 18 registries. The ministry has records that date back from 1900s which are securely stored in both digital and paper records, it has in store over 3million records and it maintains a library that is full of field paper records for reference. The ministry has been able to provide an online portal for lands owners and buyers to carry out transactions such as transfer of ownership.

1.2 Statements of Problem

Records and Information management has in the recent past received increasing support and attention in the public sector across the globe as governments embrace information & communication technologies in the management of their corporate records (Mnjama & Wamukoya, 2013). The public sector in most countries in Africa have embarked on reforms aimed at streamlining and bettering the life of their citizens, and creating new government machineries to establish efficient and effective management systems (Chinyemba, & Ngulube, 2015). Nevertheless, regardless of tremendous efforts and resources assigned to reforms, slight progress has been made, and many African countries

have not come close to their goal of developing and transforming their societies to the same standards as developed countries. Effective implementation of electronic record management systems still remains a challenge in many countries especially in the Public Sector.

According to Wan (2012) due to the use of technology many citizens are information technology literate and they have advanced in knowledge and they are aware of information and technology therefore the government need to remain competitive in the changing world of technology. A comprehensive records management system needs to be in place for the efficiency and effectiveness of services in the Public sectors since records acts as vital institution memory and they are central to efficient public service machinery.

A report from the Auditor General states that land issues is a sore thumb and many people are out to lose their pieces of lands since they were not acquired in the right way. Recently we have seen buildings being brought down because of building on riparian lands. According to a report given by the EACC Chairman Arch Bishop Dr. Eliud Wabukala, (2015) showed that there are still unauthorized personnel who have the accessibility of very vital lands records due to the weak system and unsecured land registries across the country.

In 2010, the integrated records management system was installed and rolled out in the Kenya Government Ministries to manage records processes and functions. In spite of that, there still has been complains by the public on unavailability of records and delay in service delivery largely attributed by use of manual system irrespective of the integrated

records management system being in place. Therefore, this problem presents a potential study to examine the optimization of ERMS in public institutions with specific reference to the Ministry of Lands and physical planning registry.

1.3. Purpose of the Study

The purpose of the study was to examine the optimization of electronic records management system and performance of public institution with specific reference to Ministry of Lands and Physical Planning Registry.

1.3.1 Objectives of the Study

The study was guided by the following objectives:

i. To examine the use of electronic records management system and performance of Ministry of Lands and Physical planning.

ii. To establish the management process of electronic records management system and performance of Ministry of Lands and Physical Planning.

iii. To determine how information governance of electronic records management system affects performance of Ministry of Lands and Physical Planning.

iv. To examine how return on investment of electronic records management system moderates performance of Ministry of Lands and Physical Planning.

1.4 Research questions

The study questionnaires were:

i. What is the use of electronic records management system and performance of Ministry of Lands and Physical planning?

ii. What is management process of electronic records management system and performance of Ministry of Lands and Physical Planning?

iii. How does electronic records management system support information governance in public organizations?

iv. How does return on investment of electronic records management system moderates performance of Ministry of Lands and Physical Planning?

1.5 Significance of the Study

The study will contribute in enhancing management of the public organizations on how to implement ERMS in public organization. The study is beneficial to policy makers in coming up with workable strategies towards the enactment of policies to support use of electronic records management system in government entities and also it enlightens about electronic records management system stakeholders on the need to efficiently and effectively advance use of electronic records management system. On the information professional, other sectors of economy and organizations it will help them to be able to access information at any time since the information is available online for effective service delivery and transparency.

1.6 Assumption of the Study

The assumption of the study at the Ministry of Lands headquarters has adequate information that was to be applied to other public institutions in Kenya. The researcher assumed that the respondents were in position to give truthful and accurate information.

1.7 Scope of the Study

The research was undertaken at the Ministry of Lands and Physical Planning registry headquarters in Nairobi. The study was based on descriptive research design at it adopted a census study at the Ministry of Lands and Physical Planning. The study was conducted for a period of six months.

1.8 Limitations of the Study

Despite the research being successful, there existed lots of limiting factors as to the completion of the report. There was lack of proper sharing of documentation on optimization of ERMS given that the information was deemed very confidential in nature. The process of data collection was very involving and the researcher wasn't able to have adequate information that would be observed over a long period of time, the time constraint influenced the findings and thus it would be good to have such a study conducted in a period of over five years for valid conclusions and recommendations

1.9 Definition of Terms and Concepts

Electronic Record Management Systems

It a system that is planned in such a way that it can be used to organize the institution files and record electronically whether the records are in traditional format or electronic format.

Electronic system

Is a system used to manage the records effectively and efficiently in the Ministry of Land.

Electronic Records Documentation Management System

This is a system that is designed in a manner that it can be used to manage the life cycle of records.i.es from creation to disposal and it also allow the record management tools such as the retention schedule and the disposal schedule.

Land Information Management System

Is a system designed to create analyze and publish land based data such as parcels of information zoning land use, ownership and general property information.

Implementation

This refers to making sure that all the systems in the organization are working.

Optimization

The word optimization substitutes the word effective and acts a conjunction between the study variables

Policy

This refers to a set of guidelines that are used to guide the institutions on how to manage their records.

Perceived

Perceived brings a stronger impression to the extent at which the organization has adopted or has been using particular systems like database registry, and online records for service delivery. The terminology has widely been featured in technology led institutions by various authors in their research work such as Fred D Davis has used the term perceived usefulness, perceived ease use and user acceptance of information technology in his study. Abdullah Saeed on his article of information he has studied about the impact

of organization and project factors on acceptance and usage of project management software and perceived project success.

Performance

Execution and accomplishment of tasks to achieve the set targets

Records

Are information in any format whether paperless or electronic that are created acquired maintained and used as evidence at the ministry of lands in order to help in the carrying of its day today activities. It usually helps in the tracing of work done.

Record manager

Record manager is the person who manages the records in the ministry of land and planning registry.

1.10 Organization of the Study

The study was structured into five chapters where chapter one covered introduction, background of the study, context of the study, statement of the problem purpose and objective of the study, research questions, significance of the study, assumption of the study, scope of the study, limitation of the study, operations terms and concepts. Chapter two dealt with the literature review of the study with understanding of conceptual/theoretical framework and the scholarly work on ERMS. The themes studied perceived use, management process, information governance, return on investment influence in ERMS. Chapter three outlined the research methodology used by the research, introduction, research design, area of the study, target population, sample and sampling techniques, data collection methods and approaches, research instruments, data

collection procedures, data analysis and interpretation procedures, and ethical considerations. Chapter four presented the data presentation, analysis and interpretation under thematic areas and sub-sections in line with the study objectives. Finally, chapter five summarizes of the findings, conclusion, recommendations and suggestion for further research.

1.11 Chapter summary

This chapter introduced the title of the study where the background information was clearly provided. The study discussed electronic record management system, statement of the research problem and the aim of the study. The objectives of the study and research questions are clearly highlighted. Lastly the assumption of the study, scope limitation and significance of the research were also discussed.

CHAPTER TWO

LITERATURE REVIEW AND THEORITICAL FRAMEWORK

2.0 Introduction

Part two covers detailed and comprehensive evaluation of the literature on which the topic of study was entrenched. This chapter contains a detailed overview of how Electronic Record Management Systems is undertaken; the factors influencing utilization Electronic Record Management Systems, how utilization of electronic record management system enhances service delivery, staff performance and addresses corruption in government organization, and how utilization of electronic records enhances the socio-economic benefits in the public organizations. The chapter also talks about the theory that supports the electronic record management system. Further it connotes reflective study literature, conceptual framework and knowledge gap.

2.1 Electronic Records Management System

Electronic record is defined as information that is kept in an electronic media and is readily available for access and editing. An Electronic Records Management System, also referred to as ERMS, is a computer program that is designed to store and to track the movement of records (Adam, 2013). The system enables the identification of specific changes that are made on a record and find out who made the changes (Ngoepe, 2014). ERMS does expedite the management, generation and custody of information for specified purpose with the control how the records are accessed and used.

Electronic Record Management Systems also have modules that apply retention schedules for specific and groups of records. Sprehe (2012) posits that electronic records

make it easier, efficient and effective to capture and manage records at all the stages of records management. ERMS have the capability of capturing all the records created by the business operations of an organization. Good ERMS are able to capture the information together with all the metadata that is associated to any particular record. After capturing a record, the ERMS is able to classify to classify and categorize it appropriately based on the classification system that is used by the organization (Ngoepe, 2014).

Electronic and physical records have different metadata associated with them. Electronic records require a larger extent of metadata in order for the records to have the qualities expected of records such as reliability and authenticity (Apiyo & Omolo, 2016). Electronic records management systems maintain the content, context and structure to enable accessibility to them and enhance their attributes as records. After records have been created, they have to be maintained to ensure they have the basic characteristics of records such as authenticity, reliability, integrity and usability (Davenport, 2013).

2.1.1 Use of Electronic Record Management System

The concept of perceived ease of use was put forward by Davis in (1989) when developing Technology Acceptance Model. This was associated to having platform that are free from effort when in used. The technological system must be easy to use and with little barriers when in application with the authorized personnel in organization. The interface must be free from errors or little correspondence so as not to create negative attitude more so to those in record management (Mnjama, 2013). Effective records management practices are essential to ensure that there are no loopholes in the system

and targets on increased accountability of the records within the management of an organization (Chinyemba, & Ngulube, 2015).

Evidently, organization malpractices such as data fraud and unauthorized access to the records can be a great setback to any organization progress and service delivery. This swings away the rightful match of appropriate record to the respective individual or organization rights. When misappropriated, cases of system breakdown, public mistrust and poor service delivery is commonly associated with such malpractices in any of the organization. The impact not only affects the organization performance but also has a spillover effect to those who have the rightful entitlement to the information (Maguire, 2015).

The perceived ease of use of the ERMS must integrate the aspect of reliability, authenticity and accurate record management of any organization in a way that can be validated for system audit. This enables the central authority to known when and where were the changes effected and those who were responsible took the right approach when validating the information before sharing (Wamukoya & Mutula, 2015).

Key indicators of rightful record management is when they are systemized in a categorized manner relating to the time when created, origin and contents to make it easier for the employees to have correct records in access with procedural approach. The records must be stored in alternative models and placed under security tight environment to avoid compromise. There is also need to have virtual storage in cloud computing to

safeguard information from physical destructions such as fire (Chinyemba, & Ngulube, 2015).

2.1.2 Management Process of Electronic Records and Documents

Luica and Ibiricu (2014) argue that, to implement successfully an ERMS in any organization, it's very imperative to have support of the management and all concerned departments as they create and model the information process to an organization. The major need arises toward rightful procedure in communication and enhanced management of the system functionality of an institution. System awareness and the accrued benefits in short term and long term has to be clear to enhance the management process of ERMS in any organization (Chinyemba & Ngulube, 2015). In addition, the management process of ERMS has to involve the aspect of productive training of the users to enhance their applicability and responsible use in workplace environment.

The essence of management process in record management has depicted of the aspects related to top management support, employee training, record keeping and business classification as the enhanced pillars of successful implementation. Thus, before the onset of a new concept relating to ERMS in any organization must have stakeholder participation in the management process (Ellis, 2015). The top management, middle management and lower management must be in consensus of the new record management before its implementation. This is meant to enhance awareness and derive negative connotations related to job loss, redundancies or demotion when new systems are put in place in the organization (Muguire, 2015).

Technology management process in the organization gives a wider reflection on how the culture of record management, awareness and practices is being enhanced in any institutions. Through the ERMS aspects, various cadres of organization management are linked with implied association that reflects the practices and achievements of the organization when familiarity is achieved in record management (Williams, 2015). The organization management process and the totems are identified and the responsibilities shared to enhance efficient buy in of all concerned parties in the organization and the implementation of the digitalized records (Miller, 2015).

2.1.3 Information Governance of Electronic Records Management System

Cox (2013) stated that electronic record management systems provides a well-established access control measures which only allows authorised access of records stored in the database. Through measures such as encryptions and setting up of passwords and pins, the system prevents unauthorised access to confidential records/data. This ensures that sound service delivery is uninterrupted as the records' availability, integrity and authenticity is always well guaranteed. Interestingly, organizations will realize the effectiveness of information governance in long term when productivity, user confidence, trust and service delivery is acknowledged. The authority in place that defines on the access, retrieval or storage procedure only becomes relevant when there is shared responsibilities and collaboration for greater results in the organization (Tough, 2013). Contrary, lack of information governance and central authority can render the records in a state of disarray, falsification, lack of privacy, unauthorized access and manipulation.

According to Davenport (2013) these days many information technology models that were previously managed in tailor made approach and traditional model through the third parties are slowly being readjusted to fit the current regulatory framework on information governance more so to the government entities. Appropriate procedures are being implemented to enhance record management, archiving and transcription in a secure manner. The value of the database is so important and must be governed in a way that does not subject it to manipulation or compromisation of the already secured and encrypted information.

Ngoepe (2008) reviewed on the scope of data authorization through chained access of the issuer and the record user. This was necessitated by analyzing to what extent in authorization does the involved parties have the access of the information and how best to govern it. Many cases were raised on the integrity and authenticity of the digital records in use and how best they can be assessed based on the behavior of the user and the issuer towards specific information that may be sensitive. The study acknowledged challenges related to the use of digital records more so to those who may lack basic education about information privacy and level of authorization access. It was evident that the digital records are potentially subject to manipulation and tempering hence the need to have effective governance on maintaining both the hard copy and soft copy records for reliability incase digital records are subject to virus or other external threats to their existence.

2.1.4 Return on Investment of Electronic Records Management System

Maintenance of electronic records through a defined management system in an organization is applauded for yielding numerous benefits to the organization. The cost associated with maintaining a digital records and space used has the best return to the organization. This only becomes beneficial when it is done in a rightful way that considers serialization of the records for easy retrieval, access and update. Organizations have to consider using the professionals who have the experience of digital data management to help in define the objective of the information, security measures and the procedures to follow when documenting such records (Mountain, 2012). Having documents stored in paper formal and filled verses having the same paper stored in a cloud will have different ratings of cost associated and the risks involved.

Cases of paper with relevant information stored in files at various levels of the offices have been subject to manipulation, missing information, being altered, being removed and instances of fire burning the physical evidence. A number of government institutions offices have been deliberately set on fire or vital documents reported missing in courts, in land offices among others. This cannot be justified as compared to when having such records in a digital repository with minimal access and authorization towards the return on investment to such institutions that has fully digitalized their records.

Paper documents are associated with many costs related to physical presentation, filling process, and reproduction and changing hands in different departments as compared to the electronic records. Thus, the establishment of a digital record is more beneficial to all

the involved parties and helps to bring efficiency in service delivery in an organization as acknowledged by (Chinyemba & Ngulube, 2015). The costs associated with managing the draft copy involves a lot of manpower while the cost associated with the transforming the digitalization process of record keeping may be costly to the organization in the initial setup stage and later a drop in the expenses when managing such records. Minimal errors may be recorded in digital records compared to the paper record hence a new leaf for many organizations to consider having their digitalized records.

2.2 Knowledge Gaps

The need for records management programme cannot be overstressed in the current information age. Records Management programme economics can be achieved through: at creation to ensure that only the vital records are created and duplications is not done. Unwanted records cannot be kept at creation, one needs to have an effective system of determining what records needs to be kept and for how long with effective retention/disposal systems it will be possible to empty the filing cabinets regularly to avoid purchasing new ones for new files, the removal of all non-current records from precious office space to low cost storage areas in the records centers where they can be serviced economically.

The adherence and embracing of the records management programme the field of records management would be without any effects. Since a lot of knowledge has been gathered on the electronic record management systems this research is done to fill the gap on the optimization of electronic record management system in public institutions which has not

been covered adequately and proper guideline on the implementation has not been provided.

2.3 Empirical Studies

Technology has changed the way of doing things globally. It has awakened the discussion on the possible challenges and opportunities for record management. The reduction of physical records is a shift in the focus of electronic records that has been termed as essential transformation of a long time. Previous studies that have been done have touched on key issues that need to be addressed. The costs associated with managing the draft copy involves a lot of manpower while the cost associated with the transforming the digitalization process of record keeping may be costly to the organization in the initial setup stage and later a drop in the expenses when managing such records. Minimal errors may be recorded in digital records compared to the paper record hence a new leaf for many organizations to consider having their digitalized records.

Ngulube (2014) acknowledges that the aim of having proper record management is to ensure efficiency, proper maintenance, utilization and storage in rightful manner. Contrary to the relevance of proper record management system in most organizations, the form of record management in Africa and Kenya is very wanting as they are corrupted by system failure (Record Management Trust, 2013). Most of the government led institutions are shooting themselves in their foot by disrupting the system to take advantage and misuse the records.

This is indicated in scenarios where there has been deliberate destruction of the systems by setting fire to hide evidence and also damage to the systems and records. Many cases have been put forward to instances where system is termed to be very low, disarray and not working (Yeo, 2013). There is need to have compliance law to the government led institutions to proactively capture, record and manage all the records with the central back up storage in independent state. This will help such organization to be accountable to all the information they handle and also to demonstrate good intentions in the record management as opined by (Mountain, 2012).

2.4 Theoretical Framework

The study is based on two related models namely: information governance model and diffusion theory.

2.4.1 Information Governance Theory

Information governance model was founded by Claud Shannon in the year 1948. The theory was linked to relevant limits of the signal and communication operations relating to data processing. The theory enlists data formulation on storage, quantification, retrieval and communication via governance mechanism. Throughout, the concept of information governance has been widely used in many organizations in conjunctions with data security and governance under different parties on transparency, accuracy, legal compliance among others as stipulated by (Ellis, 2015). It has enabled organizations to create logical framework that defines the role of every individual in an organization and the approach towards information governance policies and procedures (Roos, 2011).

Organization can establish a consistent and logical framework for employees to handle data through their information governance policies and procedures. These policies guide proper behavior regarding how organizations and employees handle electronically stored information. The model review key measures on security and governance with privacy to the data. Organizations have set policies on the way they create, manage and retrieve their digital information with precedent approach. The organization records are presented in a physical object like papers, tangible object like disks or in a digital format of online databases, emails or application data (Tough, 2013). The information becomes relevance when there is scrutiny towards its accessibility, the central manning authority has the right to produce it to the right people when the need arises through a governance approach. Further, information governance gives a reflection of the best policy guide on how the records are accessed, shared in privacy and comply with the set standards that does not infringe the rightful owners (Jeffrey & Cook, 2015).

2.4.2 Diffusion of Innovation Theory

The first model is Diffusion theory. The diffusion of innovations methodology, outlined by Rogers (2003), was used to cultivate understanding of motives for implementation, practice designs, and communication ideas that can be met by technology in a developing country. This includes how and why an innovation is adopted, and especially the unique reinvention of an innovation to the changing needs of the individual.

The innovation theory is articulated on the concept where new innovation is emancipated in streams of channels within a social community upon introduction to it (Rodgers, 2003). The ingredient idea of innovation is related to newness of a thought in practice or

an object that is considered to simplify life when adopted. The new concepts are relayed to the users via reference of communication that is meant to generate, process and share information from one individual to the other with a mutual consent and understanding (Rodgers, 1995). This process of diffusion is widely attached to the aspect of perception of the idea, the behaviors of the adopter and the contextual aspects. According to Rodgers (1995), there exists four elementary stages of innovation this being; invention itself, diffusion of idea via the social structure, the period and the results. The form of the message exchange involved a defined network. The network is spiced up with the opinion shapers like Dr. Bitange Ndemo on new ideas and the followers considered as role model who only infer certain information from specific social class in the community.

The concept of innovation diffusion in the current study attempts to shed more light on the aspects as to why certain users will ascribe to specific information in a medium of communication with reflection to the use of ERMS in public institutions and performance in service delivery. Industry stakeholder's raises concerns on the level of efficiency and communicate the issues to the policy makers to create platforms meant to bridge the gap and simplify service delivery (Gagnon et al., 2010).

2.4.3 Application of the Theory in the study

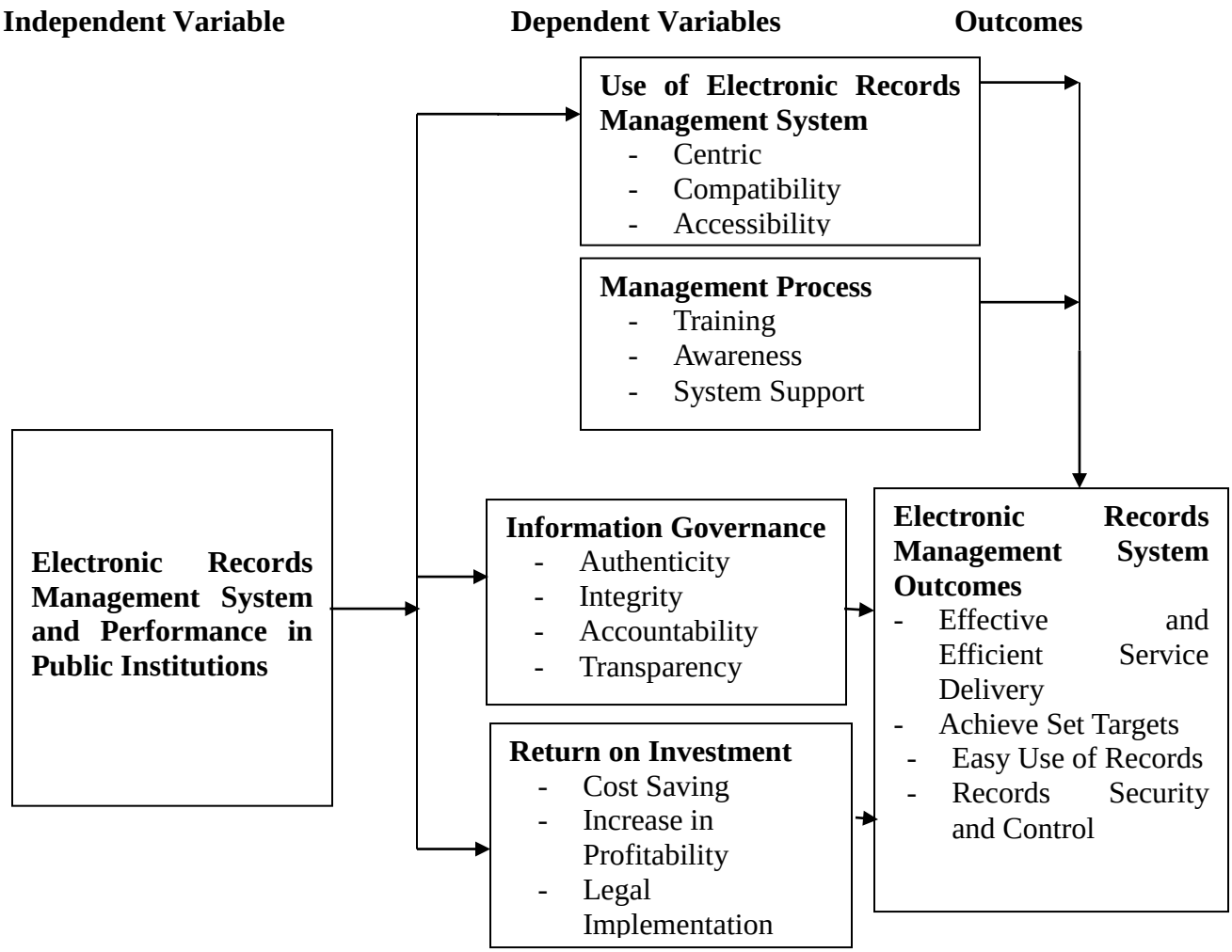
Information Governance Model is used in management of information in the whole practice. Electronic Records Management system is a process which entails a continuum which starts with creation to disposal of records. This theory hence aids in providing information on the proves of this continuum. It also informs on how information accountability, transparency and confidentiality is handled. IGT enhances efficiency of

record management. Diffusion of Innovation Theory plays a critical role in providing insight on progressive adoption of technological dynamics in ERMS.

2.5 Conceptual Framework.

Conceptual framework is termed as variable representation with the determinant variables placed in the left wing of the figure and response variable places in the right wing of the figure. The model indicates the nature of the association whereas when one factor increases and how it impacts the other factor.

Figure 2.1: Conceptual Framework



2.6 Chapter Summary

The chapter has presented the theoretical framework, conceptual framework and the research on ERMS. It has emphasized on relevant studies carried out in Kenya and other countries on ERMS. The literature reviewed has related themes which relate to the study objectives which includes overview of how Electronic Record Management Systems in the Ministry of lands is undertaken; use of electronic record management systems, process of managing electronic records and documents, electronic records management systems and information governance, return on investment of electronic records management systems and reasons for the use of electronic record management systems. The literature sends right on the legislations and policies that are required to maintain the records.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

The chapter started by detailing on the field work procedure of which a plan in the study context was established. This depicted steps by briefing on research design, study population, data collection and analysis.

3.1 Research Design

Research design emulates an organized structure of inquiry that attempts to respond to the study questionnaires in a meaningful approach (Paul, 2017). The research design is very important to the study in providing clear information that details how the study is arranged, how data is collected and analyzed. The study employed an explanatory research design with causal effect as to why optimization of ERMS was relevant to the performance of the public institutions specific to the Ministry of Lands and Physical Planning.

3.2 Area of Study

The research was about optimizing ERMS and performance of public institutions. The study location where questionnaires were administered and information collected was the Ministry of Lands and Physical Planning, Nairobi Headquarter – Ardhi House.

3.3 Target Population

The study population entails all the sets of individuals, events, elements, object or cases with certain observable features that can be categorized for decision making. Target population represents the total combination of the population that the researcher has a

choice to analyze. The study target population was 56 respondents who were the employees of the Ministry of Lands and Planning. They included selected record managers, information technologists, land registrars, land assistants and office administrators.

3.4 Sample and Sampling Techniques

3.4.1 Sample Size

Sampling is the process of selecting part of the target population with specified criteria for study analysis (Creswell, 2013). The study adopted a purposive random and census sampling to select the representatives of the study population. Purposive sampling was adopted to enable inclusivity and attention to record keeping at information-generating sections of the Ministry. Census sampling was adopted for the whole population of the information staff. The method was used because the number of information was small.

Table 3.1: Sample population

Staff	**Frequency**
Record Managers	2
Land Registrars	20
Information Technologists	4
Head of Administration	1
Land Assistants	15
Secretaries	1
Total	**43**

3.4.2 Sampling Techniques

Dang and Pheng (2015), defines sampling technique as the process of selecting a group of people, elements with certain sets of behavior and organizing them to involve in the study. The study adopted a purposive random sampling in a stratified approach and census. The study incorporated strata to have mix of data based on how the department optimize ERMS and how it influences their performance. Census sampling was used in choosing the respondent for information staff given their small number in the institution.

3.5 Data Collection Methods

The researcher used questionnaires to collect data and were distributed to the targeted population and hand delivered. The researcher booked for an appointment at the Ministry of Lands and Pshsical Planning Director of Human Resourse to have permision in meeting with the respective respondents.

3.5.1 Questionnaire

The study used questionnaires as the instrument of data collection. The questionnaire consisted of general information the themes of the study. It highlighted issues on use of electronic record management system, management process of electronic record management system, information governance of electronic record management system, return on investment of electronic record management system and performance of the Ministry of Lands and Physical Planning.

3.6 Research Instruments

Several research instruments were employed in the study to ensure that the study achieved process meticulousness.

3.6.1 Pilot Study

The researcher conducted a pilot study involving 5 respondents from the Ministry of Lands and Physical Planning departments to infer to areas that would have technicalities for correction. Parts considered not clear were adjusted and the assessments of data collection instruments were worked on.

3.6.2 Validity

The study validity is defined as the capability of the research instrument to give precise and accurate information with valid solutions (Marshall & Rossman, 2014). The study validity was achieved by having the views of the university supervisor and coordination in the Ministry of Lands and Physical Planning. Validity was affirmed by having verifiable objectives that fitted to the optimization of ERMS with the highest impact**.**

3.6.3 Reliability

The study reliability is enshrined to the model of assessment that yields consistent results under same considerations in the study. The study used questionnaires that were shared with the respondents to ensure that the information given was evaluated and deemed reliable. The pilot study results were tallied and generated a record of Cronbach's alpha of above 0.7. In conclusion, the value of Cronbach's alpha coefficient that exceeds 0.7 is termed very reliable.

3.7 Ethical Considerations

It's a word that refers to a certain behavior that differentiates acceptable behavior and unacceptable behavior witnessed through the methods, procedures or perspectives by which one decides how to act and for analyzing complex problems matters (Saunders,

Lewis and Thornhill, 2012). The study adhered to the ethical practices related to confidentiality, plagiarism, honesty, objectivity, respect of intellectual property, dissemination of the findings anonymity, non-discrimination, voluntary and informed consent, academic freedom, social responsibility and respect for colleagues.

3.8 Data analysis and interpretation procedures.

The study sought to analyze optimizing of ERMS and performance of public institutions with a case study of Ministry of Lands and Physical Planning. The study used questionnaire to collect primary data which was then tabulated into bio data and descriptive arrangement via the Likert scale. The results were presented using tables and charts. The study was analyzed in statistical package for social science (SPSS) version 23. The choice of the SPSS was based on friendly interface and ease in linking with the Microsoft word document. Descriptive statistics involved frequencies, mean, standard deviation, analysis of variance and multilinear regression. To assess the effects of independent variables on themselves and the how they affect the dependent variables.

The linear model was represented as shown below

$Y = B0+B1X1+B2X2+B3X3+B4X4+E$

Whereby Y = performance of public institutions

B0 = Y intercept

X1 = Use of ERMS (measured in ordinal Likert scale and to analyze the; mean, standard deviation, variance, correlation and regression).

X2 = Management Process of ERMS (measure in ordinal Likert scale and to analyze the; mean, standard deviation, variance, correlation and regression).

X3 = Information Governance of ERMS (measured in ordinal Likert scale to analyze; mean, standard deviation, variance, correlation and regression).

X4 = Return on Investment of ERMS (measured in ordinal Likert scale to analyze; mean, standard deviation, variance, correlation and regression).

B1, B2, B3 and B4 = coefficients of X1, X2, X3 and X4 respectively.

E = error term.

3.9 Chapter Summary

The chapter summaries the study methodology and how it was accomplished. The chapter gave emphasize to the study research design, study population, data collection and analysis. The study involved questionnaire as data collection tools that mirrored the specific objectives and the tabulated in SPSS for analysis and generation of the outputs

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.0 Introduction

The purpose of this chapter was to present the results of the study whose main objective was to examine optimization of electronic records management system and performance in public institutions, a case of the Ministry of Lands and Physical Planning.

4.1 Background Information of the Respondents

The study focused on how use of ERMS, management process of ERMS, information governance of ERMS and return on investment of ERMS influences the performance of Ministry of Lands and Physical Planning. The study questionnaire was based on primary data which was analyzed using SPSS version 23 and presented in form of demographic information, descriptive statistics and inferential analysis.

4.1.1 Response Rate

The study had a response rate of 84% out of which 36 questionnaires were confirmed while a non-response was at 16% representing 7 questionnaires respondents that were not obtained. According to Mugenda (2012), a response rate of 50% is said to be adequate for analysis, a response rate of 60% gives appropriate representation while a response rate that is above 70% yields an excellent report for the study being conducted. In this case the response rate for this study was quite adequate

Table 4.1: Response Rate

Category	Frequency	Percentage
Response	36	84
Non response	7	16
Total	43	100

4.2 Demographic Characteristics of the Respondents

The general information of the respondents was based on bio data to establish on the gender, level of education, number of years in the organization and the age class of the respondents.

4.2.1 Gender Representation

The study found out the gender representation in the ministry. The Table 4.2 below on gender representation showed that 52.8% of the total respondents were females while 47.2% were males.

Table 4.2: Gender Representation

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Male	17	47.2	47.2	47.2
Female	19	52.8	52.8	100.0
Total	36	100.0	100.0	

4.2.2 Workstation Environment

The Table 4.3 below was used to present the departmental roles of the respondents, from the results it was evident that 25% of the respondents were technologists, 19.4% of the

total respondents were from the land registrars, 16.7% tallied from head of administration and land assistants. Record managers and Secretaries represented 11.1%.

Table 4.3: Worksstation Environment

Work Station Environment	Frequency	Percent	Valid Percent	Cumulative Percent
Record Managers	4	11.1	11.1	11.1
Land Registrars	7	19.4	19.4	30.6
Information Technologists	9	25.0	25.0	55.6
Head of Administration	6	16.7	16.7	72.2
Land Assistants	6	16.7	16.7	88.9
Secretaries	4	11.1	11.1	100.0
Total	36	100.0	100.0	

4.2.3 Work Experience in the Organization

The Figure 4.1 below indicates the number of years the respondents have been working in the institution. From the analysis it is evidenced that majority represented by 27.8% of the respondents have been in the organization in a range of 1 – 5 years, 6 -10 years and over 16 years. Those who had worked in a span of 11 – 15 years were represented by 16.7%. Their experience in the sector helped to provide relevant information on optimization of ERMS and organizational performance

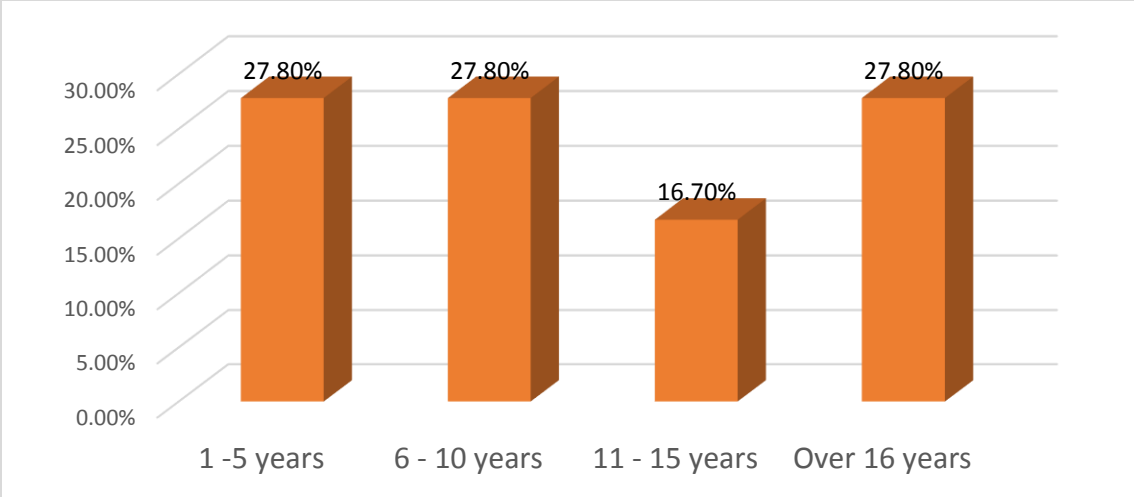


Figure 4.1: Work Experience

4.2.4 Position in the Organization

Referring to the Table 4.5: below majority of the respondents were from the middle level management represented by 47.2%, this was followed by lower management with 44.4% and the top management was at 8.3%.

Table 4.4: Position in the Organization

Position	Frequency	Percent	Valid Percent	Cumulative Percent
Top Management	3	8.3	8.3	8.3
Middle Management	17	47.2	47.2	55.6
Lower Management	16	44.4	44.4	100.0
Total	36	100.0	100.0	

4.2.5 Age group

The Table 4.6: below showed that most of the respondents were in the age group of 36 – 45 years represented by 36.1%, this was followed by those above 46 years at 33.3%,

those below 25 years stood at 16.7% while those in range of 26 -35 years were at 13.9%. Most of the respondents were economically active and within the productive age. The age brackets of the organization are all in a position to utilize Electronic Recording methods.

Table 4.5: Age Group

Age	Frequency	Percent	Valid Percent	Cumulative Percent
Below 25 years	6	16.7	16.7	16.7
26 - 35 years	5	13.9	13.9	30.6
36 - 45 years	13	36.1	36.1	66.7
46 years and above	12	33.3	33.3	100.0
Total	36	100.0	100.0	

4.2.6 Highest level of Education

The study found out the level of the education of staff working at the ministry Table 4.6: below, showed that the majority of the respondents working in the organization were degree holders with representation of 44.4%, they were followed by the masters' holders at 25%. Those who had diploma were represented by 16.7% while those who had other combinations stood at 13.9%. Thus, the study findings indicate that the respondents are well educated and they provided skilled services in the matters to do with use of ERMS in the organization.

Table 4.6: Highest Level of Education

Education	Frequency	Percent	Valid Percent	Cumulative Percent
Diploma	6	16.7	16.7	16.7
Degree	16	44.4	44.4	61.1
Masters	9	25.0	25.0	86.1
Others	5	13.9	13.9	100.0
Total	36	100.0	100.0	

4.3 Use of ERMS and Organizational Performance

The first objective was to present a statement on the use of electronic record management systems and performance of the organization. From the analysis it was clear that response relating to use of ERMS aid in accessibility and retrieval of the records registered least approval rate with a mean of 3.00. The statement relating to employees being trained on the ERMS system skills and competencies was rated top with a mean of 4.19. The key tenant of electronic record management is linked to the training of the workforce to enhance understandability and ease of using the ERMS. Well trained employees are considered to be very competitive and deemed to improve on the results of their work output.

Table 4.7: Use of ERMS and Performance in the Organization

Statement	N	Minimum	Maximum	Mean	Std. Deviation	Variance
Aid in accessibility and retrieval of the records	36	1	5	3.00	1.454	2.114
Application of ERMS is user centric and knowledgeable to organization	36	1	5	3.19	1.167	1.361
Very compatible with the organizational culture and support	36	1	5	3.19	1.489	2.218
Makes work effective and efficient in service delivery	36	1	5	3.25	1.228	1.507
Very easy and simple to use	36	1	5	3.28	1.365	1.863
System support gives hassle free when in use	36	1	5	3.36	1.291	1.666
Ensures no file misplacement	36	2	5	3.39	1.022	1.044
I am familiar with the system used in the organization	36	1	5	3.42	1.317	1.736
System is stable and less costly to maintain	36	1	5	3.42	1.360	1.850
System is used in all levels of the work	36	1	5	3.64	1.175	1.380
Staff are trained on the system skills and competencies	36	1	5	4.19	1.261	1.590
Valid N (list wise)	36					

4.4 Management Process of ERMS and Organizational Performance

The study results on Management Process of ERMS and Organization performance was assessed and presented. The study analysis showed that most of the respondents were of the support to the opinion relating to the management process of ERMS which involve: creation, use, maintenance, preservation and archiving with the highest mean of 3.28. The process of having the best practices attached to the ERMS management has to consider every aspect of its implementation in various stages. Wider consultation must be effected to involve the employees, management, clients and the government. This helps to have an all-round experience and assess challenges associated with the implementation. There was less support to the statement relating to the management of the ERMS calling for benchmarking with other institutions recording least mean of 2.61 hence need to review it implementation.

Table 4.8: Management Process of ERMS and Organizational Performance

Statement		Minimum	Maximum	Mean	Std. Deviation
The management process of records involves creation, use maintenance, preservation and archiving	36	1	5	3.28	1.186
Organization has sensitized staff on the implementation procedure.	36	1	5	3.36	1.291
Organization management leads in implementation of the system	36	1	5	3.31	1.191
Management of the system has incorporated training of the staff.	36	1	5	3.42	1.105

Implementation of the system has involves backing of records	36	1	5	3.31	1.327
System has been fully adopted and implemented in the organization	36	1	5	3.22	1.290
System has eased the management and retrieval of information	36	1	5	3.64	1.199
System brings accountability and transparency of the information	36	1	5	3.22	1.396
Proper management of the system brings employee competency	36	1	5	3.92	.996
Adequate resources needed in the management of the system	36	1	5	3.31	1.117
Every employee is part of the system management and decision making	36	1	5	3.47	1.207
Management of the system calls for benchmarking with other institutions	36	1	5	2.61	1.271
Valid N (list wise)	36				

4.5 Information Governance of ERMS and Organizational Performance

The study analysis on information governance and organizational performance table 4.9 showed that most of the respondent were in agreement to support the aspect of authenticity and integrity of the ERMS with a mean score of 3.86, for a long time the institution has faced lots of challenges relating to confidentiality and integrity of records under their custody. The support level to the statement relating to ERMS ensures security of the data got the lowest support with a mean of 3.5. This is exemplified to the fact that even though the ERMS has played a critical role, there are some weak links when it comes to the security of the information being mined and used in a wrong way.

Table 4.9: Information Governance of ERMS and Organizational performance

Statement	N	Minimum	Maximum	Mean	Std. Deviation	Variance
Ensures security of the database management	36	1	5	3.50	1.183	1.400
Promotes system best practices in managing of records	36	1	5	3.58	1.105	1.221
Application of system calls for managerial support on information at all levels	36	1	5	3.61	1.225	1.502
Information policy guidelines are very important in implementation of the system	36	1	5	3.67	1.171	1.371
There is no authorized access to the system	36	1	5	3.69	1.117	1.247
Helps to validate the work done by the employees	36	1	5	3.78	1.098	1.206
Practice eases evaluation of the system	36	1	5	3.81	1.117	1.247
Ensures rights and privileges in access to specific database	36	1	5	3.83	1.134	1.286
Promotes authenticity and integrity of the system.	36	1	5	3.86	1.099	1.209
Valid N (list wise)	36					

4.6 Return on Investment of ERMS and Organizational Performance

The study assessment on statement relating to return on investment of ERMS and organizational performance was computed and results analyzed. The finding indicated

that most of the respondents were in support of the fact that use of ERMS has led to achieving set goals in the organization with a mean score of 3.81. Mostly, the used of ERMS is linked to better service delivery and efficiency saving on time. The respondents didn't reaffirm much to the statement relating to the use of ERMS enhanced reliability in resource management with least mean of 2.61. This is linked to the fact that even as organizations strive to create systems working, there is still challenge in resource allocation as they are constrained in financing some of the operations.

Table 4.10: Return on Investment of ERMS and Organizational Performance

Statement	N	Minimum	Maximum	Mean	Std. Deviation	Variance
Enhanced reliability in resource management	36	1	5	2.61	1.202	1.444
Use of the system is very cost effective	36	1	5	2.86	1.246	1.552
Has helped to save a lot of resources	36	1	5	3.08	1.228	1.507
Increased productivity and organization performance	36	1	5	3.50	1.231	1.514
System enhances productivity of employees in organization	36	1	5	3.56	1.229	1.511
System brings efficiency through time management	36	1	5	3.69	1.091	1.190
System has saved resources	36	1	5	3.75	.996	.993
Use of system has led to achieving set goals	36	1	5	3.81	1.191	1.418
Valid N (list wise)	36					

4.7 Performance of Ministry of Lands and Physical Planning

The study assessment on the performance of Ministry of Land and Physical Planning was presented with key aspects attached on. From the analysis, most of the respondents were in support to the idea of increase in customer support that registered a highest mean of 3.75. The study assessment on increased return on investment was ranked second with a mean of 3.69. Provision of efficiency in service delivery was ranked third with a mean of 3.61. Lastly, the organizational performance aspect related to achieve set goals got least support with a mean of 3.14. Generally, the organizational performance was rated as good.

Table 4.11 Performance of Ministry of Lands and Physical Planning

Statement	N	Minimum	Maximum	Mean	Std. Deviation	Variance
Achieved set targets	36	1	5	3.14	1.313	1.723
Efficiency in service delivery	36	1	5	3.61	1.103	1.216
Increase in Return on Investment	36	1	5	3.69	1.142	1.304
Increased in customer support	36	1	5	3.75	1.180	1.393
Valid N (list wise)	36					

4.9 Chapter Summary

This chapter emphasized on the outcomes of the data analyzed based on the objectives of the study. The findings are as a result of answers from the respondents as well as reviewed literature and are presented in terms of graphs tables bar chart and text

CHAPTER FIVE

SUMMARY OF THE FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter provides the summary of findings, conclusion and recommendations on the study topic. It contains the findings, conclusion and recommendations based on the data analysis and presentation from chapter four. It has recommended for further study.

5.1 Summary of the Findings

The purpose of the study was to examine the optimization of electronic records management system and performance of public institution with specific reference to Ministry of Lands and Physical Planning Registry. Objectives were to:

i. Examine the use of electronic record management system and performance of Ministry of Lands and Physical Planning.

ii. Establish the management process of electronic record management system and performance of Ministry of Lands and Physical Planning.

iii. Determine how information governance of electronic record management system and affects performance of Ministry of Lands and Physical Planning.

iv. Examine how return on investment of electronic record management system moderates performance of Ministry of Lands and Physical Planning.

The study findings were based on the general information of the respondents, descriptive analysis and the regression analysis. From the study findings, a response rate of 84% was attained which represented 36 respondents out of targeted sample frame of 43. According

to Mugenda (2012), states that a response rate that is above 70% gives an excellent representation of the study findings in review.

5.1.1 Use of ERMS and Organizational Performance

The study sought to explore on how use of the ERMS influences on the performance of the Ministry of Lands and Physical Planning by having an assessment of the descriptive and inferential analysis. The study results showed that majority of the respondents were in support of having received training on the management and governance of the ERMS in the organization. This further led to increased competence at their place of work. There was positive association between use of ERMS and organizational performance with an r of 0.232. When holding all other factors constant (Management Process of ERMS, Information Governance of ERMS and Return on Investment of ERMS) Use of ERMS Increases Organizational Performance by 18.1%.

A study presented by Muries and Masele (2017) depicting electronic learning management systems usage and facilitation of higher education in Tanzania supports this fact. This study incorporated of a cross sectional descriptive study to the 264 respondents from five higher learning institutions. Its summary findings indicated that electronic learning management systems registered a strong positive association to usage intentions. It had perceived ease of use increased usage intentions with 22 percent. Similarly, a study presented by Tubaishat (2018) on the perceived usefulness and perceived ease of the use of electronic health records among the nurses showed a positive correlation of 0.20 between perceived ease of use and technology quality. The study involved 1338 respondents via the online questionnaire platform.

5.1.2 Management Process of ERMS and Organizational Performance

The study findings on the management process of ERMS and its implication to the performance of the ministry was presented. The findings acknowledged the management process of the ERMS of incorporating the creation, use, maintenance, preservation and archiving of the records via the electronic platform. The study result indicated presence of positive association between management process of ERMS and organizational performance with an r of 0.026. The study result on management process of ERMS showed that when holding all other factors constant (Use of ERMS, information governance of ERMS and return on investment of ERMS), management process of ERMS will increase organizational performance by 18.6%.

Chegugu and Yusuf (2018) presented a study on the electronic procurement practices and organizational performance. This involved public hospitals in Uasin Gishu County, the study captured on the procurement cycle where the management was tasked with reviewing on the system functionality. The study finding indicated that management planning had a strong positive association of 0.62 to organizational performance. Cheng (2018) assessed on the electronic management of records and achieves in Hong Kong school. This was based on the principles and practices for managing records of the institutions of learning. Using the study documentary analysis, the findings indicated that adopting record management in the institution had a positive association to quality assurance with ease in classification of digital archive.

5.1.3 Information Governance of ERMS and Organizational Performance

The study assessment on information governance and organizational performance was reviewing with the findings support skewed on authenticity and integrity of the ERMS being highly recommendable. The study result on correlation showed there was positive association between information governance and organizational performance with an r of 0.12. The assessments showed that when holding all other factors constant (Use of ERMS, management process of ERMS and return on investment of ERMS), information governance of ERMS will increase organizational performance by 4.8%.

A study presented by Daneshmandnia (2019) on organizational culture and information governance effectiveness in higher education institutions. The study involved technology officers, information security officers, IT directors and IT professionals. The study evaluated organizational culture profile through the aspects of innovation, collaboration, competition and result oriented. The result showed that information governance directly influences organizational culture. The study emphasized on the need to develop trust in information governance that glues to organization culture.

Asadi, Rouzbahani and Emami (2019) studied information governance program and application in healthcare. Information governance is key in providing effective and efficient management of the information and productivity. Identifying the applications and attributed benefits to the health benefits of 128 identified healthcare personnel. The study further clarified information governance to involve patient safety, healthcare improvement, reducing costs, enhancing quality data and confidentiality of the patient

information. The results indicated that information governance was directly correlated to healthcare implementation.

5.1.4 Return on Investment of ERMS and Organizational Performance

The study result related to return on investment of the ERMS and organizational performance was presented with an indication to strong support on achieving the set goals. The correlation analysis showed that return on investment had a positive association to organizational performance with r of 0.296. Moreover, holding all the factors constant (use of ERMS, management process of ERMS and information governance of ERMS). Return on investment of ERMS would increase organizational performance by 27.8 percent.

Similarly, a study presented by Bojja and Liu (2020) on the impact of information technology investment on hospital performance in Hawaii. The study aim was to recognize massive investments in the IT and the expected results when implemented in the organization. The study considered the financial outcomes and non-financial outcomes of 500 hospitals. The study results showed positive relationship among the IT investments and hospital performance measures.

Wang and McLeod (2018) presented a study on information health technology investments and hospital financial performance and productivity. The study captured the hospital expenses, intermediate business processes, operating expenses, capital expenses and the investments towards managing the systems using healthcare data. The study results showed that health information technology expenses were positively associated

with hospitals return on the assets and productivity. This was acknowledged after the application of the information health technology for commercial and clinical health was achieved.

5.2 Conclusion

The aim of the research was to examine optimization of ERMS and performance of public organization with a case of Ministry of Lands and Physical Planning. Relating to the study findings, it can be resolved that there is a positive and significant relationship between the use of ERMS and organizational performance. This was justified by the fact that most of the employees acknowledged of having been trained and gained competencies on the use of the ERMS.

The study review on the management process of ERMS and performance of Ministry of Lands and Physical Planning was assessed with strong emphasis directed towards the procedure of creating, maintenance, and preservation and archiving. The aspect of management process of ERMS showed a positive correlation to organization performance. For successful implementation of the ERMS, there is need to have an entire support of the concept form the top management to the lower management. Organizations that have full been atomized the activities becomes more significant and the management is able to address few issues compared to those not involved.

Having information governance to the organization proved to be very impactful as most of the respondents were in support to the fact that information governance ensures authenticity and integrity of the ERMS. The electronic record management that are

created in the organization must be ideal to the users and the aspects of security, confidentiality of the users and institutions, privacy and trust must be created through the governance. It is the call for the organization to ensure that the database is safe and it promotes the best practices of governance to the institutions. The assessments showed that information governance had a positive association to the organizational performance.

The study conclusion on return on investment of ERMS to organizational performance was assessed and presented. The findings indicated that use of the ERMS has helped the organization to achieve set goals as supported. This signified the advantage of creating system to the organization to help improve reliability and resource management. In addition, the analysis showed positive association between return on investment of ERMS and organizational performance.

5.3 Recommendations

According to the finding of the study, there are issues which need to be addressed in view of the finding the research recommends the following.

i. The study commends that government should come out clearly on the policies that are meant to safeguard and enhance use of ERMS in its institutions. This is of relevance in ensuring that there is availability of services, less bureaucracy and efficient service provision. These are the benefits attached when it comes to the usage of technology in the organization.

ii. The need to have right management who are well versed with the use of technology in the business management process must be emphasized. There is

need to have all level of the management involved in supporting business automation and implementation. All employees who are hired in the organization must be provided with the guidelines on the organization systems. This helps to create a supportive culture key to service provision. Current employees in the organization ought to be trained on new technology to enhance absorption and reduce redundancies in the workplace hence promoting productivity.

iii. Use of technological backed system comes with limitations and challenges relating to information security, fraud, privacy and confidentiality. Throughout the implementation of the ERMS, there is need to have transparency and control so that the platform is not used or given less support by the employees for other motives. The governance of all the government developed systems must also have a central management with limited access to the platform. This will ensure there is transparency and information maintained in the databases is kept in a confidential way.

iv. The use of technology in business transactions has ascertained to be vital and saves organization resources. Through the use of systems, organizations are able to provide services throughout even in odd hours. It also increases efficiency and service delivery saving a lot of the money that would have been used in same process to provide services. Thus the government must ensure that systems adopted in the organization are used in desired way to help save on the cost and increase service level.

5.4 Suggestions for Further Research

i. This study concentrated on optimization of electronic records management system and performance of public institution, a case study of the Ministry of Lands and Physical Planning. The study drew respondents from head office in Nairobi. Further, there is need to have such study being employed in other counties to give a view of their findings.

ii. Further there is need to have such a research on electronic record management system and information governance it will be important to the government as it will help it to take advantage of the technology that is changing now and then.

5.5 Chapter Summary

The chapter highlighted the summary of the major findings of the study based on the objectives. It has given recommendations for implementation and it has suggested further study to be carried out.

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APPENDIX I: INTRODUCTORY LETTER

Department of Library and Information Science
University of Nairobi
P.O Box 30197
NAIROBI

Dear respondent

RE: QUESTIONNAIRE ADMINISTRATION

I am a student currently carrying out a study on the optimization of the electronic records management system in the Ministry of Lands and Planning. The aim of the study is to examine the optimization of electronic record management systems in public institutions with specific reference to the Ministry of Lands and planning registry. The findings of the study endeavors to enhance the optimization of the electronic records management system in the Ministry of Lands and Planning and other ministries in Kenya for performance improvement.

You have been selected to participate in this study. As a participant you are required to provide answers to the questionnaire attached to this letter. Please read the questions and instructions carefully before answering the questions. The questionnaire comprises of four sections. Kindly fill your responses as honestly as possible. Your responses will be treated with utmost confidentiality and it will not be used for any other purpose apart from the study.

Your contribution in the study is highly appreciated.
Thank you in advance
Yours faithfully

Evangeline Wambogo
Reg.C54/5158/2017

APPENDIX II: RESEARCH QUESTIONNAIRE

QUESTIONNIARE FOR RESPONDENTS

INSTRUCTIONS

Please respond by ticking (✓) against your preferred response for questions with options.

For questions that require suggestions or comments, please use the provided space.

SECTION A: BACKGROUND INFORMATION

1. Name of Section

Record Managers ( ) Land Registrars ( )

Information Technologists ( ) Head of Administration ( )

Land Assistants ( ) Secretaries ( )

2. Gender: Male () Female ()

3. Professional experience in organization

1 – 5 years ( ) 6 – 10 years ( )

11 – 15 years ( ) Over 16 years ( )

4. Position in the organization:

Top management ( ) Middle management ( ) Lower Management ( )

5. Age group:

Below 25 years ( ) 26 – 35 years ( ) 36 – 45 years 46 years and above ()

6. Highest level of education:

Diploma ( ) Degree ( )

Masters ( ) Others ()

USE OF ELECTRONIC RECORDS MANAGEMENT SYSTEM

State the extent to which you agree with the following statement on Use of Electronic Record Management Systems and Performance of your Organization. Use the following Likert scale to rate your views whereby; (1) = strongly disagree, (2) = disagree, (3) = neither agree nor disagree, (4) = agree and (5) = strongly agree

Statement	**1**	**2**	**3**	**4**	**5**
Ensures no file misplacement					
Aid in accessibility and retrieval of the records					
Application and use of the system is user centric					
Makes work effective and efficient in service delivery					
Very easy and simple to use					
I am trained on the ERMS system skills and competencies					
System support gives a hassle free when in use					
System is used in all levels of the work					

The system is very compatible with the organizational culture and support					
Staff are trained on the system skills and competencies					
System is stable and less costly to maintain					

MANAGEMENT PROCESS OF ELECTRONIC RECORDS MANAGEMENT SYSTEM

Please indicate the degree to which you agree or disagree to the following statement on Management Process of Electronic Records Management System and Performance of your Organization. Use the following Likert scale to rate your views whereby; (1) = strongly disagree, (2) = disagree, (3) = neither agree nor disagree, (4) = agree and (5) = strongly agree.

Statement	**1**	**2**	**3**	**4**	**5**
Management process of records involves creation, use maintenance, preservation and archiving					
Organization has sensitized staff on the implementation procedure					

Organization management leads in implementation of the system					
Management of the system has incorporated training of the staff.					
Successful implementation of the system has greatly backed record management					
System has been fully adopted and implemented in the organization					
System has eased the management and retrieval of information					
System brings accountability and transparency of the information					
Proper management of system brings employee competency					
Adequate resources needed in the management of system					
Every employee is part of the system management and decision making					
Management of the system calls for benchmarking with other institutions					

INFORMATION GOVERNANCE OF ELECTRONIC RECORDS MANAGEMENT SYSTEM

Please indicate the degree to which you agree or disagree to the following statement on Management Process of Electronic Records Management System and Performance of your Organization. Use the following Likert scale to rate your views whereby; (1) = strongly disagree, (2) = disagree, (3) = neither agree nor disagree, (4) = agree and (5) = strongly agree.

Statement	**1**	**2**	**3**	**4**	**5**
Application of system call for managerial support on information at all levels					
Information policy guidelines are very important in implementation of the system					
Ensures security of the database management					
Promotes best practices of managing records					
There is no authorized to access to the system					
Ensures rights and privileges in access to specific database					

Promotes authenticity and integrity of the system.					
Eases evaluation of the system					
Helps to validate the work done by the employees					

RETURN ON INVESTMENT OF ELECTRONIC RECORDS MANAGEMENT SYSTEM

Please indicate the degree to which you agree or disagree to the following statement on Return on Investment of Electronic Records Management System and Performance of your Organization. Use the following Likert scale to rate your views whereby; (1) = strongly disagree, (2) = disagree, (3) = neither agree nor disagree, (4) = agree and (5) = strongly agree.

Statement	**1**	**2**	**3**	**4**	**5**
System enhances productivity of employees in organization					
Increased productivity and organization performance					
Use of the system has led to achieving set goals					
System has saved resources					

Use of system is very cost effective to organization					
Enhanced reliability in resource management					
System brings efficiency through time management					
Has helped to save a lot of resources					

PERFORMANCE OF MINISTRY OF LANDS AND PHYSICAL PLANNING.

The following statements seek to get Information on your Organization Performance during the last five years. Kindly tick in each category the number estimating to the best of your knowledge over the last five years.

Statement	**Lowest 20%**	**Lower 20%**	**Middle 20%**	**Next 20%**	**Top 20%**
Efficiency in service delivery					
Achieved set targets					
Increased in customer support					
Increase in Return on Investment					

THANK YOU FOR TAKING TIME TO ANSWER THE QUESTIONNAIRE